



**MADISON**  
AREA | TECHNICAL  
**COLLEGE**

# Madison College Course Catalogue

2018 - 2019

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# Accounting

Program Number: 101011

Associate in Applied Science

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ACCTG 10101111	Accounting 1 - Principles	4	4.0	0.0
ACCTG 10101139	QuickBooks-Beginning	1	0.5	1.0
BUSADM 10102134	Business Organization, Management, and Ethics	3	3.0	0.0
COMPSOFT 10103133	Excel Beginning	1	0.27	1.5
ENGLISH 10801195	Written Communication	3	3.0	0.0
MATH 10804144	Math of Finance	3	3.0	0.0

### Second Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ACCTG 10101113	Accounting 2 - Principles	4	4.0	0.0
ACCTG 10101123	Tax 1	4	4.0	0.0
ACCTG 10101141	QuickBooks-Intermediate	1	0.5	1.0
FINANCE 10114130	Personal Finance	3	3.0	0.0
PSYCH 10809199	Psychology Of Human Relations	3	3.0	0.0
COMM 20810205	Small Group & Interpersonal Communications	3	3.0	0.0

### Third Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ACCTG 10101121	Accounting 3-Intermediate	4	4.0	0.0
ACCTG 10101125	Cost Management	4	4.0	0.0
ACCTG 10101138	Accounting And Payroll Systems	3	2.0	2.0
BUSADM 10102160	Business Law 1	3	3.0	0.0

### Fourth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ACCTG 10101122	Accounting 4-Intermediate	4	4.0	0.0
ACCTG 10101137	Computerized Accounting Applications	2	1.5	1.0
ACCTG 10101142	Accounting Capstone	3	2.0	2.0
ADMINPRF 10106190	Professional Development	1	0.5	1.0
ECON 10809195	Economics	3	3.0	0.0





# Accounting Assistant

Program Number: 311011

*A One Year Technical Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ACCTG 10101111	Accounting 1 - Principles	4	4.0	0.0
BUSADM 10102134	Business Organization, Management, and Ethics	3	3.0	0.0
ACCTG 10101139	QuickBooks-Beginning	1	0.5	1.0
COMPSOFT 10103133	Excel Beginning	1	0.27	1.5
ENGLISH 10801195	Written Communication	3	3.0	0.0
MATH 10804144	Math of Finance	3	3.0	0.0

### Second Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ACCTG 10101113	Accounting 2 - Principles	4	4.0	0.0
ACCTG 10101123	Tax 1	4	4.0	0.0
ACCTG 10101141	QuickBooks-Intermediate	1	0.5	1.0
FINANCE 10114130	Personal Finance	3	3.0	0.0
ADMINPRF 10106190	Professional Development	1	0.5	1.0
COMM 10801196	Oral/Interpersonal Communication	3	3.0	0.0



# Addiction Studies

Program Number: 305201

*Less Than One Year Tech Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
HUMSVC 10520116	Group Work Skills	3	3.0	0.0
HUMSVC 10520117	Interviewing	3	3.0	0.0
HUMSVC 10520135	Issues in Alcohol and Other Drug Abuse	3	3.0	0.0
HUMSVC 10520136	Counseling Alcoholics and Other Drug Abusers	3	3.0	0.0
HUMSVC 10520142	Psychopharmacology	3	3.0	0.0
HUMSVC 10520150	AODA Special Populations	3	3.0	0.0
HUMSVC 10520157	Human Services Counseling Skills	3	3.0	0.0

### Additional Courses

Choose one of the following courses.

NOTE: Introduction to Psychology (PSYCH 20809231) is a prerequisite to Developmental Psychology (PSYCH 20809233) and Abnormal Psychology (PSYCH 20809237).

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
HUMSVC 10520141	Introduction to Community Mental Health	3	Mar-00	a
PSYCH 20809237	Abnormal Psych	3	Mar-00	



# Administrative Professional

Program Number: 101066

Associate in Applied Science

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ENGLISH 10801195	Written Communication	3	3.0	0.0
MATH 10804123	Math with Business Applications	3	3.0	00
ADMINPRF 10106102	Introduction to Office Professions	1	1.0	0.5
ADMINPRF 10106107	Business Document Applications	3	1.0	4.0
ADMINPRF 10106139	Keyboard Skillbuilding	1	0.27	1.5
ADMINPRF 10106182	Information Technology Concepts	3	2.0	2.0
ADMINPRF 10106231	Business Presentations and Publications	3	1.0	4.0

### Second Semster

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
COMPSOFT 10103165	Outlook	1	0.27	1.5
ADMINPRF 10106108	Proofreading And Editing	3	2.0	2.0
ADMINPRF 10106109	Business Spreadsheet Applications	3	1.0	4.0
ADMINPRF 10106133	Document Formatting	2	1.0	2.0
ADMINPRF 10106164	Customer Contact Skills	1	1.0	0.5
ADMINPRF 10106172	Administrative Office Management	3	2.0	2.0
ADMINPRF 10106240	Business Information Management	3	1.0	4.0

### Third Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
COMM 10801196	Oral/Interpersonal Communication	3	Mar-00	
SOC 10809172	Introduction to Diversity Studies	3	Mar-00	a
PSYCH 10809199	Psychology Of Human Relations	3	Mar-00	
ACCTG 10101106	Accounting Fundamentals	3	Mar-00	
COMPSOFT 10103169	Collaboration Tools	1	0.27-1.5	
ADMINPRF 10106106	Business Writing and Research	3	2-Feb	
ADMINPRF 10106190	Professional Development	1	0.5-1	

### Fourth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
BUSADM 10102135	Project Management - Fundamentals	3	3.0	0.0
ADMINPRF 10106134	Software Projects	2	0.5	3.0
ADMINPRF 10106194	Career Management	1	1.0	0.5
ADMINPRF 10106195	Internship - Administrative Professional & Medical Administrative Specialist	1	0.0	0.0
	Business-Related Selection	3		

### Business-Related Selection Courses

Take one course from the following list:

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
MKTG 10104114	Social Media Principles	3	3.0	0.0
EVTMG 10109102	Fundamentals Of Meeting Mgmt	3	3.0	0.0
BUSADM 10102134	Business Organization, Management, and Ethics	3	3.0	0.0
HRMG 10116145	Introduction to Human Resources	3	3.0	0.0
MKTG 10104102	Marketing Principles	3	3.0	0.0



# Advanced EMT

Program Number: 305316

*Less Than One Year Tech Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
EMS 30531360	Advanced Emergency Medical Technician	4	4.0	2.0



# Agricultural Equipment Technology

Program Number: 100701

Associate in Applied Science

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
AGMECH 10070176	Electrical Systems	5	3.0	4.0
AGMECH 10070181	Implements 1	4	2.0	0.0
WELD 10442126	Metal Repair Techniques	2	1.0	0.0
ENGLISH 10801195	Written Communication	3	3.0	0.0
MATH 10804107	College Mathematics	3	2.0	2.0

### Second Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
AGMECH 10070178	Implements 2	3	4-Jan	a
AGMECH 10070183	Hydraulics	4	2-Mar	
AGMECH 10070187	Occupational Experience 1 - Agricultural Equipment Technology Program	2	0-0	
AGMECH 10070193	Air Conditioning	2	2-Jan	
MKTG 10104104	Selling Principles	3	Mar-00	

### Third Semester / Summer Session

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
COMM 10801196	Oral/Interpersonal Communication	3	3.0	0.0
AGMECH 10070175	Power Transmissions	4	1.0	4.0
AGMECH 10070150	Precision Farming (Ag Management Solutions)	1	0.5	1.0
PHYSICS 10806139	Survey of Physics	3	1.0	4.0

### Fourth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
AGMECH 10070177	Fuel Systems	3	2.0	2.0
AGMECH 10070182	Accessories & Electronics	3	2.0	2.0
AGMECH 10070184	Hydraulics 2	3	1.0	4.0
AGMECH 10070188	Occupational Experience 2	2	0.0	0.0
PSYCH 10809199	Psychology Of Human Relations	3	3.0	0.0

### Fifth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
AGMECH 10070191	Engine Repair Theory	3	1.0	4.0
AGMECH 10070195	Engine Repair	3	1.0	4.0
ECON 10809195	Economics	3	3.0	0.0
SOC 10809197	Contemporary Amer Society	3	3.0	0.0

### Sixth Semester / Summer Session

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
AGMECH 10070189	Occupational Experience 3	2	0.0	0.0



# Agriculture Systems Management

Program Number: 300903

*Less Than One Year Tech Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Hours
FARMBUS 10090381	Agriculture Business Management	3	3.0	0.0
FARMBUS 10090382	Principles of Sustainable Soil and Crop Management	3	3.0	0.0

### Second Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Hours
FARMBUS 10090385	Principles of Animal Science and Management	3	3.0	0.0
FARMBUS 10090386	Agriculture Finance and Economics	3	3.0	0.0



# Animation

Program Number: 102071

Associate in Applied Arts

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Prior to Start of Program - REQUIRED

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ANIM 10207101	Animation Industry Overview	1	0.0	2.0

### First Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ANIM 10207103	Basic Drawing for Concepting	2	0.0	4.0
ANIM 10207110	Animation 1	2	0.0	4.0
ANIM 10207111	Introduction To Digital 3D	2	0.0	4.0
ANIM 10207112	Photoshop for 3D and Concepting	2	0.0	4.0
ANIM 10207114	Modeling 1	2	0.0	4.0
ANIM 10207139	Design & Color for Concepting	2	0.0	4.0
ENGLISH 10801195	Written Communication	3	3.0	0.0
PSYCH 10809199	Psychology Of Human Relations	3	3.0	0.0

### Second Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ANIM 10207117	Figure Drawing for Concepting	3	0.0	6.0
ANIM 10207120	Animation 2	2	0.0	4.0
ANIM 10207122	Advanced Digital 3D	2	0.0	4.0
ANIM 10207150	Animation Concepts 1	3	0.0	6.0
ANIM 10207224	Modeling 2	2	0.0	4.0
COMM 10801196	Oral/Interpersonal Communication	3	3.0	0.0
MATH 10804107	College Mathematics	3	2.0	2.0

### Third Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ANIM 10207130	Digital Set Design 1	2	0.0	4.0
ANIM 10207131	Animation 3	2	0.0	4.0
ANIM 10207134	Modeling 3	2	0.0	4.0
ANIM 10207140	Advanced Animation Studio 1	2	0.0	4.0
ANIM 10207151	Animation Concepts 2	2	0.0	4.0
SPEECH 10801198	Speech	3	3.0	0.0
	Elective	3		

### Fourth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ANIM 10207133	Digital Set Design 2	2	0.0	4.0
ANIM 10207141	Production Studio	3	0.0	6.0
ANIM 10207142	Animation Internship	2	0.0	0.0
ANIM 10207143	Animation Portfolio	2	0.0	4.0
ANIM 10207144	Advanced Animation Studio 2	2	0.0	4.0
PHILOS 10809166	Intro to Ethics: Theory & App	3	3.0	0.0
SOC 10809197	Contemporary Amer Society	3	3.0	0.0



# Architectural Technology

Program Number: 106141

Associate in Applied Science

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ENGLISH 10801195	Written Communication	3	3.0	0.0
MATH 10804114	College Technical Math 1B	2	2.0	0.0
ARCHT 10614111	Architectural Graphics 1	3	1.0	4.0
ARCHT 10614113	Intro To CAD-Architectural	3	1.0	4.0
ARCHT 10614121	Construction Materials - Architectural Technology Program	3	3.0	0.0
ARCHT 10614118	Design Communications	2	1.0	2.0

### Second Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
MATH 10804116	College Technical Math 2	4	4.0	0.0
PHYSICS 10806154	General Physics 1	4	3.0	2.0
ARCHT 10614112	Architectural Graphics 2	3	1.0	4.0
ARCHT 10614115	Introduction to Revit	3	2.0	2.0
ARCHT 10614135	Building Codes	2	2.0	0.0
ARCHT 10614122	Revit MEP	2	1.0	2.0

### Third Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
PSYCH 10809199	Psychology Of Human Relations	3	3.0	0.0
ARCHT 10614119	Digital Architectural Rendering	1	1.0	0.0
ARCHT 10614123	Electrical and Mechanical Systems	4	4.0	0.0
ARCHT 10614152	Introduction to Sustainable Design and LEED	2	2.0	0.0
ARCHT 10614154	Site Design	3	2.0	2.0
ARCHT 10614155	Advanced Revit	2	1.0	2.0
ARCHT 10614178	Building Structures	4	4.0	0.0

### Fourth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ENGLISH 10801197	Technical Reporting	3	3.0	0.0
PHILOS 10809166	Intro to Ethics: Theory & App	3	3.0	0.0
ARCHT 10614114	Advanced CAD	2	1.0	2.0
ARCHT 10614120	Professional Practice	2	2.0	0.0
ARCHT 10614142	Architectural Detailing	2	1.0	2.0
ARCHT 10614145	Architectural Design Studio	4	3.0	2.0
ARCHT 10614194	Portfolio Preparation for Architectural	1	1.0	0.0





# Architectural Technology

Program Number: 106141-TR

Associate in Applied Science

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ARCHT 10614111	Architectural Graphics 1	3	1.0	4.0
ARCHT 10614113	Intro To CAD-Architectural	3	1.0	4.0
ARCHT 10614121	Construction Materials - Architectural Technology Program	3	3.0	0.0
ARCHT 10614118	Design Communications	2	1.0	2.0
ENGLISH 20801201	English 1	3	3.0	0.0
MATH 20804212	College Algebra	3	2.0	2.0

### Second Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ARCHT 10614112	Architectural Graphics 2	3	1.0	4.0
ARCHT 10614115	Introduction to Revit	3	2.0	2.0
ARCHT 10614135	Building Codes	2	2.0	0.0
ARCHT 10614122	Revit MEP	2	1.0	2.0
ENGLISH 20801202	English 2	3	3.0	0.0
MATH 20804213	Trigonometry	3	2.0	2.0
PHYSICS 20806220	Physics of Everyday Life	3	3.0	0.0

### Third Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ARCHT 10614101	Architectural Theory 1	3	2.0	2.0
ARCHT 10614123	Electrical and Mechanical Systems	4	3.0	0.0
ARCHT 10614155	Advanced Revit	2	1.0	2.0
ARCHT 10614154	Site Design	3	2.0	2.0
ARCHT 10614178	Mechanics/Strength of Materials	4	3.0	0.0
ARCHT 10614193	Job Orientation	1	1.0	0.0

### Fourth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ARCHT 10614100	Introduction to Architecture	3	3.0	0.0
ARCHT 10614114	Advanced CAD	2	1.0	2.0
ARCHT 10614132	Building Estimating	2	2.0	0.0
ARCHT 10614142	Architectural Detailing	2	1.0	2.0
ARCHT 10614145	Architectural Design Studio	4	3.0	2.0
ARCHT 10614194	Portfolio Preparation for Architectural	1	1.0	0.0
PHILOS 10809166	Intro to Ethics: Theory & App	3	3.0	0.0
PSYCH 20809231	Intro Psychology	3	3.0	0.0



# Associate Degree Nursing (R. N.)

Program Number: 105431

Associate in Applied Science

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Nursing Certification

*Proof of certification as a Nursing Assistant or completion of a Nursing Assistant course is required prior to petitioning. Refer to petition requirements for additional details.*

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
NRSAD 30543300	Nursing Assistant	3	2.77	1.66

### General Education Courses

*The following general education and elective courses are required to successfully graduate from the Nursing-Associate Degree program. Some of these courses are required to petition and others may be completed prior to the start of the program. Prospective students should refer to petition requirements and current students should refer to their Degree Progress Report for additional details regarding which general education program requirements must be taken to petition.*

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ENGLISH 20801201	English 1	3	3.0	0.0
SPEECH 10801198	Speech	3	3.0	0.0
BIOLOGY 20806207	Anatomy and Physiology 1	4	3.0	2.0
BIOLOGY 20806208	Anatomy and Physiology 2	4	3.0	2.0

*Choose from Microbiology or General Microbiology*

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
BIOLOGY 20806273	Microbiology-University Medical	5	3.0	4.0
BIOLOGY 20806274	General Microbiology	5	3.0	4.0
SOC 20809203	Intro Sociology	3	3.0	0.0
PSYCH 20809231	Intro Psychology	3	3.0	0.0
PSYCH 20809233	Developmental Psychology	3	3.0	0.0

### First Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
NRSAD 10543101	Nursing Fundamentals - Associate Degree Nursing Program	2	2.0	0.0
NRSAD 10543102	Nursing Skills - Associate Degree Nursing Program	3	0.0	6.0
NRSAD 10543103	Nursing Pharmacology - Associate Degree Nursing Program	2	2.0	0.0
NRSAD 10543104	Nsg: Intro Clinical Practice	2	0.0	0.0

### Second Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
NRSAD 10543105	Nursing Health Alterations - Associate Degree Nursing	3	3.0	0.0
NRSAD 10543106	Nursing Health Promotion - Associate Degree Nursing	3	3.0	0.0
NRSAD 10543107	Nursing: Clinical Care Across Lifespan	2	3.0	0.0
NRSAD 10543108	Nursing: Introduction to Clinical Care Management	2	3.0	0.0



### Third Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
NRSAD 10543109	Nursing: Complex Health Alterations 1	3	3.0	0.0
NRSAD 10543110	Nursing: Mental Health Community Concepts	2	2.0	0.0
NRSAD 10543111	Nursing: Intermediate Clinical Practice	3	0.0	0.0
NRSAD 10543112	Nursing Advanced Skills	1	0.0	2.0

### Fourth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
NRSAD 10543113	Nursing: Complex Health Alterations 2	3	3.0	0.0
NRSAD 10543114	Nursing: Management and Professional Concepts	2	2.0	0.0
NRSAD 10543115	Nursing: Advanced Clinical Practice	3	0.0	0.0
NRSAD 10543116	Nursing Clinical Transition	2	0.0	0.0



# Associate Degree Nursing (R. N.)

Program Number: 105431-PA

Associate in Applied Science

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### General Education Courses

The following general education and elective courses are required to successfully graduate from the Nursing-Associate Degree program. Some of these courses are required to petition and others may be completed prior to the start of the program. Prospective students should refer to petition requirements and current students should refer to their Degree Progress Report for additional details regarding which general education program requirements must be taken to petition.

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ENGLISH 20801201	English 1	3	3.0	0.0
BIOLOGY 20806207	Anatomy and Physiology 1	4	3.0	2.0
BIOLOGY 20806208	Anatomy and Physiology 2	4	3.0	2.0
PSYCH 20809231	Intro Psychology	3	3.0	0.0
PSYCH 20809233	Developmental Psychology	3	3.0	0.0

The following courses are recommended to be completed prior to enrolling in the nursing bridge courses.

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
SPEECH 10801198	Speech	3	3.0	0.0

Choose from Microbiology or General Microbiology.

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
BIOLOGY 20806273	Microbiology-University Medical	5	3.0	4.0
BIOLOGY 20806274	General Microbiology	5	3.0	4.0
SOC 20809203	Intro Sociology	3	3.0	0.0
	Elective	5		

### Paramedic Bridge Courses and Licensure Requirements

#### Second Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
NRSAD 10543127	Paramedic to AD Theory 1	3	3.0	0.0
NRSAD 10543128	Paramedic to AD Theory 2	3	3.0	0.0
NRSAD 10543129	Paramedic to AD Skills	2	0.0	4.0
NRSAD 10543130	Paramedic to RN Clinical	2	0.0	0.0

### Associate Degree Nursing 2nd Year Requirements

#### Third Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
NRSAD 10543109	Nursing: Complex Health Alterations 1	3	3.0	0.0
NRSAD 10543110	Nursing: Mental Health Community Concepts	2	2.0	0.0
NRSAD 10543111	Nursing: Intermediate Clinical Practice	3	0.0	0.0
NRSAD 10543112	Nursing Advanced Skills	1	0.0	2.0

#### Fourth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
NRSAD 10543113	Nursing: Complex Health Alterations 2	3	3.0	0.0
NRSAD 10543114	Nursing: Management and Professional Concepts	2	2.0	0.0
NRSAD 10543115	Nursing: Advanced Clinical Practice	3	0.0	0.0
NRSAD 10543116	Nursing Clinical Transition	2	0.0	0.0



# Associate Degree Nursing (R. N.)

Program Number: 105431-PN

Associate in Applied Science

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### General Education Courses

The following general education and elective courses are required to successfully graduate from the Nursing-Associate Degree program. Some of these courses are required to petition and others may be completed prior to the start of the program. Prospective students should refer to petition requirements and current students should refer to their Degree Progress Report for additional details regarding which general education program requirements must be taken to petition.

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ENGLISH 20801201	English 1	3	3.0	0.0
SPEECH 10801198	Speech	3	3.0	0.0
SOC 20809203	Intro Sociology	3	3.0	0.0
BIOLOGY 20806207	Anatomy and Physiology 1	4	3.0	2.0
BIOLOGY 20806208	Anatomy and Physiology 2	4	3.0	2.0

Choose from Microbiology or General Microbiology.

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
BIOLOGY 20806273	Microbiology-University Medical	5	3.0	4.0
BIOLOGY 20806274	General Microbiology	5	3.0	4.0
PSYCH 20809231	Intro Psychology	3	3.0	0.0
PSYCH 20809233	Developmental Psychology	3	3.0	0.0
	Elective	5		

### Practical Nursing and Licensure Requirements

#### First Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
NRSAD 31543301	Nursing Fundamentals - Practical Nursing Program	2	Apr-00	
NRSAD 31543302	Nursing Skills - Practical Nursing Program	3	0-6	
NRSAD 31543303	Nursing Pharmacology - Practical Nursing Program	2	Apr-00	
NRSAD 31543304	Nursing: Intro to Clinical Practice	2	0-0	

#### Second Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
NRSAD 31543305	Nursing Health Alterations - Practical Nursing Program	3	6.0	0.0
NRSAD 31543306	Nursing Health Promotion - Practical Nursing Program	3	6.0	0.0
NRSAD 31543307	Nursing: Clinical Care Across the Lifespan	2	0.0	0.0
NRSAD 31543308	Nursing: Intro to Clinical Care Management	2	0.0	0.0

#### Prior to the Start of Third Semester Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
NRSAD 10543164	Orientation Associate Degree Nursing	3	2-Feb	

#### Third Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
NRSAD 10543109	Nursing: Complex Health Alterations 1	3	3.0	0.0
NRSAD 10543110	Nursing: Mental Health Community Concepts	2	2.0	0.0
NRSAD 10543111	Nursing: Intermediate Clinical Practice	3	0.0	0.0
NRSAD 10543112	Nursing Advanced Skills	1	0.0	2.0



*Fourth Semester*

<b>Class Course Number</b>	<b>Class Name</b>	<b>Credits</b>	<b>Hours Per Week</b>	
			<b>Lecture</b>	<b>Lab</b>
NRSAD 10543113	Nursing: Complex Health Alterations 2	3	3.0	0.0
NRSAD 10543114	Nursing: Management and Professional Concepts	2	2.0	0.0
NRSAD 10543115	Nursing: Advanced Clinical Practice	3	0.0	0.0
NRSAD 10543116	Nursing Clinical Transition	2	0.0	0.0



# Auto Collision Repair & Refinishing Technician

Program Number: 324051

A Two Year Technical Diploma

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
AUTOBODY 32405301	Basic Sheet Metal Repair & Welding Fundamentals	5	0.0	10.0
AUTOBODY 32405302	Refinishing 1	5	0.0	10.0
AUTOBODY 32405361	Collision Repair/Refinishing Theory 1	3	6.0	0.0
AUTOBODY 32405340	Collision Electrical Fundamentals	2	2.0	2.0
	Customer Relations	2	2.0	0.0

### Second Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
AUTOBODY 32405303	Non-Structural Panel Repair & Glass Servicing	5	0.0	10.0
AUTOBODY 32405304	Refinishing 2/Trim & Hardware	5	0.0	10.0
AUTOBODY 32405341	Collision Mechanical Systems	2	2.0	2.0
MATH 31804379	Vocational Math 1	1	2.0	0.0
AUTOBODY 32405363	Collision Repair and Refinishing Theory 2	3	6.0	0.0

### Third Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
AUTOBODY 32405305	Auto Refinishing/Color Adjustment	5	0.0	10.0
AUTOBODY 32405306	Collision Structural Welding & Panel Replacement	5	0.0	10.0
AUTOBODY 32405311	Introduction to Airbrushing and Custom Painting	2	1.0	3.0
AUTOBODY 32405365	Collision Repair and Refinishing Theory 3	3	6.0	0.0
PHYSICS 31806363	Science 1	2	2.0	2.0

### Fourth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
AUTOBODY 32405307	Adv Collision Structural Repair	5	0.0	10.0
AUTOBODY 32405308	Collision Plastics/Composites & Adv Refinishing	5	0.0	10.0
AUTOBODY 32405321	Advanced Airbrushing and Custom Painting	2	1.0	3.0
AUTOBODY 32405334	Collision Damage Analysis and Report Writing	3	6.0	0.0
AUTOBODY 31405374	Collision Occup Orient	2	3.0	0.0



# Auto Collision Repair & Refinishing Technician

Program Number: 314051

*A One Year Technical Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
AUTOBODY 32405301	Basic Sheet Metal Repair & Welding Fundamentals	5	0.0	10.0
AUTOBODY 32405302	Refinishing 1	5	0.0	10.0
AUTOBODY 32405340	Collision Electrical Fundamentals	2	2.0	2.0
AUTOBODY 32405361	Collision Repair/Refinishing Theory 1	3	6.0	0.0
SMLBUS 10145189	Customer Relations	2	2.0	0.0

### Second Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
AUTOBODY 32405303	Non-Structural Panel Repair & Glass Servicing	5	0.0	10.0
AUTOBODY 32405304	Refinishing 2/Trim & Hardware	5	0.0	10.0
AUTOBODY 32405341	Collision Mechanical Systems	2	2.0	2.0
AUTOBODY 32405363	Collision Repair and Refinishing Theory 2	3	6.0	0.0
MATH 31804379	Vocational Math 1	1	2.0	0.0





# Automated Manufacturing Systems Technology

Program Number: 106283

Associate in Applied Science

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ENGLISH 10801195	Written Communication	3	3.0	0.0
MATH 10804107	College Mathematics	3	2.0	2.0
INDMANUF 10623300	Fluid Power 1 for Industry	1	0.0	2.0
INDMANUF 10623301	Fluid Power 2 for Industry	2	0.0	4.0
INDMANUF 10623310	Mechanisms for Industry 1	1	0.0	2.0
INDMANUF 10623408	Computer-Assisted Design-2D	2	0.5	3.0
AUTMFG 10628170	Robotics for Industrial Automation 1	1	0.0	2.0
AUTMFG 10628401	PLCs for Industrial Automation 1	1	0.5	1.0
AUTMFG 10628420	Introduction to Logic & Troubleshooting	1	0.0	2.0

### Second Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ECON 10809195	Economics	3	3.0	0.0
COMPSOFT 10103186	MS (Microsoft) Project	2	0.5	3.0
MACHT 10420126	Manufacturing Materials	2	0.0	4.0
IND MECH 10462320	DC/AC Circuits	3	0.0	6.0
INDMANUF 10623100	Safety for Industry	1	0.0	2.0
INDMANUF 10623200	Interpreting Engineering Drawings	2	0.0	4.0
AUTMFG 10628168	Robotics for Industrial Automation 2	2	0.5	3.0
AUTMFG 10628302	Integration Introduction	2	0.0	4.0
AUTMFG 10628402	PLCs for Industrial Automation 2	1	0.5	1.0

### Third Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ENGLISH 10801197	Technical Reporting	3	3.0	0.0
PSYCH 10809199	Psychology Of Human Relations	3	3.0	0.0
IND MECH 10462322	Industrial Electricity and Controls	4	0.0	8.0
INDMANUF 10623409	Computer-Assisted Design-3D	2	0.5	3.0
AUTMFG 10628403	Programmable Automation Controller 1	2	1.0	2.0
AUTMFG 10628450	Integration of Mechanisms and Controls 1	4	0.0	8.0

### Fourth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
PHILOS 10809166	Intro to Ethics: Theory & App	3	3.0	0.0
SOC 10809197	Contemporary American Society	3	3.0	0.0
AUTMFG 10628172	Vision for Robotics in Industrial Automation	2	0.0	4.0
AUTMFG 10628404	Programmable Automation Controller 2	2	1.0	2.0
AUTMFG 10628451	Integration of Mechanisms and Controls 2	4	0.5	7.0
AUTMFG 10628500	Introduction to HMI and SCADA Development	2	0.0	4.0



# Automotive Technician

Program Number: 324042

A Two Year Technical Diploma

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
AUTOTEC 10602125	Electrical and Electronics Systems 1	2	2.0	0.0
AUTOTEC 10602127	Electrical and Electronics Systems 2	2	1.5	3.0
AUTOTEC 10602166	Powertrain Management Technology	5	0.0	10.0
AUTOTEC 10602102	Service Repair Procedures	5	0.0	10.0
WELD 10442126	Metal Repair Techniques	2	1.0	0.0
COLLSUCC 10890101	College Success and Study Skills 1cr	1	1.0	0.0

### Second Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
AUTOTEC 10602156	Comfort Control Systems	2	0.0	4.0
AUTOTEC 10602157	Technical Braking Systems	5	0.0	10.0
AUTOTEC 10602163	Steering & Suspension Systems	5	0.0	10.0
MATH 10804134	Mathematical Reasoning	3	2.0	2.0

### Third Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
AUTOTEC 10602154	Automatic Transmissions	5	0.0	10.0
AUTOMECH 32404356	Manual Drivetrain & Axles	5	2.0	8.0
AUTOTEC 10602115	Hybrid and Alternative Fueled Vehicles	2	0.0	4.0
AUTOTEC 10602158	Service Management	1	0.0	2.0
PHYSICS 10806139	Survey of Physics	3	1.0	4.0

### Fourth Semester

Class Course Number	Class Name	Credit / Units	Hours Per Week	
			Lecture	Lab
AUTOTEC 10602162	Automobile Accessories	2	0.0	4.0
AUTOTEC 10602150	Internal Combustion Engines	5	0.0	10.0
AUTOTEC 10602152	Driveability Analysis	5	0.0	10.0



# Automotive Technology - Comprehensive

Program Number: 106026

Associate in Applied Science

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
AUTOTEC 10602102	Service Repair Procedures	5	0.0	10.0
AUTOTEC 10602125	Electrical and Electronics Systems 1	2	2.0	0.0
AUTOTEC 10602127	Electrical and Electronics Systems 2	2	1.5	3.0
AUTOTEC 10602156	Comfort Control Systems	2	0.0	4.0
AUTOTEC 10602166	Powertrain Management Technology	5	0.0	10.0
MATH 10804134	Mathematical Reasoning	3	2.0	2.0

### Second Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
WELD 10442126	Metal Repair Techniques	2	1.0	0.0
AUTOTEC 10602157	Technical Braking Systems	5	0.0	10.0
AUTOTEC 10602158	Service Management	1	0.0	2.0
AUTOTEC 10602163	Steering & Suspension Systems	5	0.0	10.0
ENGLISH 10801195	Written Communication	3	3.0	0.0
PSYCH 10809199	Psychology Of Human Relations	3	3.0	0.0

### Third Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
AUTOTEC 10602153	Manual Drivetrains & Axles	4	0.0	8.0
AUTOTEC 10602154	Fluid Power Transmissions	5	0.0	10.0
AUTOTEC 10602162	Automobile Accessories	2	0.0	4.0
PHYSICS 10806139	Survey of Physics	3	1.0	4.0
ECON 10809195	Economics	3	3.0	0.0

### Fourth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
AUTOTEC 10602115	Hybrid and Alternative Fueled Vehicles	2	0.0	4.0
AUTOTEC 10602150	Internal Combustion Engines	4	0.0	10.0
AUTOTEC 10602152	Driveability Analysis	4	0.0	10.0
ENGLISH 10801197	Technical Reporting	3	3.0	0.0



# Baking & Decorative Arts

Program Number: 313141

*A One Year Technical Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Prior to Start of Program

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
CUL ARTS 10316101	Principles Of Sanitation	1	1.0	0.0

### First Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
BAKING 31314302	Yeast Breads	4	0.0	8.0
BAKING 31314306	Bakery Retail	1	0.0	2.0
BAKING 31314309	Baking Principles	2	4.0	0.0
BAKING 31314315	Intro to Baking	3	0.0	6.0
BAKING 31314375	Experimental Baking	1	0.0	2.0
BAKING 31314384	Cake Decorating	3	0.0	6.0

### Second Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
BAKING 31314305	Chocolate	2	0.0	4.0
BAKING 31314335	Specialty Cakes & Miniatures	3	0.0	6.0
BAKING 31314345	Artisan Breads & Breakfast Pastries	3	0.0	6.0
BAKING 31314355	Bakery Production	3	0.0	6.0
BAKING 31314388	Advanced Cake Decorating	2	0.0	4.0
BAKING 31314389	Baking Seminar	1	2.0	0.0



# Baking & Decorative Arts

Program Number: 303078

*Embedded Technical Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Required Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
EARLYCHL 10307167	ECE: Health, Safety, & Nutrition	3	3.0	0.0
EARLYCHL 10307178	ECE: Art, Music & Lang Arts	3	2.0	2.0
EARLYCHL 10307188	ECE: Guiding Child Behavior	3	2.0	2.0



# Basic Industrial Power

Program Number: 304626

*Embedded Technical Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Required Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
INDMANUF 10623300	Fluid Power 1 for Industry	1	0.0	2.0
INDMANUF 10623301	Fluid Power 2 for Industry	2	0.0	4.0
INDMANUF 10623100	Safety for Industry	1	0.0	2.0
INDMANUF 10623200	Interpreting Engineering Drawings	2	0.0	4.0
MATH 31804381	Machine Tool Math 1	2	4.0	0.0
MATH 31804382	Machine Tool Math 2	1	2.0	0.0
SMLBUS 10145189	Customer Relations	2	2.0	0.0



# Biotechnology Intensive Post-baccalaureate

Program Number: 900072CERT

*Certificate*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Required Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
BIOTECH 10007103	Biotechnology Laboratory Skills for a Regulated Workplace	3	1.0	0.0
BIOTECH 10007122	Protein Bioseparations Methods	3	1.0	0.0
BIOTECH 10007123	Cell Culturing	3	1.0	0.0
BIOTECH 10007124	Molecular Biology 1	3	1.0	0.0
BIOTECH 10007136	Laboratory Math for Biotechnology	1	0.0	2.0
BIOTECH 10007152	Making Biotech Products in a Quality Environment	2	0.0	4.0



# Biotechnology Laboratory Support Assistant

Program Number: 300071

*Embedded Technical Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Required Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
BIOTECH 10007103	Biotechnology Laboratory Skills for a Regulated Workplace	3	1.0	0.0
BIOTECH 10007105	Bioprocess Technology	3	1.0	0.0
BIOTECH 10007108	Hazardous Materials - Biotechnology	1	0.5	1.0
BIOTECH 10007111	Biotechnology Career Seminar	1	1.0	0.0
BIOTECH 10007136	Laboratory Math for Biotechnology	1	0.0	2.0





# Biotechnology Laboratory Technician

Program Number: 100072

Associate in Applied Science

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
BIOTECH 10007103	Biotechnology Laboratory Skills for a Regulated Workplace	3	1.0	0.0
BIOTECH 10007108	Hazardous Materials - Biotechnology	1	0.5	1.0
BIOTECH 10007111	Biotechnology Career Seminar	1	1.0	0.0
BIOTECH 10007115	General Cell Biology	4	3.0	0.0
BIOTECH 10007136	Laboratory Math for Biotechnology	1	0.0	2.0
ENGLISH 10801195	Written Communication	3	3.0	0.0

Choose from one of the following courses.

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
CHEM 10806127	Chemistry 1	4	3.0	2.0
CHEM 20806201	General, Organic & Biological Chemistry	5	4.0	2.0

### Second Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
BIOTECH 10007104	Chromatography Techniques	3	1.0	0.0
BIOTECH 10007105	Bioprocess Technology	3	1.0	0.0
BIOTECH 10007110	Biotechnology Applications	1	1.0	0.0
BIOTECH 10007174	Applied Microbiology	4	2.0	4.0
COMM 10801196	Oral/Interpersonal Communication	3	3.0	0.0

Choose from one of the following courses.

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
CHEM 10806129	Chemistry 2	4	2-Mar	
CHEM 20806216	Chemistry for Biotechnology	3	2-Feb	

### Third Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
BIOTECH 10007122	Protein Bioseparations Methods	3	1.0	0.0
BIOTECH 10007123	Cell Culturing	3	1.0	0.0
BIOTECH 10007124	Molecular Biology 1	3	1.0	0.0
BIOTECH 10007152	Making Biotech Products in a Quality Environment	2	0.0	4.0
SOC 10809197	Contemporary Amer Society	3	3.0	0.0
PSYCH 10809199	Psychology Of Human Relations	3	3.0	0.0
BIOTECH 10007112	Biotechnology Employment Skills	1	1.0	0.0

### Fourth Semester

Class Course Number	Class Name	Credits / Units	Hour Per Week	
			Lecture	Lab
BIOTECH 10007121	Applied Biochemistry	3	2.0	0.0
BIOTECH 10007125	Research Methods in Molecular Biology	3	1.0	0.0
BIOTECH 10007126	Occupational Work Experience	3	0.0	0.0
ECON 10809195	Economics	3	3.0	0.0
	Elective	3		



## Recommended Electives

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
BIOTECH 10007137	Selected Topics in HPLC	1	0.0	2.0
BIOTECH 10007155	Quality Regulations and Standards for Biotechnology	2	2.0	0.0
BIOLOGY 20806203	Introductory Zoology	5	4.0	2.0



# Biotechnology Post-baccalaureate

Program Number: 900071CERT

Certificate

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Required Course

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
BIOTECH 10007103	Biotechnology Laboratory Skills for a Regulated Workplace	3	1.0	0.0

### Elective Courses

In addition, participants choose a minimum of 12 additional credits from the following list.

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
BIOTECH 10007105	Bioprocess Technology	3	1.0	0.0
BIOTECH 10007104	Chromatography Techniques	3	1.0	0.0
BIOTECH 10007124	Molecular Biology 1	3	1.0	0.0
BIOTECH 10007122	Protein Bioseparations Methods	3	1.0	0.0
BIOTECH 10007123	Cell Culturing	3	1.0	0.0
BIOTECH 10007174	Applied Microbiology	4	2.0	4.0
BIOTECH 10007152	Making Biotech Products in a Quality Environment	2	0.0	4.0
BIOTECH 10007155	Quality Regulations and Standards for Biotechnology	2	2.0	0.0
BUSADM 10102115	Introduction to Business	2	2.0	0.0
BIOTECH 10007125	Research Methods in Molecular Biology	3	1.0	0.0
BIOTECH 10007116	Introduction to Human Stem Cell Methods	3	0.0	6.0
BIOTECH 10007118	Introduction to Human Stem Cell Concepts	1	1.0	0.0
BIOTECH 10007117	Advanced Human Stem Cell Methods	3	0.0	6.0
BIOTECH 10007119	Advanced Human Stem Cell Concepts	1	1.0	0.0
BIOTECH 10007121	Applied Biochemistry	3	2.0	0.0
BIOTECH 10007137	Selected Topics in HPLC	1	0.0	2.0



# Bricklaying/Masonry Apprenticeship

Program Number: 504081

*Apprenticeship Completion*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
BRCKMSN 50408510	Tech Brick Sem 1	2	3.0	0.0

### Second Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
BRCKMSN 50408511	Tech Brick Sem 2	2	3.0	0.0

### Third Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
BRCKMSN 50408512	Tech Brick Sem 3	2	3.0	0.0

### Fourth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
BRCKMSN 50408513	Tech Brick Sem 4	2	3.0	0.0

### Fifth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
BRCKMSN 50408514	Tech Brick Sem 5	2	3.0	0.0

### Sixth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
BRCKMSN 50408515	Tech Brick Sem 6	2	3.0	0.0



# Business Management

Program Number: 101023

Associate in Applied Science

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Required Courses

#### First Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ENGLISH 10801195	Written Communication	3	3.0	0.0
MATH 10804144	Math of Finance	3	3.0	0.0
ACCTG 10101111	Accounting 1 - Principles	4	4.0	0.0
BUSADM 10102134	Business Organization, Management, and Ethics	3	3.0	0.0
HRMGT 10116145	Introduction to Human Resources	3	3.0	0.0

#### Second Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
COMM 20810205	Small Group & Interpersonal Communications	3	3.0	0.0
PSYCH 10809199	Psychology Of Human Relations	3	3.0	0.0
ACCTG 10101118	Management Accounting	4	4.0	0.0
BUSADM 10102135	Project Management - Fundamentals	3	3.0	0.0
COMPSOFT 10103133	Excel Beginning	1	0.27	1.5
COMPSOFT 10103139	Excel Intermediate	1	0.27	1.5

#### Third Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
BUSADM 10102114	Business Communication	3	Mar-00	
BUSADM 10102143	Management Techniques	3	Mar-00	
MKTG 10104102	Marketing Principles	3	Mar-00	
FINANCE 10114126	Corporate Finance	3	Mar-00	

Choose from one of the following options.

#### Option A: Employment Law and an Elective

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
HRMGT 10116168	Employment Law Emphasis Area Course	3	3-0	
	Elective	3		

#### Option B: 6 Credits from One Emphasis Area

See list of courses on next page.

#### Fourth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
BUSADM 10102104	Business Statistics	3	3.0	0.0
BUSADM 10102132	Strategic Leadership	3	3.0	0.0
BUSADM 10102133	Topics in Tactical Management	3	3.0	0.0
ECON 10809195	Economics	3	3.0	0.0



Choose from one of the following options.

*Option A: Employment Law and an Elective*

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
HRMGT 10116168	Employment Law Emphasis Area Course	3	3-0	
	Elective	3		

*Option B: 6 Credits from One Emphasis Area*

See list of courses below.

**Business-Related Emphasis Area Courses**

*Accounting Emphasis*

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ACCTG 10101113	Accounting 2 - Principles	4	4.0	0.0
ACCTG 10101123	Tax 1	4	4.0	0.0
ACCTG 10101138	Accounting And Payroll Systems	3	2.0	2.0
ACCTG 10101139	QuickBooks-Beginning	1	0.5	1
ACCTG 10101141	QuickBooks-Intermediate	1	0.5	1

*AgriBusiness Emphasis*

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
FARMBUS 10090381	Agriculture Business Management	3	3.0	0.0
FARMBUS 10090382	Principles of Sustainable Soil and Crop Management	3	3.0	0.0
FARMBUS 10090385	Principles of Animal Science and Management	3	3.0	0.0
FARMBUS 10090386	Agriculture Finance and Economics	3	3.0	0.0

*Finance Emphasis*

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
FINANCE 10114128	Financial Institutions	3	3.0	0.0
FINANCE 10114130	Personal Finance	3	3.0	0.0
FINANCE 10114140	Investments	3	3.0	0.0

*Human Resources Emphasis*

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
HRMGT 10116147	Wage, Salary & Benefits Admin	3	3.0	0.0
HRMGT 10116148	Labor Relations	3	3.0	0.0
HRMGT 10116149	Effective Staffing	3	3.0	0.0
HRMGT 10116152	Organizational Training and Development	3	3.0	0.0
HRMGT 10116168	Employment Law	3	3.0	0.0

*Marketing Emphasis*

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
MKTG 10104104	Selling Principles	3	3.0	0.0
MKTG 10104114	Social Media Principles	3	3.0	0.0
MKTG 10104125	Principles of Advertising	3	3.0	0.0
MKTG 10104126	Public Relations	3	3.0	0.0
MKTG 10104162	Mobile Marketing (Social Media)	3	3.0	0.0
MKTG 10104169	Internet Marketing	3	3.0	0.0

*Medical Administrative Emphasis*

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
COMPSOFT 10103169	Collaboration Tools	1	0.27	1.5
MEDADMIN 10160165	Medical Administrative Procedures	3	1.0	4.0
MEDADMIN 10160178	Medical Language for the Business Professional 1	2	1.0	2.0



### Microsoft Skills Emphasis

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
COMPSOFT 10103145	Access	1	0.27-1.5	
COMPSOFT 10103165	Outlook	1	0.27-1.5	
ADMINPRF 10106107	Business Document Applications	3	4-Jan	
ADMINPRF 10106109	Business Spreadsheet Applications	3	4-Jan	
ADMINPRF 10106231	Business Presentations and Publications	3	4-Jan	

### Project Management Emphasis

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
COMPSOFT 10103186	MS (Microsoft) Project	2	0.5	3.0
COMPSOFT 10103169	Collaboration Tools	1	0.27	1.5
BUSADM 10102131	Project Management and Sustainable Change	3	3.0	0.0

### Real Estate Emphasis

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
RLEST 10194182	Real Estate Law	4	4.0	0.0
RLEST 10194185	Real Estate Brokerage	4	4.0	0.0

### Risk Management & Insurance Emphasis

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
INSMGT 10162125	Intro to Business Insurance Contracts (AAI 82)	3	3.0	0.0
INSMGT 10162126	Introduction to Loss Investigaton (AIC 33)	3	3.0	0.0
INSMGT 10162131	Introduction to Employee Benefits	1	3.0	0.0
INSMGT 10162133	Managing Business Risks	3	3.0	0.0
INSMGT 10162135	Detecting Employee Fraud	3	3.0	0.0

### Small Business Emphasis

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
SMLBUS 10145102	Small Business Development	3	3.0	0.0
SMLBUS 10145105	Operations Management	3	3.0	0.0
SMLBUS 10145106	Small Business Marketing	3	3.0	0.0
SMLBUS 10145117	Introduction to Entrepreneurship	3	3.0	0.0
SMLBUS 10145185	Customer Service Management	3	3.0	0.0



# Business Plan

Program Number: 901453CERT

*Certificate*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### *Required Courses*

Class Course Number	Class Name	Credits / Hours	Hours Per Week	
			Lecture	Lab
SMLBUS 10145102	Small Business Development	3	3.0	0.0
SMLBUS 10145106	Small Business Marketing	3	3.0	0.0

### *Take one of the following courses:*

Class Course Number	Class Name	Credits / Hours	Hours Per Week	
			Lecture	Lab
SMLBUS 10145108	Field Experience	2	1.0	0.0
SMLBUS 10145117	Introduction to Entrepreneurship	3	3.0	0.0





# CNC Operations

Program Number: 904203CERT

*Certificate*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number		Hours Per Week		
MACHT 32420346	Intro to CNC - G-code Programming	2	2.0	2.0
MACHT 32420337	Manufacturing w/Solid Modeling-2D	2	4.0	0.0
MACHT 32420348	Applied CNC-Conversational and Setup	2	2.0	2.0
MACHT 32420336	Manufacturing w/Solid Modeling 3D	2	4.0	0.0
MACHT 32420389	Applied CNC - Intermediate Operations	2	1.0	3.0
MACHT 32420370	Manufacturing w/Solid Modeling-Advanced	1	1.0	1.0
MACHT 32420391	Applied CNC - Advanced Operations	1	0.0	2.0



# Cabinetmaking and Millwork

Program Number: 314092

*A One Year Technical Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
CABMIL 31409328	Woodworking 1A	2	1.0	3.0
CABMIL 31409329	Woodworking 1B	3	1.0	5.0
CABMIL 31409331	Woodworking 2: Materials and Processes	5	2.0	8.0
CABMIL 31409337	Workplace Safety	1	0.0	2.0
CABMIL 31409341	Wood Finishing A	1	1.0	1.0
CABMIL 31409381	Drawing 1	1	0.0	2.0
CABMIL 31409382	Drawing 2	1	0.0	2.0
CABMIL 31409342	Laminates 1	2	1.0	1.0
CABMIL 31409101	Surfaces 1	1	1.0	1.0

### Second Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
CABMIL 31409332	Cabinetmaking, Millwork & Furniture 1	5	2.0	8.0
CABMIL 31409333	Cabinetmaking, Millwork, and Furniture 2	5	2.0	8.0
CABMIL 31409340	Tool & Machine Maintenance	1	1.0	1.0
CABMIL 31409102	Surfaces 2	1	1.0	1.0
CABMIL 31409100	Laminates 2	1	1.0	1.0
CABMIL 31409345	Wood Finishing B	1	0.0	2.0
CABMIL 31409383	AutoCAD for Cabinet Drawing 1	1	0.0	2.0
CABMIL 31409384	AutoCAD for Cabinet Drawing 2	1	0.0	2.0



# Carpentry (Construction)

Program Number: 504101

*Apprenticeship Completion*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
CARP 50410593	Tech Carpentry Semester 1	2	1.5	3.0

### Second Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
CARP 50410594	Tech Carpentry Semester 2	2	2.22	2.22

### Third Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
CARP 50410595	Tech Carpentry Semester 3	2	1.5	3.0

### Fourth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
CARP 50410596	Tech Carpentry Semester 4	2	3.33	1.11

### Fifth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
CARP 50410597	Tech Carpentry Semester 5	2	1.5	3.0

### Sixth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
CARP 50410598	Tech Carpentry Semester 6	2	3	1.5



# Carpentry Techniques

Program Number: 304102

*Embedded Technical Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Required Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
CONST 31410301	Introduction to Construction	5	2.0	8.0
CONST 31410328	Construction Techniques 1	5	2.0	.0
CONST 31410337	Workplace Safety	1	0.0	2.0
CONST 31410399	Fundamentals Of Construction	3	1.0	5.0
COMM 31801356	Communications 1	1	2.0	0.0
MATH 31804379	Vocational Math 1	1	2.0	0.0



# Child Care Services

Program Number: 313071

*A One Year Technical Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
EARLYCHL 10307148	ECE: Foundations of ECE	3	3.0	0.0
EARLYCHL 10307151	ECE: Infant & Toddler Development	3	3.0	0.0
EARLYCHL 10307166	ECE: Curriculum Planning	3	2.0	2.0
EARLYCHL 10307167	ECE: Health, Safety, & Nutrition	3	3.0	0.0
EARLYCHL 10307174	ECE: Practicum 1	3	1.0	0.0
ENGLISH 10801195	Written Communication	3	3.0	0.0

### Second Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
EARLYCHL 10307178	ECE: Art, Music & Lang Arts	3	2.0	2.0
EARLYCHL 10307179	ECE: Child Development	3	3.0	0.0
EARLYCHL 10307188	ECE: Guiding Child Behavior	3	2.0	2.0
EARLYCHL 10307192	ECE: Practicum 2	3	1.0	0.0



# Civil Engineering Technology

Program Number: 106071

Associate in Applied Science

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
CIVILET 10607120	Methods In Civil Engineering	2	2.0	0.0
CIVILET 10607155	Survey 1	3	1.5	3.0
ENGLISH 10801195	Written Communication	3	3.0	0.0
MATH 10804114	College Technical Math 1B	2	2.0	0.0
ECON 10809195	Economics	3	3.0	0.0
PSYCH 10809199	Psychology Of Human Relations	3	3.0	0.0
CIVILET 10607125	Intro To Cad Civil Engineer	2	1.0	2.0

### Second Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
COMPSOFT 10103133	Excel Beginning	1	0.27	1.5
CIVILET 10607147	Civil Drawing 1	3	1.0	2.0
CIVILET 10607149	Aggregates And Concrete	2	1.0	0.0
CIVILET 10607156	Survey 2	3	2.0	0.0
CIVILET 10607193	Career Development - Civil Engineering Program	1	1.0	0.0
MATH 10804116	College Technical Math 2	4	4.0	0.0
PHYSICS 10806154	General Physics 1	4	3.0	2.0

### Third Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
CIVILET 10607148	Civil Drawing 2	2	1.0	0.0
CIVILET 10607158	Survey 3	3	1.0	2.0
CIVILET 10607160	Soils	2	1.0	0.0
CIVILET 10607172	Stormwater Management	2	1.0	2.0
CIVILET 10607177	Legal Elements Engineering	2	2.0	0.0
ENGLISH 10801197	Technical Reporting	3	3.0	0.0
	Elective	3		

### Fourth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
CIVILET 10607133	Estimating	3	2-Feb	
CIVILET 10607161	Project - Civil Engineering Technology Program	3	Jan-00	
CIVILET 10607171	Construction Materials -Civil Engineering Technician Program	2	2-Jan	
CIVILET 10607179	Intro to Geographical Information Systems (GIS)	2	2-Jan	
CIVILET 10607182	Water Supply and Sewerage	2	2-Jan	
	Elective	3		



# Clinical Ophthalmic Assistant

Program Number: 905161CERT

*Certificate*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
OPTOMET 31516325	Optical Dispensing 1	3	3.0	2.0
OPTOMET 31516301	Ophthalmic Pre-Testing	3	3.0	3.0
OPTOMET 31516305	Basic Optical Concepts	3	3.0	2.0
OPTOMET 31516315	Ocular Anatomy	2	3.0	1.0
OPTOMET 31516339	Human Relations - Optometric Technician Program	1	2.0	0.0

### Second Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
OPTOMET 31516327	Clinical Ophthalmic Procedures	2	0.0	4.0
OPTOMET 31516326	Optical Dispensing 2	2	2.0	2.0
OPTOMET 31516330	Contact Lenses	3	2.5	2.5
OPTOMET 31516335	Ophthalmic Specialty Testing	3	4.0	2.0
OPTOMET 31516340	Patient Relations/Pract Manage	2	3.33	0.0
OPTOMET 31516345	Preclinical	2	0.0	4.0
OPTOMET 31516350	Clinical Experience	3	0.0	0.0

### Third Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
OPTOMET 31516351	Clinical Experience 2	3	0-0	



# Construction Essentials

Program Number: 304103

*Embedded Technical Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
CONST 31410337	Workplace Safety	1	0.0	2.0
CONST 31410399	Fundamentals Of Construction	3	1.0	5.0
COMM 31801356	Communications 1	1	2.0	0.0
MATH 31804379	Vocational Math 1	1	2.0	0.0





# Construction and Remodeling

Program Number: 314106

*A One Year Technical Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
CONST 31410301	Introduction to Construction	5	2.0	8.0
CONST 31410302	Plans, Site and Formwork	2	1.0	3.0
CONST 31410309	Plan Reading and Drawing	1	1.0	1.0
CONST 31410328	Construction Techniques 1	5	2.0	8.0
CONST 31410337	Workplace Safety	1	0.0	2.0
CONST 31410410	Fundamentals of Construction 1	2	1.0	2.0
MATH 31804379	Vocational Math 1	1	2.0	0.0

### Second Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
CONST 31410308	Construction Industry Codes and Regulations	2	2.0	2.0
CONST 31410329	Construction Techniques 2	5	2.0	8.0
CARP 31410335	Intermediate Carpentry Lab	2	1.0	3.0
CONST 31410335	Intermediate Carpentry Lab	2	1.0	3.0
CONST 31410345	Materials and Estimating 1	1	2.0	0.0
CONST 31410411	Fundamentals of Construction 2	1	0.0	2.0
COMM 31801356	Communications 1	1	2.0	0.0

Select 3 courses from the Course Selectives list below.

### 3 Course Selectives

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
CONST 31410363	Building Science and Sustainability	1	2.0	0.0
CONST 31410385	Introduction to 3D Computer Assisted Drafting	1	1.0	1.0
CONST 31410311	Commercial Construction	1	0.0	2.0
CONST 31410310	Materials and Estimating 2	1	2.0	0.0
CONST 31410324	Remodeling Techniques	1	1.0	1.0



# Cosmetology

Program Number: 315021

*A One Year Technical Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Prior to Start of Program

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
COSMET 10502330	Making the Cut	1	1.0	0.0

### First Semester

Class Course Number	Class Name	Credits / Units	Hour Per Week	
			Lecture	Lab
COSMET 31502321	Cosmetology Techniques 1	3	0.0	6.0
COSMET 31502322	Cosmetology Techniques 2	2	0.0	4.0
COSMET 31502340	Cosmetology Theory 1	5	10.0	0.0
COSMET 31502341	Cosmetology Theory 2	4	8.0	0.0

### Second Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
COSMET 31502323	Cosmetology Techniques 3	3	0.0	6.0
COSMET 31502324	Cosmetology Techniques 4	3	0.0	6.0
COSMET 31502325	Cosmetology Techniques 5	4	0.0	8.0
COSMET 31502342	Cosmetology Theory 3	4	8.0	0.0
COSMET 31502392	Cosmetology Sales and Advertising 1	1	2.0	0.0
COSMET 31502398	Cosmetology Client Relations	1	2.0	0.0

### Third Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
COSMET 31502326	Cosmetology Techniques 6	4	0.0	8.0
COSMET 31502327	Cosmetology Techniques 7	4	0.0	8.0
COSMET 31502328	Cosmetology Techniques 8	4	0.0	8.0
COSMET 31502393	Cosmetology Sales and Advertising 2	1	2.0	0.0
COSMET 31502343	Cosmetology Theory 4	3	6.0	0.0
COSMET 31502395	Cosmetology State Board Review	1	2.0	0.0



# Cosmetology Apprenticeship

Program Number: 505021

*A One Year Technical Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
COSMET 50502521	Trichology, Bacteriology, Sterilization and Sanitation	2	4.0	0.0

### Second Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
COSMET 50502522	Hair Cutting, Design and Chemical Services	2	4.0	0.0

### Third Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
COSMET 50502523	Hygiene, Facial Anatomy, Skin Care, and Make-up	2	4.0	0.0

### Fourth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
COSMET 50502524	Nail Care and State Regulations	2	4.0	0.0



# Court Reporting

Program Number: 101702

Associate in Applied Science

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
BUSADM 10102160	Business Law 1	3	3.0	0.0
COURT 10170111	Court Reporting 1	4	2.0	4.0
COURT 10170121	CAT Class 1	1	0.77	0.5
COURT 10170131	English for Realtime Reporters 1	1	0.77	0.5
MATH 10804123	Math with Business Applications	3	3.0	0.0

### Second Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
COURT 10170112	Court Reporting 2	4	2.0	4.0
COURT 10170122	CAT Class 2	1	0.77	0.5
COURT 10170132	English for Realtime Reporters 2	1	0.77	0.5
MEDTERM 10501101	Medical Terminology	3	3.0	0.0
SOC 10809197	Contemporary Amer Society	3	3.0	0.0

### Third Semester (Summer)

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
COURT 10170113	Court Reporting 3	4	2.0	4.0
SOC 10809172	Introduction to Diversity Studies	3	3.0	0.0

### Fourth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
COURT 10170114	Court Reporting 4	4	2.0	4.0
COURT 10170124	CAT Class 4	1	0.5	1.0
COURT 10170134	English for Realtime Reporters 4	1	0.5	1.0
ENGLISH 10801195	Written Communication	3	3.0	0.0
PSYCH 10809199	Psychology Of Human Relations	3	3.0	0.0

### Fifth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
COURT 10170115	Court Reporting 5	4	2.0	4.0
COURT 10170125	CAT Class 5	1	0.5	1.0
COURT 10170135	English for Realtime Reporters 5	1	0.5	1.0
COMM 10801196	Oral/Interpersonal Communication	3	3.0	0.0
ECON 10809195	Economics	3	3.0	0.0

### Sixth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
COURT 10170116	Court Reporting 6	4	2.0	4.0
COURT 10170170	Court Reporting Procedures	3	3.0	0.0
COURT 10170171	Legal Terminology	2	2.0	0.0
COURT 10170172	Court Reporting Internship	3	0.0	0.0



# Criminal Justice - Law Enforcement

Program Number: 105041

Associate in Applied Science

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
CRIMJUST 10504170	Introduction to Corrections	3	3.0	0.0
CRIMJUST 10504900	Introduction to Criminal Justice	3	3.0	0.0
ENGLISH 10801195	Written Communication	3	3.0	0.0
MATH 10804107	College Mathematics	3	2.0	2.0
PSYCH 10809199	Psychology Of Human Relations	3	3.0	0.0
COLLSUCC 10890101	College Success and Study Skills 1cr	1	1.0	0.0

### Second Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
CRIMJUST 10504171	Private Sector Security	3	3.0	0.0
CRIMJUST 10504902	Criminal Law	3	3.0	0.0
CRIMJUST 10504904	Juvenile Law	3	3.0	0.0
COMM 10801196	Oral/Interpersonal Communication	3	3.0	0.0
POLISCI 10809122	Intro to Amer Government	3	3.0	0.0
SOC 10809197	Contemporary Amer Society	3	3.0	0.0

### Third Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
CRIMJUST 10504103	Professional Development Seminar for Criminal Justice	1	1.0	0.0
CRIMJUST 10504901	Constitutional Law	3	3.0	0.0
CRIMJUST 10504905	Report Writing	3	3.0	0.0
CRIMJUST 10504906	Criminal Investigation Theory	3	2.0	2.0
CRIMJUST 10504908	Traffic Theory	3	3.0	0.0
EMS 10531150	Emergency Response for Protective Services-Criminal Justice/Law Enforcement Program	2	2.0	0.0
	<i>Elective</i>	3		

### Fourth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
CRIMJUST 10504143	Criminology for Law Enforcement	3	3.0	0.0
CRIMJUST 10504152	Emergency Management	3	3.0	0.0
CRIMJUST 10504903	Professional Communications	3	3.0	0.0
CRIMJUST 10504907	Community Policing Strategies	3	3.0	0.0
SOC 10809172	Introduction to Diversity Studies	3	3.0	0.0
	<i>Elective</i>	3		



# Criminal Justice - Law Enforcement 720 Academy

Program Number: 305042

*Less Than One Year Tech Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Required Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lectur	Lab
CRIMJUST 30504310	Application of Investigations	2	0.83	1.16
CRIMJUST 30504311	Application of Traffic Response	2	1.66	3.33
CRIMJUST 30504312	Health and Fitness	1	0.22	1.88
CRIMJUST 30504313	Overview of Criminal Justice	1	2.0	0.11
CRIMJUST 30504314	Overview of Investigations	2	2.66	0.44
CRIMJUST 30504315	Overview of Patrol Response	2	2.11	0.88
CRIMJUST 30504316	Overview of Tactics	1	1.11	1.22
CRIMJUST 30504317	Principles of Emergency Vehicle Response	2	0.66	2.66
CRIMJUST 30504318	Principles of Investigations	2	1.66	0.77
CRIMJUST 30504319	Principles of Patrol Response	2	2.22	2.11
CRIMJUST 30504320	Principles of Tactics	3	0.55	8.44



# Culinary Arts

Program Number: 103161

Associate in Applied Science

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
CULARTS 10316101	Principles Of Sanitation	1	1.0	0.0
CULARTS 10316106	Food Theory	2	2.0	0.0
CULARTS 10316108	Culinary Baking Fundamentals	1	1.0	0.0
CULARTS 10316111	Professional Cooking 1	4	0.0	8.0
CULARTS 10316115	Culinary Baking Lab	2	0.0	4.0
CULARTS 10316140	Menu Planning	1	1.0	0.0
PSYCH 10809199	Psychology Of Human Relations	3	3.0	0.0

### Second Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ACCTG 10101106	Accounting Fundamentals	3	3.0	0.0
CULARTS 10316121	Professional Cooking 2	4	0.0	8.0
CULARTS 10316133	Garde Manger/Decorative Foods	2	0.0	2.0
CULARTS 10316139	Catering	2	2.0	0.0
CULARTS 10316152	Nutrition	1	1.0	0.0
ENGLISH 10801195	Written Communication	3	3.0	0.0

### Third Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
CULARTS 10316194	Culinary Internship	2	0.0	0.0

### Fourth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
HOSPT 10109134	Cost Control/Revenue Management	3	3.0	0.0
CULARTS 10316104	Advanced Skills Lab 1	3	0.0	6.0
CULARTS 10316158	Food Purchasing Analysis	1	1.0	0.0
CULARTS 10316132	Waitstaff Training	2	0.0	4.0
MATH 10804123	Math with Business Applications	3	3.0	0.0
SOC 10809197	Contemporary Amer Society	3	3.0	0.0
	<i>Elective</i>	3		

### Fifth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
HOSPT 10109125	Hospitality Leadership	3	Mar-00	
CULARTS 10316130	Advanced Skills Lab 2	4	6-Jan	
CULARTS 10316135	Dining Room Operations	2	0-4	
COMM 10801196	Oral/Interpersonal Communication	3	Mar-00	
ECON 10809195	Economics	3	Mar-00	



## Recommended Electives

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
HOSPT 10109136	Hospitality Law	3	3.0	0.0
CUL ARTS 10316112	Cuisines of the World	2	0.0	4.0
CUL ARTS 10316118	Meat Cutting	2	1.0	2.0
CUL ARTS 10316178	Americana Cuisine	2	0.0	4.0
CUL ARTS 10316189	Breakfast Cookery	1	0.0	2.0





# Culinary Production Specialist

Program Number: 313162

*Embedded Technical Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits / Hours	Hours Per Week	
			Lecture	Lab
CUL ARTS 10316101	Principles Of Sanitation	1	1.0	0.0
CUL ARTS 10316106	Food Theory	2	2.0	0.0
CUL ARTS 10316108	Culinary Baking Fundamentals	1	1.0	0.0
CUL ARTS 10316111	Professional Cooking 1	4	0.0	8.0
CUL ARTS 10316115	Culinary Baking Lab	2	0.0	4.0
CUL ARTS 10316140	Menu Planning	1	1.0	0.0
PHILOS 10809166	Intro to Ethics: Theory & App	3	3.0	0.0

### Second Semester

Class Course Number	Class Name	Credits / Hours	Hours Per Week	
			Lecture	Lab
ACCTG 10101106	Accounting Fundamentals	3	3.0	0.0
CUL ARTS 10316121	Professional Cooking 2	4	0.0	8.0
CUL ARTS 10316133	Garde Manger/Decorative Foods	2	0.0	4.0
CUL ARTS 10316139	Catering	2	2.0	0.0
CUL ARTS 10316152	Nutrition	1	1.0	0.0
ENGLISH 10801195	Written Communication	3	3.0	0.0

### Third (Summer) Semester

Class Course Number	Class Name	Credits / Hours	Hours Per Week	
			Lecture	Lab
CUL ARTS 10316194	Culinary Internship	2	0.0	0.0



# Dental Assistant

Program Number: 305082

*Less Than One Year Tech Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Required Courses

Class Course Number	Class Number	Credits / Units	Hours Per Week	
			Lecture	Lab
DENTHYG 10508101	Dental Health Safety	1	0.0	2.0
DENTAST 31508302	Dental Chairside	5	4.0	6.0
DENTHYG 10508113	Dental Materials	2	1.0	2.0
DENTHYG 10508304	Dental & General Anatomy	2	2.0	0.0
DENTHYG 10508103	Dental Radiography	2	1.0	2.0
DENTAST 31508306	Dental Assistant Clinical	3	0.0	0.0
DENTAST 31508307	Dental Assistant Professional	1	2.0	0.0



# Dental Assistant

Program Number: 105081

Associate in Applied Science

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### PREREQUISITE - Pre-Dental Hygienist Courses

The following courses must be completed prior to acceptance into dental courses.

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
BIOLOGY 20806206	General Anatomy and Physiology	4	3.0	2.0
CHEM 20806201	General, Organic & Biological Chemistry	5	4.0	2.0

Choose from Microbiology or General Microbiology.

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
BIOLOGY 20806273	Microbiology-University Medical	5	3.0	4.0
BIOLOGY 20806274	General Microbiology	5	3.0	4.0

### PREREQUISITE - Summer Semester

The following must be taken prior to fall/first semester.

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
DENTHYG 10508101	Dental Health Safety	1	0.0	2.0

### First Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
DENTHYG 10508102	Oral Anatomy, Embry, Histology	4	4.0	0.0
DENTHYG 10508103	Dental Radiography	2	1.0	2.0
DENTHYG 10508105	Dental Hygiene Process 1	4	2.0	0.0

### Second Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
DENTHYG 10508106	Dental Hygiene Process 2	4	2.0	0.0
DENTHYG 10508108	Periodontology	3	3.0	0.0
DENTHYG 10508109	Cardiology	1	1.0	0.0
DENTHYG 10508110	Nutrition and Dental Health	2	2.0	0.0
DENTHYG 10508113	Dental Materials	2	1.0	2.0
PSYCH 20809231	Intro Psychology	3	3.0	0.0

### Third Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
DENTHYG 10508111	General and Oral Pathology	3	3.0	0.0
DENTHYG 10508112	Dental Hygiene Process 3	5	1.0	0.0
DENTHYG 10508114	Dental Pharmacology	2	2.0	0.0
DENTHYG 10508115	Community Dental Health	2	2.0	0.0
DENTHYG 10508118	Dental Anxiety and Pain Management	2	1.0	2.0
SOC 20809203	Intro Sociology	3	3.0	0.0



## Fourth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
DENTHYG 10508107	Dental Hygiene Ethics & Profes	1	1.0	0.0
DENTHYG 10508117	Dental Hygiene Process 4	4	0.0	0.0
ENGLISH 10801195	Written Communication	3	3.0	0.0
SPEECH 10801198	Speech	3	3.0	0.0
PSYCH 20809233	Developmental Psychology	3	3.0	0.0
	<i>Elective</i>	<i>1</i>		



# Diesel & Heavy Equipment Technician

Program Number: 324121

A Two-Year Technical Diploma

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
MATH 10804107	College Mathematics	3	2.0	2.0
DIESEL 10412140	Diesel Shop Skill Fundamentals	1	0.0	2.0
DIESEL 10412155	Heavy Duty Drivetrains	4	2.0	0.0
DIESEL 10412164	Brake and Suspension Systems	4	2.0	0.0
WELD 10442126	Metal Repair Techniques	2	1.0	0.0

### Second Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
DIESEL 10412137	Preventive Maintenance Inspections	4	3.0	2.0
DIESEL 10412144	Fundamental Diesel Electrical/Electronics Systems	3	1.0	0.0
DIESEL 10412145	Electrical/Electronics Systems Diagnostics	3	1.0	0.0
PHYSICS 10806139	Survey of Physics	3	1.0	4.0

### Third Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
DIESEL 10412138	Diesel Shop Management	2	2.0	0.0
DIESEL 10412176	Diesel Fuel Systems	4	2.0	0.0
DIESEL 10412177	Diesel Engine Diagnostics	2	1.0	2.0
DIESEL 10412178	Diagnostic Strategies	2	1.0	2.0
DIESEL 10412188	Electronic Control Systems	2	1.0	2.0
ENGLISH 10801195	Written Communication	3	3.0	0.0

### Fourth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
DIESEL 10412112	Mobile Hydraulics	3	2.0	2.0
DIESEL 10412125	Cab Climate Control and Refrigeration Systems	3	1.0	4.0
DIESEL 10412184	Diesel Engine Technology	2	0.0	4.0
DIESEL 10412185	Diesel Engine Repair	4	0.5	2.0



# Diesel Equipment Technology

Program Number: 104121

Associate in Applied Science

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
MATH 10804107	College Mathematics	3	2.0	2.0
DIESEL 10412137	Preventive Maintenance Inspections	4	3.0	2.0
DIESEL 10412144	Fundamental Diesel Electrical/Electronics Systems	3	1.0	0.0
DIESEL 10412145	Electrical/Electronics Systems Diagnostics	3	1.0	0.0
WELD 10442126	Metal Repair Techniques	2	1.0	0.0

### Second Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ENGLISH 10801195	Written Communication	3	3.0	0.0
SOC 10809197	Contemporary Amer Society	3	3.0	0.0
DIESEL 10412112	Mobile Hydraulics	3	2.0	2.0
DIESEL 10412155	Heavy Duty Drivetrains	4	2.0	0.0
DIESEL 10412164	Brake and Suspension Systems	4	2.0	0.0

### Third/Summer Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
DIESEL 10412190	Diesel Equipment Laboratory Experience 1	1	0.0	2.0
DIESEL 10412195	Occupational Experience 1 - Diesel Equipment Technology Program	2	0.0	0.0

### Fourth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
DIESEL 10412125	Cab Climate Control and Refrigeration Systems	3	1.0	4.0
DIESEL 10412184	Diesel Engine Technology	2	0.0	4.0
DIESEL 10412185	Diesel Engine Repair	4	0.5	2.0
ENGLISH 10801197	Technical Reporting	3	3.0	0.0
PHYSICS 10806139	Survey of Physics	3	1.0	4.0

### Fifth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
DIESEL 10412176	Diesel Fuel Systems	4	2.0	0.0
DIESEL 10412177	Diesel Engine Diagnostics	2	1.0	2.0
DIESEL 10412138	Diesel Shop Management	2	2.0	0.0
DIESEL 10412178	Diagnostic Strategies	2	1.0	2.0
DIESEL 10412188	Electronic Control Systems	2	1.0	2.0
ECON 10809195	Economics	3	3.0	0.0
PSYCH 10809199	Psychology Of Human Relations	3	3.0	0.0



# Digital Forensics

Program Number: 905041CERT

Certificate

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
CRIMJUST 10504185	Introduction to Computer Forensics	3	3.0	0.0
CRIMJUST 10504186	Introduction to Internet and Network Concepts	3	3.0	0.0
CRIMJUST 10504196	Ethics	1	1.0	0.0

### Second Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
CRIMJUST 10504187	Legal Issues and Digital Evidence	3	3.0	0.0
CRIMJUST 10504189	Introduction to Video Evidence	3	3.0	0.0
CRIMJUST 10504195	Mobile Forensics	3	3.0	0.0

### Third Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
CRIMJUST 10504188	Advanced Computer Forensics Concepts/Forensics Practicum	3	2.0	2.0



# Digital Marketing

Program Number: 311045

*Embedded Technical Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
MKTG 10104102	Marketing Principles	3	3.0	0.0
MKTG 10104114	Social Media Principles	3	3.0	0.0
MKTG 10104162	Mobile Marketing (Social Media)	3	3.0	0.0
MKTG 10104164	Marketing Digital Design	3	3.0	0.0
MKTG 10104169	Internet Marketing	3	3.0	0.0

### Second Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
MKTG 10104103	Marketing Research	3	3.0	0.0
MKTG 10104113	Leadership Ethics in the Digital Age	3	3.0	0.0
MKTG 10104115	Capstone Campaign	3	3.0	0.0
MKTG 10104126	Public Relations	3	3.0	0.0





# Early Childhood Education

Program Number: 103071

Associate in Applied Science

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
EARLYCHL 10307148	ECE: Foundations of ECE	3	3.0	0.0
EARLYCHL 10307151	ECE: Infant & Toddler Dev	3	3.0	0.0
EARLYCHL 10307166	ECE: Curriculum Planning	3	2.0	2.0
EARLYCHL 10307167	ECE: Health, Safety, & Nutrition	3	3.0	0.0
EARLYCHL 10307174	ECE: Practicum 1	3	1.0	0.0
ENGLISH 10801195	Written Communication	3	3.0	0.0

### Second Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
EARLYCHL 10307178	ECE: Art, Music & Lang Arts	3	2.0	2.0
EARLYCHL 10307179	ECE: Child Development	3	3.0	0.0
EARLYCHL 10307188	ECE: Guiding Child Behavior	3	2.0	2.0
EARLYCHL 10307192	ECE: Practicum 2	3	1.0	0.0
SOC 10809172	Introduction to Diversity Studies	3	3.0	0.0
MATH 10804134	Mathematical Reasoning	3	2.0	2.0

### Third Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
EARLYCHL 10307194	ECE: Math Science & Soc St	3	2.0	2.0
EARLYCHL 10307195	ECE: Family & Community Rel	3	3.0	0.0
EARLYCHL 10307197	ECE: Practicum 3	3	0.0	0.0
COMM 10801196	Oral/Interpersonal Communication	3	3.0	0.0
PSYCH 10809199	Psychology Of Human Relations	3	3.0	0.0

### Fourth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
EARLYCHL 10307187	ECE: Children w diff Abilities	3	3.0	0.0
EARLYCHL 10307198	ECE: Admin an ECE Program	3	3.0	0.0
EARLYCHL 10307199	ECE: Practicum 4	3	0.0	0.0
SOC 10809197	Contemporary Amer Society	3	3.0	0.0
	<i>Elective</i>	3		



# Early Childhood Education: Entry Level Provider

Program Number: 903075CERT

*Certificate*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Required Courses

Class Course Number	Class Name	Credits / Hours	Hours Per Week	
			Lecture	Lab
EARLYCHL 10307167	ECE: Health, Safety, & Nutrition	3	3.0	0.0
EARLYCHL 10307178	ECE: Art, Music & Lang Arts	3	2.0	2.0
EARLYCHL 10307188	ECE: Guiding Child Behavior	3	2.0	2.0



# Early Childhood Education - Infant & Toddler

Program Number: 903072CERT

*Certificate*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Required Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
EARLYCHL 10307151	ECE: Infant & Toddler Development	3	3.0	0.0
EARLYCHL 10307161	Infants/Toddlers-Grp Care	3	3.0	0.0
EARLYCHL 10307195	ECE: Family & Community Relations	3	3.0	0.0
EARLYCHL 10307115	ECE: Infant Toddler Capstone	3	3.0	0.0



# Early Childhood Education - Preschool

Program Number: 303077

*Embedded Technical Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
EARLYCHL 10307148	ECE: Foundations of ECE	3	3.0	0.0
EARLYCHL 10307167	ECE: Health, Safety, & Nutrition	3	3.0	0.0
EARLYCHL 10307174	ECE: Practicum 1	3	1.0	0.0

### Second Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
EARLYCHL 10307178	ECE: Art, Music & Language Arts	3	2.0	2.0
EARLYCHL 10307179	ECE: Child Development	3	3.0	0.0
EARLYCHL 10307188	ECE: Guiding Child Behavior	3	2.0	2.0



# Early Childhood Education - Preschool

Program Number: 903071CERT

Certificate

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
EARLYCHL 10307148	ECE: Foundations of ECE	3	3.0	0.0

### Second Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
EARLYCHL 10307179	ECE: Child Development	3	3.0	0.0

### Third Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
EARLYCHL 10307167	ECE: Health, Safety, & Nutrition	3	3.0	0.0

### Fourth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
EARLYCHL 10307188	ECE: Guiding Child Behavior	3	3.0	0.0

### Fifth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
EARLYCHL 10307178	ECE: Art, Music & Lang Arts	3	3.0	0.0

### Sixth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
EARLYCHL 10307130	ECE: Preschool Capstone	3	3.0	0.0



# Electrical Construction Apprenticeship

Program Number: 504133

*Apprenticeship Completion*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ELEC 50413530	Tech Electrical 1	4	6.0	2.0

### Second Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ELEC 50413531	Tech Electrical 2	4	6.0	2.0

### Third Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ELEC 50413532	Tech Electrical 3	2	2.0	2.0

### Fourth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ELEC 50413533	Tech Electrical 4	2	2.0	2.0

### Fifth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ELEC 50413534	Tech Electrical 5	2	3.0	1.0

### Sixth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ELEC 50413535	Tech Electrical 6	2	3.0	1.0

### Seventh Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ELEC 50413570	Tech Electrical 7	2	2.0	2.0

### Eighth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ELEC 50413571	Tech Electrical 8	2	2.0	2.0



# Electrical Engineering Technology

Program Number: 106621

Associate in Applied Science

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ENGLISH 10801195	Written Communication	3	3.0	0.0
PSYCH 10809199	Psychology Of Human Relations	3	3.0	0.0
ELECT 10605112	AC/DC Electronics 1	3	2.0	0.0
ELECT 10605113	Analog Circuit Techniques	3	1.0	4.0
ELECT 10605118	Digital Circuit Techniques	3	1.0	4.0
ELECT 10605172	Applied Electronic Math 2	2	1.5	1.0

### Second Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ECON 10809195	Economics	3	3.0	0.0
ELECT 10605114	AC/DC Electronics 2	3	2.0	0.0
ELECT 10605115	Analog Circuit Principles	3	2.0	0.0
ELECT 10605119	Digital Circuit Principles	3	2.0	0.0
ELECT 10605173	Embedded Programming	3	2.0	0.0

### Third Semester

Class Course Numbers	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ENGLISH 10801197	Technical Reporting	3	3.0	0.0
PHYSICS 10806143	College Physics 1	3	2.0	2.0
ELECT 10605131	Technical Calculus 1	4	3.0	2.0
ELECT 10605143	Motors and Control Circuits	3	2.0	0.0
ELECT 10605176	Microcontrollers	3	2.0	0.0
ELECENG 10662112	AC/DC Electronics 3	3	2.0	0.0

### Fourth Semester

Class Course Numbers	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
PHILOS 20809264	Introduction to Logic and Critical Thinking	3	3.0	0.0
ELECT 10605108	Certified IPC Application Specialist (CIS) J-STD-001	1	0.5	1.0
ELECT 10605132	Technical Calculus 2	4	3.0	2.0
ELECT 10605145	Programmable Logic Controls	3	2.0	0.0
ELECT 10605178	Networks, Interfacing and Programming	3	2.0	0.0
ELECENG 10662124	Advanced Circuit Analysis	3	2.0	0.0



# Electrical Maintenance

Program Number: 304621

*Embedded Technical Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Required Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
IND MECH 10462320	DC/AC Circuits	3	0.0	6.0
INDMANUF 10623100	Safety for Industry	1	0.0	2.0
INDMANUF 10623200	Interpreting Engineering Drawings	2	0.0	4.0
MATH 31804381	Machine Tool Math 1	2	3.0	0.0
MATH 31804382	Machine Tool Math 2	1	2.0	0.0
SMLBUS 10145189	Customer Relations	2	2.0	0.0





# Electrician Apprentices (ABC)

Program Number: 504139

Apprenticeship Completion

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ELEC 50413580	Trade Electrical Semester 1	2	3.0	1.0

### Second Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ELEC 50413581	Trade Electrical Semester 2	2	3	1.0

### Third Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ELEC 50413582	Trade Electrical Semester 3	2	1-Mar	1.0

### Fourth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ELEC 50413583	Trade Electrical Semester 4	2	3	1.0

### Fifth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ELEC 50413584	Trade Electrical Semester 5	2	3.0	1.0

### Sixth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ELEC 50413585	Trade Electrical Semester 6	2	3.4	0.6

### Seventh Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ELEC 50413586	Trade Electrical Semester 7	2	3.0	1.0

### Eight Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ELEC 50413587	Trade Electrical Semester 8	2	3.0	1.0

### Ninth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ELEC 50413588	Trade Electrical Semester 9	2	3.0	1.0

### Tenth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ELEC 50413589	Trade Electrical Semester 10	2	3.0	1.0



# Electronic Assembler

Program Number: 306053

*Embedded Technical Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Required Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ELECT 10605107	Certified IPC Application Specialist (CIS) A-610	1	1.0	0.0
ELECT 10605108	Certified IPC Application Specialist (CIS) J-STD-001	1	0.5	1.0
ELECT 10605112	AC/DC Electronics 1	3	2.0	0.0
ELECT 10605118	Digital Circuit Techniques	3	1.0	4.0



# Electronic Assembler

Program Number: 906051CERT

*Certificate*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Required Courses

Class Course Numbers	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ELECT 10605112	AC/DC Electronics 1	3	2.0	0.0
ELECT 10605118	Digital Circuit Techniques	3	1.0	4.0
ELECT 10605107	Certified IPC Application Specialist (CIS) A-610	1	1.0	0.0
ELECT 10605108	Certified IPC Application Specialist (CIS) J-STD-001	1	0.5	1.0



# Electronic Service Technician

Program Number: 316052

*Embedded Technical Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits / Hours	Hours Per Week	
			Lecture	Lab
ELECT 10605107	Certified IPC Application Specialist (CIS) A-610	1	1.0	0.0
ELECT 10605108	Certified IPC Application Specialist (CIS) J-STD-001	1	0.5	1.0
ELECT 10605112	AC/DC Electronics 1	3	2.0	0.0
ELECT 10605113	Analog Circuit Techniques	3	1.0	4.0
ELECT 10605118	Digital Circuit Techniques	3	1.0	4.0
ELECT 10605172	Applied Electronic Math 2	2	1.5	1.0
ENGLISH 10801195	Written Communication	3	3.0	0.0

### Second Semester

Class Course Number	Class Name	Credits / Hours	Hours Per Week	
			Lecture	Lab
ELECT 10605114	AC/DC Electronics 2	3	2.0	0.0
ELECT 10605115	Analog Circuit Principles	3	2.0	0.0
ELECT 10605119	Digital Circuit Principles	3	2.0	0.0
ELECT 10605123	Embedded Device Concepts	3	2.0	0.0



# Electronics

Program Number: 106051

Associate in Applied Science

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ELECT 10605112	AC/DC Electronics 1	3	2.0	0.0
ELECT 10605113	Analog Circuit Techniques	3	1.0	4.0
ELECT 10605118	Digital Circuit Techniques	3	1.0	4.0
ELECT 10605107	Certified IPC Application Specialist (CIS) A-610	1	1.0	0.0
ELECT 10605108	Certified IPC Application Specialist (CIS) J-STD-001	1	0.5	1.0
ELECT 10605172	Applied Electronic Math 2	2	1.5	1.0
ENGLISH 10801195	Written Communication	3	3.0	0.0

### Second Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ELECT 10605114	AC/DC Electronics 2	3	2.0	0.0
ELECT 10605115	Analog Circuit Principles	3	2.0	0.0
ELECT 10605119	Digital Circuit Principles	3	2.0	0.0
ELECT 10605123	Embedded Device Concepts	3	2.0	0.0
ENGLISH 10801197	Technical Reporting	3	3.0	0.0

### Third Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ELECT 10605143	Motors and Control Circuits	3	2.0	0.0
ELECT 10605151	Instrumentation and Troubleshooting	3	2.0	0.0
ELECT 10605152	Digital Systems Analysis	3	2.0	0.0
PHYSICS 10806143	College Physics 1	3	2.0	2.0
ECON 10809195	Economics	3	3.0	0.0

### Fourth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ELECT 10605116	Engineering Project Principles	3	2.0	0.0
ELECT 10605178	Networks, Interfacing and Programming	3	2.0	0.0
PHILOS 10809166	Intro to Ethics: Theory & App	3	3.0	0.0
PSYCH 10809199	Psychology Of Human Relations	3	3.0	0.0
	<i>Electives</i>	3		

### Recommended Electives

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ELECT 10605101	Electronics Internship Level 1	3	0.0	0.0
ELECT 10605102	Electronics Internship Level 2	3	0.0	0.0
ELECT 10605136	Biomedical Electronics	3	2.0	0.0
ELECT 10605160	Virtual Reality	3	3.0	0.0
ELECT 10605173	Embedded Programming	3	2.0	0.0
ELECT 10605176	Microcontrollers	3	2.0	0.0
ELECT 10605270	AC/DC Circuit Techniques and Principles	3	1.0	4.0



# Emergency Medical Technician

Program Number: 305313

*Less Than One Year Tech Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Required Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
EMS 10531102	Emergency Medical Technician 1	2	1.0	2.0
EMS 10531103	Emergency Medical Technician 2	3	1.0	0.0



# Entrepreneurship

Program Number: 901452CERT

*Certificate*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Required Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
SMLBUS 10145102	Small Business Development	3	3.0	0.0
SMLBUS 10145105	Operations Management	3	3.0	0.0
SMLBUS 10145106	Small Business Marketing	3	3.0	0.0
SMLBUS 10145108	Field Experience	2	1.0	0.0
SMLBUS 10145185	Customer Service Management	3	3.0	0.0



# Ethnic Studies

Program Number: 908091CERT

*Certificate*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Literature Courses

Class Course Number	Class Name	Credits / Units	Hours Per Course	
			Lecture	Lab
ENGLISH 20801207	World Indigenous Literatures	3	3.0	0.0
ENGLISH 20801212	Ethnic Literature	3	3.0	0.0
ENGLISH 20801213	Native American Literature	3	3.0	0.0
ENGLISH 20801214	African American Literature	3	3.0	0.0
ENGLISH 20801222	U.S. Latino Literature	3	3.0	0.0

### History Courses

Class Course Number	Class Name	Credits / Units	Hours Per Course	
			Lecture	Lab
HISTORY 20803214	Native American History - Liberal Arts Transfer	3	3.0	0.0
HISTORY 20803240	Afro-American History	3	3.0	0.0





# Event Management

Program Number: 101096

Associate in Applied Science

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ADMINPRF 10106109	Business Spreadsheet Applications	3	1.0	4.0
ACCTG 10101106	Accounting Fundamentals	3	3.0	0.0
EVTMGT 10109102	Fundamentals Of Meeting Mgmt	3	3.0	0.0
EVTMGT 10109111	Registration/Housing Logistics	2	2.0	0.0
ENGLISH 10801195	Written Communication	3	3.0	0.0
MATH 10804123	Math with Business Applications	3	3.0	0.0

### Second Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MKTG 10104114	Social Media Principles	3	3.0	0.0
EVTMGT 10109104	Meeting Design	3	3.0	0.0
EVTMGT 10109108	Mtgs Industry Budget/Finance	2	2.0	0.0
EVTMGT 10109110	Meeting Coordination	3	3.0	0.0
COMM 10801196	Oral/Interpersonal Communication	3	3.0	0.0

### Third Semester

Class Course Number	Class Name	Credits	Hours Per Week	
			Lecture	Lab
MKTG 10104102	Marketing Principles	3	3.0	0.0
EVTMGT 10109109	Special Event Management	3	3.0	0.0
EVTMGT 10109116	Fundamentals of Green Meetings and Events	2	2.0	0.0
EVTMGT 10109119	Event Professional Best Practices	3	3.0	0.0
SOC 10809172	Introduction to Diversity Studies	3	3.0	0.0

### Fourth Semester

Class Course Number	Class Name	Credits	Hours Per Week	
			Lecture	Lab
EVTMGT 10109112	Exhibition Management	3	3.0	0.0
EVTMGT 10109113	Risk Management, Negotiations, and Legal Issues	3	3.0	0.0
EVTMGT 10109114	Meeting/Event Mgmt Internship	2	0.0	0.0
EVTMGT 10109117	Partnership Development	3	3.0	0.0
PSYCH 10809199	Psychology Of Human Relations	3	3.0	0.0
	Elective	3		



# Event Management for the Administrative Professional

Program Number: 901096CERT  
*Certificate*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Required Courses

Class Course Number	Class Name	Hours/Units	Hours Per Week	
			Lecture	Lab
ADMINPRF 10106109	Business Spreadsheet Applications	3	1.0	4.0
EVTMGT 10109102	Fundamentals Of Meeting Mgmt	3	3.0	0.0
EVTMGT 10109110	Meeting Coordination	3	3.0	0.0
EVTMGT 10109111	Registration/Housing Logistics	2	2.0	0.0



# Facilities Management

Program Number: 904625CERT

*Certificate*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Required Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
BUSADM 10102135	Project Management - Fundamentals	3	3.0	0.0
SUPDEV 10196136	Safety in the Workplace	3	3.0	0.0
IND MECH 10462336	Building Automation	3	0.0	6.0
IND MECH 10462318	Maintenance Management	2	0.0	4.0



# Fashion Marketing

Program Number: 101044

Associate in Applied Science

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
COMPSOFT 10103137	Word - Beginning	1	0.27	1.5
COMPSOFT 10103143	PowerPoint	1	0.27	1.5
MKTG 10104102	Marketing Principles	3	3.0	0.0
FSHNMKTG 10104122	Adobe Illustrator for Fashion	3	3.0	0.0
FSHNMKTG 10104124	Retail Management	3	3.0	0.0
FSHNMKTG 10104195	Fashion Analysis	2	2.0	0.0
FSHNMKTG 10104197	Apparel Marketing	3	3.0	0.0

### Second Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
COMPSOFT 10103133	Excel Beginning	1	0.27	1.5
MKTG 10104104	Selling Principles	3	3.0	0.0
FSHNMKTG 10104194	Visual Merchandising	3	2.0	2.0
FSHNMKTG 10104196	Textiles	2	1.0	2.0
MATH 10804144	Math of Finance	3	3.0	0.0
	<i>Elective</i>	3		

### Third Semester (Summer)

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
FSHNMKTG 10104157	Fashion Internship	2	0.5	0.0

### Fourth Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MKTG 10104103	Marketing Research	3	3.0	0.0
MKTG 10104113	Leadership Ethics in the Digital Age	3	3.0	0.0
FSHNMKTG 10104123	Merchandise Plan/Control	3	3.0	0.0
ENGLISH 10801195	Written Communication	3	3.0	0.0
	<i>Elective</i>	3		

### Fifth Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MKTG 10104112	Marketing Design Strategies	3	3.0	0.0
FSHNMKTG 10104182	Portfolio Presentation	3	3.0	0.0
COMM 10801196	Oral/Interpersonal Communication	3	3.0	0.0
ECON 10809195	Economics	3	3.0	0.0
PSYCH 10809199	Psychology Of Human Relations	3	3.0	0.0



## Recommended Electives

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MKTG 10104114	Social Media Principles	3	3.0	0.0
FSHNMKTG 10104118	Store Operations	3	2.0	2.0
FSHNMKTG 10104120	Adobe Photoshop Fashion Design	3	3.0	0.0
FSHNMKTG 10104127	Technical Design Specifications for Fashion	3	2.0	2.0
FSHNMKTG 10104186	History of Costume	3	3.0	0.0
FSHNMKTG 10104198	Fashion CAD Lab	1	1.0	0.0



# Finance

Program Number: 101142

Associate in Applied Science

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ACCTG 10101111	Accounting 1 - Principles	4	4.0	0.0
FINANCE 10114130	Personal Finance	3	3.0	0.0
ADMINPRF 10106109	Business Spreadsheet Applications	3	1.0	4.0
ENGLISH 10801195	Written Communication	3	3.0	0.0
MATH 10804144	Math of Finance	3	3.0	0.0

### Second Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ACCTG 10101113	Accounting 2 - Principles	4	4.0	0.0
BUSADM 10102104	Business Statistics	3	3.0	0.0
COMPSOFT 10103145	Access	1	0.27	1.5
FINANCE 10114128	Financial Institutions	3	3.0	0.0
BUSADM 10102160	Business Law 1	3	3.0	0.0
ECON 10809195	Economics	3	3.0	0.0

### Third Semester

Class Course Number	Class Name	Credit/Units	Hours Per Week	
			Lecture	Lab
ACCTG 10101118	Management Accounting	4	4.0	0.0
ACCTG 10101123	Tax 1	4	4.0	0.0
FINANCE 10114126	Corporate Finance	3	3.0	0.0
INSMGT 10162126	Introduction to Loss Investigaton (AIC 33)	3	3.0	0.0
COMM 20810205	Small Group & Interpersonal Communications	3	3.0	0.0

### Fourth Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
FINANCE 10114127	Financial Analysis	3	3.0	0.0
FINANCE 10114140	Investments	3	3.0	0.0
BUSADM 10102143	Management Techniques	3	3.0	0.0
PSYCH 10809199	Psychology Of Human Relations	3	3.0	0.0
	<i>Elective or Concentration</i>	3		

### Concentrations

*Financial Planning Concentration*

(select 3 credits)

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
FINANCE 10114120	Financial Planning	3	3.0	0.0
INSMGT 10162131	Introduction to Employee Benefits	1	3.0	0.0
MKTG 10104104	Selling Principles	3	3.0	0.0



**Risk Management & Insurance Concentration**  
(select 3 credits)

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
INSMGT 10162125	Intro to Business Insurance Contracts (AAI 82)	3	3.0	0.0
INSMGT 10162126	Introduction to Loss Investigaton (AIC 33)	3	3.0	0.0
INSMGT 10162133	Managing Business Risks	3	3.0	0.0
INSMGT 10162135	Detecting Employee Fraud	3	3.0	0.0

**Small Business Concentration**  
(select 3 credits)

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
SMLBUS 10145102	Small Business Development	3	3.0	0.0
SMLBUS 10145106	Small Business Marketing	3	3.0	0.0

**Accounting Concentration**  
(select 3 credits)

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ACCTG 10101138	Accounting And Payroll Systems	3	2.0	2.0
ACCTG 10101139	QuickBooks-Beginning	1	0.5	1.0

**Management Concentration**  
(select 3 credits)

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
BUSADM 10102134	Business Organization, Management, and Ethics	3	3.0	0.0
HRMGT 10116145	Introduction to Human Resources	3	3.0	0.0

**Other Recommended Electives**

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
INSMGT 10162140	Risk Management and Insurance Internship	2	0.0	0.0
ACCTG 10101140	Accounting/Business Internship	3	0.0	0.0



# Fire Protection Technician

Program Number: 105032

Associate in Applied Science

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
FIRET 10503143	Building Construction	3	3.0	0.0
FIRET 10503144	OSHA for the Fire Service	3	3.0	0.0
FIRET 10503191	Principles of Emergency Services	2	2.0	0.0
EMS 10531102	Emergency Medical Technician 1	2	1.0	2.0
EMS 10531103	Emergency Medical Technician 2	3	1.0	0.0
ENGLISH 10801195	Written Communication	3	3.0	0.0

### Second Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MATH 10804134	Mathematical Reasoning	3	2.0	2.0
FIRET 10503100	Fire Recruit Academy	5	2.0	0.0
FIRET 10503154	Hazardous Materials Chemistry	2	2.0	0.0
COMM 10801196	Oral/Interpersonal Communication	3	3.0	0.0
PSYCH 10809199	Psychology Of Human Relations	3	3.0	0.0

### Third Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
FIRET 10503151	Fire Prevention	4	4.0	0.0
FIRET 10503195	Fire Behavior & Combustion	3	3.0	0.0
ENGLISH 10801197	Technical Reporting	3	3.0	0.0
SOC 10809197	Contemporary Amer Society	3	3.0	0.0
	<i>Elective</i>			

### Fourth Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
FIRET 10503156	Strategies, Tactics & Inc Mgmt	4	4.0	0.0
FIRET 10503157	Fire Investigation	3	3.0	0.0
FIRET 10503192	Principles Emergency Services/Survival	3	3.0	0.0
FIRET 10503193	Fire Protection Systems	3	3.0	0.0
FIRET 10503194	Fire Protection Hydraulics	3	3.0	0.0





# Fire Protection Certification

Program Number: 305032

*Less Than One Year Tech Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Required Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
EMS 10531102	Emergency Medial Technician 1	2	1.0	2.0
EMS 10531103	Emergency Medial Technician 2	3	1.0	0.0

*Choose one of the two following Fire Recruit Academy Courses*

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
FIRET 30503300	Fire Recruit Academy - Fire Service Certification Program	5	5.55	3.88
FIRET 10503100	Fire Recruit Academy	5	2.0	0.0



# Fitness and Wellness Specialist

Program Number: 301094

*Less Than One Year Tech Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
RECMGT 10109173	Group Fitness Development	3	2.0	2.0
RECMGT 10109195	Recreation Industry Budget and Financial Management	3	3.0	0.0
MEDTERM 10501153	Body Structure & Function ( <i>Used in a variety of Degree Programs</i> )	3	3.0	0.0
BIOLOGY 20806262	Anatomy and Physiology for Exercise Lab	1	0.0	2.0

### Second Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
RECMGT 10109159	Wellness Coaching and Promotion	3	3.0	0.0
RECMGT 10109176	Personal Trainer Development	3	1.0	4.0
RECMGT 10109190	Recreation Seminar	1	1.0	0.0
RECMGT 10109189	Foundations of Worksite Wellness	3	3.0	0.0



# Fitness/Health Club Specialist

Program Number: 901091CERT

*Certificate*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
RECMGT 10109159	Wellness Coaching and Promotion	3	3.0	0.0
RECMGT 10109195	Recreation Industry Budget and Financial Management	3	3.0	0.0
MEDTERM 10501153	Body Structure & Function ( <i>Used in a variety of Degree Programs</i> )	3	3.0	0.0
BIOLOGY 20806262	Anatomy and Physiology for Exercise Lab	1	0.0	2.0

### Second Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
RECMGT 10109173	Group Fitness Development	3	2.0	2.0
RECMGT 10109176	Personal Trainer Development	3	1.0	4.0
RECMGT 10109190	Recreation Seminar	1	1.0	0.0
RECMGT 10109189	Foundations of Worksite Wellness	3	3.0	0.0



# Gas Metal Arc Welding (GMAW)

Program Number: 304425

*Embedded Technical Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Required Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
INDMANUF 10623100	Safety for Industry	1	0.0	2.0
INDMANUF 10623200	Interpreting Engineering Drawings	2	0.0	4.0
WELD 31442320	Welding Occupational Development	1	2.0	0.0
WELD 31442323	Basic Gas Metal Arc Welding (GMAW/MIG)	2	2.0	2.0
MATH 31804379	Vocational Math 1	1	2.0	0.0



# Gender and Women's Studies

Program Number: 908093CERT

*Certificate*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Required Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
SOCSCI 20809206	Introduction to Women's Studies	3	3.0	0.0

### Additional Course List

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ENGLISH 20801211	Gay & Lesbian Literature	3	3.0	0.0
ENGLISH 20801250	Women In Literature	3	3.0	0.0
HISTORY 20803230	Women In History	3	3.0	0.0
HISTORY 20803233	Gender and Women's History in Cultural Representations	3	3.0	0.0
HISTORY 20803234	Gender and Women's Global History	3	3.0	0.0
PSYCH 20809201	Human Sexuality	3	3.0	0.0
SOC 20809204	Marriage and the Family	3	3.0	0.0
PSYCH 20809210	Psychology of Men	3	3.0	0.0
PSYCH 20809234	Psychology of Women	3	3.0	0.0
SOC 20809253	Sociology of Gender	3	3.0	0.0
SOCSCI 20809256	International Perspectives on Gender and Women	3	3.0	0.0
SOCSCI 20809257	Gender and Women's Studies-Study Abroad Experience	1	1.0	0.0
SOC 20809277	Couple Relationships	1	1.0	0.0
ART 20815211	Art History: Women In Art	3	3.0	0.0
SOC 20809255	Introduction to LGBTQ+ Studies	3	3.0	0.0

### Optional Honors Project

*Students with a GPA of 3.5 or higher may choose to complete an Honors Project in Gender and Women's Studies for up to 3 Credits in place of one of the courses on this list.*



# General Accountancy

Program Number: 311013

*Embedded Technical Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ACCTG 10101111	Accounting 1 - Principles	4	4.0	0.0
ACCTG 10101139	QuickBooks-Beginning	1	0.5	1.0
COMPSOFT 10103133	Excel Beginning	1	0.27	1.5
MATH 10804144	Math of Finance	3	3.0	0.0

### Second Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ACCTG 10101111	Accounting 1 - Principles	4	4.0	0.0
ACCTG 10101139	QuickBooks-Beginning	1	0.5	1.0
COMPSOFT 10103133	Excel Beginning	1	0.27	1.5
MATH 10804144	Math of Finance	3	3.0	0.0

### Third Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ACCTG 10101121	Accounting 3-Intermediate	4	4.0	0.0
ACCTG 10101125	Cost Management	4	4.0	0.0
ACCTG 10101138	Accounting And Payroll Systems	3	2.0	0.0

### Fourth Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ACCTG 10101122	Accounting 4-Intermediate	4	4.0	0.0
ACCTG 10101137	Computerized Accounting Applications	2	1.5	1.0
ACCTG 10101142	Accounting Capstone	3	2.0	2.0



# Graphic Design

Program Number: 102011

Associate in Applied Arts

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ENGLISH 10801195	Written Communication	3	3.0	0.0
MATH 10804123	Math with Business Applications	3	3.0	0.0
GRDSGN 10201102	Design Fundamentals	3	0.0	6.0
GRDSGN 10201103	Drawing Fundamentals	3	0.0	6.0
GRDSGN 10201136	Concept Development	2	0.0	4.0
GRDSGN 10201137	Survey of Design Communication	1	1.0	0.0
GRDSGN 10201181	Introduction to Computer Graphics	3	0.0	6.0

### Second Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PSYCH 10809199	Psychology Of Human Relations	3	3.0	0.0
GRDSGN 10201112	Color	2	0.0	4.0
GRDSGN 10201151	Typographic Design	3	0.0	6.0
GRDSGN 10201152	Applied Drawing	2	0.0	4.0
GRDSGN 10201177	Web Page Design	3	0.0	6.0
GRDSGN 10201182	Applied Computer Graphics	3	0.0	6.0

### Third Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
COMM 10801196	Oral/Interpersonal Communication	3	Mar-00	
GRDSGN 10201106	Illustration	3	0-6	
GRDSGN 10201121	Graphic Design	3	0-6	
GRDSGN 10201128	Print & Digital Production	3	0-6	
PHOTO 10203130	Intro Digital Photography	2	0-4	
VICOM 10206129	Motion Design	2	0-4	

### Fourth Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
SOC 10809197	Contemporary American Society	3	3.0	0.0
GRDSGN 10201153	Integrated Design	2	0.0	4.0
GRDSGN 10201154	Design Project Management	3	0.0	6.0
GRDSGN 10201162	Graphic Design Portfolio Preparation	2	0.0	4.0
GRDSGN 10201184	Advanced Design & Layout	2	0.0	4.0
	<i>Electives</i>	6		



## Recommended Graphic Design Electives

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
GRDSGN 10201117	Illustrative Figure Drawing	3	0.0	6.0
GRDSGN 10201144	Principles of Letterpress: Design and Printing	3	0.0	6.0
GRDSGN 10201145	Introduction to Screen Printing	2	0.0	4.0
GRDSGN 10201146	Advanced Screen Printing Workshop	2	0.0	4.0
GRDSGN 10201147	Advanced Letterpress Workshop	2	0.0	4.0
GRDSGN 10201149	Advanced Figure Drawing	3	0.0	4.0
GRDSGN 10201155	Content Management Systems for Designers	3	2.0	2.0
GRDSGN 10201178	Applied UI Design	3	0.0	6.0
GRDSGN 10201183	Electronic Illustration	2	0.0	4.0
GRDSGN 10201193	Mobile Web Design	3	2.5	1.0
GRDSGN 10201195	Advanced Web Page Design	3	0.0	6.0
GRDSGN 10201198	Social Media/Web Design Strategies	3	3.0	0.0
VICOM 10206190	Advanced Interactive Media	2	0.0	4.0
ART 20815200	Art History: Ancient to Medieval	3	3.0	0.0
ART 20815210	Art History: Renaissance to Modern	3	3.0	0.0
ART 20815211	Art History: Women In Art	3	3.0	0.0
ART 20815256	Art Metal Welding	3	0.0	6.0
GRDSGN 10201169	Business of Graphic Design & Illustration	2	2.0	0.0





# HVAC Apprentice (ABC)

Program Number: 504019

*Apprenticeship Completion*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
HVAC 50401590	Trade Hvac Semester 1	2	3.0	1.0

### Second Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
HVAC 50401591	Trade Hvac Semester 2	2	3.0	1.0

### Third Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
HVAC 50401592	Trade Hvac Semester 3	2	3.0	1.0

### Fourth Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
HVAC 50401593	Trade Hvac Semester 4	2	3.0	1.0

### Fifth Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
HVAC 50401594	Trade Hvac Semester 5	2	3.0	1.0

### Sixth Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
HVAC 50401595	Trade Hvac Semester 6	2	3.0	1.0

### Seventh Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
HVAC 50401596	Trade Hvac Semester 7	2	3.0	1.0

### Eighth Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
HVAC 50401597	Trade Hvac Semester 8	2	3.0	1.0



# Healthcare Administrative & Insurance

Program Number: 905092CERT

*Certificate*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Required Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MEDTERM 10501101	Medical Terminology	3	3.0	0.0
MASST 31509302	Human Body in Health & Disease	3	6.0	0.0
MASST 31509307	Medical Office Insurance & Finance	2	4.0	0.0



# Healthcare Management

Program Number: 901608CERT

*Certificate*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Required Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
BUSADM 10102143	Management Techniques	3	3.0	0.0
HRMGT 10116145	Introduction to Human Resources	3	3.0	0.0
BUSADM 10102134	Business Organization, Management, and Ethics	3	3.0	0.0
ADMINPRF 10106231	Business Presentations and Publications	3	1.0	4.0

### Medical Emphasis Track Requirements

*The following courses may also be used to fulfill Medical Emphasis Track requirements for the Business Management Program:*

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MEDADMIN 10160178	Medical Language for the Business Professional 1	2	1.0	2.0
MEDADMIN 10160165	Medical Administrative Procedures	3	1.0	4.0



# Healthcare Receptionist

Program Number: 301602

*Embedded Technical Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
COMPSOFT 10103165	Outlook	1	0.27	1.5
ADMINPRF 10106107	Business Document Applications	3	1.0	4.0
ADMINPRF 10106139	Keyboard Skillbuilding	1	0.27	1.5
MEDADMIN 10160178	Medical Language for the Business Professional 1	2	1.0	2.0
ENGLISH 10801195	Written Communication	3	3.0	0.0

### Second Semester

Class Course Number	Class name	Credits/Units	Hours Per Week	
			Lecture	Lab
ADMINPRF 10106109	Business Spreadsheet Applications	3	1.0	4.0
ADMINPRF 10106164	Customer Contact Skills	1	1.0	0.5
MEDADMIN 10160165	Medical Administrative Procedures	3	1.0	4.0
MEDADMIN 10160179	Medical Language for the Business Professional 2	2	1.0	2.0



# Hospitality Assistant

Program Number: 301091

*Embedded Technical Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Required Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
HOSPT 10109101	Exploring Hospitality	3	3.0	0.0
BUSADM 10102114	Business Communication	3	3.0	0.0
COMM 10801196	Oral/Interpersonal Communication	3	3.0	0.0



# Hospitality Management

Program Number: 101092

Associate in Applied Science

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
BUSADM 10102114	Business Communication	3	3.0	0.0
HOSPT 10109101	Exploring Hospitality	3	3.0	0.0
MKTG 10104102	Marketing Principles	3	3.0	0.0
HOSPT 10109131	Rooms Division Operation	3	3.0	0.0
ENGLISH 10801195	Written Communication	3	3.0	0.0
MATH 10804123	Math with Business Applications	3	3.0	0.0

### Second Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ACCTG 10101106	Accounting Fundamentals	3	3.0	0.0
.0	Social Media Principles	3	3.0	0.0
EVTMG 10109102	Fundamentals Of Meeting Mgmt	3	3.0	0.0
HOSPT 10109136	Hospitality Law	3	3.0	0.0
COMM 10801196	Oral/Interpersonal Communication	3	3.0	0.0

### Third Semester (Summer)

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
HOSPT 10109157	Hospitality Internship	2	0-0	

### Fourth Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
EVTMG 10109119	Event Professional Best Practices	3	3.0	0.0
HOSPT 10109125	Hospitality Leadership	3	3.0	0.0
HRMGT 10116145	Introduction to Human Resources	3	3.0	0.0
ECON 10809195	Economics	3	3.0	0.0
PSYCH 10809199	Psychology Of Human Relations	3	3.0	0.0

### Fifth Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
HOSPT 10109134	Cost Control/Revenue Management	3	3.0	0.0
SMLBUS 10145106	Small Business Marketing	3	3.0	0.0
PHILOS 10809166	Intro to Ethics: Theory & App	3	3.0	0.0
SOC 10809197	Contemporary American Society	3	3.0	0.0



# Hospitality Specialist

Program Number: 311094

*Embedded Technical Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MKTG 10104102	Marketing Principles	3	3.0	0.0
HOSPT 10109101	Exploring Hospitality	3	3.0	0.0
HOSPT 10109131	Rooms Division Operation	3	3.0	0.0
BUSADM 10102114	Business Communication	3	3.0	0.0
MATH 10804123	Math with Business Applications	3	3.0	0.0
ENGLISH 10801195	Written Communication	3	3.0	0.0

### Second Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ACCTG 10101106	Accounting Fundamentals	3	Mar-00	
MKTG 10104114	Social Media Principles	3	Mar-00	
EVTMGT 10109102	Fundamentals Of Meeting Mgmt	3	Mar-00	
HOSPT 10109136	Hospitality Law	3	Mar-00	
COMM 10801196	Oral/Interpersonal Communication	3	Mar-00	



# Hospitality for Office Professionals

Program Number: 901068CERT

*Certificate*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Required Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Labs
ADMINPRF 10106109	Business Spreadsheet Applications	3	1.0	4.0
ADMINPRF 10106164	Customer Contact Skills	1	1.0	0.5
EVTMGT 10109102	Fundamentals Of Meeting Mgmt	3	3.0	0.0
HOSPT 10109101	Exploring Hospitality	3	3.0	0.0
HOSPT 10109125	Hospitality Leadership	3	3.0	0.0





# Human Resource Management

Program Number: 101162

Associate in Applied Science

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
BUSADM 10102134	Business Organization, Management, and Ethics	3	3.0	0.0
HRMGT 10116145	Introduction to Human Resources	3	3.0	0.0
HRMGT 10116153	Meeting Facilitation	1	0.5	1.0
HRMGT 10116168	Employment Law	3	3.0	0.0
ENGLISH 10801195	Written Communication	3	3.0	0.0
COMM 20810205	Small Group & Interpersonal Communications	3	3.0	0.0

### Second Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
FINANCE 10114130	Personal Finance	3	3.0	0.0
HRMGT 10116147	Wage, Salary & Benefits Admin	3	3.0	0.0
HRMGT 10116149	Effective Staffing	3	3.0	0.0
HRMGT 10116152	Organizational Training and Development	3	3.0	0.0
SPEECH 10801198	Speech	3	3.0	0.0
MATH 10804144	Math of Finance	3	3.0	0.0

### Third Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ACCTG 10101111	Accounting 1 - Principles	4	4.0	0.0
BUSADM 10102143	Management Techniques	3	3.0	0.0
HRMGT 10116148	Labor Relations	3	3.0	0.0
ECON 10809195	Economics	3	3.0	0.0
PSYCH 10809199	Psychology Of Human Relations	3	3.0	0.0

### Fourth Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ACCTG 10101154	Payroll Accounting	1	0.5	1.0
BUSADM 10102132	Strategic Leadership	3	3.0	0.0
BUSADM 10102135	Project Management - Fundamentals	3	3.0	0.0
MKTG 10104102	Marketing Principles	3	3.0	0.0
HRMGT 10116169	Human Resources Capstone	1	1.0	0.0



# Human Resources

Program Number: 901161CERT

*Certificate*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Required Courses

Select a minimum of 12 credits from the following:

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
BUSADM 10102143	Management Techniques	3	3.0	0.0
ACCTG 10101154	Payroll Accounting	1	0.5	1.0
HRMGT 10116145	Introduction to Human Resources	3	3.0	0.0
HRMGT 10116147	Wage, Salary & Benefits Admin	3	3.0	0.0
HRMGT 10116148	Labor Relations	3	3.0	0.0
HRMGT 10116149	Effective Staffing	3	3.0	0.0
HRMGT 10116152	Organizational Training and Development	3	3.0	0.0
HRMGT 10116153	Meeting Facilitation	1	0.5	1.0
HRMGT 10116168	Employment Law	3	3.0	0.0
HRMGT 10116169	Human Resources Capstone	1	1.0	0.0



# Human Services Associate

Program Number: 105203

Associate in Applied Science

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
HUMSVC 10520105	Introduction to Human Services	3	3.0	0.0
HUMSVC 10520106	Orientation to Human Services Populations	3	3.0	0.0
HUMSVC 10520117	Interviewing	3	3.0	0.0
HUMSVC 10520135	Issues in Alcohol and Other Drug Abuse	3	3.0	0.0
ENGLISH 10801195	Written Communication	3	3.0	0.0

Choose one of the following courses

Note: Introduction to Psychology 20-809-231 is a pre-requisite to Developmental Psychology 20-809-233

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PSYCH 10809199	Psychology Of Human Relations	3	3.0	0.0
PSYCH 20809231	Intro Psychology	3	3.0	0.0

### Second Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
HUMSVC 10520116	Group Work Skills	3	3.0	0.0
HUMSVC 10520130	Social Change Skills	3	3.0	0.0
ENGLISH 10801197	Technical Reporting	3	3.0	0.0
MATH 10804107	College Mathematics	3	2.0	2.0
SOC 10809197	Contemporary Amer Society	3	3.0	0.0
HUMSVC 10520136	Counseling Alcoholics and Other Drug Abusers	3	3.0	0.0

### Third Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
HUMSVC 10520139	Human Services Agency Experience 1	4	0.0	0.0
HUMSVC 10520157	Human Services Counseling Skills	3	3.0	0.0
HUMSVC 10520188	Human Services Experience Conference 1	3	3.0	0.0

Choose one of the following courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PSYCH 10809127	Human Development	3	3.0	0.0
PSYCH 20809233	Developmental Psychology	3	3.0	0.0

### Fourth Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
HUMSVC 10520120	Community Service Agencies	3	3.0	0.0
HUMSVC 10520140	Human Services Agency Experience 2	4	0.0	0.0
HUMSVC 10520189	Human Services Experience Conference 2	3	3.0	0.0
SOC 10809172	Introduction to Diversity Studies	3	3.0	0.0
	Elective	3		



# IT-Android Applications Development

Program Number: 9015212CER

*Certificate*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Required Course

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ITPROG 10152189	Android Applications Development	3	2.0	2.0



# IT-Cisco Certification Professional

Program Number: 901505CERT

*Certificate*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ITNET 10150155	CCNP Route	3	2.0	2.0

### Second Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ITNET 10150151	CCNP Route	3	2.0	2.0



# IT-Cisco Certified Networking Associate (CCNA)

Program Number: 901502CERT

*Certificate*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Required Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ITNET 10150121	Intro to Cisco Networking	3	2.0	2.0
ITNET 10150122	Cisco Networking 2	3	2.0	2.0
ITNET 10150123	Cisco Networking 3	3	2.0	2.0
ITNET 10150124	Cisco Networking 4	3	2.0	2.0



# IT-Cisco Entry Networking Technician

Program Number: 901505CERT

*Certificate*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Required Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ITNET 10150121	Intro to Cisco Networking	3	2.0	2.0
ITNET 10150122	Cisco Networking 2	3	2.0	2.0



# IT-Cloud Support Associate

Program Number: 101571

Associate in Applied Science

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits	Hours Per Week	
			Lecture	Lab
IT 10107111	Exploration of Information Technology	1	1.0	0.0
ITNET 10150121	Intro to Cisco Networking	3	2.0	0.0
ITSECUR 10151102	IT Security Awareness	1	1.0	0.0
ITPROG 10152124	Introduction to Databases	3	2.0	2.0
ITTECSUP 10154184	Enterprise Client	3	2.0	2.0
ENGLISH 10801195	Written Communication	3	3.0	0.0
PSYCH 10809199	Psychology Of Human Relations	3	3.0	0.0

### Second Semester

Class Course Number	Class Name	Credits	Hours Per Week	
			Lecture	Lab
ITTECSUP 10154118	Infrastructure Automation	3	2.0	2.0
ITTECSUP 10154171	Windows Server 1	3	2.0	2.0
ITTECSUP 10154190	Linux Server 1	3	2.0	2.0
ITCLOUD 10157101	Introduction to Cloud Computing	3	2.0	2.0
COMM 10801196	Oral/Interpersonal Communication	3	3.0	0.0

### Third Semester

Class Course Number	Class Name	Credits	Hours Per Week	
			Lecture	Lab
IT 10107175	Preparation for an IT Career	1	1.0	0.0
ITSECUR 10151114	Linux Server 2 (Security)	3	2.0	2.0
ITCLOUD 10157130	Azure Administration	3	2.0	2.0
ITCLOUD 10157135	VMware Certified Professional (VCP)	3	2.0	2.0
MATH 10804144	Math of Finance	3	3.0	0.0
	<i>Recommended Elective or General Elective</i>	3		

### Fourth Semester

Class Course Number	Class Name	Credits	Hours Per Week	
			Lecture	Lab
ITCLOUD 10157141	AWS Administration	3	2.0	2.0
ITCLOUD 10157155	Cloud Automation/DevOps	3	2.0	2.0
ITCLOUD 10157196	Cloud Internship	3	0.0	0.0
SOC 10809197	Contemporary American Society	3	3.0	0.0
	<i>Recommended Elective or General Elective</i>	3		

### Recommended Electives

Class Course Number	Class Name	Credits	Hours Per Week	
			Lecture	Lab
ITPROG 10152120	Website Development-HTML5	3	2.0	2.0
ITTECSUP 10154172	Windows Server 2	3	2.0	2.0





# IT-CompTIA A+ Computer Essentials

Program Number: 901542CERT

*Certificate*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Required Classes

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ITTECSUP 10154104	A+ Hardware Essentials	3	2.0	2.0
ITTECSUP 10154184	Enterprise Client	3	2.0	2.0



# IT-Desktop Support Technician

Program Number: 311541

*Embedded Technical Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
COMPSOFT 10103137	Word Beginning	1	0.27	1.5
COMPSOFT 10103136	Word Intermediate	1	0.27	1.5
IT 10107111	Exploration of Information Technology	1	1.0	0.0
ITSECUR 10151102	IT Security Awareness	1	1.0	0.0
ITTECSUP 10154104	A+ Hardware Essentials	3	2.0	2.0
ITTECSUP 10154122	IT Service Concepts	3	2.0	2.0
ENGLISH 10801195	Written Communication	3	3.0	0.0

### Second Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
COMPSOFT 10103133	Excel Beginning	1	0.27	1.5
COMPSOFT 10103139	Excel Intermediate	1	0.27	1.5
ITTECSUP 10154146	Help Desk Tools and Techniques	3	2.0	2.0
ITTECSUP 10154184	Enterprise Client	3	2.0	2.0
ITTECSUP 10154147	Supporting Emerging Technologies	3	2.0	2.0
COMM 10801196	Oral/Interpersonal Communication	3	3.0	0.0



# IT-HDI Support Center Analyst

Program Number: 901545CERT

*Certificate*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Required Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ITTECSUP 10154122	IT Service Concepts	3	2.0	2.0
ITTECSUP 10154146	Help Desk Tools and Techniques	3	2.0	2.0



# IT-Help Desk Support Specialist

Program Number: 311547

*A One Year Technical Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
IT 10107111	Exploration of Information Technology	1	1.0	0.0
ITSECUR 10151102	IT Security Awareness	1	1.0	0.0
ITTECSUP 10154104	A+ Hardware Essentials	3	2.0	2.0
ITTECSUP 10154122	IT Service Concepts	3	2.0	2.0
COMPSOFT 10103136	Word - Intermediate	1	0.27	1.5
COMPSOFT 10103137	Word - Beginning	1	0.27	1.5
ENGLISH 10801195	Written Communication	3	3.0	0.0

### Second Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ITTECSUP 10154105	A+ Software Essentials	3	2.0	2.0
ITTECSUP 10154148	Help Desk Specialist Internship	3	0.0	0.0
ITTECSUP 10154184	Enterprise Client	3	2.0	2.0
COMPSOFT 10103133	Excel - Beginning	1	0.27	1.5
COMPSOFT 10103139	Excel - Intermediate	1	0.27	1.5
COMM 10801196	Oral/Interpersonal Communication	3	3.0	0.0



# IT-Java Professional Developer

Program Number: 901527CERT

*Certificate*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Required Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ITPROG 10152111	Java Programming	3	2-Feb	
ITPROG 10152112	Advanced Java Programming	3	2-Feb	
ITPROG 10152113	Enterprise Java Programming	3	2-Feb	



# IT-LAMP Open Source Development

Program Number: 901523CERT

*Certificate*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ITPROG 10152166	PHP Web Development with MySQL	3	2.0	2.0
ITTECSUP 10154190	Linux Server 1	3	2.0	2.0

### Second Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ITPROG 10152157	Ruby on Rails Development	3	2.0	2.0
ITPROG 10152167	Advanced PHP and MySQL Web Development	3	2.0	2.0

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# IT-Microsoft Technologies

Program Number: 901547CERT

*Certificate*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Required Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ITTECSUP 10154171	Windows Server 1	3	2.0	2.0
ITTECSUP 10154172	Windows Server 2	3	2.0	2.0
ITTECSUP 10154184	Windows Client	3	2.0	2.0



# IT-Microsoft Visual Studio.Net

Program Number: 901525CERT

*Certificate*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Required Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ITTECSUP 10152103	C# Web Development Using ASP.NET	3	2.0	2.0





# IT-Mobile Applications Developer

Program Number: 101528

Associate in Applied Science

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
IT 10107111	Exploration of Information Technology	1	1.0	0.0
ITSECUR 10151102	IT Security Awareness	1	1.0	0.0
ITPROG 10152119	Introduction to Programming with JavaScript	3	2.0	2.0
ITPROG 10152120	Website Development-HTML5	3	2.0	2.0
ITPROG 10152124	Introduction to Databases	3	2.0	2.0
ENGLISH 10801195	Written Communication	3	3.0	0.0
PSYCH 10809199	Psychology Of Human Relations	3	3.0	0.0

### Second Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ITPROG 10152111	Java Programming	3	2.0	2.0
ITPROG 10152121	Advanced Website Development	3	2.0	2.0
ITPROG 10152125	SQL Database Programming	3	2.0	2.0
ITPROG 10152130	Systems Design	3	2.0	2.0
COMM 10801196	Oral/Interpersonal Communication	3	3.0	0.0

### Third Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
IT 10107175	Preparation for an IT Career	1	1.0	0.0
ITPROG 10152112	Advanced Java Programming	3	2.0	2.0
ITPROG 10152131	Systems Analysis	3	2.0	2.0
ITPROG 10152139	iOS Development	3	2.0	2.0
MATH 10804144	Math of Finance	3	3.0	0.0
	<i>Recommended Elective or General Elective</i>	3		

### Fourth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ITPROG 10152168	AJAX and JavaScript Web Development	3	2.0	2.0
ITPROG 10152174	IT Mobile Development Internship	3	0.0	0.0
ITPROG 10152189	Android Applications Development	3	2.0	2.0
SOC 10809197	Contemporary American Society	3	3.0	0.0
	<i>Recommended Elective or General Elective</i>	3		

### Recommended Electives

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ITPROG 10152103	C# Web Development Using ASP.NET	3	2.0	2.0
ITPROG 10152157	Ruby on Rails Development	3	2.0	2.0
ITPROG 10152166	PHP Web Development with MySQL	3	2.0	2.0



# IT-Mobile Programmer

Program Number: 311521

*Embedded Technical Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
IT 10107111	Exploration of Information Technology	1	1.0	0.0
ITSECUR 10151102	IT Security Awareness	1	1.0	0.0
ITPROG 10152119	Introduction to Programming with JavaScript	3	2.0	2.0
ITPROG 10152120	Website Development-XHTML	3	2.0	2.0
ITPROG 10152124	Introduction to Database	3	2.0	2.0
ENGLISH 10801195	Written Communication	3	3.0	0.0

### Second Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ITPROG 10152121	Advanced Website Development	3	2.0	2.0
ITPROG 10152125	SQL Database Programming	3	2.0	2.0
ITPROG 10152130	Object-Oriented Design with UML	3	2.0	2.0
PSYCH 10809199	Psychology Of Human Relations	3	3.0	0.0



# IT-Network Security Specialist

Program Number: 101503

Associate in Applied Science

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
IT 10107111	Exploration of Information Technology	1	1.0	0.0
ITNET 10150121	Intro to Cisco Networking	3	2.0	2.0
ITSECUR 10151102	IT Security Awareness	1	1.0	0.0
ITTECSUP 10154184	Enterprise Client	3	2.0	2.0
ITTECSUP 10154190	Linux Server 1	3	2.0	2.0
ENGLISH 10801195	Written Communication	3	3.0	0.0
PSYCH 10809199	Psychology Of Human Relations	3	3.0	0.0

### Second Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ITNET 10150194	Firewall/VPN Technologies	3	2.0	2.0
ITSECUR 10151114	Linux Server 2 (Security)	3	2.0	2.0
ITPROG 10152109	Python Programming	3	2.0	2.0
ITTECSUP 10154171	Windows Server 1	3	2.0	2.0
COMM 10801196	Oral/Interpersonal Communication	3	3.0	0.0

### Third Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
IT 10107175	Preparation for an IT Career	1	1.0	0.0
ITSECUR 10151142	Web Application Security	3	2.0	2.0
ITSECUR 10151133	Computer Forensics	3	2.0	2.0
ITSECUR 10151137	Intrusion Detection	3	2.0	2.0
MATH 10804144	Math of Finance	3	3.0	0.0
ITCLOUD 10157101	Introduction to Cloud Computing	3	2.0	0.0

### Fourth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ITSECUR 10151164	Penetration Testing	3	2.0	2.0
ITSECUR 10151168	Security Design	3	2.0	2.0
ITSECUR 10151197	Network Security Internship	3	0.0	0.0
SOC 10809197	Contemporary American Society	3	3.0	0.0
	<i>Elective</i>	3		

### Recommended Electives

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ITNET 10150122	Cisco Networking 2	3	2.0	2.0
ITNET 10150150	VoIP Convergence Fundamentals	3	2.0	2.0
ITPROG 10152120	Website Development-HTML5	3	2.0	2.0
ITCLOUD 10157135	VMware Certified Professional (VCP)	3	2.0	2.0



# IT-Network Security Specialist

Program Number: 101502

Associate in Applied Science

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
IT 10107111	Exploration of Information Technology	1	1.0	0.0
ITNET 10150121	Intro to Cisco Networking	3	2.0	2.0
ITSECUR 10151102	IT Security Awareness	1	1.0	0.0
ITTECSUP 10154184	Enterprise Client	3	2.0	2.0
ITTECSUP 10154190	Linux Server 1	3	2.0	2.0
ENGLISH 10801195	Written Communication	3	3.0	0.0
PSYCH 10809199	Psychology Of Human Relations	3	3.0	0.0

### Second Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ITNET 10150122	Cisco Networking 2	3	2.0	2.0
ITTECSUP 10154122	IT Service Concepts	3	2.0	2.0
ITTECSUP 10154171	Windows Server 1	3	2.0	2.0
ITNET 10150194	Firewall/VPN Technologies	3	2.0	2.0
COMM 10801196	Oral/Interpersonal Communication	3	3.0	0.0

### Third Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
IT 10107175	Preparation for an IT Career	1	1.0	0.0
ITNET 10150123	Cisco Networking 3	3	2.0	2.0
ITNET 10150150	VoIP Convergence Fundamentals	3	2.0	2.0
ITNET 10150190	Wireless Topics	3	2.0	2.0
MATH 10804144	Math of Finance	3	3.0	0.0
SOC 10809197	Contemporary American Society	3	3.0	0.0

### Fourth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ITNET 10150124	Cisco Networking 4	3	2.0	2.0
ITNET 10150151	Advanced Networking Topics	3	2.0	2.0
ITNET 10150195	Networking Internship	3	2.0	2.0
ITPROG 10152109	Python Programming	3	2.0	2.0
	<i>Elective</i>	3		

### Recommended Electives

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ITSECUR 10151114	Linux Server 2 (Security)	3	2.0	2.0
ITPROG 10152120	Website Development-XHTML	3	2.0	2.0
ITTECSUP 10154172	Windows Server 2	3	2.0	2.0
ITCLOUD 10157135	VMware Certified Professional (VCP)	3	2.0	2.0



# IT-PHP Professional Web Developer

Program Number: 901528CERT

*Certificate*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Required Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ITPROG 10152166	PHP Web Development with MySQL	3	2.0	2.0
ITPROG 10152167	Advanced PHP and MySQL Web Development	3	2.0	2.0



# IT-Python Programming

Program Number: 9015213CER

*Certificate*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Required Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ITPROG 10152109	Python Programming	3	2.0	2.0



# IT-Systems Administration Specialist

Program Number: 101547

Associate in Applied Science

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
COMPSOFT 10103137	Word Beginning	1	0.27	1.5
COMPSOFT 10103136	Word Intermediate	1	0.27	1.5
IT 10107111	Exploration of Information Technology	1	1.0	0.0
ITSECUR 10151102	IT Security Awareness	1	1.0	0.0
ITTECSUP 10154104	A+ Hardware Essentials	3	2.0	2.0
ITTECSUP 10154122	IT Service Concepts	3	2.0	2.0
ENGLISH 10801195	Written Communication	3	3.0	0.0
PSYCH 10809199	Psychology Of Human Relations	3	3.0	0.0

### Second Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
COMPSOFT 10103133	Excel Beginning	1	0.27	1.5
COMPSOFT 10103139	Excel Intermediate	1	0.27	1.5
ITNET 10150121	Intro to Cisco Networking	3	2.0	2.0
ITTECSUP 10154146	Help Desk Tools and Techniques	3	2.0	2.0
ITTECSUP 10154147	Supporting Emerging Technologies	3	2.0	2.0
ITTECSUP 10154184	Enterprise Client	3	2.0	2.0
COMM 10801196	Oral/Interpersonal Communication	3	3.0	0.0

### Third Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
IT 10107175	Preparation for an IT Career	1	1.0	0.0
ITTECSUP 10154118	Infrastructure Automation	3	2.0	2.0
ITTECSUP 10154171	Windows Server 1	3	2.0	2.0
ITTECSUP 10154190	Linux Server 1	3	2.0	2.0
MATH 10804144	Math of Finance	3	3.0	0.0
	<i>Elective</i>	3		

### Fourth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ITTECSUP 10154172	Windows Server 2	3	2.0	2.0
ITTECSUP 10154198	Systems Administration Internship	3	0.0	0.0
ITCLOUD 10157135	VMware Certified Professional (VCP)	3	2.0	2.0
SOC 10809197	Contemporary American Society	3	3.0	0.0
	<i>Elective</i>	3		

### Recommended Electives

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ADMINPRF 10106101	Keyboarding Introduction	1	0.27	1.5
ITPROG 10152109	Python Programming	3	2.0	2.0
ITPROG 10152120	Website Development-XHTML	3	2.0	2.0
ITCLOUD 10157101	Introduction to Cloud Computing	3	2.0	2.0



# IT-iOS Applications Development

Program Number: 901529CERT

*Certificate*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Required Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ITPROG 10152139	iOS Development	3	2.0	2.0





# IT-Web Software Developer

Program Number: 101524

Associate in Applied Science

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
IT 10107111	Exploration of Information Technology	1	1.0	0.0
ITSECUR 10151102	IT Security Awareness	1	1.0	0.0
ITPROG 10152119	Introduction to Programming with JavaScript	3	2.0	2.0
ITPROG 10152120	Website Development-HTML5	3	2.0	2.0
ITPROG 10152124	Introduction to Database	3	2.0	2.0
ENGLISH 10801195	Written Communication	3	3.0	0.0
PSYCH 10809199	Psychology Of Human Relations	3	3.0	0.0

### Second Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ITPROG 10152111	Java Programming	3	2.0	2.0
ITPROG 10152125	SQL Database Programming	3	2.0	2.0
ITPROG 10152130	Systems Design	3	2.0	2.0
ITPROG 10152166	PHP Web Development with MySQL	3	2.0	2.0
COMM 10801196	Oral/Interpersonal Communication	3	3.0	0.0

### Third Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
IT 10107175	Preparation for an IT Career	1	1.0	0.0
ITPROG 10152112	Advanced Java Programming	3	2.0	2.0
ITPROG 10152121	Advanced Website Development	3	2.0	2.0
ITPROG 10152131	Systems Analysis	3	2.0	2.0
MATH 10804144	Math of Finance	3	3.0	0.0
	<i>Elective</i>	3		

### Fourth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ITPROG 10152113	Enterprise Java Programming	3	2.0	2.0
ITPROG 10152132	Web Software Developer Internship	3	0.0	0.0
ITPROG 10152168	AJAX and JavaScript Web Development	3	2.0	2.0
SOC 10809197	Contemporary American Society	3	3.0	0.0
	<i>Elective</i>	3		

### Recommended Electives

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ITNET 10150121	Intro to Cisco Networking	3	2.0	2.0
ITPROG 10152103	C# Web Development Using ASP.NET	3	2.0	2.0
ITPROG 10152157	Ruby on Rails Development	3	2.0	2.0
ITPROG 10152158	Modern JavaScript	3	2.0	2.0
ITPROG 10152167	Advanced PHP and MySQL Web Development	3	2.0	2.0
ITPROG 10152189	Android Applications Development	3	2.0	2.0



# Individualized Technical Studies

Program Number: 108251

*Associate in Applied Science*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### General Education Core (21-30 credits)

Select one from each content group:

Content Group	Credits
Communications	6
Social Science	3
Behavior Science	3
Math/Science	3
Additional General Studies Courses	6

### Individualized Technical Studies Courses (36-49 credits)

Students are required to complete a minimum of 36 credit hours relevant to career goals. A minimum of 20 of these credits must be focused in one discipline.

### Electives (0-6 credits)

Students may complete up to six credit hours of electives relevant to career goals. You may utilize your electives to take additional technical courses.



# Industrial Automation - Post Baccalaureate

Program Number: 904623CERT

*Certificate*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Required Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
IND MECH 10462327	Electronic Circuits for Maintenance	3	0.0	6.0
IND MECH 10462324	Programmable Logic Controllers 1	3	0.0	6.0
IND MECH 10462326	Programmable Logic Controllers 2	3	0.0	6.0
IND MECH 10462328	Interfacing Sensors with Computer Controls	3	0.0	6.0
IND MECH 10462340	Manufacturing Systems, Application and Control	3	0.0	6.0



# Industrial Electrician Apprenticeship

Program Number: 504131

Apprenticeship Completion

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ELEC 50413542	Tech EI Ind Sem 1	2	3.4	0.6

### Second Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ELEC 50413543	Tech EI Ind Sem 2	2	3.4	0.6

### Third Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ELEC 50413544	Tech EI Ind Sem 3	2	3.4	0.6

### Fourth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ELEC 50413545	Tech EI Ind Sem 4	2	3.4	0.6

### Fifth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ELEC 50413546	Tech EI Ind Sem 5	2	3.4	0.6

### Sixth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ELEC 50413547	Tech EI Ind Sem 6	2	3.4	0.6

### Seventh Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ELEC 50413548	Tech EI Ind Sem 7	2	3.4	0.6

### Eighth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ELEC 50413549	Tech EI Ind Sem 8	2	3.4	0.6

### Ninth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ELEC 50413552	Tech EI Ind Sem 9	2	3.4	0.6

### Tenth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ELEC 50413553	Tech EI Ind Sem 10	2	3.4	0.6



# Industrial Maintenance Manufacturing Essentials

Program Number: 906232CERT

*Certificate*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Required Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
INDMANUF 10623100	Safety for Industry	1	0.0	2.0
INDMANUF 10623200	Interpreting Engineering Drawings	2	0.0	4.0
INDMANUF 10623300	Fluid Power 1 for Industry	1	0.0	2.0
MATH 31804381	Machine Tool Math 1	2	4.0	0.0
COMM 32801350	Workplace Communication for Industry	1	2.0	0.0



# Industrial Maintenance Mechanic

Program Number: 314622

*A One Year Technical Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
IND MECH 10462320	DC/AC Circuits	3	0.0	6.0
INDMANUF 10623100	Safety for Industry	1	0.0	2.0
INDMANUF 10623200	Interpreting Engineering Drawings	2	0.0	4.0
INDMANUF 10623300	Fluid Power 1 for Industry	1	0.0	2.0
AUTMFG 10628170	Robotics for Industrial Automation 1	1	0.0	2.0
INDMANUF 10623301	Fluid Power 2 for Industry	2	0.0	4.0
MACHT 32420330	Metal Processes 1	2	2.0	2.0
MATH 31804381	Machine Tool Math 1	2	4.0	0.0
MATH 31804382	Machine Tool Math 2	1	2.0	0.0

### Second Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
IND MECH 10462304	Industrial Fluid Distribution Systems	2	0.0	4.0
IND MECH 10462306	Metal Processes Maintenance	2	0.0	4.0
IND MECH 10462311	Industrial Equipment Mechanisms 2	1	0.0	2.0
IND MECH 10462322	Industrial Electricity and Controls	4	0.0	8.0
INDMANUF 10623310	Mechanisms for Industry 1	1	0.0	2.0
AUTMFG 10628168	Robotics for Industrial Automation 2	2	0.5	3.0
SMLBUS 10145189	Customer Relations	2	2.0	0.0



# Industrial Maintenance Technician

Program Number: 324621

*A Two Year Technical Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
IND MECH 10462320	DC/AC Circuits	3	0.0	6.0
INDMANUF 10623100	Safety for Industry	1	0.0	2.0
INDMANUF 10623200	Interpreting Engineering Drawings	2	0.0	4.0
INDMANUF 10623300	Fluid Power 1 for Industry	1	0.0	2.0
INDMANUF 10623301	Fluid Power 2 for Industry	2	0.0	4.0
AUTMFG 10628170	Robotics for Industrial Automation 1	1	0.0	2.0
MACHT 32420330	Metal Processes 1	2	2.0	2.0
MATH 31804381	Machine Tool Math 1	2	4.0	0.0
MATH 31804382	Machine Tool Math 2	1	2.0	0.0

### Second Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
IND MECH 10462304	Industrial Fluid Distribution Systems	2	0.0	4.0
IND MECH 10462306	Metal Processes Maintenance	2	0.0	4.0
IND MECH 10462311	Industrial Equipment Mechanisms 2	1	0.0	2.0
IND MECH 10462322	Industrial Electricity and Controls	4	0.0	8.0
INDMANUF 10623310	Mechanisms for Industry 1	1	0.0	2.0
AUTMFG 10628168	Robotics for Industrial Automation 2	2	0.5	3.0
SMLBUS 10145189	Customer Relations	2	2.0	0.0

### Third Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
IND MECH 10462314	Industrial Maint Mechanic 1	3	0.0	6.0
IND MECH 10462318	Maintenance Management - Industrial Maintenance Program	2	0.0	4.0
IND MECH 10462324	Programmable Logic Controllers 1	3	0.0	6.0
IND MECH 10462327	Electronic Circuits for Maintenance	3	0.0	6.0
IND MECH 10462330	Heating and Air Conditioning 1	3	0.0	6.0
IND MECH 10462334	Facilities Maintenance	3	0.0	6.0

### Fourth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
IND MECH 10462316	Industrial Maintenance Mechanic 2	3	0.0	6.0
IND MECH 10462326	Programmable Logic Controllers 2	3	0.0	6.0
IND MECH 10462328	Interfacing Sensors with Computer Controls	3	0.0	6.0
IND MECH 10462332	Heating and Air Conditioning 2	3	1.0	4.0
IND MECH 10462336	Building Automation	3	0.0	6.0
IND MECH 10462340	Manufacturing Systems, Application and Control	3	0.0	6.0



# Industrial Mechanic - HVAC

Program Number: 314623

*A One Year Technical Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
IND MECH 10462320	DC/AC Circuits	3	0.0	6.0
IND MECH 10462330	Heating and Air Conditioning 1	3	0.0	6.0
IND MECH 10462334	Facilities Maintenance	3	0.0	6.0
INDMANUF 10623100	Safety for Industry	1	0.0	2.0
INDMANUF 10623200	Interpreting Engineering Drawings	2	0.0	4.0
INDMANUF 10623300	Fluid Power 1 for Industry	1	0.0	2.0
MACHT 32420330	Metal Processes 1	2	2.0	2.0
MATH 31804381	Machine Tool Math 1	2	4.0	0.0
MATH 31804382	Machine Tool Math 2	1	2.0	0.0

### Second Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
IND MECH 10462304	Industrial Fluid Distribution Systems	2	0.0	4.0
IND MECH 10462322	Industrial Electricity and Controls	4	0.0	8.0
IND MECH 10462332	Heating and Air Conditioning 2	3	1.0	4.0
IND MECH 10462336	Building Automation	3	0.0	6.0
INDMANUF 10623310	Mechanisms for Industry 1	1	0.0	2.0
SMLBUS 10145189	Customer Relations	2	2.0	0.0





# Injection Mold Set-Up (Plastic) Apprenticeship

Program Number: 504201

Apprenticeship Completion

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
PLASTIC 50463501	Industrial Math 1	1	1.5	0.5
PLASTIC 50463713	Schematics for Apprentices	1	1.61	0.38

### Second Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
PLASTIC 50463714	Introduction to Injection Molding	2	2.77	1.22

### Third Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ELEC 50413701	Fundamentals of Electricity for Apprentices	1	1.61	0.38
PLASTIC 50463502	Industrial Math 2	1	1.5	0.5

### Fourth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
PLASTIC 50463715	Injection Mold Design	2	2.77	1.22

### Fifth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
HYDPNEU 50419501	Hydraulics for Apprentices	1	1.61	0.38
HYDPNEU 50419502	Pneumatics for Apprentices	1	1.61	0.38

### Sixth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
PLASTIC 50463716	Fundamentals of Plastics Processing	2	2.77	1.22

### Seventh Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
PLASTIC 50463717	Plastic Processing Design & Troubleshooting	2	2.77	1.22

### Eighth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
AUTMFG 50664718	Automation for Apprentices	2	2.77	1.22



# Insurance for Office Professionals

Program Number: 901069CERT

*Certificate*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Required Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ADMINPRF 10106107	Business Document Applications	3	1.0	4.0
ADMINPRF 10106164	Customer Contact Skills	1	1.0	0.5
BUSADM 10102134	Business Organization, Management, and Ethics	3	3.0	0.0
INSMGT 10162125	Intro to Property & Casualty Insurance - PreLicensing	3	3.0	0.0
INSMGT 10162131	Intro to Life & Health Insurance	3	3.0	0.0



# Interdisciplinary Global Studies

Program Number: 901401CERT

Certificate

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### World Language (3-8 credits)

Additionally, non-credit enrichment courses in French, Spanish, Chinese, German, Arabic, etc., may count as one credit each.

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
SPANISH 10802102	Introductory Spanish Conversation 1	3	3.0	0.0
SPANISH 20802211	Spanish 1 - Liberal Arts Transfer	4	3.0	2.0
SPANISH 20802212	Spanish 2 - Liberal Arts Transfer	4	3.0	2.0
SPANISH 20802213	Spanish 3 - Liberal Arts Transfer	4	3.0	2.0
SPANISH 20802214	Spanish 4 - Liberal Arts Transfer	4	3.0	2.0
SPANISH 20802215	Spanish 5	3	3.0	0.0
FRENCH 20802221	French 1 - Liberal Arts Transfer	4	3.0	2.0
FRENCH 20802222	French 2 - Liberal Arts Transfer	4	3.0	2.0
FRENCH 20802223	French 3 - Liberal Arts Transfer	4	3.0	2.0
FRENCH 20802224	French 4 - Liberal Arts Transfer	4	3.0	2.0
CHINESE 20802230	Introduction to Mandarin Chinese	3	2.0	2.0
CHINESE 20802231	Introduction to Mandarin Chinese 2	3	2.0	2.0
ARABIC 20802240	Intro to Modern Arabic 1	3	2.0	2.0
ARABIC 20802241	Intro to Modern Arabic 2	3	2.0	2.0

### Study Abroad (3-12 credits)

Every student must have one education abroad experience/course or courses taken in a semester- abroad experience.

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ECON 99809214	International Economics	3	3.0	0.0
GLBL ED 10140101	Traditional Healing in Cross Cultural Context	3	3.0	0.0
MKTG 10104187	Global Studies Seminar	3	3.0	0.0
HOSPT 10109182	Global Studies Seminar	3	3.0	0.0
GLBL ED 10140112	Renewable Energy for the Developing World	3	1.0	0.0
SPANISH 20802216	Spanish Culture & Civilization - Liberal Arts Transfer	4	4.0	0.0
PHYSICS 20806290	Renewable Energy for International Development	3	3.0	0.0

### Study Abroad Opportunities

Courses taken as semester-abroad (appear as 99-xxx-xxx on transcripts).

*Carlow, Ireland*  
*Cuemavaca, Mexico*  
*Salzburg, Austria*  
*San Jose, Costa Rica*  
*Seville, Spain*  
*Sydney, Australia*  
*Xi'an, China*

### Internationalized Courses (0-9 credits)

Complete up to 9 credits of coursework to bring the certificate to a total of 15 credits.

#### 801 English

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ENGLISH 20801207	World Indigenous Literatures	3	3.0	0.0
ENGLISH 20801215	British Literature 1	3	3.0	0.0
ENGLISH 20801216	British Literature 2	3	3.0	0.0
ENGLISH 20801219	Western World Lit: Classical Antiquity to the Middle Ages	3	3.0	0.0
ENGLISH 20801220	Western World Lit: Early Renaissance to Present	3	3.0	0.0



Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ENGLISH 20801223	Peace, Conflict, and Literature: The Arts of the Contact	3	3.0	0.0
ENGLISH 20801224	Special Topics in International Literature	3	3.0	0.0
ENGLISH 20801226	Introduction to African Literature	3	3.0	0.0
ENGLISH 20801230	Classical Mythology	3	3.0	0.0
ENGLISH 20801231	19th c. Russian Literature in Translation	3	3.0	0.0
ENGLISH 20801232	20th c. Russian/Soviet Literature in Translation	3	3.0	0.0
JOURNAL 20801252	World Issues Journalism	3	3.0	0.0

### 803 History

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
HISTORY 20803204	Making of Modern Europe	3	3.0	0.0
HISTORY 20803205	Europe and Modern World	3	3.0	0.0
HISTORY 20803206	British History Since 1688 - Liberal Arts Transfer	3	3.0	0.0
HISTORY 20803220	History Of West Civilization 1	3	3.0	0.0
803 20803221	Hist West Civ 2	3	3.0	0.0
HISTORY 20803224	History of Sub Saharan Africa	3	3.0	0.0
HISTORY 20803225	World In 20th Century	3	3.0	0.0
HISTORY 20803225	World In 20th Century	3	3.0	0.0
HISTORY 20803226	East Asian Civilization	3	3.0	0.0
HISTORY 20803229	Vietnam/American-1945-Present	3	3.0	0.0
HISTORY 20803230	Women In History	3	3.0	0.0
HISTORY 20803233	Gender and Women's History in Cultural Representations	3	3.0	0.0
HISTORY 20803234	Gender and Women's Global History	3	3.0	0.0

### 805 Music

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
MUSIC 20805207	World Music	3	3.0	0.0
MUSIC 20805232	International Arts Intensive-Music	3	3.0	0.0
MUSIC 20805279	World Drumming Ensemble 1	1	0.0	2.0
MUSIC 20805280	World Drumming Ensemble 2	1	0.0	2.0

### 806 Natural Science

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
BIOLOGY 20806280	Environmental Issues	3	3.0	0.0

### 807 Physical Education

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
PHYED 20807260	Martial Arts Fundamentals	1	0.0	2.0

### 809 Social and Behavioral Science

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ECON 20809214	Intro International Econ	3	3.0	0.0
POLISCI 20809220	American Foreign Policy	3	3.0	0.0
POLISCI 20809223	International Relations	3	3.0	0.0
ECON 20809228	Environmental Economics	3	3.0	0.0
POLISCI 20809243	Comparative Politics	3	3.0	0.0
POLISCI 20809244	Russian Politics	3	3.0	0.0
POLISCI 20809245	Latin American Politics	3	3.0	0.0
POLISCI 20809246	African Politics	3	3.0	0.0
POLISCI 20809247	Introduction to East Asian Politics	3	3.0	0.0
SOC 20809251	Sociology of the Middle East and North Africa	3	3.0	0.0
PHILOS 20809263	East/West World View - Liberal Arts Transfer	3	3.0	0.0
809 20809278	Intro to Buddhism	3	3.0	0.0
ANTHRO 20809280	General Anthropology	3	3.0	0.0
ANTHRO 20809281	Archaeology & Prehistoric World	3	3.0	0.0
ANTHRO 20809283	Cultural Anthropology & Human Diversity	3	3.0	0.0
ANTHRO 20809285	Anthropology of Myth, Magic, and Religion	3	3.0	0.0
ANTHRO 20809286	The Anthropology of Globalization & Multiculturalism	3	3.0	0.0



### 810 Speech/Drama

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
DRAMA 20810232	International Arts Intensive-Theatre	3	3.0	0.0

### 815 Art

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ART 20815200	Art History: Ancient to Medieval	3	3.0	0.0
ART 20815210	Art History: Renaissance to Modern	3	3.0	0.0
ART 20815211	Art History: Women In Art	3	3.0	0.0

### Other Disciplines

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
BUSADM 10102150	Introduction to International Business	3	3.0	0.0
MKTG 10104180	International Marketing	3	3.0	0.0
FSHNMKTG 10104183	International Business in Fashion	2	0.0	4.0
PARALEG 10110171	Law & Contemporary Problems	3	3.0	0.0
GLBL ED 10140107	Perspectives on Study Abroad	1	1.0	0.0
INSMGT 10162136	Current Issues in Risk Management and Insurance	1	1.0	0.0
CUL ARTS 10316112	Cuisines of the World	4	0.0	4.0
INDSGN 10304129	History of Interior Design	3	2.0	2.0
NRSAD 10543291	Community Cultural Health Care	3	1.0	0.0
LANG INT 31538303	Cultural Competency and the Medical Setting	2	4.0	0.0
LANG INT 31538304	Introduction to Interpreting in Spanish	2	4.0	0.0
LANG INT 31538305	Introduction to Basic Translation Skills in Spanish	2	4.0	0.0
COOKING 60303652	Foreign/Ethnic Foods	0	0.22	0.88



# Interior Design

Program Number: 103041

Associate in Applied Arts

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Summer (Prior to start of program)

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
INDSGN 10304100	Survey of the Interior Design Profession	1	1.0	0.0

### First Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
INDSGN 10304102	Fundamentals of Design	3	4-Jan	
INDSGN 10304104	Basic Architectural Drawing	3	4-Jan	
INDSGN 10304105	Building and Furniture Construction	3	2-Feb	
INDSGN 10304107	Interior Design Textiles	3	2-Feb	
MATH 10804123	Math with Business Applications	3	Mar-00	

### Second Semester

Class Course Number	Class Name	Credits / Units	Hour Per Week	
			Lecture	Lab
ENGLISH 10801195	Written Communication	3	3.0	0.0
INDSGN 10304120	Advanced Architectural Drawing	2	0.0	4.0
INDSGN 10304125	Residential Design 1	3	1.0	4.0
INDSGN 10304127	Materials and Finishes	2	1.0	2.0
INDSGN 10304129	History of Interior Design	3	2.0	2.0
INDSGN 10304161	Visual Communication for Interior Design	3	1.0	4.0

### Third Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	lab
INDSGN 10304133	Commercial Design	5	1.0	8.0
INDSGN 10304135	Lighting	2	1.0	2.0
INDSGN 10304142	Sales & Professional Practice	3	2.0	2.0
INDSGN 10304146	Trends and Issues in Interior Design	2	1.0	2.0
COMM 10801196	Oral/Interpersonal Communication	3	3.0	0.0
PSYCH 10809199	Psychology Of Human Relations	3	3.0	0.0

### Fourth Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
INDSGN 10304132	Kitchen & Bath Design	5	1.0	8.0
INDSGN 10304143	Residential Design 2	3	2.0	2.0
INDSGN 10304145	Interior Design Internship	2	0.0	0.0
INDSGN 10304147	Portfolio Development	2	1.0	2.0
SOC 10809197	Contemporary Amer Society	3	3.0	0.0



# Introduction to the Instructional Assistant Career

Program Number: 805221

*Advanced Technical Certificate*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Required Courses

Class Course Number	Class Name	Credits	Hours Per Week	
			Lecture	Lab
EDSVC 10522103	IA: Introduction to Educational Practices	3	3.0	0.0
EDSVC 10522106	IA: Child and Adolescent Development	3	2.0	2.0
EDSVC 10522107	IA: Overview of Special Education	3	3.0	0.0
EDSVC 10522111	IA: Guiding and Managing Behavior	3	2.0	2.0



# Ironworker Apprentice

Program Number: 504371

*Apprenticeship Completion*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lab	Lecture
STEELIRN 50437535	Combined Weld for IW	2	1.0	3.0
STEELIRN 50437570	Reinforcing Steel/Post Tensioning/Math	2	3.0	1.0

### Second Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lab	Lecture
STEELIRN 50437536	Gmaw/Fcaw Welding	2	1.0	3.0
STEELIRN 50437571	Ornamental	2	3.0	1.0

### Third Semester

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lab	Lecture
STEELIRN 50437537	Gtaw (Gas Tungston Arc Welding)	2	1.0	3.0
STEELIRN 50437703	Structural Steel Erection 1	3	3.0	3.0





# Jail Officer

Program Number: 905042CERT

*Certificate*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Required Courses

Class Course Number	Class Name	Credits	Hours Per Week	
			Lecture	Lab
CRIMJUST 30504350	Basic Jail Officer Certification	4	6.66	2.22



# Journalism

Program Number: 908012CERT

*Certificate*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Required Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
JOURNAL 20801245	Introduction to Journalism	3	3.0	0.0
JOURNAL 20801246	Investigative Journalism	3	3.0	0.0
JOURNAL 20801253	Documentary Storytelling	3	2.0	2.0
JOURNAL 20801262	Social Media Writing	3	3.0	0.0
JOURNAL 20801271	Journalism Practicum 1	1	2.0	0.0

### Selected Electives

Students must also complete at least a minimum of 5 credits from the following electives:

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
PHOTO 10203173	Photojournalism	2	0.0	4.0
VICOM 10206147	Introduction to DSLR Video Production	2	0.0	4.0
JOURNAL 20801251	Introduction to Mass Communication	4	4.0	0.0
JOURNAL 20801252	World Issues Journalism	3	3.0	0.0
JOURNAL 20801272	Journalism Practicum 2	1	2.0	0.0
JOURNAL 20801273	Journalism Practicum 3	1	2.0	0.0
JOURNAL 20801274	Journalism Practicum 4	1	2.0	0.0
ART 20815239	Digital Photography	3	0.0	6.0
GRDSGN 10201181	Introduction to Computer Graphics	3	0.0	6.0
GRDSGN 10201177	WebPage Design	3	0.0	6.0
JOURNAL 20801269	On-Air Performance	3	2.0	0.0
JOURNAL 20801254	Media Ethics and Democracy	3	0.0	0.0



# Liberal Arts Transfer

Program Number: 208001-A

*Associate in Arts*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Number of Credits Required

60 credits minimum to complete the program, by satisfying the all requirements as defined.

### English and Speech (9 Credits)

Six credits must be in composition - English 1 and one other composition course (English 2 recommended). Three credits must be in public speaking.

#### Composition Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ENGLISH 20801201	English 1	3	3.0	0.0
ENGLISH 20801202	English 2	3	3.0	0.0
JOURNAL 20801245	Introduction to Journalism	3	3.0	0.0
JOURNAL 20801246	Investigative Journalism	3	3.0	0.0
JOURNAL 20801251	Introduction to Mass Communication	4	4.0	0.0

#### Public Speaking Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
SPEECH 10801198	Speech	3	3.0	0.0
JOURNAL 20801269	On-Air Performance	3	2.0	2.0
SPEECH 20810202	Theory & Practice of Argumentation and Debate	3	3.0	0.0
SPEECH 20810211	Oral Interpretation	3	3.0	0.0

### Health/Wellness/Physical Education (1 credit)

Completion of one credit is required.

#### Physical Education Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
PHYED 20807210	Conditioning/Weight Training	1	0.0	2.0
PHYED 20807213	Co-Ed Flag Football	1	0.0	2.0
PHYED 20807214	Pickleball	1	0.0	2.0
PHYED 20807219	Introduction to Kinesiology	2	2.0	0.0
PHYED 20807223	Beginning Volleyball	1	0.0	2.0
PHYED 20807229	Swimming for Fitness	1	0.0	2.0
PHYED 20807230	Beginning Swimming	1	0.0	2.0
PHYED 20807245	Social Dance	1	0.0	2.0
PHYED 20807247	Jazz 1	1	0.0	2.0
PHYED 20807248	Ballet	1	0.0	2.0
PHYED 20807250	Badminton	1	0.0	2.0
PHYED 20807254	Beginning Yoga	1	0.0	2.0
PHYED 20807255	Prev/Care Athletic Injuries	2	1.0	2.0
PHYED 20807258	First Aid and CPR	2	2.0	0.0
PHYED 20807264	Intermediate Yoga	1	0.0	2.0
PHYED 20807266	Wellness Today	2	2.0	2.0
PHYED 20807267	Health & Fitness for Life	1	0.0	2.0
PHYED 20807268	Blueprint for Healthy Living	2	2.0	0.0
PHYED 20807269	Stress Management Foundations	1	0.0	2.0
PHYED 20807271	Bicycle Conditioning	1	0.0	2.0
PHYED 20807289	Aerobics/Weight Training	1	0.0	2.0

### Humanities/Fine Arts (12 credits)

Select one literature course. Completion of courses from two additional disciplines is required.



Choose courses from the following disciplines: art, drama, film, music, philosophy, world languages, writing and communication, and interdisciplinary humanities. Remaining credits to fulfill the requirement can be selected from any Humanities and Fine Arts courses offered within the AA degree, including literature.

### Art Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ART 20815200	Art History: Ancient to Medieval	3	3.0	0.0
ART 20815201	Basic Design	3	0.0	6.0
ART 20815202	Color & Design	3	0.0	6.0
ART 20815203	3-Dimensional Design	3	0.0	6.0
ART 20815205	Drawing Fundamentals	3	0.0	6.0
ART 20815208	Contemporary Art Survey	3	0.0	6.0
ART 20815210	Art History: Renaissance to Modern	3	3.0	0.0
ART 20815211	Art History: Women In Art	3	3.0	0.0
ART 20815214	Modern Art Survey	3	0.0	6.0
ART 20815215	Drawing 2	3	0.0	6.0
ART 20815219	Life Drawing 1	3	0.0	6.0
ART 20815220	Life Drawing 2	3	0.0	6.0
ART 20815221	Life Drawing 3	3	0.0	6.0
ART 20815232	Digital Design Fundamentals	3	0.0	6.0
ART 20815235	Creative Photography	3	0.0	6.0
ART 20815236	Advanced Creative Photography	3	0.0	6.0
ART 20815239	Digital Photography	3	0.0	6.0
ART 20815241	Painting 1	3	0.0	6.0
ART 20815242	Painting 2	3	0.0	6.0
ART 20815253	Jewelry 1	3	0.0	6.0
ART 20815254	Jewelry 2	3	0.0	6.0
ART 20815290	Ceramics 1	3	0.0	6.0
ART 20815291	Ceramics 2	3	0.0	6.0
ART 20815294	Ceramics Sculpture 1	3	0.0	6.0
ART 20815295	Ceramics Sculpture 2	3	0.0	6.0
ART 20815296	Ceramics Firing Techniques/Alternative Methods	3	0.0	6.0

### Writing and Communication Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
COMM 10801196	Oral/Interpersonal Communication	3	3.0	0.0
JOURNAL 20801251	Introduction to Mass Communication	4	4.0	0.0
COMM 20810205	Small Group & Interpersonal Communications	3	3.0	0.0
ENGLISH 10801195	Written Communication	3	3.0	0.0
ENGLISH 10801197	Technical Reporting	3	3.0	0.0
ENGLISH 20801240	Creative Writing	3	3.0	0.0
ENGLISH 20801241	Creative Writing/Fiction	3	3.0	0.0
ENGLISH 20801242	Creative Writing/Drama	3	3.0	0.0
ENGLISH 20801243	Creative Writing/Poetry	3	3.0	0.0
ENGLISH 20801244	Creative Writing/Non Fiction	3	3.0	0.0
JOURNAL 20801245	Introduction to Journalism	3	3.0	0.0
JOURNAL 20801246	Investigative Journalism	3	3.0	0.0
ENGLISH 20801249	Film Writing	3	3.0	0.0
JOURNAL 20801252	World Issues Journalism	3	3.0	0.0
JOURNAL 20801253	Documentary Storytelling	3	2.0	2.0
JOURNAL 20801254	Media Ethics and Democracy	3	0.0	0.0
JOURNAL 20801262	Social Media Writing	3	3.0	0.0
JOURNAL 20801271	Journalism Practicum 1	1	2.0	0.0
JOURNAL 20801272	Journalism Practicum 2	1	2.0	0.0
JOURNAL 20801273	Journalism Practicum 3	1	2.0	0.0
JOURNAL 20801274	Journalism Practicum 4	1	2.0	0.0

### Drama Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
DRAMA 20810235	Stagecraft 1	3	3.0	0.0
DRAMA 20810236	Stagecraft 2	3	3.0	0.0



Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
DRAMA 20810260	Drama Practicum	1	2.0	0.0
DRAMA 20810262	Acting 1	3	3.0	0.0
DRAMA 20810263	Acting 2	3	3.0	0.0
DRAMA 20810270	Movement Theory & Training for Actors	1	0.0	2.0
DRAMA 20810230	Intro To Theatre	3	3.0	0.0
DRAMA 20810238	Cultural Diversity in Contemporary American Theater	3	3.0	0.0

### Film Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
FILM 20810250	Introduction to Film	3	2.0	2.0
FILM 20810254	History Of World Cinema	3	2.0	2.0

### Literature Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ENGLISH 20801204	Introduction to Literature	3	3.0	0.0
ENGLISH 20801207	World Indigenous Literatures	3	3.0	0.0
ENGLISH 20801211	Gay & Lesbian Literature	3	3.0	0.0
ENGLISH 20801212	Ethnic Literature	3	3.0	0.0
ENGLISH 20801213	Native American Literature	3	3.0	0.0
ENGLISH 20801214	African American Literature	3	3.0	0.0
ENGLISH 20801215	British Literature 1	3	3.0	0.0
ENGLISH 20801216	British Literature 2	3	3.0	0.0
ENGLISH 20801217	American Literature 1	3	3.0	0.0
ENGLISH 20801218	American Literature 2	3	3.0	0.0
ENGLISH 20801219	Western World Lit: Classical Antiquity to the Middle Ages	3	3.0	0.0
ENGLISH 20801220	Western World Lit: Early Renaissance to Present	3	3.0	0.0
ENGLISH 20801221	Literature and Popular Culture	3	3.0	0.0
ENGLISH 20801222	U.S. Latino Literature	3	3.0	0.0
ENGLISH 20801223	Peace, Conflict, and Literature: The Arts of the Contact	3	3.0	0.0
ENGLISH 20801226	Introduction to African Literature	3	3.0	0.0
ENGLISH 20801227	Children's Literature	3	3.0	0.0
ENGLISH 20801229	Contemporary Lit	3	3.0	0.0
ENGLISH 20801230	Classical Mythology	3	3.0	0.0
ENGLISH 20801231	19th c. Russian Literature in Translation	3	3.0	0.0
ENGLISH 20801232	20th c. Russian Literature in Translation	3	3.0	0.0
ENGLISH 20801250	Women In Literature	3	3.0	0.0
LITTRANS 20802250	Literature in Translation	3	3.0	0.0

### Music Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
MUSIC 20805205	Class Voice 1	1	1.0	0.0
MUSIC 20805206	Class Voice 2	1	1.0	0.0
MUSIC 20805209	Swing Choir	2	2.0	0.0
MUSIC 20805211	Orchestra 1	1	0.0	2.0
MUSIC 20805212	Orchestra 2	1	0.0	2.0
MUSIC 20805216	Concert Band 1	1	0.0	2.0
MUSIC 20805217	Concert Band 2	1	0.0	2.0
MUSIC 20805219	Jazz Ensemble 1	1	0.0	2.0
MUSIC 20805220	Jazz Ensemble 2	1	0.0	2.0
MUSIC 20805221	Class Piano 1	1	0.0	2.0
MUSIC 20805222	Class Piano 2	1	0.0	2.0
MUSIC 20805270	Madison College Chorale	1	0.0	2.0
MUSIC 20805271	Madison College Chorale 2	1	0.0	2.0
MUSIC 20805272	Madrigal Choir	1	0.0	2.0
MUSIC 20805279	World Drumming Ensemble 1	1	0.0	2.0
MUSIC 20805280	World Drumming Ensemble 2	1	0.0	2.0
MUSIC 20805281	World Drumming Ensemble 3	1	0.0	2.0
MUSIC 20805282	World Drumming Ensemble 4	1	0.0	2.0
MUSIC 20805207	World Music	3	3.0	0.0
MUSIC 20805227	Music Appreciation	3	3.0	0.0



Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
MUSIC 20805260	Music Theory Fundamentals	3	3.0	0.0
MUSIC 20805261	Music Theory 1	3	3.0	0.0
MUSIC 20805262	Music Theory 2	3	3.0	0.0
MUSIC 20805263	Jazz History	3	3.0	0.0
MUSIC 20805267	Aural Skills 1	1	0.0	2.0
MUSIC 20805268	Aural Skills 2	1	0.0	2.0
MUSIC 20805278	Hist Pop/Rock Music	3	3.0	0.0

### Philosophy Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
PHILOS 10809166	Intro to Ethics: Theory & App	3	3.0	0.0
PHILOS 20809258	Philosophy Through Film	3	3.0	0.0
PHILOS 20809259	Classics in Philosophy	3	3.0	0.0
PHILOS 20809260	Intro Philosophy	3	3.0	0.0
PHILOS 20809261	Elementary Logic	4	4.0	0.0
PHILOS 20809262	Contemporary Moral Issues	3	3.0	0.0
PHILOS 20809263	East/West World View	3	3.0	0.0
PHILOS 20809264	Introduction to Logic and Critical Thinking	3	3.0	0.0
PHILOS 20809266	Ethics In Medicine	3	3.0	0.0
PHILOS 20809268	Intro to Social and Political Philosophy	3	3.0	0.0
PHILOS 20809276	Business Ethics	3	3.0	0.0

### World Languages Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
SPANISH 20802211	Spanish 1	4	3.0	2.0
SPANISH 20802212	Spanish 2	4	3.0	2.0
SPANISH 20802213	Spanish 3	4	3.0	2.0
SPANISH 20802214	Spanish 4	4	3.0	2.0
SPANISH 20802215	Spanish 5	3	3.0	0.0
FRENCH 20802221	French 1	4	3.0	2.0
FRENCH 20802222	French 2	4	3.0	2.0
FRENCH 20802223	French 3	4	3.0	2.0
FRENCH 20802224	French 4	4	3.0	2.0
CHINESE 20802230	Introduction to Mandarin Chinese	3	2.0	2.0
CHINESE 20802231	Introduction to Mandarin Chinese 2	3	2.0	2.0
ARABIC 20802240	Intro to Modern Arabic 1	3	2.0	2.0
ARABIC 20802241	Intro to Modern Arabic 2	3	2.0	2.0

### Interdisciplinary Humanities Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
LDRSHP 20810267	Leadership As An Art	3	3.0	0.0

### Mathematics and Natural Science (10 credits)

Select one mathematics course at the level of Intermediate Algebra or higher. Select one biological science course and one physical science course; one of the courses must include a laboratory. If lab is a stand-alone course, the associated lecture component is also required.

### Mathematics Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
MATH 20804201	Intermediate Algebra	4	3.0	2.0
MATH 20804203	Intermediate Algebra 2	3	2.0	2.0
MATH 20804210	Math for Elementary Teachers	3	3.0	0.0
MATH 20804211	Quantitative Reasoning	3	2.0	2.0
MATH 20804212	College Algebra	3	2.0	2.0
MATH 20804213	Trigonometry	3	2.0	2.0
MATH 20804214	Math for Elementary Teachers 2	3	3.0	0.0
MATH 20804215	Computer Science 1	3	3.0	0.0
MATH 20804216	Computer Science 2	3	3.0	0.0
MATH 20804220	Finite Math	3	2.0	2.0
MATH 20804221	Calculus Methods for Business and Social Sciences I	5	5.0	0.0
MATH 20804223	Calculus Methods for Business and Social Sciences II	3	2.0	2.0



Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
MATH 20804228	Calculus w Algebra & Trigonometry 1	5	5.0	0.0
MATH 20804229	Math Analysis	5	5.0	0.0
MATH 20804230	Calculus w Algebra & Trigonometry II	5	5.0	0.0
MATH 20804231	Calculus and Analytic Geometry 1	5	5.0	0.0
MATH 20804232	Calculus and Analytic Geometry 2	5	5.0	0.0
MATH 20804233	Calculus 3	5	5.0	0.0
MATH 20804240	Basic Statistics	4	3.0	2.0
MATH 20804241	Introduction to Engineering Statistics	3	1.0	4.0
MATH 20804255	Techniques in Ordinary Differential Equations	3	1.0	4.0
MATH 20804256	Elementary Matrix and Linear Algebra	3	1.0	4.0
MATH 20804265	Introduction to Discrete Mathematics	3	2.0	2.0

### Biological Science Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
BIOLOGY 10806105	Principles of Animal Biology	4	3.0	2.0
BIOLOGY 20806203	Introductory Zoology	5	4.0	2.0
BIOLOGY 20806204	Biological Greek and Latin Terminology	3	3.0	0.0
BIOLOGY 20806206	General Anatomy and Physiology	4	3.0	2.0
BIOLOGY 20806207	Anatomy and Physiology 1	4	3.0	2.0
BIOLOGY 20806208	Anatomy and Physiology 2	4	3.0	2.0
BIOLOGY 20806215	Botany	5	3.0	4.0
BIOLOGY 20806226	Introduction To Human Biology	5	4.0	2.0
BIOLOGY 20806271	Cellular and Molecular Biology	5	3.0	4.0
BIOLOGY 20806272	Organismal Biology	5	3.0	4.0
BIOLOGY 20806273	Microbiology-University Medical	5	3.0	4.0
BIOLOGY 20806276	Principles of Genetics	4	3.0	2.0
BIOLOGY 20806280	Environmental Issues	3	3.0	0.0
BIOLOGY 20806281	Ecology/Conservation Biology	3	3.0	0.0
BIOLOGY 20806286	Environmental Science	4	2.0	4.0

### Physical Science Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ASTRON 20806253	Astronomy: The Solar System	4	3.0	2.0
ASTRON 20806254	Astronomy: Stars & Galaxies	4	3.0	2.0
CHEM 10806134	General Chemistry	4	3.0	2.0
CHEM 20806200	Chemistry for Non-Science Majors	5	3.0	4.0
CHEM 20806201	General, Organic & Biological Chemistry	5	5.0	2.0
CHEM 20806209	College Chemistry 1	5	3.0	4.0
CHEM 20806212	College Chemistry 2	5	3.0	4.0
CHEM 20806216	Chemistry for Biotechnology	3	2.0	2.0
CHEM 20806256	Organic Chemistry 1 Lecture	4	4.0	0.0
CHEM 20806257	Organic Chemistry 2 Lecture	4	4.0	0.0
CHEM 20806266	Organic Chemistry 1 Lab	2	0.0	4.0
CHEM 20806267	Organic Chemistry 2 Lab	2	0.0	4.0
EARTHSCI 20806241	Earth Science	3	3.0	0.0
EARTHSCI 20806244	General Geology	4	3.0	2.0
EARTHSCI 20806245	Weather And Climate	3	3.0	0.0
EARTHSCI 20806246	Survey of Oceanography	3	3.0	0.0
EARTHSCI 20806247	Earth Science Lab	1	0.0	2.0
EARTHSCI 20806248	Weather and Climate Laboratory	1	0.0	2.0
EARTHSCI 20806249	Geologic Evolution of the Earth	4	3.0	2.0
EARTHSCI 20806250	Climate and Climate Change	3	3.0	0.0
EARTHSCI 20806251	Undergraduate Geology Field Experience	2	0.0	4.0
EARTHSCI 20806252	Natural Hazards	3	3.0	0.0
PHYSICS 10806139	Survey of Physics	3	1.0	4.0
PHYSICS 20806220	Physics of Everyday Life	3	3.0	0.0
PHYSICS 20806221	University Physics 1	5	3.0	4.0
PHYSICS 20806222	University Physics 2	5	3.0	4.0
PHYSICS 20806223	University Physics 1-Calculus-Based	5	2.0	6.0
PHYSICS 20806224	University Physics 2-Calculus Based	5	2.0	6.0
PHYSICS 20806232	Statics	3	2.0	2.0
PHYSICS 20806233	Dynamics	3	3.0	0.0



Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
PHYSICS 20806235	Modern Physics	3	3.0	0.0
PHYSICS 20806291	Introduction to Renewable Energy	3	3.0	0.0
PHYSICS 20806292	Solar Photovoltaic Technology	3	3.0	0.0

Completion of one course from the listed courses satisfies the lab requirement:

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ASTRON 20806253	Astronomy: The Solar System	4	2.0	3.0
ASTRON 20806254	Astronomy: Stars & Galaxies	4	2.0	3.0
BIOLOGY 10806105	Principles of Animal Biology	4	2.0	3.0
BIOLOGY 20806203	Introductory Zoology	5	2.0	4.0
BIOLOGY 20806206	General Anatomy and Physiology	4	3.0	2.0
BIOLOGY 20806207	Anatomy and Physiology 1	4	3.0	2.0
BIOLOGY 20806208	Anatomy and Physiology 2	4	3.0	2.0
BIOLOGY 20806215	Botany	5	3.0	4.0
BIOLOGY 20806226	Introduction To Human Biology	5	4.0	2.0
BIOLOGY 20806271	Cellular and Molecular Biology	5	3.0	4.0
BIOLOGY 20806272	Organismal Biology	5	3.0	4.0
BIOLOGY 20806273	Microbiology-University Medical	5	3.0	4.0
BIOLOGY 20806276	Principles of Genetics	4	3.0	2.0
BIOLOGY 20806286	Environmental Science	4	2.0	4.0
CHEM 10806134	General Chemistry	4	3.0	2.0
CHEM 20806200	Chemistry for Non-Science Majors	5	3.0	4.0
CHEM 20806201	General, Organic & Biological Chemistry	5	4.0	2.0
CHEM 20806209	College Chemistry 1	5	3.0	4.0
CHEM 20806212	College Chemistry 2	5	3.0	4.0
CHEM 20806216	Chemistry for Biotechnology	3	2.0	2.0
EARTHSCI 20806244	General Geology	4	3.0	2.0
EARTHSCI 20806249	Geologic Evolution of the Earth	4	3.0	2.0
EARTHSCI 20806251	Undergraduate Geology Field Experience	2	0.0	4.0
PHYSICS 10806139	Survey of Physics	3	1.0	4.0
PHYSICS 20806221	University Physics 1	5	3.0	4.0
PHYSICS 20806222	University Physics 2	5	3.0	4.0
PHYSICS 20806223	University Physics 1-Calculus-Based	5	2.0	6.0
PHYSICS 20806224	University Physics 2-Calculus Based	5	2.0	6.0
EARTHSCI 20806247	Earth Science Lab	1	2.0	0.0
EARTHSCI 20806248	Weather and Climate Laboratory	1	0.0	2.0
CHEM 20806266	Organic Chemistry 1 Lab	2	0.0	4.0
CHEM 20806267	Organic Chemistry 2 Lab	2	0.0	4.0

### Social Science (12 credits)

Completion of courses from at least three disciplines is required. Choose courses from the following disciplines: anthropology, economics, history, political science, psychology, sociology, and interdisciplinary social science.

#### Anthropology Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ANTHRO 20809279	Introduction to the Archaeology of Native North America	3	3.0	0.0
ANTHRO 20809280	General Anthropology	3	3.0	0.0
ANTHRO 20809281	Archaeology & Prehistoric World	3	3.0	0.0
ANTHRO 20809283	Cultural Anthropology & Human Diversity	3	3.0	0.0
ANTHRO 20809285	Anthropology of Myth, Magic, and Religion	3	3.0	0.0
ANTHRO 20809286	The Anthropology of Globalization & Multiculturalism	3	3.0	0.0
ANTHRO 20809287	Anthropology of Islamic Societies and Cultures	3	3.0	0.0
ANTHRO 20809288	Human Biology & Physical Anthropology	3	3.0	0.0
ANTHRO 20809289	World Regional Geography	3	3.0	0.0
ANTHRO 20809292	Agriculture, Food, and Society	3	3.0	0.0

#### Economics Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ECON 10809195	Economics	3	3.0	0.0
ECON 20809211	Macro Economics	3	3.0	0.0





Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ECON 20809212	Micro Economics	3	3.0	0.0
ECON 20809214	Intro International Econ	3	3.0	0.0
ECON 20809228	Environmental Economics	3	3.0	0.0

### History Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
HISTORY 20803204	Renaissance, Reformation, and Revolution	3	3.0	0.0
HISTORY 20803205	Europe and Modern World	3	3.0	0.0
HISTORY 20803211	Am Hist 1607-1865	3	3.0	0.0
HISTORY 20803212	Am Hist 1865-Pres.	3	3.0	0.0
HISTORY 20803214	Native American History	3	3.0	0.0
HISTORY 20803220	History Of West Civilization 1	3	3.0	0.0
HISTORY 20803224	History of Sub Saharan Africa	3	3.0	0.0
HISTORY 20803225	World In 20th Century	3	3.0	0.0
HISTORY 20803229	Vietnam/American-1945-Present	3	3.0	0.0
HISTORY 20803230	Public Man, Private Woman: Bronze Age to Glass Ceiling	3	3.0	0.0
HISTORY 20803233	Gender and Women's History in Cultural Representations	3	3.0	0.0
HISTORY 20803234	Gender and Women's Global History	3	3.0	0.0
HISTORY 20803240	Afro-American History	3	3.0	0.0
HISTORY 20803241	Introduction to Judaism	3	3.0	0.0

### Political Science Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
POLISCI 10809122	Intro to Amer Government	3	3.0	0.0
POLISCI 20809218	Law and Society	3	3.0	0.0
POLISCI 20809220	American Foreign Policy	3	3.0	0.0
POLISCI 20809221	American Ntl Govt	3	3.0	0.0
POLISCI 20809222	State and Local Government	3	3.0	0.0
POLISCI 20809223	International Relations	3	3.0	0.0
POLISCI 20809227	Political Theory	3	3.0	0.0
POLISCI 20809242	Public Policy	3	3.0	0.0
POLISCI 20809243	Comparative Politics	3	3.0	0.0
POLISCI 20809244	Russian Politics	3	3.0	0.0
POLISCI 20809245	Latin American Politics	3	3.0	0.0
POLISCI 20809246	African Politics	3	3.0	0.0
POLISCI 20809247	East Asian Politics	3	3.0	0.0
POLISCI 20809248	Politics of India	3	3.0	0.0

### Psychology Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
PSYCH 10809199	Psychology Of Human Relations	3	3.0	0.0
PSYCH 20809201	Human Sexuality	3	3.0	0.0
PSYCH 20809210	Psychology of Men	3	3.0	0.0
PSYCH 20809225	Social Psychology	3	3.0	0.0
PSYCH 20809231	Intro Psychology	3	3.0	0.0
PSYCH 20809233	Developmental Psychology	3	3.0	0.0
PSYCH 20809234	Psychology of Women	3	3.0	0.0
PSYCH 20809237	Abnormal Psych	3	3.0	0.0
PSYCH 20809239	Child Human Development	3	3.0	0.0
PSYCH 20809249	Educational Psychology	3	3.0	0.0

### Sociology Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
SOC 10809172	Introduction to Diversity Studies	3	3.0	0.0
SOC 10809197	Contemporary American Society	3	3.0	0.0
SOC 20809202	Social Problems	3	3.0	0.0
SOC 20809203	Intro Sociology	3	3.0	0.0
SOC 20809204	Marriage and the Family	3	3.0	0.0
SOC 20809207	Criminology	3	3.0	0.0



Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
SOC 20809229	Social Movements	3	3.0	0.0
SOC 20809240	Introduction to Latin America	3	3.0	0.0
SOC 20809252	Race and Ethnicity in the U.S.	3	3.0	0.0
SOC 20809253	Sociology of Gender	3	3.0	0.0
SOC 20809255	Introduction to LGBTQ+ Studies	3	3.0	0.0
SOC 20809275	Sociology of Religion	3	3.0	0.0
SOC 20809277	Couple Relationships	1	1.0	0.0
SOC 20809291	Technology and Society	3	3.0	0.0

### Interdisciplinary Social Science Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
SOCSOCI 20809206	Introduction to Women's Studies	3	3.0	0.0
SOCSOCI 20809230	Statistics for the Social Sciences	4	4.0	0.0
SOCSOCI 20809254	Research Methods for the Social Sciences	3	3.0	0.0
SOCSOCI 20809256	International Perspectives on Gender and Women	3	3.0	0.0
SOCSOCI 20809257	Gender and Women's Studies-Study Abroad Experience	1	1.0	0.0
SOCSOCI 20809269	Energy And Society	3	3.0	0.0
SOCSOCI 20809294	Data Organization, Visualization, and Management	3	3.0	0.0

### Electives (16 credits)

Select any courses offered within the Liberal Arts Transfer program or from the list of additional electives below. A maximum of six Honor Project credits may also be applied (20-code courses only).

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ACCTG 10101111	Accounting 1 - Principles	4	4.0	0.0
ACCTG 10101113	Accounting 2 - Principles	4	4.0	0.0
ACCTG 10101118	Management Accounting	4	4.0	0.0
ACCTG 10101125	Cost Management	4	4.0	0.0
BIOLOGY 20806219	Biology for Innovators	1	0.0	2.0
CRIMJUST 10504900	Introduction to Criminal Justice	3	3.0	0.0
MATH 20804252	Introduction to Computer Engineering	3	1.0	4.0
ELECT 10605270	AC/DC Circuit Techniques and Principles	3	1.0	4.0
MEDTERM 10501101	Medical Terminology	3	3.0	0.0
INDMANUF 20623260	Introduction to Engineering	3	2.0	4.0
MATH 20804202	Intermediate Algebra I	3	2.0	2.0
BIOLOGY 20806262	Anatomy and Physiology for Exercise Lab	1	0.0	2.0
PHYSICS 20806293	Solar Photovoltaic Installation Lab	1	0.0	2.0
COLLSUCC 20890200	College Success	3	3.0	0.0
0	Career Development	1	1.0	0.0
BUSADM 10102104	Business Statistics	3	3.0	0.0
MATH 10804114	College Technical Math 1B	2	2.0	0.0
MATH 10804115	College Technical Math 1	5	5.0	0.0
MATH 10804116	College Technical Math 2	4	4.0	0.0
MATH 20804200	Principles Of Geometry	3	1.0	4.0

### Ethnic Studies (One course)

Course may also count toward Humanities/Fine Arts, Social Science, or Electives.

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ENGLISH 20801207	World Indigenous Literatures	3	3.0	0.0
ENGLISH 20801212	Ethnic Literature	3	3.0	0.0
ENGLISH 20801213	Native American Literature	3	3.0	0.0
ENGLISH 20801214	African American Literature	3	3.0	0.0
ENGLISH 20801222	U.S. Latino Literature	3	3.0	0.0
HISTORY 20803214	Native American History - Liberal Arts Transfer	3	3.0	0.0
HISTORY 20803240	Afro-American History	3	3.0	0.0
SOC 20809252	Race and Ethnicity in the U.S.	3	3.0	0.0
ANTHRO 20809283	Cultural Anthropology & Human Diversity	3	3.0	0.0
ANTHRO 20809286	The Anthropology of Globalization & Multiculturalism	3	3.0	0.0
SOC 10809172	Introduction to Diversity Studies	3	3.0	0.0



**Literature (One course)**

The course may also count toward fulfilling the Humanities and Fine Arts or Electives requirements. See Literature Courses under the Humanities and Fine Arts Requirement above.

**World Languages (One course)**

May be met with one year in high school with a grade of "C" or better OR one semester in college. College course may also count toward Humanities and Fine Arts or Electives requirements. See World Languages Courses under the Humanities and Fine Arts requirement above.



# Liberal Arts Transfer

Program Number: 208001-EB

*Associate in Arts*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Number of Credits Required

60 credits minimum to complete the program, by satisfying the all requirements as defined.

### English and Speech (9 credits)

Six credits must be in composition - English 1 and one other composition course (English 2 recommended).

Three credits must be in public speaking.

#### Composition Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ENGLISH 20801201	English 1	3	3.0	0.0
ENGLISH 20801202	English 2	3	3.0	0.0
JOURNAL 20801245	Introduction to Journalism	3	3.0	0.0
JOURNAL 20801246	Investigative Journalism	3	3.0	0.0
JOURNAL 20801251	Introduction to Mass Communication	4	4.0	0.0

#### Public Speaking Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
SPEECH 10801198	Speech	3	3.0	0.0
JOURNAL 20801269	On-Air Performance	3	2.0	2.0
SPEECH 20810202	Theory & Practice of Argumentation and Debate	3	3.0	0.0
SPEECH 20810211	Oral Interpretation	3	3.0	0.0

### Health/Wellness/Physical Education (1 credit)

Completion of one of the listed courses is required.

#### Physical Education Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
PHYED 20807210	Conditioning/Weight Training	1	0.0	2.0
PHYED 20807213	Co-Ed Flag Football	1	0.0	2.0
PHYED 20807214	Pickleball	1	0.0	2.0
PHYED 20807219	Introduction to Kinesiology	2	2.0	0.0
PHYED 20807223	Beginning Volleyball	1	0.0	2.0
PHYED 20807229	Swimming for Fitness	1	0.0	2.0
PHYED 20807230	Beginning Swimming	1	0.0	2.0
PHYED 20807245	Social Dance	1	0.0	2.0
PHYED 20807247	Jazz 1	1	0.0	2.0
PHYED 20807248	Ballet	1	0.0	2.0
PHYED 20807250	Badminton	1	0.0	2.0
PHYED 20807254	Beginning Yoga	1	0.0	2.0
PHYED 20807255	Prev/Care Athletic Injuries	2	1.0	2.0
PHYED 20807258	First Aid and CPR	2	2.0	0.0
PHYED 20807264	Intermediate Yoga	1	0.0	2.0
PHYED 20807266	Wellness Today	2	1.0	2.0
PHYED 20807267	Health & Fitness for Life	1	0.0	2.0
PHYED 20807268	Blueprint for Healthy Living	2	2.0	0.0
PHYED 20807269	Stress Management Foundations	1	0.0	2.0
PHYED 20807271	Bicycle Conditioning	1	0.0	2.0
PHYED 20807289	Aerobics/Weight Training	1	0.0	2.0



## Humanities/Fine Arts (12 credits)

Select one literature course. Completion of courses from two additional disciplines is required.

Choose courses from the following disciplines: art, drama, film, music, philosophy, world languages, writing and communication, and interdisciplinary humanities. Remaining credits to fulfill the requirement can be selected from any Humanities and Fine Arts courses offered within the AA degree, including literature.

### Art Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ART 20815200	Art History: Ancient to Medieval	3	3.0	0.0
ART 20815201	Basic Design	3	0.0	6.0
ART 20815202	Color & Design	3	0.0	6.0
ART 20815203	3-Dimensional Design	3	0.0	6.0
ART 20815205	Drawing Fundamentals	3	0.0	6.0
ART 20815208	Contemporary Art Survey	3	0.0	6.0
ART 20815210	Art History: Renaissance to Modern	3	3.0	0.0
ART 20815211	Art History: Women In Art	3	3.0	0.0
ART 20815214	Modern Art Survey	3	0.0	6.0
ART 20815215	Drawing 2	3	0.0	6.0
ART 20815219	Life Drawing 1	3	0.0	6.0
ART 20815220	Life Drawing 2	3	0.0	6.0
ART 20815221	Life Drawing 3	3	0.0	6.0
ART 20815232	Digital Design Fundamentals	3	0.0	6.0
ART 20815235	Creative Photography	3	0.0	6.0
ART 20815236	Advanced Creative Photography	3	0.0	6.0
ART 20815239	Digital Photography	3	0.0	6.0
ART 20815241	Painting 1	3	0.0	6.0
ART 20815242	Painting 2	3	0.0	6.0
ART 20815253	Jewelry 1	3	0.0	6.0
ART 20815254	Jewelry 2	3	0.0	6.0
ART 20815290	Ceramics 1	3	0.0	6.0
ART 20815291	Ceramics 2	3	0.0	6.0
ART 20815294	Ceramics Sculpture 1	3	0.0	6.0
ART 20815295	Ceramics Sculpture 2	3	0.0	6.0
ART 20815296	Ceramics Firing Techniques/Alternative Methods	3	0.0	6.0

### Drama Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
DRAMA 20810230	Intro To Theatre	3	3.0	0.0
DRAMA 20810235	Stagecraft 1	3	3.0	0.0
DRAMA 20810236	Stagecraft 2	3	3.0	0.0
DRAMA 20810238	Cultural Diversity in Contemporary American Theater	3	3.0	0.0
DRAMA 20810260	Drama Practicum	2	2.0	0.0
DRAMA 20810262	Acting 1	3	3.0	0.0
DRAMA 20810263	Acting 2	3	3.0	0.0
DRAMA 20810270	Movement Theory & Training for Actors	1	0.0	2.0

### Film Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
FILM 20810250	Introduction to Film	3	2.0	2.0
FILM 20810254	History Of World Cinema	3	2.0	2.0

### Literature Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ENGLISH 20801204	Introduction to Literature	3	3.0	0.0
ENGLISH 20801207	World Indigenous Literatures	3	3.0	0.0
ENGLISH 20801211	Gay & Lesbian Literature	3	3.0	0.0
ENGLISH 20801212	Ethnic Literature	3	3.0	0.0
ENGLISH 20801213	Native American Literature	3	3.0	0.0
ENGLISH 20801214	African American Literature	3	3.0	0.0
ENGLISH 20801215	British Literature 1	3	3.0	0.0
ENGLISH 20801216	British Literature 2	3	3.0	0.0



Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ENGLISH 20801217	American Literature 1	3	3.0	0.0
ENGLISH 20801218	American Literature 2	3	3.0	0.0
ENGLISH 20801219	Western World Lit: Classical Antiquity to the Middle Ages	3	3.0	0.0
ENGLISH 20801220	Western World Lit: Early Renaissance to Present	3	3.0	0.0
ENGLISH 20801221	Literature and Popular Culture	3	3.0	0.0
ENGLISH 20801222	U.S. Latino Literature	3	3.0	0.0
ENGLISH 20801223	Peace, Conflict, and Literature: The Arts of the Contact	3	3.0	0.0
ENGLISH 20801226	Introduction to African Literature	3	3.0	0.0
ENGLISH 20801227	Children's Literature	3	3.0	0.0
ENGLISH 20801229	Contemporary Lit	3	3.0	0.0
ENGLISH 20801230	Classical Mythology	3	3.0	0.0
ENGLISH 20801231	19th c. Russian Literature in Translation	3	3.0	0.0
ENGLISH 20801232	20th c. Russian Literature in Translation	3	3.0	0.0
ENGLISH 20801250	Women In Literature	3	3.0	0.0
LITTRANS 20802250	Literature in Translation	3	3.0	0.0

### Music Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
MUSIC 20805205	Class Voice 1	1	1.0	0.0
MUSIC 20805206	Class Voice 2	1	1.0	0.0
MUSIC 20805207	World Music	3	3.0	0.0
MUSIC 20805209	Swing Choir	2	2.0	0.0
MUSIC 20805211	Orchestra 1	1	0.0	2.0
MUSIC 20805212	Orchestra 2	1	0.0	2.0
MUSIC 20805216	Concert Band 1	1	0.0	2.0
MUSIC 20805217	Concert Band 2	1	0.0	2.0
MUSIC 20805219	Jazz Ensemble 1	1	0.0	2.0
MUSIC 20805220	Jazz Ensemble 2	1	0.0	2.0
MUSIC 20805221	Class Piano 1	1	0.0	2.0
MUSIC 20805222	Class Piano 2	1	0.0	2.0
MUSIC 20805227	Music Appreciation	3	3.0	0.0
MUSIC 20805260	Music Theory Fundamentals	3	3.0	0.0
MUSIC 20805261	Music Theory 1	3	3.0	0.0
MUSIC 20805262	Music Theory 2	3	3.0	0.0
MUSIC 20805263	Jazz History	3	3.0	0.0
MUSIC 20805267	Aural Skills 1	1	0.0	2.0
MUSIC 20805268	Aural Skills 2	1	0.0	2.0
MUSIC 20805270	Madison College Chorale	1	0.0	2.0
MUSIC 20805271	Madison College Chorale 2	1	0.0	2.0
MUSIC 20805272	Madrigal Choir	1	0.0	2.0
MUSIC 20805278	Hist Pop/Rock Music	3	3.0	0.0
MUSIC 20805279	World Drumming Ensemble 1	1	0.0	2.0
MUSIC 20805280	World Drumming Ensemble 2	1	0.0	2.0
MUSIC 20805281	World Drumming Ensemble 3	1	0.0	2.0
MUSIC 20805282	World Drumming Ensemble 4	1	0.0	2.0

### Philosophy Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
PHILOS 10809166	Intro to Ethics: Theory & App	3	3.0	0.0
PHILOS 20809258	Philosophy Through Film	3	3.0	0.0
PHILOS 20809259	Classics in Philosophy	3	3.0	0.0
PHILOS 20809260	Intro Philosophy	3	3.0	0.0
PHILOS 20809261	Elementary Logic	4	4.0	0.0
PHILOS 20809262	Contemporary Moral Issues	3	3.0	0.0
PHILOS 20809263	East/West World View	3	3.0	0.0
PHILOS 20809264	Introduction to Logic and Critical Thinking	3	3.0	0.0
PHILOS 20809266	Ethics In Medicine	3	3.0	0.0
PHILOS 20809268	Intro to Social and Political Philosophy	3	3.0	0.0
PHILOS 20809276	Business Ethics	3	3.0	0.0



## World Language Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
SPANISH 20802211	Spanish 1	4	3.0	2.0
SPANISH 20802212	Spanish 2	4	3.0	2.0
SPANISH 20802213	Spanish 3	4	3.0	2.0
SPANISH 20802214	Spanish 4	4	3.0	2.0
SPANISH 20802215	Spanish 5	3	3.0	0.0
FRENCH 20802221	French 1	4	3.0	2.0
FRENCH 20802222	French 2	4	3.0	2.0
FRENCH 20802223	French 3	4	3.0	2.0
FRENCH 20802224	French 4	4	3.0	2.0
CHINESE 20802230	Intro to Mandarin Chinese 1	3	2.0	2.0
CHINESE 20802231	Intro to Mandarin Chinese 2	3	2.0	2.0
ARABIC 20802240	Intro to Modern Arabic 1	3	2.0	2.0
ARABIC 20802241	Intro to Modern Arabic 2	3	2.0	2.0

## Writing and Communication Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ENGLISH 10801195	Written Communication	3	3.0	0.0
COMM 10801196	Oral/Interpersonal Communication	3	3.0	0.0
ENGLISH 10801197	Technical Reporting	3	3.0	0.0
ENGLISH 20801240	Creative Writing	3	3.0	0.0
ENGLISH 20801241	Creative Writing/Fiction	3	3.0	0.0
ENGLISH 20801242	Creative Writing/Drama	3	3.0	0.0
ENGLISH 20801243	Creative Writing/Poetry	3	3.0	0.0
ENGLISH 20801244	Creative Writing/Non Fiction	3	3.0	0.0
JOURNAL 20801245	Introduction to Journalism	3	3.0	0.0
JOURNAL 20801246	Investigative Journalism	3	3.0	0.0
ENGLISH 20801249	Film Writing	3	3.0	0.0
JOURNAL 20801251	Introduction to Mass Communication	4	4.0	0.0
JOURNAL 20801252	World Issues Journalism	3	3.0	0.0
JOURNAL 20801253	Documentary Storytelling	3	2.0	2.0
JOURNAL 20801254	Media Ethics and Democracy	3	0.0	0.0
JOURNAL 20801262	Social Media Writing	3	3.0	0.0
JOURNAL 20801271	Journalism Practicum 1	2	2.0	0.0
JOURNAL 20801272	Journalism Practicum 2	2	2.0	0.0
JOURNAL 20801273	Journalism Practicum 3	2	2.0	0.0
JOURNAL 20801274	Journalism Practicum 4	2	2.0	0.0
COMM 20810205	Small Group & Interpersonal Communications	3	3.0	0.0

## Interdisciplinary Humanities Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
LDRSHP 20810267	Leadership As An Art	3	3.0	0.0

## Mathematics and Natural Science (10 credits)

Select one mathematics course at the level of Intermediate Algebra or higher. Select one biological science course and one physical science course; one of the courses must include a laboratory. If lab is a stand-alone course, the associated lecture component is also required.

### Recommended Mathematics Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
MATH 20804220	Finite Math	3	2.0	2.0
MATH 20804221	Calculus Methods for Business and Social Sciences I	5	5.0	0.0
MATH 20804231	Calculus and Analytic Geometry 1	5	5.0	0.0

### Additional Mathematics Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
MATH 20804201 Intermediate Algebra		4	3.0	2.0
MATH 20804203	Intermediate Algebra 2	3	2.0	2.0
MATH 20804210	Math for Elementary Teachers	3	Mar-00	
MATH 20804211	Quantitative Reasoning	3	2.0	2.0



Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
MATH 20804212	College Algebra	3	2.0	2.0
MATH 20804213	Trigonometry	3	2.0	2.0
MATH 20804214	Math for Elementary Teachers 2	3	Mar-00	
MATH 20804215	Computer Science 1	3	Mar-00	
MATH 20804216	Computer Science 2	3	Mar-00	
MATH 20804223	Calculus Methods for Business and Social Sciences II	3	2.0	2.0
MATH 20804228	Calculus w Algebra & Trigonometry 1	5	May-00	
MATH 20804229	Math Analysis	5	May-00	
MATH 20804230	Calculus w Algebra & Trigonometry II	5	May-00	
MATH 20804232	Calculus and Analytic Geometry 2	5	May-00	
MATH 20804233	Calculus 3	5	May-00	
MATH 20804240	Basic Statistics	4	3.0	2.0
MATH 20804241	Introduction to Engineering Statistics	3	4-Jan	
MATH 20804255	Techniques in Ordinary Differential Equations	3	4-Jan	
MATH 20804256	Elementary Matrix and Linear Algebra	3	4-Jan	
MATH 20804265	Introduction to Discrete Mathematics	3	2.0	2.0

### Biological Science Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
BIOLOGY 10806105	Principles of Animal Biology	4	3.0	2.0
BIOLOGY 20806203	Introductory Zoology	5	4.0	2.0
BIOLOGY 20806204	Biological Greek and Latin Terminology	3	3.0	
BIOLOGY 20806206	General Anatomy and Physiology	4	3.0	2.0
BIOLOGY 20806207	Anatomy and Physiology 1	4	3.0	2.0
BIOLOGY 20806208	Anatomy and Physiology 2	4	3.0	2.0
BIOLOGY 20806215	Botany	5	3.0	4.0
BIOLOGY 20806226	Introduction To Human Biology	5	2.0	4.0
BIOLOGY 20806271	Cellular and Molecular Biology	5	3.0	4.0
BIOLOGY 20806272	Organismal Biology	5	3.0	4.0
BIOLOGY 20806273	Microbiology-University Medical	5	3.0	4.0
BIOLOGY 20806276	Principles of Genetics	4	3.0	2.0
BIOLOGY 20806280	Environmental Issues	3	3.0	0.0
BIOLOGY 20806281	Ecology/Conservation Biology	3	3.0	0.0
BIOLOGY 20806286	Environmental Science	4	2.0	4.0

### Physical Science Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
PHYSICS 20806220	Physics of Everyday Life	3	3.0	0.0
PHYSICS 20806232	Statics	3	2.0	2.0
PHYSICS 20806233	Dynamics	3	3.0	0.0
PHYSICS 20806235	Modern Physics	3	3.0	0.0
EARTHSCI 20806241	Earth Science	3	3.0	0.0
EARTHSCI 20806245	Weather And Climate	3	3.0	0.0
EARTHSCI 20806246	Survey of Oceanography	3	3.0	0.0
EARTHSCI 20806250	Climate and Climate Change	3	3.0	0.0
EARTHSCI 20806252	Natural Hazards	3	3.0	0.0
CHEM 20806256	Organic Chemistry 1 Lecture	4	4.0	0.0
CHEM 20806257	Organic Chemistry 2 Lecture	4	4.0	0.0
PHYSICS 20806291	Introduction to Renewable Energy	3	3.0	0.0
PHYSICS 20806292	Solar Photovoltaic Technology	3	3.0	0.0

### Lab Options

Completion of one of the listed courses will satisfy the Natural Science Lab requirement.

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
BIOLOGY 10806105	Principles of Animal Biology	4	3.0	2.0
CHEM 10806134	General Chemistry	4	3.0	2.0
PHYSICS 10806139	Survey of Physics	3	1.0	4.0
CHEM 20806200	Chemistry for Non-Science Majors	5	3.0	4.0
CHEM 20806201	General, Organic & Biological Chemistry	5	4.0	2.0
BIOLOGY 20806203	Introductory Zoology	5	4.0	2.0





Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
BIOLOGY 20806206	General Anatomy and Physiology	4	3.0	2.0
BIOLOGY 20806207	Anatomy and Physiology 1	4	3.0	2.0
BIOLOGY 20806208	Anatomy and Physiology 2	4	3.0	2.0
CHEM 20806209	College Chemistry 1	5	3.0	4.0
CHEM 20806212	College Chemistry 2	5	3.0	4.0
BIOLOGY 20806215	Botany	5	3.0	4.0
CHEM 20806216	Chemistry for Biotechnology	3	2.0	2.0
PHYSICS 20806221	University Physics 1	5	3.0	4.0
PHYSICS 20806222	University Physics 2	5	3.0	4.0
PHYSICS 20806223	University Physics 1-Calculus-Based	5	2.0	6.0
PHYSICS 20806224	University Physics 2-Calculus Based	5	2.0	6.0
BIOLOGY 20806226	Introduction To Human Biology	5	4.0	2.0
EARTHSCI 20806244	General Geology	4	3.0	2.0
EARTHSCI 20806247	Earth Science Lab	1	0.0	2.0
EARTHSCI 20806248	Weather and Climate Laboratory	1	0.0	2.0
EARTHSCI 20806251	Undergraduate Geology Field Experience	2	0.0	4.0
ASTRON 20806253	Astronomy: The Solar System	4	4.0	2.0
ASTRON 20806254	Astronomy: Stars & Galaxies	4	3.0	2.0
BIOLOGY 20806271	Cellular and Molecular Biology	5	3.0	4.0
BIOLOGY 20806272	Organismal Biology	5	3.0	4.0
BIOLOGY 20806273	Microbiology-University Medical	5	3.0	4.0
BIOLOGY 20806276	Principles of Genetics	4	3.0	2.0
BIOLOGY 20806286	Environmental Science	4	2.0	4.0
EARTHSCI 20806249	Geologic Evolution of the Earth	4	3.0	2.0

## Social Science (12 credits)

### Required Social Science Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ECON 20809211	Macro Economics	3	3.0	0.0
ECON 20809212	Micro Economics	3	3.0	0.0
PSYCH 20809231	Intro Psychology	3	3.0	0.0

Completion of one course from one additional discipline is required.

Choose courses from the following disciplines: anthropology, history, political science, sociology, and interdisciplinary social science. Remaining credits to fulfill the requirement can be selected from any Social Science courses offered within the AA degree, including economics and psychology.

### Anthropology Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ANTHRO 20809279	Introduction to the Archaeology of Native North America	3	3.0	0.0
ANTHRO 20809280	General Anthropology	3	3.0	0.0
ANTHRO 20809281	Archaeology & Prehistoric World	3	3.0	0.0
ANTHRO 20809283	Cultural Anthropology & Human Diversity	3	3.0	0.0
ANTHRO 20809285	Anthropology of Myth, Magic, and Religion	3	3.0	0.0
ANTHRO 20809286	The Anthropology of Globalization & Multiculturalism	3	3.0	0.0
ANTHRO 20809287	Anthropology of Islamic Societies and Cultures	3	3.0	0.0
ANTHRO 20809288	Human Biology & Physical Anthropology	3	3.0	0.0
ANTHRO 20809289	World Regional Geography	3	3.0	0.0
ANTHRO 20809292	Agriculture, Food, and Society	3	3.0	0.0

### History Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
HISTORY 20803204	Renaissance, Reformation, and Revolution	3	3.0	0.0
HISTORY 20803205	Europe and Modern World	3	3.0	0.0
HISTORY 20803211	Am Hist 1607-1865	3	3.0	0.0
HISTORY 20803212	Am Hist 1865-Pres.	3	3.0	0.0
HISTORY 20803214	Native American History	3	3.0	0.0
HISTORY 20803220	History Of West Civilization 1	3	3.0	0.0
HISTORY 20803224	History of Sub Saharan Africa	3	3.0	0.0
HISTORY 20803225	World In 20th Century	3	3.0	0.0



Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
HISTORY 20803229	Vietnam/American-1945-Present	3	3.0	0.0
HISTORY 20803230	Public Man, Private Woman: Bronze Age to Glass Ceiling	3	3.0	0.0
HISTORY 20803233	Gender and Women's History in Cultural Representations	3	3.0	0.0
HISTORY 20803234	Gender and Women's Global History	3	3.0	0.0
HISTORY 20803240	Afro-American History	3	3.0	0.0
HISTORY 20803241	Introduction to Judaism	3	3.0	0.0

### Political Science Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
POLISCI 10809122	Intro to Amer Government	3	3.0	0.0
POLISCI 20809218	Law and Society	3	3.0	0.0
POLISCI 20809220	American Foreign Policy	3	3.0	0.0
POLISCI 20809221	American Ntl Govt	3	3.0	0.0
POLISCI 20809222	State and Local Government	3	3.0	0.0
POLISCI 20809223	International Relations	3	3.0	0.0
POLISCI 20809227	Political Theory	3	3.0	0.0
POLISCI 20809242	Public Policy	3	3.0	0.0
POLISCI 20809243	Comparative Politics	3	3.0	0.0
POLISCI 20809244	Russian Politics	3	3.0	0.0
POLISCI 20809245	Latin American Politics	3	3.0	0.0
POLISCI 20809246	African Politics	3	3.0	0.0
POLISCI 20809247	East Asian Politics	3	3.0	0.0
POLISCI 20809248	Politics of India	3	3.0	0.0

### Sociology Courses

Class Course Number	Class Number	Credits / Units	Hours Per Week	
			Lecture	Lab
SOC 10809172	Introduction to Diversity Studies	3	3.0	0.0
SOC 10809197	Contemporary American Society	3	3.0	0.0
SOC 20809202	Social Problems	3	3.0	0.0
SOC 20809203	Intro Sociology	3	3.0	0.0
SOC 20809204	Marriage and the Family	3	3.0	0.0
SOC 20809207	Criminology	3	3.0	0.0
SOC 20809229	Social Movements	3	3.0	0.0
SOC 20809240	Introduction to Latin America	3	3.0	0.0
SOC 20809251	Sociology of the Middle East and North Africa	3	3.0	0.0
SOC 20809252	Race and Ethnicity in the U.S.	3	3.0	0.0
SOC 20809253	Sociology of Gender	3	3.0	0.0
SOC 20809255	Introduction to LGBTQ+ Studies	3	3.0	0.0
SOC 20809275	Sociology of Religion	3	3.0	0.0
SOC 20809277	Couple Relationships	1	1.0	0.0
SOC 20809291	Technology and Society	3	3.0	0.0

### Interdisciplinary Social Science Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
SOCSCI 20809206	Introduction to Women's Studies	3	3.0	0.0
SOCSCI 20809230	Statistics for the Social Sciences	4	4.0	0.0
SOCSCI 20809254	Research Methods for the Social Sciences	3	3.0	0.0
SOCSCI 20809256	International Perspectives on Gender and Women	3	3.0	0.0
SOCSCI 20809257	Gender and Women's Studies-Study Abroad Experience	1	1.0	0.0
SOCSCI 20809269	Energy And Society	3	3.0	0.0
SOCSCI 20809294	Data Organization, Visualization, and Management	3	3.0	0.0

### Electives (16 credits)

Select any courses offered within the Liberal Arts Transfer program or from the list of additional electives below.

A maximum of six Honors Project credits may also be applied (20-code courses only).

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ACCTG 10101111	Accounting 1 - Principles	4	4.0	0.0
ACCTG 10101113	Accounting 2 - Principles	4	4.0	0.0



Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ACCTG 10101118	Management Accounting	4	4.0	0.0
ACCTG 10101125	Cost Management	4	4.0	0.0
BIOLOGY 20806219	Biology for Innovators	1	0.0	2.0
CRIMJUST 10504900	Introduction to Criminal Justice	3	3.0	0.0
MATH 20804252	Introduction to Computer Engineering	3	1.0	4.0
ELECT 10605270	AC/DC Circuit Techniques and Principles	3	1.0	4.0
MEDTERM 10501101	Medical Terminology	3	3.0	0.0
ECON 10809195	Economics	3	3.0	0.0
ECON 20809214	Intro International Econ	3	3.0	0.0
ECON 20809228	Environmental Economics	3	3.0	0.0
PSYCH 10809199	Psychology Of Human Relations	3	3.0	0.0
PSYCH 20809201	Human Sexuality	3	3.0	0.0
PSYCH 20809210	Psychology of Men	3	3.0	0.0
PSYCH 20809225	Social Psychology	3	3.0	0.0
PSYCH 20809233	Developmental Psychology	3	3.0	0.0
PSYCH 20809234	Psychology of Women	3	3.0	0.0
PSYCH 20809237	Abnormal Psych	3	3.0	0.0
PSYCH 20809239	Child Human Development	3	3.0	0.0
PSYCH 20809249	Educational Psychology	3	3.0	0.0
SOCSCI 20809257	Gender and Women's Studies-Study Abroad Experience	1	1.0	0.0
SOCSCI 20809269	Energy And Society	3	3.0	0.0
BUSADM 10102104	Business Statistics	3	3.0	0.0
MATH 10804114	College Technical Math 1B	2	2.0	0.0
MATH 10804115	College Technical Math 1	5	5.0	0.0
MATH 10804116	College Technical Math 2	4	4.0	0.0
INDMANUF 20623260	Introduction to Engineering	3	1.0	4.0
MATH 20804200	Principles Of Geometry	3	1.0	4.0
MATH 20804202	Intermediate Algebra I	3	2.0	2.0
BIOLOGY 20806262	Anatomy and Physiology for Exercise Lab	1	0.0	2.0
PHYSICS 20806293	Solar Photovoltaic Installation Lab	1	0.0	2.0
COLLSUCC 20890200	College Success	3	3.0	0.0
COLLSUCC 20890202	Career Development	1	1.0	0.0

### Ethnic Studies (One course)

Course may also count toward Humanities/Fine Arts, Social Science, or Electives.

Class Course Number	Class Name	Credits / Units	Hours Per Work	
			Lecture	Lab
ANTHRO 20809283	Cultural Anthropology & Human Diversity	3	Mar-00	
ANTHRO 20809286	The Anthropology of Globalization & Multiculturalism	3	Mar-00	
SOC 10809172	Introduction to Diversity Studies	3	Mar-00	
ENGLISH 20801207	World Indigenous Literatures	3	Mar-00	
ENGLISH 20801212	Ethnic Literature	3	Mar-00	
ENGLISH 20801213	Native American Literature	3	Mar-00	
ENGLISH 20801214	African American Literature	3	Mar-00	
ENGLISH 20801222	U.S. Latino Literature	3	Mar-00	
HISTORY 20803214	Native American History	3	Mar-00	
HISTORY 20803240	Afro-American History	3	Mar-00	
SOC 20809252	Race and Ethnicity in the U.S.	3	Mar-00	

### Literature (One Course)

Course may also count toward Humanities/Fine Arts or Electives

See Literature Courses under the Humanities and Fine Arts Requirement above.

### World Languages (One course)

May be met with one year in high school with a grade of "C" or better OR one semester in college. College courses may also count toward Humanities/Fine Arts or Electives.

See World Language Courses under the Humanities and Fine Arts Requirement above.



# Liberal Arts Transfer

Program Number: 208001-ED

Associate in Arts

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Number of Credits Required

60 credits minimum to complete the program, by satisfying the all requirements as defined.

### English and Speech (9 credits)

Six credits must be in composition - English 1 and one other composition course (English 2 recommended). Three credits must be in public speaking.

#### Composition Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
ENGLISH 20801201	English 1	3	3.0	0.0
ENGLISH 20801202	English 2	3	3.0	0.0
JOURNAL 20801245	Introduction to Journalism	3	3.0	0.0
JOURNAL 20801246	Investigative Journalism	3	3.0	0.0
JOURNAL 20801251	Introduction to Mass Communication	4	4.0	0.0

#### Public Speaking Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
SPEECH 10801198	Speech	3	3.0	0.0
JOURNAL 20801269	On-Air Performance	3	2.0	2.0
SPEECH 20810202	Theory & Practice of Argumentation and Debate	3	3.0	0.0
SPEECH 20810211	Oral Interpretation	3	3.0	0.0

### Health/Wellness/Physical Education (1 credit)

Completion of one of the listed courses is required.

#### Phy Ed Courses

Class Course Number	Class Name	Credits / Units	Hours Per Week	
			Lecture	Lab
PHYED 20807210	Conditioning/Weight Training	1	0.0	2.0
PHYED 20807213	Co-Ed Flag Football	1	0.0	2.0
PHYED 20807214	Pickleball	1	0.0	2.0
PHYED 20807219	Introduction to Kinesiology	2	2.0	0.0
PHYED 20807223	Beginning Volleyball	1	0.0	2.0
PHYED 20807229	Swimming for Fitness	1	0.0	2.0
PHYED 20807230	Beginning Swimming	1	0.0	2.0
PHYED 20807245	Social Dance	1	0.0	2.0
PHYED 20807247	Jazz 1	1	0.0	2.0
PHYED 20807248	Ballet	1	0.0	2.0
PHYED 20807250	Badminton	1	0.0	2.0
PHYED 20807254	Beginning Yoga	1	0.0	2.0
PHYED 20807255	Prev/Care Athletic Injuries	2	1.0	2.0
PHYED 20807258	First Aid and CPR	2	2.0	0.0
PHYED 20807264	Intermediate Yoga	1	0.0	2.0
PHYED 20807266	Wellness Today	2	1.0	2.0
PHYED 20807267	Health & Fitness for Life	1	0.0	2.0
PHYED 20807268	Blueprint for Healthy Living	2	2.0	0.0
PHYED 20807269	Stress Management Foundations	1	0.0	2.0
PHYED 20807271	Bicycle Conditioning	1	0.0	2.0
PHYED 20807289	Aerobics/Weight Training	1	0.0	2.0



## Humanities/Fine Arts (12 credits)

Select one literature course. Completion of courses from two additional disciplines is required. Choose courses from the following disciplines: art, drama, film, music, philosophy, world languages, writing and communication, and interdisciplinary humanities. Remaining credits to fulfill the requirement can be selected from any Humanities and Fine Arts courses offered within the AA degree, including literature.

### Art Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ART 20815200	Art History: Ancient to Medieval	3.0	3.0	0.0
ART 20815201	Basic Design	3.0	0.0	6.0
ART 20815202	Color & Design	3.0	0.0	6.0
ART 20815203	3-Dimensional Design	3.0	0.0	6.0
ART 20815205	Drawing Fundamentals	3.0	0.0	6.0
ART 20815208	Contemporary Art Survey	3.0	0.0	6.0
ART 20815210	Art History: Renaissance to Modern	3.0	3.0	0.0
ART 20815211	Art History: Women In Art	3.0	3.0	0.0
ART 20815214	Modern Art Survey	3.0	0.0	6.0
ART 20815215	Drawing 2	3.0	0.0	6.0
ART 20815219	Life Drawing 1	3.0	0.0	6.0
ART 20815220	Life Drawing 2	3.0	0.0	6.0
ART 20815221	Life Drawing 3	3.0	0.0	6.0
ART 20815232	Digital Design Fundamentals	3.0	0.0	6.0
ART 20815235	Creative Photography	3.0	0.0	6.0
ART 20815236	Advanced Creative Photography	3.0	0.0	6.0
ART 20815239	Digital Photography	3.0	0.0	6.0
ART 20815241	Painting 1	3.0	0.0	6.0

### Drama Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
DRAMA 20810230	Intro To Theatre	3	3.0	0.0
DRAMA 20810235	Stagecraft 1	3	3.0	0.0
DRAMA 20810236	Stagecraft 2	3	3.0	0.0
DRAMA 20810238	Cultural Diversity in Contemporary American Theater	3	3.0	0.0
DRAMA 20810260	Drama Practicum	2	2.0	0.0
DRAMA 20810262	Acting 1	3	3.0	0.0
DRAMA 20810263	Acting 2	3	3.0	0.0
DRAMA 20810270	Movement Theory & Training for Actors	1	0.0	2.0

### Film Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
FILM 20810250	Introduction to Film	3.0	2.0	2.0
FILM 20810254	History Of World Cinema	3.0	2.0	2.0

### Literature Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ENGLISH 20801204	Introduction to Literature	3.0	3.0	0.0
ENGLISH 20801207	World Indigenous Literatures	3.0	3.0	0.0
ENGLISH 20801211	Gay & Lesbian Literature	3.0	3.0	0.0
ENGLISH 20801212	Ethnic Literature	3.0	3.0	0.0
ENGLISH 20801213	Native American Literature	3.0	3.0	0.0
ENGLISH 20801214	African American Literature	3.0	3.0	0.0
ENGLISH 20801215	British Literature 1	3.0	3.0	0.0
ENGLISH 20801216	British Literature 2	3.0	3.0	0.0
ENGLISH 20801217	American Literature 1	3.0	3.0	0.0
ENGLISH 20801218	American Literature 2	3.0	3.0	0.0
ENGLISH 20801219	Western World Lit: Classical Antiquity to the Middle Ages	3.0	3.0	0.0
ENGLISH 20801220	Western World Lit: Early Renaissance to Present	3.0	3.0	0.0
ENGLISH 20801221	Literature and Popular Culture	3.0	3.0	0.0
ENGLISH 20801222	U.S. Latino Literature	3.0	3.0	0.0
ENGLISH 20801223	Peace, Conflict, and Literature: The Arts of the Contact	3.0	3.0	0.0
ENGLISH 20801226	Introduction to African Literature	3.0	3.0	0.0
ENGLISH 20801227	Children's Literature	3.0	3.0	0.0
ENGLISH 20801229	Contemporary Lit	3.0	3.0	0.0



Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ENGLISH 20801230	Classical Mythology	3.0	3.0	0.0
ENGLISH 20801231	19th c. Russian Literature in Translation	3.0	3.0	0.0
ENGLISH 20801232	20th c. Russian Literature in Translation	3.0	3.0	0.0
ENGLISH 20801250	Women In Literature	3.0	3.0	0.0
LITTRANS 20802250	Literature in Translation	3.0	3.0	0.0

### Music Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MUSIC 20805205	Class Voice 1	1.0	1.0	0.0
MUSIC 20805206	Class Voice 2	1.0	1.0	0.0
MUSIC 20805207	World Music	3.0	3.0	0.0
MUSIC 20805209	Swing Choir	2.0	2.0	0.0
MUSIC 20805211	Orchestra 1	1.0	0.0	2.0
MUSIC 20805212	Orchestra 2	1.0	0.0	2.0
MUSIC 20805216	Concert Band 1	1.0	0.0	2.0
MUSIC 20805217	Concert Band 2	1.0	0.0	2.0
MUSIC 20805219	Jazz Ensemble 1	1.0	0.0	2.0
MUSIC 20805220	Jazz Ensemble 2	1.0	0.0	2.0
MUSIC 20805221	Class Piano 1	1.0	0.0	2.0
MUSIC 20805222	Class Piano 2	1.0	0.0	2.0
MUSIC 20805227	Music Appreciation	3.0	3.0	0.0
MUSIC 20805260	Music Theory Fundamentals	3.0	3.0	0.0
MUSIC 20805261	Music Theory 1	3.0	3.0	0.0
MUSIC 20805262	Music Theory 2	3.0	3.0	0.0
MUSIC 20805263	Jazz History	3.0	3.0	0.0
MUSIC 20805267	Aural Skills 1	1.0	0.0	2.0
MUSIC 20805268	Aural Skills 2	1.0	0.0	2.0
MUSIC 20805270	Madison College Chorale	1.0	0.0	2.0
MUSIC 20805271	Madison College Chorale 2	1.0	0.0	2.0
MUSIC 20805272	Madrigal Choir	1.0	0.0	2.0
MUSIC 20805278	Hist Pop/Rock Music	3.0	3.0	0.0
MUSIC 20805279	World Drumming Ensemble 1	1.0	0.0	2.0
MUSIC 20805280	World Drumming Ensemble 2	1.0	0.0	2.0
MUSIC 20805281	World Drumming Ensemble 3	1.0	0.0	2.0
MUSIC 20805282	World Drumming Ensemble 4	1.0	0.0	2.0

### Philosophy Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PHILOS 10809166	Intro to Ethics: Theory & App	3.0	3.0	0.0
PHILOS 20809258	Philosophy Through Film	3.0	3.0	0.0
PHILOS 20809259	Classics in Philosophy	3.0	3.0	0.0
PHILOS 20809260	Intro Philosophy	3.0	3.0	0.0
PHILOS 20809261	Elementary Logic	4.0	4.0	0.0
PHILOS 20809262	Contemporary Moral Issues	3.0	3.0	0.0
PHILOS 20809263	East/West World View	3.0	3.0	0.0
PHILOS 20809264	Introduction to Logic and Critical Thinking	3.0	3.0	0.0
PHILOS 20809266	Ethics In Medicine	3.0	3.0	0.0
PHILOS 20809268	Intro to Social and Political Philosophy	3.0	3.0	0.0
PHILOS 20809276	Business Ethics	3.0	3.0	0.0

### World Language Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ARABIC 20802240	Intro to Modern Arabic 1	3.0	2.0	2.0
ARABIC 20802241	Intro to Modern Arabic 2	3.0	2.0	2.0
CHINESE 20802230	Intro to Mandarin Chinese 1	3.0	2.0	2.0
CHINESE 20802231	Intro to Mandarin Chinese 2	3.0	2.0	2.0
FRENCH 20802221	French 1	4.0	3.0	2.0
FRENCH 20802222	French 2	4.0	3.0	2.0
FRENCH 20802223	French 3	4.0	3.0	2.0
FRENCH 20802224	French 4	4.0	3.0	2.0



Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
SPANISH 20802211	Spanish 1	4.0	3.0	2.0
SPANISH 20802212	Spanish 2	4.0	3.0	2.0
SPANISH 20802213	Spanish 3	4.0	3.0	2.0
SPANISH 20802214	Spanish 4	4.0	3.0	2.0
SPANISH 20802215	Spanish 5	3.0	3.0	0.0

### Writing and Communication

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
COMM 10801196	Oral/Interpersonal Communication	3.0	3.0	0.0
COMM 20810205	Small Group & Interpersonal Communications	3.0	3.0	0.0
ENGLISH 10801195	Written Communication	3.0	3.0	0.0
ENGLISH 10801197	Technical Reporting	3.0	3.0	0.0
ENGLISH 20801240	Creative Writing	3.0	3.0	0.0
ENGLISH 20801241	Creative Writing/Fiction	3.0	3.0	0.0
ENGLISH 20801242	Creative Writing/Drama	3.0	3.0	0.0
ENGLISH 20801243	Creative Writing/Poetry	3.0	3.0	0.0
ENGLISH 20801244	Creative Writing/Non Fiction	3.0	3.0	0.0
ENGLISH 20801249	Film Writing	3.0	3.0	0.0
JOURNAL 20801245	Introduction to Journalism	3.0	3.0	0.0
JOURNAL 20801246	Investigative Journalism	3.0	3.0	0.0
JOURNAL 20801251	Introduction to Mass Communication	4.0	4.0	0.0
JOURNAL 20801252	World Issues Journalism	3.0	3.0	0.0
JOURNAL 20801253	Documentary Storytelling	3.0	2.0	2.0
JOURNAL 20801254	Media Ethics and Democracy	3.0	0.0	0.0
JOURNAL 20801262	Social Media Writing	3.0	3.0	0.0
JOURNAL 20801271	Journalism Practicum 1	2.0	2.0	0.0
JOURNAL 20801272	Journalism Practicum 2	2.0	2.0	0.0
JOURNAL 20801273	Journalism Practicum 3	2.0	2.0	0.0
JOURNAL 20801274	Journalism Practicum 4	2.0	2.0	0.0

### Mathematics and Natural Science (10 credits)

Select one mathematics course at the level of Intermediate Algebra or higher. Select one biological science course and one physical science course; one of the courses must include a laboratory. If lab is a stand-alone course, the associated lecture component is also required.

#### Mathematics Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MATH 20804201	Intermediate Algebra	4.0	3.0	2.0
MATH 20804203	Intermediate Algebra 2	3.0	2.0	2.0
MATH 20804210	Math for Elementary Teachers	3.0	3.0	0.0
MATH 20804211	Quantitative Reasoning	3.0	2.0	2.0
MATH 20804212	College Algebra	3.0	2.0	2.0
MATH 20804213	Trigonometry	3.0	2.0	2.0
MATH 20804214	Math for Elementary Teachers 2	3.0	3.0	0.0
MATH 20804215	Computer Science 1	3.0	3.0	0.0
MATH 20804216	Computer Science 2	3.0	3.0	0.0
MATH 20804220	Finite Math	3.0	2.0	2.0
MATH 20804221	Calculus Methods for Business and Social Sciences I	5.0	5.0	0.0
MATH 20804223	Calculus Methods for Business and Social Sciences II	3.0	2.0	2.0
MATH 20804228	Calculus w Algebra & Trigonometry 1	5.0	5.0	0.0
MATH 20804229	Math Analysis	5.0	5.0	0.0
MATH 20804230	Calculus w Algebra & Trigonometry II	5.0	5.0	0.0
MATH 20804231	Calculus and Analytic Geometry 1	5.0	5.0	0.0
MATH 20804232	Calculus and Analytic Geometry 2	5.0	5.0	0.0
MATH 20804233	Calculus 3	5.0	5.0	0.0
MATH 20804240	Basic Statistics	4.0	3.0	2.0
MATH 20804241	Introduction to Engineering Statistics	3.0	1.0	4.0
MATH 20804255	Techniques in Ordinary Differential Equations	3.0	1.0	4.0
MATH 20804256	Elementary Matrix and Linear Algebra	3.0	1.0	4.0
MATH 20804265	Introduction to Discrete Mathematics	3.0	2.0	2.0



### Biological Science Lab Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
BIOLOGY 10806105	Principles of Animal Biology	4.0	3.0	2.0
BIOLOGY 20806203	Introductory Zoology	5.0	4.0	2.0
BIOLOGY 20806206	General Anatomy and Physiology	4.0	3.0	2.0
BIOLOGY 20806207	Anatomy and Physiology 1	4.0	3.0	2.0
BIOLOGY 20806208	Anatomy and Physiology 2	4.0	3.0	2.0
BIOLOGY 20806215	Botany	5.0	3.0	4.0
BIOLOGY 20806226	Introduction To Human Biology	5.0	4.0	2.0
BIOLOGY 20806271	Cellular and Molecular Biology	5.0	3.0	4.0
BIOLOGY 20806272	Organismal Biology	5.0	3.0	4.0
BIOLOGY 20806273	Microbiology-University Medical	5.0	3.0	4.0
BIOLOGY 20806276	Principles of Genetics	4.0	3.0	2.0
BIOLOGY 20806286	Environmental Science	4.0	2.0	4.0

### Physical Science Lab Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ASTRON 20806253	Astronomy: The Solar System	4.0	3.0	2.0
ASTRON 20806254	Astronomy: Stars & Galaxies	4.0	3.0	2.0
CHEM 10806134	General Chemistry	4.0	3.0	2.0
CHEM 20806200	Chemistry for Non-Science Majors	5.0	3.0	4.0
CHEM 20806201	General, Organic & Biological Chemistry	5.0	4.0	2.0
CHEM 20806209	College Chemistry 1	5.0	3.0	4.0
CHEM 20806212	College Chemistry 2	5.0	3.0	4.0
CHEM 20806257	Organic Chemistry 2 Lecture	4.0	4.0	0.0
CHEM 20806216	Chemistry for Biotechnology	3.0	2.0	2.0
EARTHSCI 20806241	Earth Science	3.0	3.0	0.0
EARTHSCI 20806244	General Geology	4.0	3.0	2.0
EARTHSCI 20806245	Weather And Climate	3.0	3.0	0.0
EARTHSCI 20806246	Survey of Oceanography	3.0	3.0	0.0
EARTHSCI 20806247	Earth Science Lab	1.0	0.0	2.0
EARTHSCI 20806248	Weather and Climate Laboratory	1.0	0.0	2.0
EARTHSCI 20806249	Geologic Evolution of the Earth	4.0	3.0	2.0
EARTHSCI 20806250	Climate and Climate Change	3.0	3.0	0.0
EARTHSCI 20806251	Undergraduate Geology Field Experience	2.0	0.0	4.0
EARTHSCI 20806252	Natural Hazards	3.0	3.0	0.0
PHYSICS 10806139	Survey of Physics	3.0	1.0	4.0
PHYSICS 20806220	Physics of Everyday Life	3.0	3.0	0.0
PHYSICS 20806221	University Physics 1	5.0	3.0	4.0
PHYSICS 20806222	University Physics 2	5.0	3.0	4.0
PHYSICS 20806223	University Physics 1-Calculus-Based	5.0	2.0	6.0
PHYSICS 20806224	University Physics 2-Calculus Based	5.0	2.0	6.0
PHYSICS 20806232	Statics	3.0	2.0	2.0
PHYSICS 20806233	Dynamics	3.0	3.0	0.0
PHYSICS 20806290	Renewable Energy for International Development	3.0	3.0	0.0
PHYSICS 20806291	Introduction to Renewable Energy	3.0	3.0	0.0
PHYSICS 20806292	Solar Photovoltaic Technology	3.0	3.0	0.0
CHEM 20806266	Organic Chemistry 1 Lab	2.0	0.0	4.0
CHEM 20806267	Organic Chemistry 2 Lab	2.0	0.0	4.0
PHYSICS 20806235	Modern Physics	3.0	3.0	0.0

### Biological Science Courses - without Lab

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
BIOLOGY 20806204	Biological Greek and Latin Terminology	3	3.0	0.0
BIOLOGY 20806280	Environmental Issues	3	3.0	0.0
BIOLOGY 20806281	Ecology/Conservation Biology	3	3.0	0.0

### Physical Science Courses - without Lab

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PHYSICS 20806220	Physics of Everyday Life	3.0	3.0	0.0
PHYSICS 20806232	Statics	3.0	2.0	2.0





Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PHYSICS 20806233	Dynamics	3.0	3.0	0.0
PHYSICS 20806235	Modern Physics	3.0	3.0	0.0
EARTHSCI 20806241	Earth Science	3.0	3.0	0.0
EARTHSCI 20806245	Weather And Climate	3.0	3.0	0.0
EARTHSCI 20806246	Survey of Oceanography	3.0	3.0	0.0
EARTHSCI 20806250	Climate and Climate Change	3.0	3.0	0.0
EARTHSCI 20806252	Natural Hazards	3.0	3.0	0.0
CHEM 20806256	Organic Chemistry 1 Lecture	4.0	4.0	0.0
CHEM 20806257	Organic Chemistry 2 Lecture	4.0	4.0	0.0
PHYSICS 20806291	Introduction to Renewable Energy	3.0	3.0	0.0
PHYSICS 20806292	Solar Photovoltaic Technology	3.0	3.0	0.0
PHYSICS 20806290	Renewable Energy for International Development	3.0	3.0	0.0

## Social Science (12 credits)

### Required Psychology Course

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PSYCH 20809231	Intro Psychology	3.0	3.0	0.0

Completion of courses from at least two additional disciplines is required. Choose courses from the following disciplines: anthropology, economics, history, political science, sociology, and interdisciplinary social science. Remaining credits to fulfill the requirement can be selected from any social science courses offered within the AA degree, including psychology.

### Anthropology Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ANTHRO 20809279	Introduction to the Archaeology of Native North America	3.0	3.0	0.0
ANTHRO 20809280	General Anthropology	3.0	3.0	0.0
ANTHRO 20809281	Archaeology & Prehistoric World	3.0	3.0	0.0
ANTHRO 20809283	Cultural Anthropology & Human Diversity	3.0	3.0	0.0
ANTHRO 20809285	Anthropology of Myth, Magic, and Religion	3.0	3.0	0.0
ANTHRO 20809286	The Anthropology of Globalization & Multiculturalism	3.0	3.0	0.0
ANTHRO 20809287	Anthropology of Islamic Societies and Cultures	3.0	3.0	0.0
ANTHRO 20809288	Human Biology & Physical Anthropology	3.0	3.0	0.0
ANTHRO 20809289	World Regional Geography	3.0	3.0	0.0
ANTHRO 20809292	Agriculture, Food, and Society	3.0	3.0	0.0

### Economics Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ECON 10809195	Economics	3.0	3.0	0.0
ECON 20809211	Macro Economics	3.0	3.0	0.0
ECON 20809212	Micro Economics	3.0	3.0	0.0
ECON 20809214	Intro International Econ	3.0	3.0	0.0
ECON 20809228	Environmental Economics	3.0	3.0	0.0

### History Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
HISTORY 20803204	Renaissance, Reformation, and Revolution	3.0	3.0	0.0
HISTORY 20803205	Europe and Modern World	3.0	3.0	0.0
HISTORY 20803211	Am Hist 1607-1865	3.0	3.0	0.0
HISTORY 20803212	Am Hist 1865-Pres.	3.0	3.0	0.0
HISTORY 20803214	Native American History	3.0	3.0	0.0
HISTORY 20803220	History Of West Civilization 1	3.0	3.0	0.0
HISTORY 20803224	History of Sub Saharan Africa	3.0	3.0	0.0
HISTORY 20803225	World In 20th Century	3.0	3.0	0.0
HISTORY 20803229	Vietnam/American-1945-Present	3.0	3.0	0.0
HISTORY 20803230	Public Man, Private Woman: Bronze Age to Glass Ceiling	3.0	3.0	0.0
HISTORY 20803233	Gender and Women's History in Cultural Representations	3.0	3.0	0.0
HISTORY 20803234	Gender and Women's Global History	3.0	3.0	0.0
HISTORY 20803240	Afro-American History	3.0	3.0	0.0
HISTORY 20803241	Introduction to Judaism	3.0	3.0	0.0



## Political Science Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
POLISCI 10809122	Intro to Amer Government	3.0	3.0	0.0
POLISCI 20809218	Law and Society	3.0	3.0	0.0
POLISCI 20809220	American Foreign Policy	3.0	3.0	0.0
POLISCI 20809221	American Ntl Govt	3.0	3.0	0.0
POLISCI 20809222	State and Local Government	3.0	3.0	0.0
POLISCI 20809223	International Relations	3.0	3.0	0.0
POLISCI 20809227	Political Theory	3.0	3.0	0.0
POLISCI 20809242	Public Policy	3.0	3.0	0.0
POLISCI 20809243	Comparative Politics	3.0	3.0	0.0
POLISCI 20809244	Russian Politics	3.0	3.0	0.0
POLISCI 20809245	Latin American Politics	3.0	3.0	0.0
POLISCI 20809246	African Politics	3.0	3.0	0.0
POLISCI 20809247	East Asian Politics	3.0	3.0	0.0
POLISCI 20809248	Politics of India	3.0	3.0	0.0

## Psychology Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PSYCH 10809199	Psychology Of Human Relations	3.0	3.0	0.0
PSYCH 20809201	Human Sexuality	3.0	3.0	0.0
PSYCH 20809210	Psychology of Men	3.0	3.0	0.0
PSYCH 20809225	Social Psychology	3.0	3.0	0.0
PSYCH 20809233	Developmental Psychology	3.0	3.0	0.0
PSYCH 20809234	Psychology of Women	3.0	3.0	0.0
PSYCH 20809237	Abnormal Psych	3.0	3.0	0.0
PSYCH 20809239	Child Human Development	3.0	3.0	0.0
PSYCH 20809249	Educational Psychology	3.0	3.0	0.0

## Sociology Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
SOC 10809172	Introduction to Diversity Studies	3.0	3.0	0.0
SOC 10809197	Contemporary American Society	3.0	3.0	0.0
SOC 20809202	Social Problems	3.0	3.0	0.0
SOC 20809203	Intro Sociology	3.0	3.0	0.0
SOC 20809204	Marriage and the Family	3.0	3.0	0.0
SOC 20809207	Criminology	3.0	3.0	0.0
SOC 20809229	Social Movements	3.0	3.0	0.0
SOC 20809240	Introduction to Latin America	3.0	3.0	0.0
SOC 20809252	Race and Ethnicity in the U.S.	3.0	3.0	0.0
SOC 20809253	Sociology of Gender	3.0	3.0	0.0
SOC 20809255	Introduction to LGBTQ+ Studies	3.0	3.0	0.0
SOC 20809275	Sociology of Religion	3.0	3.0	0.0
SOC 20809277	Couple Relationships	1.0	1.0	0.0
SOC 20809291	Technology and Society	3.0	3.0	0.0

## Interdisciplinary Social Science Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
SOCSCI 20809206	Introduction to Women's Studies	3.0	3.0	0.0
SOCSCI 20809230	Statistics for the Social Sciences	4.0	4.0	0.0
SOCSCI 20809254	Research Methods for the Social Sciences	3.0	3.0	0.0
SOCSCI 20809256	International Perspectives on Gender and Women	3.0	3.0	0.0
SOCSCI 20809257	Gender and Women's Studies-Study Abroad Experience	1.0	1.0	0.0
SOCSCI 20809269	Energy And Society	3.0	3.0	0.0
SOCSCI 20809294	Data Organization, Visualization, and Management	3.0	3.0	0.0

## Electives (16 credits)

Select any courses offered within the Liberal Arts Transfer program or from the list of additional electives below. A maximum of six Honor Project credits may also be applied (20-code courses only)



Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ACCTG 10101111	Accounting 1 - Principles	4.0	4.0	0.0
ACCTG 10101113	Accounting 2 - Principles	4.0	4.0	0.0
ACCTG 10101118	Management Accounting	4.0	4.0	0.0
ACCTG 10101125	Cost Management	4.0	4.0	0.0
BUSADM 10102104	Business Statistics	3.0	3.0	0.0
BIOLOGY 20806219	Biology for Innovators	1.0	0.0	2.0
CRIMJUST 10504900	Introduction to Criminal Justice	3.0	3.0	0.0
MATH 20804252	Introduction to Computer Engineering	3.0	1.0	4.0
ELECT 10605270	AC/DC Circuit Techniques and Principles	3.0	1.0	4.0
MEDTERM 10501101	Medical Terminology	3.0	3.0	0.0
MATH 10804114	College Technical Math 1B	2.0	2.0	0.0
MATH 10804115	College Technical Math 1	5.0	5.0	0.0
MATH 10804116	College Technical Math 2	4.0	4.0	0.0
INDMANUF 20623260	Introduction to Engineering	3.0	1.0	4.0
MATH 20804200	Principles Of Geometry	3.0	1.0	4.0
MATH 20804202	Intermediate Algebra I	3.0	2.0	2.0
BIOLOGY 20806262	Anatomy and Physiology for Exercise Lab	1.0	0.0	2.0
PHYSICS 20806293	Solar Photovoltaic Installation Lab	1.0	0.0	2.0
COLLSUCC 20890200	College Success	3.0	3.0	0.0
COLLSUCC 20890202	Career Development	1.0	1.0	0.0

### Ethnic Studies (One course)

Course may also count toward Humanities/Fine Arts, Social Science, or Electives.

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ANTHRO 20809283	Cultural Anthropology & Human Diversity	3.0	3.0	0.0
ANTHRO 20809286	The Anthropology of Globalization & Multiculturalism	3.0	3.0	0.0
ENGLISH 20801207	World Indigenous Literatures	3.0	3.0	0.0
ENGLISH 20801212	Ethnic Literature	3.0	3.0	0.0
ENGLISH 20801213	Native American Literature	3.0	3.0	0.0
ENGLISH 20801214	African American Literature	3.0	3.0	0.0
ENGLISH 20801222	U.S. Latino Literature	3.0	3.0	0.0
HISTORY 20803214	Native American History	3.0	3.0	0.0
HISTORY 20803240	Afro-American History	3.0	3.0	0.0
SOC 10809172	Introduction to Diversity Studies	3.0	3.0	0.0
SOC 20809252	Race and Ethnicity in the U.S.	3.0	3.0	0.0

### Literature (One Course)

Course may also count toward Humanities/Fine Arts or Electives.

See Literature Courses under the Humanities and Fine Arts Requirement above.

### World Languages (One course)

May be met with one year in high school with a grade of "C" or better OR one semester in college. College courses may also count toward Humanities/Fine Arts or Electives.

See World Languages Courses under the Humanities and Fine Arts Requirement above.



# Liberal Arts Transfer

Program Number: 208002-E

Associate in Arts

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Number of Credits Required

60 credits minimum to complete the program, by satisfying the all requirements as defined.

### English and Speech (9 credits)

Six credits must be in composition - English 1 and one other composition course (English 2 recommended). Three credits must be in public speaking.

#### Composition Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ENGLISH 20801201	English 1	3.0	3.0	0.0
ENGLISH 20801202	English 2	3.0	3.0	0.0
JOURNAL 20801245	Introduction to Journalism	3.0	3.0	0.0
JOURNAL 20801246	Investigative Journalism	3.0	3.0	0.0
JOURNAL 20801251	Introduction to Mass Communication	4.0	4.0	0.0

#### Public Speaking Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
SPEECH 10801198	Speech	3.0	3.0	3.0
JOURNAL 20801269	On-Air Performance	3.0	2.0	2.0
SPEECH 20810202	Theory & Practice of Argumentation and Debate	3.0	3.0	3.0
SPEECH 20810211	Oral Interpretation	3.0	3.0	3.0

### Health/Wellness/Physical Education (1 credit)

Completion of one of the listed courses is required.

#### Phy Ed Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PHYED 20807210	Conditioning/Weight Training	1.0	0.0	2.0
PHYED 20807213	Co-Ed Flag Football	1.0	0.0	2.0
PHYED 20807214	Pickleball	1.0	0.0	2.0
PHYED 20807219	Introduction to Kinesiology	2.0	2.0	0.0
PHYED 20807223	Beginning Volleyball	1.0	0.0	2.0
PHYED 20807229	Swimming for Fitness	1.0	0.0	2.0
PHYED 20807230	Beginning Swimming	1.0	0.0	2.0
PHYED 20807245	Social Dance	1.0	0.0	2.0
PHYED 20807247	Jazz 1	1.0	0.0	2.0
PHYED 20807248	Ballet	1.0	0.0	2.0
PHYED 20807250	Badminton	1.0	0.0	2.0
PHYED 20807254	Beginning Yoga	1.0	0.0	2.0
PHYED 20807255	Prev/Care Athletic Injuries	2.0	1.0	2.0
PHYED 20807258	First Aid and CPR	2.0	2.0	0.0
PHYED 20807264	Intermediate Yoga	1.0	0.0	2.0
PHYED 20807266	Wellness Today	2.0	1.0	2.0
PHYED 20807267	Health & Fitness for Life	1.0	0.0	2.0
PHYED 20807268	Blueprint for Healthy Living	2.0	2.0	0.0
PHYED 20807269	Stress Management Foundations	1.0	0.0	2.0
PHYED 20807271	Bicycle Conditioning	1.0	0.0	2.0
PHYED 20807289	Aerobics/Weight Training	1.0	0.0	2.0



## Mathematics and Natural Science (25 credits)

### Required Mathematics and Chemistry Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MATH 20804231	Calculus and Analytic Geometry 1	5.0	5.0	0.0
MATH 20804232	Calculus and Analytic Geometry 2	5.0	5.0	0.0
CHEM 20806209	College Chemistry 1	5.0	3.0	4.0
CHEM 20806212	College Chemistry 2	5.0	3.0	4.0

Choose Option #1 or Option #2 to satisfy the additional Physical Science requirement.

### Physical Science Option #1

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PHYSICS 20806223	University Physics 1-Calculus-Based	5.0	2.0	6.0

### Physical Science Option #2

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PHYSICS 20806232	Statics	3.0	2.0	2.0
PHYSICS 20806233	Dynamics	3.0	3.0	0.0

## Humanities/Fine Arts (6 credits)

Select one literature course. Completion of one course from one additional discipline is required. Choose from the following disciplines: art, drama, film, music, world languages, writing and communication, and interdisciplinary humanities. Remaining credits to fulfill the requirement can be selected from any Humanities and Fine Arts courses offered within the AS degree, including literature.

### Literature Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ENGLISH 20801204	Introduction to Literature	3.0	3.0	0.0
ENGLISH 20801207	World Indigenous Literatures	3.0	3.0	0.0
ENGLISH 20801211	Gay & Lesbian Literature	3.0	3.0	0.0
ENGLISH 20801212	Ethnic Literature	3.0	3.0	0.0
ENGLISH 20801213	Native American Literature	3.0	3.0	0.0
ENGLISH 20801214	African American Literature	3.0	3.0	0.0
ENGLISH 20801215	British Literature 1	3.0	3.0	0.0
ENGLISH 20801216	British Literature 2	3.0	3.0	0.0
ENGLISH 20801217	American Literature 1	3.0	3.0	0.0
ENGLISH 20801218	American Literature 2	3.0	3.0	0.0
ENGLISH 20801219	Western World Lit: Classical Antiquity to the Middle Ages	3.0	3.0	0.0
ENGLISH 20801220	Western World Lit: Early Renaissance to Present	3.0	3.0	0.0
ENGLISH 20801221	Literature and Popular Culture	3.0	3.0	0.0
ENGLISH 20801222	U.S. Latino Literature	3.0	3.0	0.0
ENGLISH 20801223	Peace, Conflict, and Literature: The Arts of the Contact Zone	3.0	3.0	0.0
ENGLISH 20801226	Introduction to African Literature	3.0	3.0	0.0
ENGLISH 20801227	Children's Literature	3.0	3.0	0.0
ENGLISH 20801229	Contemporary Lit	3.0	3.0	0.0
ENGLISH 20801230	Classical Mythology	3.0	3.0	0.0
ENGLISH 20801231	19th c. Russian Literature in Translation	3.0	3.0	0.0
ENGLISH 20801232	20th c. Russian Literature in Translation	3.0	3.0	0.0
ENGLISH 20801250	Women In Literature	3.0	3.0	0.0
LITTRANS 20802250	Literature in Translation	3.0	3.0	0.0

### Art Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ART 20815200	Art History: Ancient to Medieval	3.0	3.0	0.0
ART 20815201	Basic Design	3.0	0.0	6.0
ART 20815202	Color & Design	3.0	0.0	6.0
ART 20815203	3-Dimensional Design	3.0	0.0	6.0
ART 20815205	Drawing Fundamentals	3.0	0.0	6.0
ART 20815208	Contemporary Art Survey	3.0	0.0	6.0
ART 20815210	Art History: Renaissance to Modern	3.0	3.0	0.0
ART 20815211	Art History: Women In Art	3.0	3.0	0.0
ART 20815214	Modern Art Survey	3.0	0.0	6.0



Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ART 20815215	Drawing 2	3.0	0.0	6.0
ART 20815219	Life Drawing 1	3.0	0.0	6.0
ART 20815220	Life Drawing 2	3.0	0.0	6.0
ART 20815221	Life Drawing 3	3.0	0.0	6.0
ART 20815232	Digital Design Fundamentals	3.0	0.0	6.0
ART 20815235	Creative Photography	3.0	0.0	6.0
ART 20815236	Advanced Creative Photography	3.0	0.0	6.0
ART 20815239	Digital Photography	3.0	0.0	6.0
ART 20815241	Painting 1	3.0	0.0	6.0
ART 20815242	Painting 2	3.0	0.0	6.0
ART 20815253	Jewelry 1	3.0	0.0	6.0
ART 20815254	Jewelry 2	3.0	0.0	6.0
ART 20815290	Ceramics 1	3.0	0.0	6.0
ART 20815291	Ceramics 2	3.0	0.0	6.0
ART 20815294	Ceramics Sculpture 1	3.0	0.0	6.0
ART 20815295	Ceramics Sculpture 2	3.0	0.0	6.0
ART 20815296	Ceramics Firing Techniques/Alternative Methods	3.0	0.0	6.0

### Drama Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
DRAMA 20810230	Intro To Theatre	3.0	3.0	0.0
DRAMA 20810235	Stagecraft 1	3.0	3.0	0.0
DRAMA 20810236	Stagecraft 2	3.0	3.0	0.0
DRAMA 20810238	Cultural Diversity in Contemporary American Theater	3.0	3.0	0.0
DRAMA 20810260	Drama Practicum	2.0	2.0	0.0
DRAMA 20810262	Acting 1	3.0	3.0	0.0
DRAMA 20810263	Acting 2	3.0	3.0	0.0
DRAMA 20810270	Movement Theory & Training for Actors	1.0	0.0	2.0

### Film Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
FILM 20810250	Introduction to Film	3.0	2.0	2.0
FILM 20810254	History Of World Cinema	3.0	2.0	2.0

### Music Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MUSIC 20805205	Class Voice 1	1.0	1.0	0.0
MUSIC 20805206	Class Voice 2	1.0	1.0	0.0
MUSIC 20805207	World Music	3.0	3.0	0.0
MUSIC 20805209	Swing Choir	2.0	2.0	0.0
MUSIC 20805211	Orchestra 1	1.0	0.0	2.0
MUSIC 20805212	Orchestra 2	1.0	0.0	2.0
MUSIC 20805216	Concert Band 1	1.0	0.0	2.0
MUSIC 20805217	Concert Band 2	1.0	0.0	2.0
MUSIC 20805219	Jazz Ensemble 1	1.0	0.0	2.0
MUSIC 20805220	Jazz Ensemble 2	1.0	0.0	2.0
MUSIC 20805221	Class Piano 1	1.0	0.0	2.0
MUSIC 20805222	Class Piano 2	1.0	0.0	2.0
MUSIC 20805227	Music Appreciation	3.0	3.0	0.0
MUSIC 20805260	Music Theory Fundamentals	3.0	3.0	0.0
MUSIC 20805261	Music Theory 1	3.0	3.0	0.0
MUSIC 20805262	Music Theory 2	3.0	3.0	0.0
MUSIC 20805263	Jazz History	3.0	3.0	0.0
MUSIC 20805267	Aural Skills 1	1.0	0.0	2.0
MUSIC 20805268	Aural Skills 2	1.0	0.0	2.0
MUSIC 20805270	Madison College Chorale	1.0	0.0	2.0
MUSIC 20805271	Madison College Chorale 2	1.0	0.0	2.0
MUSIC 20805272	Madrigal Choir	1.0	0.0	2.0
MUSIC 20805278	Hist Pop/Rock Music	3.0	3.0	0.0
MUSIC 20805279	World Drumming Ensemble 1	1.0	0.0	2.0
MUSIC 20805280	World Drumming Ensemble 2	1.0	0.0	2.0



Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MUSIC 20805281	World Drumming Ensemble 3	1.0	0.0	2.0
MUSIC 20805282	World Drumming Ensemble 4	1.0	0.0	2.0

### Philosophy Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PHILOS 10809166	Intro to Ethics: Theory & App	3.0	3.0	0.0
PHILOS 20809258	Philosophy Through Film	3.0	3.0	0.0
PHILOS 20809259	Classics in Philosophy	3.0	3.0	0.0
PHILOS 20809260	Intro Philosophy	3.0	3.0	0.0
PHILOS 20809261	Elementary Logic	4.0	4.0	0.0
PHILOS 20809262	Contemporary Moral Issues	3.0	3.0	0.0
PHILOS 20809263	East/West World View	3.0	3.0	0.0
PHILOS 20809264	Introduction to Logic and Critical Thinking	3.0	3.0	0.0
PHILOS 20809266	Ethics In Medicine	3.0	3.0	0.0
PHILOS 20809268	Intro to Social and Political Philosophy	3.0	3.0	0.0
PHILOS 20809276	Business Ethics	3.0	3.0	0.0

### World Languages Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
SPANISH 20802211	Spanish 1	4.0	3.0	2.0
SPANISH 20802212	Spanish 2	4.0	3.0	2.0
SPANISH 20802213	Spanish 3	4.0	3.0	2.0
SPANISH 20802214	Spanish 4	4.0	3.0	2.0
SPANISH 20802215	Spanish 5	3.0	3.0	0.0
FRENCH 20802221	French 1	4.0	3.0	2.0
FRENCH 20802222	French 2	4.0	3.0	2.0
FRENCH 20802223	French 3	4.0	3.0	2.0
FRENCH 20802224	French 4	4.0	3.0	2.0
CHINESE 20802230	Intro to Mandarin Chinese 1	3.0	2.0	2.0
CHINESE 20802231	Intro to Mandarin Chinese 2	3.0	2.0	2.0
ARABIC 20802240	Intro to Modern Arabic 1	3.0	2.0	2.0
ARABIC 20802241	Intro to Modern Arabic 2	3.0	2.0	2.0

### Writing and Communication Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
COMM 10801196	Oral/Interpersonal Communication	3.0	3.0	0.0
ENGLISH 10801195	Written Communication	3.0	3.0	0.0
ENGLISH 10801197	Technical Reporting	3.0	3.0	0.0
ENGLISH 20801240	Creative Writing	3.0	3.0	0.0
ENGLISH 20801241	Creative Writing/Fiction	3.0	3.0	0.0
ENGLISH 20801242	Creative Writing/Drama	3.0	3.0	0.0
ENGLISH 20801243	Creative Writing/Poetry	3.0	3.0	0.0
ENGLISH 20801244	Creative Writing/Non Fiction	3.0	3.0	0.0
ENGLISH 20801249	Film Writing	3.0	3.0	0.0
JOURNAL 20801245	Introduction to Journalism	3.0	3.0	0.0
JOURNAL 20801246	Investigative Journalism	3.0	3.0	0.0
JOURNAL 20801251	Introduction to Mass Communication	4.0	4.0	0.0
JOURNAL 20801252	World Issues Journalism	3.0	3.0	0.0
JOURNAL 20801253	Documentary Storytelling	3.0	2.0	2.0
JOURNAL 20801254	Media Ethics and Democracy	3.0	0.0	0.0
JOURNAL 20801262	Social Media Writing	3.0	3.0	0.0
JOURNAL 20801271	Journalism Practicum 1	2.0	2.0	0.0
JOURNAL 20801272	Journalism Practicum 2	2.0	2.0	0.0
JOURNAL 20801273	Journalism Practicum 3	2.0	2.0	0.0
JOURNAL 20801274	Journalism Practicum 4	2.0	2.0	0.0
COMM 20810205	Small Group & Interpersonal Communications	3.0	3.0	0.0



## Interdisciplinary Humanities Courses

Class Course Number	Class Name	Credits/Hours	Hours Per Week	
			Lecture	Lab
LDRSHP 20810267	Leadership As An Art	3	3.0	0.0

### Social Science (6 credits)

Choose Option #1 or Option #2 to satisfy the requirement.

#### Social Science Option #1

Required Economics courses.

Class Course Number	Class Name	Credits/Hours	Hours Per Week	
			Lecture	Lab
ECON 20809212	Micro Economics	3	3.0	0.0
ECON 20809228	Environmental Economics	3	3.0	0.0

#### Social Science Option #2

Completion of courses from at least two disciplines is required. Choose courses from the following disciplines: anthropology, economics, history, political science, psychology, sociology, and interdisciplinary social science.

### Anthropology Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ANTHRO 20809279	Introduction to the Archaeology of Native North America	3.0	3.0	0.0
ANTHRO 20809280	General Anthropology	3.0	3.0	0.0
ANTHRO 20809281	Archaeology & Prehistoric World	3.0	3.0	0.0
ANTHRO 20809283	Cultural Anthropology & Human Diversity	3.0	3.0	0.0
ANTHRO 20809285	Anthropology of Myth, Magic, and Religion	3.0	3.0	0.0
ANTHRO 20809286	The Anthropology of Globalization & Multiculturalism	3.0	3.0	0.0
ANTHRO 20809287	Anthropology of Islamic Societies and Cultures	3.0	3.0	0.0
ANTHRO 20809288	Human Biology & Physical Anthropology	3.0	3.0	0.0
ANTHRO 20809289	World Regional Geography	3.0	3.0	0.0
ANTHRO 20809292	Agriculture, Food, and Society	3.0	3.0	0.0

### Economics Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ECON 10809195	Economics	3.0	3.0	0.0
ECON 20809211	Macro Economics	3.0	3.0	0.0
ECON 20809212	Micro Economics	3.0	3.0	0.0
ECON 20809214	Intro International Econ	3.0	3.0	0.0
ECON 20809228	Environmental Economics	3.0	3.0	0.0

### History Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
HISTORY 20803204	Renaissance, Reformation, and Revolution	3.0	3.0	0.0
HISTORY 20803205	Europe and Modern World	3.0	3.0	0.0
HISTORY 20803211	Am Hist 1607-1865	3.0	3.0	0.0
HISTORY 20803212	Am Hist 1865-Pres.	3.0	3.0	0.0
HISTORY 20803214	Native American History	3.0	3.0	0.0
HISTORY 20803220	History Of West Civilization 1	3.0	3.0	0.0
HISTORY 20803224	History of Sub Saharan Africa	3.0	3.0	0.0
HISTORY 20803225	World In 20th Century	3.0	3.0	0.0
HISTORY 20803229	Vietnam/American-1945-Present	3.0	3.0	0.0
HISTORY 20803230	Public Man, Private Woman: Bronze Age to Glass Ceiling	3.0	3.0	0.0
HISTORY 20803233	Gender and Women's History in Cultural Representations	3.0	3.0	0.0
HISTORY 20803234	Gender and Women's Global History	3.0	3.0	0.0
HISTORY 20803240	Afro-American History	3.0	3.0	0.0
HISTORY 20803241	Introduction to Judaism	3.0	3.0	0.0

### Political Science Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
POLISCI 10809122	Intro to Amer Government	3.0	3.0	0.0
POLISCI 20809218	Law and Society	3.0	3.0	0.0
POLISCI 20809220	American Foreign Policy	3.0	3.0	0.0





Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
POLISCI 20809221	American Ntl Govt	3.0	3.0	0.0
POLISCI 20809222	State and Local Government	3.0	3.0	0.0
POLISCI 20809223	International Relations	3.0	3.0	0.0
POLISCI 20809227	Political Theory	3.0	3.0	0.0
POLISCI 20809242	Public Policy	3.0	3.0	0.0
POLISCI 20809243	Comparative Politics	3.0	3.0	0.0
POLISCI 20809244	Russian Politics	3.0	3.0	0.0
POLISCI 20809245	Latin American Politics	3.0	3.0	0.0
POLISCI 20809246	African Politics	3.0	3.0	0.0
POLISCI 20809247	East Asian Politics	3.0	3.0	0.0
POLISCI 20809248	Politics of India	3.0	3.0	0.0

## Psychology Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PSYCH 10809199	Psychology Of Human Relations	3.0	3.0	0.0
PSYCH 20809201	Human Sexuality	3.0	3.0	0.0
PSYCH 20809210	Psychology of Men	3.0	3.0	0.0
PSYCH 20809225	Social Psychology	3.0	3.0	0.0
PSYCH 20809231	Intro Psychology	3.0	3.0	0.0
PSYCH 20809233	Developmental Psychology	3.0	3.0	0.0
PSYCH 20809234	Psychology of Women	3.0	3.0	0.0
PSYCH 20809237	Abnormal Psych	3.0	3.0	0.0
PSYCH 20809239	Child Human Development	3.0	3.0	0.0
PSYCH 20809249	Educational Psychology	3.0	3.0	0.0

## Sociology Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
SOC 10809172	Introduction to Diversity Studies	3.0	3.0	0.0
SOC 10809197	Contemporary American Society	3.0	3.0	0.0
SOC 20809202	Social Problems	3.0	3.0	0.0
SOC 20809203	Intro Sociology	3.0	3.0	0.0
SOC 20809204	Marriage and the Family	3.0	3.0	0.0
SOC 20809207	Criminology	3.0	3.0	0.0
SOC 20809229	Social Movements	3.0	3.0	0.0
SOC 20809240	Introduction to Latin America	3.0	3.0	0.0
SOC 20809252	Race and Ethnicity in the U.S.	3.0	3.0	0.0
SOC 20809253	Sociology of Gender	3.0	3.0	0.0
SOC 20809255	Introduction to LGBTQ+ Studies	3.0	3.0	0.0
SOC 20809275	Sociology of Religion	3.0	3.0	0.0
SOC 20809277	Couple Relationships	1.0	1.0	0.0
SOC 20809291	Interdisciplinary Social Technology and Society Science Courses	3.0	3.0	0.0

## Interdisciplinary Social Science Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
SOCSCI 20809206	Introduction to Women's Studies	3.0	3.0	0.0
SOCSCI 20809230	Statistics for the Social Sciences	4.0	4.0	0.0
SOCSCI 20809254	Research Methods for the Social Sciences	3.0	3.0	0.0
SOCSCI 20809256	International Perspectives on Gender and Women	3.0	3.0	0.0
SOCSCI 20809257	Gender and Women's Studies-Study Abroad Experience	1.0	1.0	0.0
SOCSCI 20809269	Energy And Society	3.0	3.0	0.0
SOCSCI 20809294	Data Organization, Visualization, and Management	3.0	3.0	0.0

## Ethnic Studies (One course)

Course may also count toward Humanities/Fine Arts, Social Science, or Electives

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
SOC 10809172	Introduction to Diversity Studies	3.0	3.0	0.0
ENGLISH 20801207	World Indigenous Literatures	3.0	3.0	0.0
ENGLISH 20801212	Ethnic Literature	3.0	3.0	0.0
ENGLISH 20801213	Native American Literature	3.0	3.0	0.0



Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ENGLISH 20801214	African American Literature	3.0	3.0	0.0
ENGLISH 20801222	U.S. Latino Literature	3.0	3.0	0.0
HISTORY 20803214	Native American History	3.0	3.0	0.0
HISTORY 20803240	Afro-American History	3.0	3.0	0.0
SOC 20809252	Race and Ethnicity in the U.S.	3.0	3.0	0.0
ANTHRO 20809283	Cultural Anthropology & Human Diversity	3.0	3.0	0.0
ANTHRO 20809286	The Anthropology of Globalization & Multiculturalism	3.0	3.0	0.0

### Literature (One Course)

Course may also count toward Humanities/Fine Arts or Electives.

See Literature Courses under the Humanities and Fine Arts Requirement above.

### World Languages (One course)

May be met with one year of high school with a grade of "C" or better OR one semester in college. College course may also count toward Humanities/Fine Arts or Electives.

See World Languages Courses under the Humanities and Fine Arts Requirement above.

### Engineering Related Electives (13 credits)

Consult with your advisor to determine which courses are best for your intended transfer program.

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MATH 20804252	Introduction to Computer Engineering	3.0	1.0	4.0
ELECT 10605270	AC/DC Circuit Techniques and Principles	3.0	1.0	4.0
MECTEC 20606231	Introductory Engineering Graphics	3.0	2.0	2.0
INDMANUF 20623260	Introduction to Engineering	3.0	1.0	4.0
MATH 20804215	Computer Science 1	3.0	3.0	0.0
MATH 20804216	Computer Science 2	3.0	3.0	0.0
MATH 20804233	Calculus 3	5.0	5.0	0.0
MATH 20804241	Introduction to Engineering Statistics	3.0	1.0	4.0
MATH 20804255	Techniques in Ordinary Differential Equations	3.0	1.0	4.0
MATH 20804256	Elementary Matrix and Linear Algebra	3.0	1.0	4.0
MATH 20804265	Introduction to Discrete Mathematics	3.0	2.0	2.0
BIOLOGY 20806203	Introductory Zoology	5.0	4.0	2.0
PHYSICS 20806224	University Physics 2-Calculus Based	5.0	2.0	6.0
PHYSICS 20806232	Statics	3.0	2.0	2.0
PHYSICS 20806233	Dynamics	3.0	3.0	0.0
EARTHSCI 20806244	General Geology	4.0	3.0	2.0
CHEM 20806256	Organic Chemistry 1 Lecture	4.0	4.0	0.0
CHEM 20806257	Organic Chemistry 2 Lecture	4.0	4.0	0.0
CHEM 20806266	Organic Chemistry 1 Lab	2.0	0.0	4.0
CHEM 20806267	Organic Chemistry 2 Lab	2.0	0.0	4.0
BIOLOGY 20806271	Cellular and Molecular Biology	5.0	3.0	4.0
BIOLOGY 20806272	Organismal Biology	5.0	3.0	4.0
PHYSICS 20806290	Renewable Energy for International Development	3.0	3.0	0.0
PHYSICS 20806291	Introduction to Renewable Energy	3.0	3.0	0.0
PHYSICS 20806292	Solar Photovoltaic Technology	3.0	3.0	0.0
PHYSICS 20806293	Solar Photovoltaic Installation Lab	1.0	0.0	2.0



# Liberal Arts Transfer

Program Number: 208002-HE

Associate in Science

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Number of Credits Required

60 credits minimum to complete the program, by satisfying the all requirements as defined.

### English and Speech (9 credits)

Six credits must be in composition - English 1 and one other composition course (English 2 recommended). Three credits must be in public speaking.

#### Composition Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ENGLISH 20801201	English 1	3.0	3.0	0.0
ENGLISH 20801202	English 2	3.0	3.0	0.0
JOURNAL 20801245	Introduction to Journalism	3.0	3.0	0.0
JOURNAL 20801246	Investigative Journalism	3.0	3.0	0.0
JOURNAL 20801251	Introduction to Mass Communication	4.0	4.0	0.0

#### Public Speaking Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
SPEECH 10801198	Speech	3.0	3.0	0.0
JOURNAL 20801269	On-Air Performance	3.0	2.0	2.0
SPEECH 20810202	Theory & Practice of Argumentation and Debate	3.0	3.0	0.0
SPEECH 20810211	Oral Interpretation	3.0	3.0	0.0

### Health/Wellness/Physical Education (1 credit)

Completion of one of the listed courses is required.

#### Phy Ed Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PHYED 20807210	Conditioning/Weight Training	1.0	0.0	2.0
PHYED 20807213	Co-Ed Flag Football	1.0	0.0	2.0
PHYED 20807214	Pickleball	1.0	0.0	2.0
PHYED 20807219	Introduction to Kinesiology	2.0	2.0	0.0
PHYED 20807223	Beginning Volleyball	1.0	0.0	2.0
PHYED 20807229	Swimming for Fitness	1.0	0.0	2.0
PHYED 20807230	Beginning Swimming	1.0	0.0	2.0
PHYED 20807245	Social Dance	1.0	0.0	2.0
PHYED 20807247	Jazz 1	1.0	0.0	2.0
PHYED 20807248	Ballet	1.0	0.0	2.0
PHYED 20807250	Badminton	1.0	0.0	2.0
PHYED 20807254	Beginning Yoga	1.0	0.0	2.0
PHYED 20807255	Prev/Care Athletic Injuries	2.0	1.0	2.0
PHYED 20807258	First Aid and CPR	2.0	2.0	0.0
PHYED 20807264	Intermediate Yoga	1.0	0.0	2.0
PHYED 20807266	Wellness Today	2.0	1.0	2.0
PHYED 20807267	Health & Fitness for Life	1.0	0.0	2.0
PHYED 20807268	Blueprint for Healthy Living	2.0	2.0	0.0
PHYED 20807269	Stress Management Foundations	1.0	0.0	2.0
PHYED 20807271	Bicycle Conditioning	1.0	0.0	2.0
PHYED 20807289	Aerobics/Weight Training	1.0	0.0	2.0



## Humanities/Fine Arts (6 credits)

Select one literature course. Completion of one course from one additional discipline is required. Choose from the following disciplines: art, drama, film, music, world languages, writing and communication, and interdisciplinary humanities. Remaining credits to fulfill the requirement can be selected from any Humanities and Fine Arts courses offered within the AS degree, including literature.

### Art Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ART 20815200	Art History: Ancient to Medieval	3.0	3.0	0.0
ART 20815201	Basic Design	3.0	0.0	6.0
ART 20815202	Color & Design	3.0	0.0	6.0
ART 20815203	3-Dimensional Design	3.0	0.0	6.0
ART 20815205	Drawing Fundamentals	3.0	0.0	6.0
ART 20815208	Contemporary Art Survey	3.0	0.0	6.0
ART 20815210	Art History: Renaissance to Modern	3.0	3.0	0.0
ART 20815211	Art History: Women In Art	3.0	3.0	0.0
ART 20815214	Modern Art Survey	3.0	0.0	6.0
ART 20815215	Drawing 2	3.0	0.0	6.0
ART 20815219	Life Drawing 1	3.0	0.0	6.0
ART 20815220	Life Drawing 2	3.0	0.0	6.0
ART 20815221	Life Drawing 3	3.0	0.0	6.0
ART 20815232	Digital Design Fundamentals	3.0	0.0	6.0
ART 20815235	Creative Photography	3.0	0.0	6.0
ART 20815236	Advanced Creative Photography	3.0	0.0	6.0
ART 20815239	Digital Photography	3.0	0.0	6.0
ART 20815241	Painting 1	3.0	0.0	6.0
ART 20815242	Painting 2	3.0	0.0	6.0
ART 20815253	Jewelry 1	3.0	0.0	6.0
ART 20815254	Jewelry 2	3.0	0.0	6.0
ART 20815290	Ceramics 1	3.0	0.0	6.0
ART 20815291	Ceramics 2	3.0	0.0	6.0
ART 20815293	Ceramics Independent Study	3.0	0.0	6.0
ART 20815294	Ceramics Sculpture 1	3.0	0.0	6.0
ART 20815295	Ceramics Sculpture 2	3.0	0.0	6.0
ART 20815296	Ceramics Firing Techniques/Alternative Methods	3.0	0.0	6.0

### Drama Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
DRAMA 20810230	Intro To Theatre	3	3-0	
DRAMA 20810235	Stagecraft 1	3	3-0	
DRAMA 20810236	Stagecraft 2	3	3-0	
DRAMA 20810238	Cultural Diversity in Contemporary American Theater	3	3-0	
DRAMA 20810260	Drama Practicum	2	2-0	
DRAMA 20810262	Acting 1	3	3-0	
DRAMA 20810263	Acting 2	3	3-0	
DRAMA 20810270	Movement Theory & Training for Actors	1	0-2	

### Film Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
FILM 20810250	Introduction to Film	3.0	2.0	2.0
FILM 20810254	History Of World Cinema	3.0	2.0	2.0

### Literature Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ENGLISH 20801204	Introduction to Literature	3.0	3.0	0.0
ENGLISH 20801207	World Indigenous Literatures	3.0	3.0	0.0
ENGLISH 20801211	Gay & Lesbian Literature	3.0	3.0	0.0
ENGLISH 20801212	Ethnic Literature	3.0	3.0	0.0
ENGLISH 20801213	Native American Literature	3.0	3.0	0.0
ENGLISH 20801214	African American Literature	3.0	3.0	0.0
ENGLISH 20801215	British Literature 1	3.0	3.0	0.0
ENGLISH 20801216	British Literature 2	3.0	3.0	0.0
ENGLISH 20801217	American Literature 1	3.0	3.0	0.0



Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ENGLISH 20801218	American Literature 2	3.0	3.0	0.0
ENGLISH 20801219	Western World Lit: Classical Antiquity to the Middle Ages	3.0	3.0	0.0
ENGLISH 20801220	Western World Lit: Early Renaissance to Present	3.0	3.0	0.0
ENGLISH 20801221	Literature and Popular Culture	3.0	3.0	0.0
ENGLISH 20801222	U.S. Latino Literature	3.0	3.0	0.0
ENGLISH 20801223	Peace, Conflict, and Literature: The Arts of the Contact Zone	3.0	3.0	0.0
ENGLISH 20801226	Introduction to African Literature	3.0	3.0	0.0
ENGLISH 20801227	Children's Literature	3.0	3.0	0.0
ENGLISH 20801229	Contemporary Lit	3.0	3.0	0.0
ENGLISH 20801230	Classical Mythology	3.0	3.0	0.0
ENGLISH 20801231	19th c. Russian Literature in Translation	3.0	3.0	0.0
ENGLISH 20801232	20th c. Russian Literature in Translation	3.0	3.0	0.0
ENGLISH 20801250	Women In Literature	3.0	3.0	0.0
LITTRANS 20802250	Literature in Translation	3.0	3.0	0.0

### Music Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MUSIC 20805205	Class Voice 1	1.0	1.0	0.0
MUSIC 20805206	Class Voice 2	1.0	1.0	0.0
MUSIC 20805207	World Music	3.0	3.0	0.0
MUSIC 20805209	Swing Choir	2.0	2.0	0.0
MUSIC 20805211	Orchestra 1	1.0	0.0	2.0
MUSIC 20805212	Orchestra 2	1.0	0.0	2.0
MUSIC 20805216	Concert Band 1	1.0	0.0	2.0
MUSIC 20805217	Concert Band 2	1.0	0.0	2.0
MUSIC 20805219	Jazz Ensemble 1	1.0	0.0	2.0
MUSIC 20805220	Jazz Ensemble 2	1.0	0.0	2.0
MUSIC 20805221	Class Piano 1	1.0	0.0	2.0
MUSIC 20805222	Class Piano 2	1.0	0.0	2.0
MUSIC 20805227	Music Appreciation	3.0	3.0	0.0
MUSIC 20805260	Music Theory Fundamentals	3.0	3.0	0.0
MUSIC 20805261	Music Theory 1	3.0	3.0	0.0
MUSIC 20805262	Music Theory 2	3.0	3.0	0.0
MUSIC 20805263	Jazz History	3.0	3.0	0.0
MUSIC 20805267	Aural Skills 1	1.0	0.0	2.0
MUSIC 20805268	Aural Skills 2	1.0	0.0	2.0
MUSIC 20805270	Madison College Chorale	1.0	0.0	2.0
MUSIC 20805271	Madison College Chorale 2	1.0	0.0	2.0
MUSIC 20805272	Madrigal Choir	1.0	0.0	2.0
MUSIC 20805278	Hist Pop/Rock Music	3.0	3.0	0.0
MUSIC 20805279	World Drumming Ensemble 1	1.0	0.0	2.0
MUSIC 20805280	World Drumming Ensemble 2	1.0	0.0	2.0
MUSIC 20805281	World Drumming Ensemble 3	1.0	0.0	2.0
MUSIC 20805282	World Drumming Ensemble 4	1.0	0.0	2.0

### Philosophy Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PHILOS 10809166	Intro to Ethics: Theory & App	3.0	3.0	0.0
PHILOS 20809258	Philosophy Through Film	3.0	3.0	0.0
PHILOS 20809259	Classics in Philosophy	3.0	3.0	0.0
PHILOS 20809260	Intro Philosophy	3.0	3.0	0.0
PHILOS 20809261	Elementary Logic	4.0	4.0	0.0
PHILOS 20809262	Contemporary Moral Issues	3.0	3.0	0.0
PHILOS 20809263	East/West World View	3.0	3.0	0.0
PHILOS 20809264	Introduction to Logic and Critical Thinking	3.0	3.0	0.0
PHILOS 20809266	Ethics In Medicine	3.0	3.0	0.0
PHILOS 20809268	Intro to Social and Political Philosophy	3.0	3.0	0.0
PHILOS 20809276	Business Ethics	3.0	3.0	0.0



## World Languages Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
SPANISH 20802211	Spanish 1	4.0	3.0	2.0
SPANISH 20802212	Spanish 2	4.0	3.0	2.0
SPANISH 20802213	Spanish 3	4.0	3.0	2.0
SPANISH 20802214	Spanish 4	4.0	3.0	2.0
SPANISH 20802215	Spanish 5	4.0	3.0	0.0
FRENCH 20802221	French 1	4.0	3.0	2.0
FRENCH 20802222	French 2	4.0	3.0	2.0
FRENCH 20802223	French 3	4.0	3.0	2.0
FRENCH 20802224	French 4	4.0	3.0	2.0
CHINESE 20802230	Intro to Mandarin Chinese 1	3.0	2.0	2.0
CHINESE 20802231	Intro to Mandarin Chinese 2	3.0	2.0	2.0
ARABIC 20802240	Intro to Modern Arabic 1	3.0	2.0	2.0
ARABIC 20802241	Intro to Modern Arabic 2	3.0	2.0	2.0

## Writing and Communication Courses

Class Course Number	Class Name	Credits/Units	Class Course Number	
			Lecture	Lab
COMM 10801196	Oral/Interpersonal Communication	3.0	3.0	0.0
COMM 20810205	Small Group & Interpersonal Communications	3.0	3.0	0.0
ENGLISH 10801195	Written Communication	3.0	3.0	0.0
ENGLISH 10801197	Technical Reporting	3.0	3.0	0.0
ENGLISH 20801240	Creative Writing	3.0	3.0	0.0
ENGLISH 20801241	Creative Writing/Fiction	3.0	3.0	0.0
ENGLISH 20801242	Creative Writing/Drama	3.0	3.0	0.0
ENGLISH 20801243	Creative Writing/Poetry	3.0	3.0	0.0
ENGLISH 20801244	Creative Writing/Non Fiction	3.0	3.0	0.0
ENGLISH 20801249	Film Writing	3.0	3.0	0.0
JOURNAL 20801245	Introduction to Journalism	3.0	3.0	0.0
JOURNAL 20801246	Investigative Journalism	3.0	3.0	0.0
JOURNAL 20801251	Introduction to Mass Communication	4.0	4.0	0.0
JOURNAL 20801252	World Issues Journalism	3.0	3.0	0.0
JOURNAL 20801253	Documentary Storytelling	3.0	2.0	2.0
JOURNAL 20801254	Media Ethics and Democracy	3.0	0.0	0.0
JOURNAL 20801262	Social Media Writing	3.0	3.0	0.0
JOURNAL 20801271	Journalism Practicum 1	2.0	2.0	0.0
JOURNAL 20801272	Journalism Practicum 2	2.0	2.0	0.0
JOURNAL 20801273	Journalism Practicum 3	2.0	2.0	0.0
JOURNAL 20801274	Journalism Practicum 4	2.0	2.0	0.0

## Interdisciplinary Humanities Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
LDRSHP 20810267	Leadership As An Art	3.0	3.0	0.0

## Mathematics and Natural Science (20 credits)

Basic Statistics is required. Select one additional mathematics course at the level of College Algebra or higher. Select one biological science course and one physical science course. Both courses must include a laboratory. Remaining credits to fulfill the requirement can be selected from any mathematics or natural science courses offered within the AS degree.

### Required Statistics Course

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MATH 20804240	Basic Statistics	4.0	3.0	2.0

### Mathematics Courses

Select at least one of the following Mathematics courses.

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MATH 20804210	Math for Elementary Teachers	3.0	3.0	0.0
MATH 20804211	Quantitative Reasoning	3.0	2.0	2.0
MATH 20804212	College Algebra	3.0	2.0	2.0
MATH 20804213	Trigonometry	3.0	2.0	2.0



Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MATH 20804214	Math for Elementary Teachers 2	3.0	3.0	0.0
MATH 20804220	Finite Math	3.0	2.0	2.0
MATH 20804221	Calculus Methods for Business and Social Sciences I	5.0	5.0	0.0
MATH 20804223	Calculus Methods for Business and Social Sciences II	3.0	2.0	2.0
MATH 20804228	Calculus w Algebra & Trigonometry 1	5.0	5.0	0.0
MATH 20804229	Math Analysis	5.0	5.0	0.0
MATH 20804230	Calculus w Algebra & Trigonometry II	5.0	5.0	0.0
MATH 20804231	Calculus and Analytic Geometry 1	5.0	5.0	0.0
MATH 20804232	Calculus and Analytic Geometry 2	5.0	5.0	0.0
MATH 20804233	Calculus 3	5.0	5.0	0.0
MATH 20804241	Introduction to Engineering Statistics	3.0	1.0	4.0
MATH 20804255	Techniques in Ordinary Differential Equations	3.0	1.0	4.0
MATH 20804256	Elementary Matrix and Linear Algebra	3.0	1.0	4.0
MATH 20804265	Introduction to Discrete Mathematics	3.0	2.0	2.0

### Biological Science Courses

Select at least one of the following Biological Science courses.

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
BIOLOGY 20806203	Introductory Zoology	5.0	4.0	2.0
BIOLOGY 20806206	General Anatomy and Physiology	4	3.0	2.0
BIOLOGY 20806207	Anatomy and Physiology 1	4	3.0	2.0
BIOLOGY 20806208	Anatomy and Physiology 2	4	3.0	2.0
BIOLOGY 20806271	Cellular and Molecular Biology	5.0	3.0	4.0
BIOLOGY 20806272	Organismal Biology	5.0	3.0	4.0

### Physical Science Courses

Select at least one of the following Physical Science courses.

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
CHEM 20806201	General, Organic & Biological Chemistry	5.0	4.0	2.0
CHEM 20806209	College Chemistry 1	5.0	3.0	4.0
CHEM 20806212	College Chemistry 2	5.0	3.0	4.0

### Additional Science Courses

Additional courses available to meet 20 credit mathematics and natural science requirement.

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ASTRON 20806253	Astronomy: The Solar System	4.0	3.0	2.0
ASTRON 20806254	Astronomy: Stars & Galaxies	4.0	3.0	2.0
BIOLOGY 10806105	Principles of Animal Biology	4.0	3.0	2.0
BIOLOGY 20806204	Biological Greek and Latin Terminology	3.0	3.0	0.0
BIOLOGY 20806215	Botany	5.0	3.0	4.0
BIOLOGY 20806226	Introduction To Human Biology	5.0	4.0	2.0
BIOLOGY 20806262	Anatomy and Physiology for Exercise Lab	1.0	0-2	2.0
BIOLOGY 20806273	Microbiology-University Medical	5.0	3.0	4.0
BIOLOGY 20806280	Environmental Issues	3.0	3.0	0.0
BIOLOGY 20806281	Ecology/Conservation Biology	3.0	3.0	0.0
BIOLOGY 20806286	Environmental Science	4.0	2.0	4.0
BUSADM 10102104	Business Statistics	3.0	3.0	0.0
CHEM 10806134	General Chemistry	4.0	3.0	2.0
CHEM 20806200	Chemistry for Non-Science Majors	5.0	3.0	4.0
CHEM 20806256	Organic Chemistry 1 Lecture	4.0	4.0	0.0
CHEM 20806257	Organic Chemistry 2 Lecture	4.0	4.0	0.0
CHEM 20806216	Chemistry for Biotechnology	3.0	2.0	2.0
EARTHSCI 20806241	Earth Science	3.0	3.0	0.0
EARTHSCI 20806244	General Geology	4.0	3.0	2.0
EARTHSCI 20806245	Weather And Climate	3.0	3.0	0.0
EARTHSCI 20806246	Survey of Oceanography	3.0	3.0	0.0
EARTHSCI 20806247	Earth Science Lab	1.0	0.0	2.0
EARTHSCI 20806248	Weather and Climate Laboratory	1.0	0.0	2.0



Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
EARTHSCI 20806249	Geologic Evolution of the Earth	4.0	3.0	2.0
EARTHSCI 20806250	Climate and Climate Change	3.0	3.0	0.0
EARTHSCI 20806251	Undergraduate Geology Field Experience	2	0.0	4.0
EARTHSCI 20806252	Natural Hazards	3.0	3.0	0.0
MATH 10804114	College Technical Math 1B	2	2.0	0.0
MATH 10804115	College Technical Math 1	5.0	5.0	0.0
MATH 10804116	College Technical Math 2	4.0	4.0	0.0
MATH 20804200	Principles Of Geometry	3.0	1.0	4.0
PHYSICS 10806139	Survey of Physics	3.0	1.0	4.0
PHYSICS 20806220	Physics of Everyday Life	3.0	3.0	0.0
PHYSICS 20806221	University Physics 1	5.0	3.0	4.0
PHYSICS 20806222	University Physics 2	5.0	3.0	4.0
PHYSICS 20806223	University Physics 1-Calculus-Based	5.0	2.0	6.0
PHYSICS 20806224	University Physics 2-Calculus Based	5.0	2.0	6.0
PHYSICS 20806232	Statics	3.0	2.0	2.0
PHYSICS 20806233	Dynamics	3.0	3.0	0.0
PHYSICS 20806291	Introduction to Renewable Energy	3.0	3.0	0.0
PHYSICS 20806292	Solar Photovoltaic Technology	3.0	3.0	0.0
PHYSICS 20806293	Solar Photovoltaic Installation Lab	1.0	0.0	2.0
MATH 20804201	Intermediate Algebra	4.0	3.0	2.0
MATH 20804202	Intermediate Algebra I	3.0	2.0	2.0
MATH 20804203	Intermediate Algebra 2	3.0	2.0	2.0
MATH 20804215	Computer Science 1	3.0	3.0	0.0
MATH 20804216	Computer Science 2	3.0	3.0	0.0
PHYSICS 20806235	Modern Physics	3.0	3.0	0.0
CHEM 20806266	Organic Chemistry 1 Lab	2.0	0.0	4.0
CHEM 20806267	Organic Chemistry 2 Lab	2.0	0.0	4.0
BIOLOGY 20806276	Principles of Genetics	4.0	3.0	2.0

### Social Science (6 credits)

*Required Psychology Course*

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PSYCH 20809231	Intro Psychology	3.0	3.0	0.0

### *Additional Psychology Course*

Completion of one course from one additional discipline is required. Choose courses from the following disciplines: anthropology, economics, history, political science, sociology, and interdisciplinary social science. Remaining credits to fulfill the requirement can be selected from any Social Science courses offered within the AS degree, including psychology.

Completion of one course from one additional discipline is required. Choose courses from the following disciplines: anthropology, economics, history, political science, sociology, and interdisciplinary social science. Remaining credits to fulfill the requirement can be selected from any Social Science courses offered within the AS degree, including psychology.

### Anthropology Courses

Class Course Number	Class Name	Credits/Lecture	Hours Per Week	
			Lab	Lecture
ANTHRO 20809279	Introduction to the Archaeology of Native North America	3.0	3.0	0.0
ANTHRO 20809280	General Anthropology	3.0	3.0	0.0
ANTHRO 20809281	Archaeology & Prehistoric World	3.0	3.0	0.0
ANTHRO 20809283	Cultural Anthropology & Human Diversity	3.0	3.0	0.0
ANTHRO 20809285	Anthropology of Myth, Magic, and Religion	3.0	3.0	0.0
ANTHRO 20809286	The Anthropology of Globalization & Multiculturalism	3.0	3.0	0.0
ANTHRO 20809287	Anthropology of Islamic Societies and Cultures	3.0	3.0	0.0
ANTHRO 20809288	Human Biology & Physical Anthropology	3.0	3.0	0.0
ANTHRO 20809289	World Regional Geography	3.0	3.0	0.0
ANTHRO 20809292	Agriculture, Food, and Society	3.0	3.0	0.0

### Economics Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ECON 10809195	Economics	3.0	3.0	0.0
ECON 20809211	Macro Economics	3.0	3.0	0.0
ECON 20809212	Micro Economics	3.0	3.0	0.0
ECON 20809214	Intro International Econ	3.0	3.0	0.0





Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ECON 20809228	Environmental Economics	3.0	3.0	0.0

### History Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
HISTORY 20803204	Renaissance, Reformation, and Revolution	3.0	3.0	0.0
HISTORY 20803205	Europe and Modern World	3.0	3.0	0.0
HISTORY 20803211	Am Hist 1607-1865	3.0	3.0	0.0
HISTORY 20803212	Am Hist 1865-Pres.	3.0	3.0	0.0
HISTORY 20803214	Native American History	3.0	3.0	0.0
HISTORY 20803220	History Of West Civilization 1	3.0	3.0	0.0
HISTORY 20803224	History of Sub Saharan Africa	3.0	3.0	0.0
HISTORY 20803225	World In 20th Century	3.0	3.0	0.0
HISTORY 20803229	Vietnam/American-1945-Present	3.0	3.0	0.0
HISTORY 20803230	Public Man, Private Woman: Bronze Age to Glass Ceiling	3.0	3.0	0.0
HISTORY 20803233	Gender and Women's History in Cultural Representations	3.0	3.0	0.0
HISTORY 20803234	Gender and Women's Global History	3.0	3.0	0.0
HISTORY 20803240	Afro-American History	3.0	3.0	0.0
HISTORY 20803241	Introduction to Judaism	3.0	3.0	0.0

### Political Science Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
POLISCI 10809122	Intro to Amer Government	3.0	3.0	0.0
POLISCI 20809218	Law and Society	3.0	3.0	0.0
POLISCI 20809220	American Foreign Policy	3.0	3.0	0.0
POLISCI 20809221	American Ntl Govt	3.0	3.0	0.0
POLISCI 20809222	State and Local Government	3.0	3.0	0.0
POLISCI 20809223	International Relations	3.0	3.0	0.0
POLISCI 20809227	Political Theory	3.0	3.0	0.0
POLISCI 20809242	Public Policy	3.0	3.0	0.0
POLISCI 20809243	Comparative Politics	3.0	3.0	0.0
POLISCI 20809244	Russian Politics	3.0	3.0	0.0
POLISCI 20809245	Latin American Politics	3.0	3.0	0.0
POLISCI 20809246	African Politics	3.0	3.0	0.0
POLISCI 20809247	East Asian Politics	3.0	3.0	0.0
POLISCI 20809248	Politics of India	3.0	3.0	0.0

### Psychology Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PSYCH 10809199	Psychology Of Human Relations	3.0	3.0	0.0
PSYCH 20809201	Human Sexuality	3.0	3.0	0.0
PSYCH 20809210	Psychology of Men	3.0	3.0	0.0
PSYCH 20809225	Social Psychology	3.0	3.0	0.0
PSYCH 20809233	Developmental Psychology	3.0	3.0	0.0
PSYCH 20809234	Psychology of Women	3.0	3.0	0.0
PSYCH 20809237	Abnormal Psych	3.0	3.0	0.0
PSYCH 20809239	Child Human Development	3.0	3.0	0.0
PSYCH 20809249	Educational Psychology	3.0	3.0	0.0

### Sociology Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
SOC 10809172	Introduction to Diversity Studies	3.0	3.0	0.0
SOC 10809197	Contemporary American Society	3.0	3.0	0.0
SOC 20809202	Social Problems	3.0	3.0	0.0
SOC 20809203	Intro Sociology	3.0	3.0	0.0
SOC 20809204	Marriage and the Family	3.0	3.0	0.0
SOC 20809207	Criminology	3.0	3.0	0.0
SOC 20809229	Social Movements	3.0	3.0	0.0
SOC 20809240	Introduction to Latin America	3.0	3.0	0.0
SOC 20809252	Race and Ethnicity in the U.S.	3.0	3.0	0.0



Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
SOC 20809253	Sociology of Gender	3.0	3.0	0.0
SOC 20809255	Introduction to LGBTQ+ Studies	3.0	3.0	0.0
SOC 20809275	Sociology of Religion	3.0	3.0	0.0
SOC 20809277	Couple Relationships	1.0	1.0	0.0
SOC 20809291	Technology and Society	3.0	3.0	0.0

### Interdisciplinary Social Science Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
SOCSCI 20809206	Introduction to Women's Studies	3.0	3.0	0.0
SOCSCI 20809230	Statistics for the Social Sciences	4.0	4.0	0.0
SOCSCI 20809254	Research Methods for the Social Sciences	3.0	3.0	0.0
SOCSCI 20809256	International Perspectives on Gender and Women	3.0	3.0	0.0
SOCSCI 20809257	Gender and Women's Studies-Study Abroad Experience	1.0	1.0	0.0
SOCSCI 20809269	Energy And Society	3.0	3.0	0.0
SOCSCI 20809294	Data Organization, Visualization, and Management	3.0	3.0	0.0

### Electives (18 credits)

Select any courses offered within the Liberal Arts Transfer program or from the list of additional electives below. A maximum of six Honor Project credits may also be applied (20-code courses only).

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ACCTG 10101111	Accounting 1 - Principles	4.0	4.0	0.0
ACCTG 10101113	Accounting 2 - Principles	4.0	4.0	0.0
ACCTG 10101118	Management Accounting	4.0	4.0	0.0
ACCTG 10101125	Cost Management	4.0	4.0	0.0
BIOLOGY 20806219	Biology for Innovators	1.0	0.0	2.0
CRIMJUST 10504900	Introduction to Criminal Justice	3.0	3.0	0.0
MATH 20804252	Introduction to Computer Engineering	3.0	1.0	4.0
ELECT 10605270	AC/DC Circuit Techniques and Principles	3.0	1.0	4.0
MEDTERM 10501101	Medical Terminology	3.0	3.0	0.0
INDMANUF 20623260	Introduction to Engineering	3.0	1.0	4.0
COLLSUCC 20890200	College Success	3.0	3.0	0.0
COLLSUCC 20890202	Career Development	1.0	1.0	0.0

### Ethnic Studies (One course)

Course may also count toward Humanities/Fine Arts, Social Science, or Electives.

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ANTHRO 20809283	Cultural Anthropology & Human Diversity	3.0	3.0	0.0
ANTHRO 20809286	The Anthropology of Globalization & Multiculturalism	3.0	3.0	0.0
ENGLISH 20801207	World Indigenous Literatures	3.0	3.0	0.0
ENGLISH 20801212	Ethnic Literature	3.0	3.0	0.0
ENGLISH 20801213	Native American Literature	3.0	3.0	0.0
ENGLISH 20801214	African American Literature	3.0	3.0	0.0
ENGLISH 20801222	U.S. Latino Literature	3.0	3.0	0.0
HISTORY 20803214	Native American History	3.0	3.0	0.0
HISTORY 20803240	Afro-American History	3.0	3.0	0.0
SOC 10809172	Introduction to Diversity Studies	3.0	3.0	0.0
SOC 20809252	Race and Ethnicity in the U.S.	3.0	3.0	0.0

### Literature (One Course)

Course may also count toward Humanities/Fine Arts or Electives.

See Literature Courses under the Humanities and Fine Arts Requirement above.

### World Languages (One course)

May be met with one year of high school with a grade of "C" or better OR one semester in college. College course may also count toward Humanities/Fine Arts or Electives.

See World Languages Courses under the Humanities and Fine Arts Requirement above.



# Liberal Arts Transfer

Program Number: 208002-S

Associate in Science

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Number of Credits Required

60 credits minimum to complete the program, by satisfying the all requirements as defined.

### English and Speech (9 credits)

Six credits must be in composition - English 1 and one other composition course (English 2 recommended). Three credits must be in public speaking.

#### Composition Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ENGLISH 20801201	English 1	3.0	3.0	0.0
ENGLISH 20801202	English 2	3.0	3.0	0.0
JOURNAL 20801245	Introduction to Journalism	3.0	3.0	0.0
JOURNAL 20801246	Investigative Journalism	3.0	3.0	0.0
JOURNAL 20801251	Introduction to Mass Communication	4.0	4.0	0.0

#### Public Speaking Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
SPEECH 10801198	Speech	3.0	3.0	0.0
JOURNAL 20801269	On-Air Performance	3.0	2.0	2.0
SPEECH 20810202	Theory & Practice of Argumentation and Debate	3.0	3.0	0.0
SPEECH 20810211	Oral Interpretation	3.0	3.0	0.0

### Health/Wellness/Physical Education (1 credit)

Completion of one of the listed courses is required.

#### Phy Ed Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PHYED 20807210	Conditioning/Weight Training	1.0	0.0	2.0
PHYED 20807213	Co-Ed Flag Football	1.0	0.0	2.0
PHYED 20807214	Pickleball	1.0	0.0	2.0
PHYED 20807219	Introduction to Kinesiology	2.0	2.0	0.0
PHYED 20807223	Beginning Volleyball	1.0	0.0	2.0
PHYED 20807229	Swimming for Fitness	1.0	0.0	2.0
PHYED 20807230	Beginning Swimming	1.0	0.0	2.0
PHYED 20807245	Social Dance	1.0	0.0	2.0
PHYED 20807247	Jazz 1	1.0	0.0	2.0
PHYED 20807248	Ballet	1.0	0.0	2.0
PHYED 20807250	Badminton	1.0	0.0	2.0
PHYED 20807254	Beginning Yoga	1.0	0.0	2.0
PHYED 20807255	Prev/Care Athletic Injuries	2.0	1.0	2.0
PHYED 20807258	First Aid and CPR	2.0	2.0	0.0
PHYED 20807264	Intermediate Yoga	1.0	0.0	2.0
PHYED 20807266	Wellness Today	2.0	1.0	2.0
PHYED 20807267	Health & Fitness for Life	1.0	0.0	2.0
PHYED 20807268	Blueprint for Healthy Living	2.0	2.0	0.0
PHYED 20807269	Stress Management Foundations	1.0	0.0	2.0
PHYED 20807271	Bicycle Conditioning	1.0	0.0	2.0
PHYED 20807289	Aerobics/Weight Training	1.0	0.0	2.0



## Humanities/Fine Arts (6 credits)

Select on literature course. Completion of one course from one additional discipline is required. Choose from the following disciplines: art, drama, film, music, world languages, writing and communication, and interdisciplinary humanities. Remaining credits to fulfill the requirement can be selected from any Humanities and Fine Arts courses offered within the AS degree, including literature.

### Art Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ART 20815201	Basic Design	3.0	0.0	6.0
ART 20815202	Color & Design	3.0	0.0	6.0
ART 20815203	3-Dimensional Design	3.0	0.0	6.0
ART 20815205	Drawing Fundamentals	3.0	0.0	6.0
ART 20815208	Contemporary Art Survey	3.0	0.0	6.0
ART 20815214	Modern Art Survey	3.0	0.0	6.0
ART 20815215	Drawing 2	3.0	0.0	6.0
ART 20815219	Life Drawing 1	3.0	0.0	6.0
ART 20815220	Life Drawing 2	3.0	0.0	6.0
ART 20815221	Life Drawing 3	3.0	0.0	6.0
ART 20815232	Digital Design Fundamentals	3.0	0.0	6.0
ART 20815235	Creative Photography	3.0	0.0	6.0
ART 20815236	Advanced Creative Photography	3.0	0.0	6.0
ART 20815239	Digital Photography	3.0	0.0	6.0
ART 20815241	Painting 1	3.0	0.0	6.0
ART 20815242	Painting 2	3.0	0.0	6.0
ART 20815253	Jewelry 1	3.0	0.0	6.0
ART 20815254	Jewelry 2	3.0	0.0	6.0
ART 20815290	Ceramics 1	3.0	0.0	6.0
ART 20815291	Ceramics 2	3.0	0.0	6.0
ART 20815294	Ceramics Sculpture 1	3.0	0.0	6.0
ART 20815295	Ceramics Sculpture 2	3.0	0.0	6.0
ART 20815296	Ceramics Firing Techniques/Alternative Methods	3.0	0.0	6.0
ART 20815200	Art History: Ancient to Medieval	3.0	3.0	0.0
ART 20815210	Art History: Renaissance to Modern	3.0	3.0	0.0
ART 20815211	Art History: Women In Art	3.0	3.0	0.0

### Writing and Communication Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
COMM 10801196	Oral/Interpersonal Communication	3.0	3.0	0.0
JOURNAL 20801251	Introduction to Mass Communication	4.0	4.0	0.0
ENGLISH 10801195	Written Communication	3.0	3.0	0.0
ENGLISH 10801197	Technical Reporting	3.0	3.0	0.0
ENGLISH 20801240	Creative Writing	3.0	3.0	0.0
ENGLISH 20801241	Creative Writing/Fiction	3.0	3.0	0.0
ENGLISH 20801242	Creative Writing/Drama	3.0	3.0	0.0
ENGLISH 20801243	Creative Writing/Poetry	3.0	3.0	0.0
ENGLISH 20801244	Creative Writing/Non Fiction	3.0	3.0	0.0
JOURNAL 20801245	Introduction to Journalism	3.0	3.0	0.0
JOURNAL 20801246	Investigative Journalism	3.0	3.0	0.0
ENGLISH 20801249	Film Writing	3.0	3.0	0.0
JOURNAL 20801252	World Issues Journalism	3.0	3.0	0.0
JOURNAL 20801253	Documentary Storytelling	3.0	2.0	2.0
JOURNAL 20801254	Media Ethics and Democracy	3.0	0.0	0.0
JOURNAL 20801262	Social Media Writing	3.0	3.0	0.0
JOURNAL 20801271	Journalism Practicum 1	1.0	2.0	0.0
JOURNAL 20801272	Journalism Practicum 2	1.0	2.0	0.0
JOURNAL 20801273	Journalism Practicum 3	1.0	2.0	0.0
JOURNAL 20801274	Journalism Practicum 4	1.0	2.0	0.0
COMM 20810205	Small Group & Interpersonal Communications	3.0	3.0	0.0

### Drama Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
DRAMA 20810235	Stagecraft 1	3.0	3.0	0.0
DRAMA 20810236	Stagecraft 2	3.0	3.0	0.0
DRAMA 20810260	Drama Practicum	1.0	2.0	0.0



Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
DRAMA 20810262	Acting 1	3.0	3.0	0.0
DRAMA 20810263	Acting 2	3.0	3.0	0.0
DRAMA 20810270	Movement Theory & Training for Actors	1.0	0.0	2.0
DRAMA 20810230	Intro To Theatre	3.0	3.0	0.0
DRAMA 20810238	Cultural Diversity in Contemporary American Theater	3.0	3.0	0.0

### Film Courses

Class Course Number	Class Name	Credits/Units	Hour Per Week	
			Lecture	Lab
FILM 20810250	Introduction to Film	3.0	2.0	2.0
FILM 20810254	History Of World Cinema	3.0	2.0	2.0

### Literature Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ENGLISH 20801204	Introduction to Literature	3.0	3.0	0.0
ENGLISH 20801207	World Indigenous Literatures	3.0	3.0	0.0
ENGLISH 20801211	Gay & Lesbian Literature	3.0	3.0	0.0
ENGLISH 20801212	Ethnic Literature	3.0	3.0	0.0
ENGLISH 20801213	Native American Literature	3.0	3.0	0.0
ENGLISH 20801214	African American Literature	3.0	3.0	0.0
ENGLISH 20801215	British Literature 1	3.0	3.0	0.0
ENGLISH 20801216	British Literature 2	3.0	3.0	0.0
ENGLISH 20801217	American Literature 1	3.0	3.0	0.0
ENGLISH 20801218	American Literature 2	3.0	3.0	0.0
ENGLISH 20801219	Western World Lit: Classical Antiquity to the Middle Ages	3.0	3.0	0.0
ENGLISH 20801220	Western World Lit: Early Renaissance to Present	3.0	3.0	0.0
ENGLISH 20801221	Literature and Popular Culture	3.0	3.0	0.0
ENGLISH 20801222	U.S. Latino Literature	3.0	3.0	0.0
ENGLISH 20801223	Peace, Conflict, and Literature: The Arts of the Contact Zone	3.0	3.0	0.0
ENGLISH 20801226	Introduction to African Literature	3.0	3.0	0.0
ENGLISH 20801227	Children's Literature	3.0	3.0	0.0
ENGLISH 20801229	Contemporary Lit	3.0	3.0	0.0
ENGLISH 20801230	Classical Mythology	3.0	3.0	0.0
ENGLISH 20801231	19th c. Russian Literature in Translation	3.0	3.0	0.0
ENGLISH 20801232	20th c. Russian Literature in Translation	3.0	3.0	0.0
ENGLISH 20801250	Women In Literature	3.0	3.0	0.0
LITTRANS 20802250	Literature in Translation	3.0	3.0	0.0

### Music Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MUSIC 20805205	Class Voice 1	1.0	1.0	0.0
MUSIC 20805206	Class Voice 2	1.0	1.0	0.0
MUSIC 20805209	Swing Choir	2.0	2.0	0.0
MUSIC 20805211	Orchestra 1	1.0	0.0	2.0
MUSIC 20805212	Orchestra 2	1.0	0.0	2.0
MUSIC 20805216	Concert Band 1	1.0	0.0	2.0
MUSIC 20805217	Concert Band 2	1.0	0.0	2.0
MUSIC 20805219	Jazz Ensemble 1	1.0	0.0	2.0
MUSIC 20805220	Jazz Ensemble 2	1.0	0.0	2.0
MUSIC 20805221	Class Piano 1	1.0	0.0	2.0
MUSIC 20805222	Class Piano 2	1.0	0.0	2.0
MUSIC 20805270	Madison College Chorale	1.0	0.0	2.0
MUSIC 20805271	Madison College Chorale 2	1.0	0.0	2.0
MUSIC 20805272	Madrigal Choir	1.0	0.0	2.0
MUSIC 20805279	World Drumming Ensemble 1	1.0	0.0	2.0
MUSIC 20805280	World Drumming Ensemble 2	1.0	0.0	2.0
MUSIC 20805281	World Drumming Ensemble 3	1.0	0.0	2.0
MUSIC 20805282	World Drumming Ensemble 4	1.0	0.0	2.0
MUSIC 20805207	World Music	3.0	3.0	0.0
MUSIC 20805227	Music Appreciation	3.0	3.0	0.0
MUSIC 20805260	Music Theory Fundamentals	3.0	3.0	0.0
MUSIC 20805261	Music Theory 1	3.0	3.0	0.0



Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MUSIC 20805262	Music Theory 2	3.0	3.0	0.0
MUSIC 20805263	Jazz History	3.0	3.0	0.0
MUSIC 20805267	Aural Skills 1	1.0	0.0	2.0
MUSIC 20805268	Aural Skills 2	1.0	0.0	2.0
MUSIC 20805278	Hist Pop/Rock Music	3.0	3.0	0.0

### Philosophy Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PHILOS 10809166	Intro to Ethics: Theory & App	3.0	3.0	0.0
PHILOS 20809258	Philosophy Through Film	3.0	3.0	0.0
PHILOS 20809259	Classics in Philosophy	3.0	3.0	0.0
PHILOS 20809260	Intro Philosophy	3.0	3.0	0.0
PHILOS 20809261	Elementary Logic	4.0	4.0	0.0
PHILOS 20809262	Contemporary Moral Issues	3.0	3.0	0.0
PHILOS 20809263	East/West World View	3.0	3.0	0.0
PHILOS 20809264	Introduction to Logic and Critical Thinking	3.0	3.0	0.0
PHILOS 20809266	Ethics In Medicine	3.0	3.0	0.0
PHILOS 20809268	Intro to Social and Political Philosophy	3.0	3.0	0.0
PHILOS 20809276	Business Ethics	3.0	3.0	0.0

### World Languages Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
SPANISH 20802211	Spanish 1	4.0	3.0	3-2
SPANISH 20802212	Spanish 2	4.0	3.0	3-2
SPANISH 20802213	Spanish 3	4.0	3.0	3-2
SPANISH 20802214	Spanish 4	4.0	3.0	3-2
SPANISH 20802215	Spanish 5	3.0	3.0	3-0
FRENCH 20802221	French 1	4.0	3-2	
FRENCH 20802222	French 2	4.0	3-2	
FRENCH 20802223	French 3	4.0	3-2	
FRENCH 20802224	French 4	4.0	3-2	
CHINESE 20802230	Introduction to Mandarin Chinese	3.0	2-2	
CHINESE 20802231	Introduction to Mandarin Chinese 2	3.0	2-2	
ARABIC 20802240	Intro to Modern Arabic 1	3.0	2-2	
ARABIC 20802241	Intro to Modern Arabic 2	3.0	2-2	

### Interdisciplinary Humanities Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
LDRSHP 20810267	Leadership As An Art	3.0	3.0	0.0

### Mathematics and Natural Science (20 credits)

Select one mathematics course at the level of College Algebra or higher. Select one biological science course and one physical science course. Both courses must include a laboratory.

Remaining credits to fulfill the requirement can be selected from any mathematics or natural science courses offered within the AS degree.

### Mathematics Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MATH 20804210	Math for Elementary Teachers	3.0	3.0	0.0
MATH 20804211	Quantitative Reasoning	3.0	2.0	2.0
MATH 20804212	College Algebra	3.0	2.0	2.0
MATH 20804213	Trigonometry	3.0	2.0	2.0
MATH 20804214	Math for Elementary Teachers 2	3.0	3.0	0.0
MATH 20804220	Finite Math	3.0	2.0	2.0
MATH 20804221	Calculus Methods for Business and Social Sciences I	5.0	5.0	0.0
MATH 20804223	Calculus Methods for Business and Social Sciences II	3.0	2.0	2.0
MATH 20804228	Calculus w Algebra & Trigonometry 1	5.0	5.0	0.0
MATH 20804229	Math Analysis	5.0	5.0	0.0
MATH 20804230	Calculus w Algebra & Trigonometry II	5.0	5.0	0.0
MATH 20804231	Calculus and Analytic Geometry 1	5.0	5.0	0.0



Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MATH 20804232	Calculus and Analytic Geometry 2	5.0	5.0	0.0
MATH 20804233	Calculus 3	5.0	5.0	0.0
MATH 20804240	Basic Statistics	4.0	3.0	2.0
MATH 20804241	Introduction to Engineering Statistics	3.0	1.0	4.0
MATH 20804255	Techniques in Ordinary Differential Equations	3.0	1.0	4.0
MATH 20804256	Elementary Matrix and Linear Algebra	3.0	1.0	4.0
MATH 20804265	Introduction to Discrete Mathematics	3.0	2.0	2.0

### Biological Science Lab Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
BIOLOGY 10806105	Principles of Animal Biology	4.0	3.0	2.0
BIOLOGY 20806203	Introductory Zoology	5.0	4.0	2.0
BIOLOGY 20806206	General Anatomy and Physiology	4.0	3.0	2.0
BIOLOGY 20806207	Anatomy and Physiology 1	4.0	3.0	2.0
BIOLOGY 20806208	Anatomy and Physiology 2	4.0	3.0	2.0
BIOLOGY 20806215	Botany	5.0	3.0	4.0
BIOLOGY 20806226	Introduction To Human Biology	5.0	4.0	2.0
BIOLOGY 20806271	Cellular and Molecular Biology	5.0	3.0	4.0
BIOLOGY 20806272	Organismal Biology	5.0	3.0	4.0
BIOLOGY 20806273	Microbiology-University Medical	5.0	3.0	4.0
BIOLOGY 20806276	Principles of Genetics	4.0	3.0	2.0
BIOLOGY 20806286	Environmental Science	4.0	2.0	4.0

### Biology Courses - without Lab

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
BIOLOGY 20806204	Biological Greek and Latin Terminology	3.0	3.0	0.0
BIOLOGY 20806280	Environmental Issues	3.0	3.0	0.0
BIOLOGY 20806281	Ecology/Conservation Biology	3.0	3.0	0.0

### Physical Science Lab Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
CHEM 10806134	General Chemistry	4.0	3.0	2.0
PHYSICS 10806139	Survey of Physics	3.0	1.0	4.0
CHEM 20806200	Chemistry for Non-Science Majors	5.0	3.0	4.0
CHEM 20806201	General, Organic & Biological Chemistry	5.0	4.0	2.0
CHEM 20806209	College Chemistry 1	5.0	3.0	4.0
CHEM 20806212	College Chemistry 2	5.0	3.0	4.0
CHEM 20806216	Chemistry for Biotechnology	3.0	2.0	2.0
PHYSICS 20806221	University Physics 1	5.0	3.0	4.0
PHYSICS 20806222	University Physics 2	5.0	3.0	4.0
PHYSICS 20806223	University Physics 1-Calculus-Based	5.0	2.0	6.0
PHYSICS 20806224	University Physics 2-Calculus Based	5.0	2.0	6.0
EARTHSCI 20806244	General Geology	4.0	3.0	2.0
EARTHSCI 20806247	Earth Science Lab	1.0	0.0	2.0
EARTHSCI 20806248	Weather and Climate Laboratory	1.0	0.0	2.0
EARTHSCI 20806249	Geologic Evolution of the Earth	4.0	3.0	2.0
ASTRON 20806253	Astronomy: The Solar System	4.0	3.0	2.0
ASTRON 20806254	Astronomy: Stars & Galaxies	4.0	3.0	2.0
EARTHSCI 20806251	Undergraduate Geology Field Experience	2.0	0.0	4.0
CHEM 20806266	Organic Chemistry 1 Lab	2.0	0.0	4.0
CHEM 20806267	Organic Chemistry 2 Lab	2.0	0.0	4.0

### Physical Science Courses - without Lab

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PHYSICS 20806220	Physics of Everyday Life	3.0	3.0	0.0
PHYSICS 20806232	Statics	3.0	2.0	2.0
PHYSICS 20806233	Dynamics	3.0	3.0	0.0
PHYSICS 20806235	Modern Physics	3.0	3.0	0.0
EARTHSCI 20806241	Earth Science	3.0	3.0	0.0



Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
EARTHSCI 20806245	Weather And Climate	3.0	3.0	0.0
EARTHSCI 20806246	Survey of Oceanography	3.0	3.0	0.0
EARTHSCI 20806250	Climate and Climate Change	3.0	3.0	0.0
EARTHSCI 20806252	Natural Hazards	3.0	3.0	0.0
PHYSICS 20806291	Introduction to Renewable Energy	3.0	3.0	0.0
CHEM 20806256	Organic Chemistry 1 Lecture	4.0	4.0	0.0
CHEM 20806257	Organic Chemistry 2 Lecture	4.0	4.0	0.0
PHYSICS 20806292	Solar Photovoltaic Technology	3.0	3.0	0.0

### Additional Courses

Additional Courses available to meet 20 credit mathematics and natural science requirement.

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
BUSADM 10102104	Business Statistics	3.0	3.0	0.0
MATH 10804114	College Technical Math 1B	2.0	2.0	0.0
MATH 10804115	College Technical Math 1	5.0	5.0	0.0
MATH 10804116	College Technical Math 2	4.0	4.0	0.0
MATH 20804200	Principles Of Geometry	3.0	1.0	4.0
MATH 20804201	Intermediate Algebra	4.0	3.0	2.0
MATH 20804202	Intermediate Algebra I	3.0	2.0	2.0
MATH 20804203	Intermediate Algebra 2	3.0	2.0	2.0
MATH 20804215	Computer Science 1	3.0	3.0	0.0
MATH 20804216	Computer Science 2	3.0	3.0	0.0
BIOLOGY 20806262	Anatomy and Physiology for Exercise Lab	1.0	0.0	2.0
PHYSICS 20806293	Solar Photovoltaic Installation Lab	1.0	0.0	2.0

### Social Science (6 credits)

Completion of courses from at least two disciplines is required. Choose courses from the following disciplines: anthropology, economics, history, political science, psychology, sociology, and interdisciplinary social science.

#### Anthropology Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ANTHRO 20809279	Introduction to the Archaeology of Native North America	3.0	3.0	0.0
ANTHRO 20809280	General Anthropology	3.0	3.0	0.0
ANTHRO 20809281	Archaeology & Prehistoric World	3.0	3.0	0.0
ANTHRO 20809283	Cultural Anthropology & Human Diversity	3.0	3.0	0.0
ANTHRO 20809285	Anthropology of Myth, Magic, and Religion	3.0	3.0	0.0
ANTHRO 20809286	The Anthropology of Globalization & Multiculturalism	3.0	3.0	0.0
ANTHRO 20809287	Anthropology of Islamic Societies and Cultures	3.0	3.0	0.0
ANTHRO 20809288	Human Biology & Physical Anthropology	3.0	3.0	0.0
ANTHRO 20809289	World Regional Geography	3.0	3.0	0.0
ANTHRO 20809292	Agriculture, Food, and Society	3.0	3.0	0.0

#### Economics Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ECON 10809195	Economics	3.0	3.0	0.0
ECON 20809211	Macro Economics	3.0	3.0	0.0
ECON 20809212	Micro Economics	3.0	3.0	0.0
ECON 20809214	Intro International Econ	3.0	3.0	0.0
ECON 20809228	Environmental Economics	3.0	3.0	0.0

#### History Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
HISTORY 20803204	Renaissance, Reformation, and Revolution	3.0	3.0	0.0
HISTORY 20803205	Europe and Modern World	3.0	3.0	0.0
HISTORY 20803211	Am Hist 1607-1865	3.0	3.0	0.0
HISTORY 20803212	Am Hist 1865-Pres.	3.0	3.0	0.0
HISTORY 20803214	Native American History	3.0	3.0	0.0
HISTORY 20803220	History Of West Civilization 1	3.0	3.0	0.0





Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
HISTORY 20803224	History of Sub Saharan Africa	3.0	3.0	0.0
HISTORY 20803225	World In 20th Century	3.0	3.0	0.0
HISTORY 20803229	Vietnam/American-1945-Present	3.0	3.0	0.0
HISTORY 20803230	Public Man, Private Woman: Bronze Age to Glass Ceiling	3.0	3.0	0.0
HISTORY 20803233	Gender and Women's History in Cultural Representations	3.0	3.0	0.0
HISTORY 20803234	Gender and Women's Global History	3.0	3.0	0.0
HISTORY 20803240	Afro-American History	3.0	3.0	0.0
HISTORY 20803241	Introduction to Judaism	3.0	3.0	0.0

### Political Science Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
POLISCI 10809122	Intro to Amer Government	3.0	3.0	0.0
POLISCI 20809218	Law and Society	3.0	3.0	0.0
POLISCI 20809220	American Foreign Policy	3.0	3.0	0.0
POLISCI 20809221	American Ntl Govt	3.0	3.0	0.0
POLISCI 20809222	State and Local Government	3.0	3.0	0.0
POLISCI 20809223	International Relations	3.0	3.0	0.0
POLISCI 20809227	Political Theory	3.0	3.0	0.0
POLISCI 20809242	Public Policy	3.0	3.0	0.0
POLISCI 20809243	Comparative Politics	3.0	3.0	0.0
POLISCI 20809244	Russian Politics	3.0	3.0	0.0
POLISCI 20809245	Latin American Politics	3.0	3.0	0.0
POLISCI 20809246	African Politics	3.0	3.0	0.0
POLISCI 20809247	East Asian Politics	3.0	3.0	0.0
POLISCI 20809248	Politics of India	3.0	3.0	0.0

### Psychology Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PSYCH 10809199	Psychology Of Human Relations	3.0	3.0	0.0
PSYCH 20809201	Human Sexuality	3.0	3.0	0.0
PSYCH 20809210	Psychology of Men	3.0	3.0	0.0
PSYCH 20809225	Social Psychology	3.0	3.0	0.0
PSYCH 20809231	Intro Psychology	3.0	3.0	0.0
PSYCH 20809233	Developmental Psychology	3.0	3.0	0.0
PSYCH 20809234	Psychology of Women	3.0	3.0	0.0
PSYCH 20809237	Abnormal Psych	3.0	3.0	0.0
PSYCH 20809239	Child Human Development	3.0	3.0	0.0
PSYCH 20809249	Educational Psychology	3.0	3.0	0.0

### Sociology Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
SOC 10809172	Introduction to Diversity Studies	3.0	3.0	0.0
SOC 10809197	Contemporary American Society	3.0	3.0	0.0
SOC 20809202	Social Problems	3.0	3.0	0.0
SOC 20809203	Intro Sociology	3.0	3.0	0.0
SOC 20809204	Marriage and the Family	3.0	3.0	0.0
SOC 20809207	Criminology	3.0	3.0	0.0
SOC 20809229	Social Movements	3.0	3.0	0.0
SOC 20809240	Introduction to Latin America	3.0	3.0	0.0
SOC 20809252	Race and Ethnicity in the U.S.	3.0	3.0	0.0
SOC 20809253	Sociology of Gender	3.0	3.0	0.0
SOC 20809255	Introduction to LGBTQ+ Studies	3.0	3.0	0.0
SOC 20809275	Sociology of Religion	3.0	3.0	0.0
SOC 20809277	Couple Relationships	1.0	1.0	0.0
SOC 20809291	Technology and Society	3.0	3.0	0.0



## Interdisciplinary Social Science Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
SOCSCI 20809206	Introduction to Women's Studies	3.0	3.0	0.0
SOCSCI 20809230	Statistics for the Social Sciences	4.0	4.0	0.0
SOCSCI 20809254	Research Methods for the Social Sciences	3.0	3.0	0.0
SOCSCI 20809256	International Perspectives on Gender and Women	3.0	3.0	0.0
SOCSCI 20809257	Gender and Women's Studies-Study Abroad Experience	1.0	1.0	0.0
SOCSCI 20809269	Energy And Society	3.0	3.0	0.0
SOCSCI 20809294	Data Organization, Visualization, and Management	3.0	3.0	0.0

### Electives (18 credits)

Select any courses offered within the Liberal Arts Transfer program or from the list of additional electives below. A maximum of six Honors Project credits may also be applied (20-code courses only).

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ACCTG 10101111	Accounting 1 - Principles	4.0	4.0	0.0
ACCTG 10101113	Accounting 2 - Principles	4.0	4.0	0.0
ACCTG 10101118	Management Accounting	4.0	4.0	0.0
ACCTG 10101125	Cost Management	4.0	4.0	0.0
BIOLOGY 20806219	Biology for Innovators	1.0	0.0	2.0
CRIMJUST 10504900	Introduction to Criminal Justice	3.0	3.0	0.0
MATH 20804252	Introduction to Computer Engineering	3.0	1.0	4.0
ELECT 10605270	AC/DC Circuit Techniques and Principles	3.0	1.0	4.0
INDMANUF 20623260	Introduction to Engineering	3.0	1.0	4.0
MEDTERM 10501101	Medical Terminology	3.0	3.0	0.0
COLLSUCC 20890200	College Success	3.0	3.0	0.0
COLLSUCC 20890202	Career Development	1.0	1.0	0.0

### Ethnic Studies (One course)

Course may also count toward Humanities/Fine Arts, Social Science, or Electives.

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ENGLISH 20801207	World Indigenous Literatures	3.0	3.0	0.0
ENGLISH 20801212	Ethnic Literature	3.0	3.0	0.0
ENGLISH 20801213	Native American Literature	3.0	3.0	0.0
ENGLISH 20801214	African American Literature	3.0	3.0	0.0
ENGLISH 20801222	U.S. Latino Literature	3.0	3.0	0.0
HISTORY 20803214	Native American History - Liberal Arts Transfer	3.0	3.0	0.0
HISTORY 20803240	Afro-American History	3.0	3.0	0.0
SOC 20809252	Race and Ethnicity in the U.S.	3.0	3.0	0.0
ANTHRO 20809283	Cultural Anthropology & Human Diversity	3.0	3.0	0.0
ANTHRO 20809286	The Anthropology of Globalization & Multiculturalism	3.0	3.0	0.0
SOC 10809172	Introduction to Diversity Studies	3.0	3.0	0.0

### Literature (One Course)

Course may also count toward Humanities/Fine Arts or Electives.

See Literature Courses under the Humanities and Fine Arts Requirement above.

### World Languages (One course)

May be met with one year of high school with a grade of "C" or better OR one semester in college. College course may also count toward Humanities/Fine Arts or Electives.

See World Languages Courses under the Humanities and Fine Arts Requirement above.



# Machine Tool Operations

Program Number: 314201

*Embedded Technical Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
INDMANUF 10623200	Interpreting Engineering Drawings	2.0	0.0	4.0
MACHT 32420322	Machine Tool 1	4.0	2.0	6.0
MACHT 32420323	Machine Tool 2	4.0	2.0	6.0
MACHT 32420346	Intro to CNC - G-code Programming	2.0	2.0	2.0
MACHT 32420351	Elements of Basic Metrology	2.0	4.0	0.0
COMM 31801356	Communications 1	1.0	2.0	0.0
MATH 31804381	Machine Tool Math 1	2.0	4.0	0.0

### Second Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MATH 31804382	Machine Tool Math 2	1.0	2.0	0.0
MACHT 32420304	Intermediate Metrology Applications	1.0	0.0	2.0
MACHT 32420324	Machine Tool 3	4.0	2.0	6.0
MACHT 32420325	Machine Tool 4	4.0	2.0	6.0
MACHT 32420337	Manufacturing w/Solid Modeling-2D	2.0	4.0	0.0
MACHT 32420348	Applied CNC-Conversational and Setup	2.0	2.0	2.0
MACHT 32420388	Tool and Fixture Design	1.0	2.0	0.0
MACHT 32420390	Fundamentals of Metallurgy	2.0	4.0	0.0



# Machine Tooling Technics

Program Number: 324205

A Two Year Technical Diploma

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
INDMANUF 10623200	Interpreting Engineering Drawings	2.0	0.0	4.0
MACHT 32420322	Machine Tool 1	4.0	2.0	6.0
MACHT 32420323	Machine Tool 2	4.0	2.0	6.0
MACHT 32420346	Intro to CNC - G-code Programming	2.0	2.0	2.0
MACHT 32420351	Elements of Basic Metrology	2.0	4.0	0.0
COMM 31801356	Communications 1	1.0	2.0	0.0
MATH 31804381	Machine Tool Math 1	2.0	4.0	0.0

### Second Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MACHT 32420304	Intermediate Metrology Applications	1.0	0.0	2.0
MACHT 32420324	Machine Tool 3	4.0	2.0	6.0
MACHT 32420325	Machine Tool 4	4.0	2.0	6.0
MACHT 32420337	Manufacturing w/Solid Modeling-2D	2.0	4.0	0.0
MACHT 32420348	Applied CNC-Conversational and Setup	2.0	2.0	2.0
MACHT 32420388	Tool and Fixture Design	1.0	2.0	0.0
MACHT 32420390	Fundamentals of Metallurgy	2.0	4.0	0.0
MATH 31804382	Machine Tool Math 2	1.0	2.0	0.0

### Third Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MACHT 32420326	Machine Tool 5	4.0	2.0	6.0
MACHT 32420327	Machine Tool 6	5.0	2.0	8.0
MACHT 32420336	Manufacturing w/Solid Modeling 3D	2.0	4.0	0.0
MACHT 32420389	Applied CNC - Intermediate Operations	2.0	1.0	3.0
MACHT 32420394	Tool Making Theory 1	2.0	4.0	0.0
PHYSICS 31806363	Science 1	2.0	2.0	2.0

### Fourth Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
INDMANUF 10623300	Fluid Power 1 for Industry	1.0	0.0	2.0
INDMANUF 10623310	Mechanisms for Industry	1.0	0.0	2.0
MACHT 32420328	Machine Tool 7	4.0	2.0	0.0
MACHT 32420329	Machine Tool 8	5.0	2.0	0.0
MACHT 32420370	Manufacturing w/Solid Modeling-Advanced	1.0	1.0	1.0
MACHT 32420391	Applied CNC - Advanced Operations	1.0	0.0	2.0
MACHT 32420393	Job Orientation - Machine Tooling Technics Program	1.0	2.0	0.0
MACHT 32420395	Tool Making Theory 2	2.0	4.0	0.0
WELD 32442313	Related Welding	1.0	0.0	2.0



# Machinist Apprenticeship

Program Number: 504202

Apprenticeship Completion

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MACHT 50420512	Machinist 1	2.0	3.0	1.0

*Alternate First Semester Courses to Satisfy Machinist 1 (complete all)*

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MACHT 50420711	Mathematics for the Machine Trades	1	1.61	0.38
MACHT 50420715	Mechanical Hardware & Hand Tools for Machine Trades Apprentices	1	1.61	0.38

### Second Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MACHT 50420513	Machinist 2	2.0	3.0	1.0

*Alternate Second Semester Courses to Satisfy Machinist 2 (complete all)*

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MACHT 50420713	Precision Measurement for Machine Tool Trade Apprentices	1	1.61	0.38
MACHT 50420714	Engineering Drawings for Machine Tool Trades Apprentices	1	1.61	0.38

### Third Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MACHT 50420514	Machinist 3	2.0	3.0	1.0

*Alternate Third Semester Courses to Satisfy Machinist 3 (complete all)*

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MACHT 50420710	Safety for Machine Tool Trade Apprentices	0.0	0.33	0.16
MACHT 50420720	Cut-Off Machines for Machine Trades Apprentices	0.0	0.33	0.16
MACHT 50420721	Metallurgy & Materials for Machine Trades	1.0	1.61	0.38
MACHT 50420732	Machine Tool Apprenticeship Greening Competencies - SAGE Project	0.0	0.72	0.27

### Fourth Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MACHT 50420515	Machinist 4	2.0	3.0	1.0

*Alternate Fourth Semester Courses to Satisfy Machinist 4 (complete all)*

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MACHT 50420716	Turning Machines for Machine Trades Apprentices	0.0	0.72	0.27
MACHT 50420717	Milling Machines for Machine Trades Apprentices	0.0	0.5	0.27
MACHT 50420718	Drilling Machines for Machine Trades Apprentices	0.0	0.72	0.27
MACHT 50420719	Grinding Machines for Machine Trades Apprentices	0.0	0.72	0.27

### Fifth Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MACHT 50420516	Machinist 5	2.0	3.0	1.0



*Alternate Fifth Semester Courses to Satisfy Machinist 5 (complete all)*

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MACHT 50420725	Basic CAD/CAM for Machine Trades Apprentices	1.0	1.61	0.38
MACHT 50420726	Jig and Fixture Design for Machine Trades Apprentices	0.0	0.72	0.27
MACHT 50420727	Geometric Design and Tolerancing for Machine Trades	0.0	0.72	0.27

**Sixth Semester**

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MACHT 50420517	Machinist 6	2.0	3.0	1.0

*Alternate Sixth Semester Courses to Satisfy Machinist 6 (complete all)*

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MACHT 50420724	CNC Programming and Planning for Machine Trades Apprentices	1.0	1.61	0.38
MACHT 50420733	CNC Operations for Machine Tool Trades Apprentices	1.0	1.61	0.38



# Maintenance Mechanic/Millwright Apprenticeship

Program Number: 504231

*Apprenticeship Completion*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MILLWRGT 50423561	Prnt Rdg/Math/Tools & Methods	2.0	3.0	1.0

### Second Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MILLWRGT 50423562	Prnt Rdg/Math/Mech Pwr Trans 1	2.0	3.0	1.0

### Third Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MILLWRGT 50423563	Prnt Rdg/Math/Mech Pwr Trans 2	2.0	3.0	1.0

### Fourth Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MILLWRGT 50423564	Print Reading/Math/Fluid Power	2.0	3.0	1.0

### Fifth Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MILLWRGT 50423565	Prnt Rdg/Math/Pipefit/Mech	2.0	3.0	1.0

### Sixth Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MILLWRGT 50423566	Print Reading/Math/Metalwork	2.0	3.0	1.0

### Seventh Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MILLWRGT 50423567	Print Reading/Math/Electrical	2.0	3.0	1.0

### Eighth Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MILLWRGT 50423568	Prnt Read/Math/Mach Repair	2.0	3.0	1.0



# Management Trainee

Program Number: 311027

*Embedded Technical Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ACCTG 10101111	Accounting 1 - Principles	4.0	4.0	0.0
BUSADM 10102134	Business Organization, Management, and Ethics	3.0	3.0	0.0
HRMGT 10116145	Introduction to Human Resources	3.0	3.0	0.0
ENGLISH 10801195	Written Communication	3.0	3.0	0.0
MATH 10804144	Math of Finance	3.0	3.0	0.0

### Second Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ACCTG 10101118	Management Accounting	4.0	4.0	0.0
BUSADM 10102135	Project Management - Fundamentals	3.0	3.0	0.0
COMPSOFT 10103133	Excel Beginning	1.0	0.27	1.5
COMPSOFT 10103139	Excel Intermediate	1.0	0.27	1.5
COMM 10801196	Oral/Interpersonal Communication	3.0	3.0	0.0
PSYCH 10809199	Psychology Of Human Relations	3.0	3.0	0.0

### Third Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
BUSADM 10102114	Business Communication	3.0	3.0	0.0
BUSADM 10102143	Management Techniques	3.0	3.0	0.0
MKTG 10104102	Marketing Principles	3.0	3.0	0.0





# Managing a Multicultural Workforce

Program Number: 901969CERT

*Certificate*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Courses

The courses are listed in the recommended order if taking them sequentially, although they can all be completed in one semester.

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
SUPDEV 10196191	Principles of Supervision	3.0	3.0	0.0
SUPDEV 10196189	Team Building & Problem Solving	3.0	3.0	0.0
SUPDEV 10196116	Organizational Behavior	3.0	3.0	0.0
SUPDEV 10196169	Diversity & Change Management	3.0	3.0	0.0



# Marketing

Program Number: 101043

Associate in Applied Science

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ENGLISH 10801195	Written Communication	3.0	3.0	0.0
COMPSOFT 10103133	Excel Beginning	1.0	0.27	1.5
COMPSOFT 10103137	Word Beginning	1.0	0.27	1.5
COMPSOFT 10103143	PowerPoint	1.0	0.27	1.5
MKTG 10104102	Marketing Principles	3.0	3.0	0.0
MKTG 10104104	Selling Principles	3.0	3.0	0.0
MKTG 10104113	Leadership Ethics in the Digital Age	3.0	3.0	0.0

### Second Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MATH 10804144	Math of Finance	3.0	3.0	0.0
MKTG 10104112	Marketing Design Strategies	3.0	3.0	0.0
MKTG 10104114	Social Media Principles	3.0	3.0	0.0
MKTG 10104125	Principles of Advertising	3.0	3.0	0.0
MKTG 10104162	Mobile Marketing (Social Media)	3.0	3.0	0.0

### Third Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
COMM 10801196	Oral/Interpersonal Communication	3.0	3.0	0.0
MKTG 10104126	Public Relations	3.0	3.0	0.0
MKTG 10104164	Marketing Digital Design	3.0	3.0	0.0
MKTG 10104169	Internet Marketing	3.0	3.0	0.0
	<i>Marketing Approved Elective (See Table below)</i>	3.0		

### Fourth Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ECON 10809195	Economics	3.0	3.0	0.0
PSYCH 10809199	Psychology Of Human Relations	3.0	3.0	0.0
MKTG 10104103	Marketing Research	3.0	3.0	0.0
MKTG 10104115	Capstone Campaign	3.0	3.0	0.0
MKTG 10104180	Global Marketing	3.0	3.0	0.0
MKTG 10104188	Marketing Portfolio	1.0	0.0	2.0

### Marketing Approved Electives (3 credits in Third Semester)

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MKTG 10104165	Marketing Internship	3.0	1.0	0.0
MKTG 10104187	Global Studies Seminar	3.0	3.0	0.0
MKTG 10104160	Sales Management	3.0	3.0	0.0
JOURNAL 20801262	Social Media Writing	3.0	3.0	0.0
MKTG 10104802	Honors - Marketing	3.0	0.0	0.0



# Marketing-Social Media

Program Number: 301043

*Embedded Technical Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MKTG 10104114	Social Media Principles	3.0	3.0	0.0
MKTG 10104162	Mobile Marketing (Social Media)	3.0	3.0	0.0
MKTG 10104164	Marketing Digital Design	3.0	3.0	0.0
MKTG 10104169	Internet Marketing	3.0	3.0	0.0



# Mechanical Design Technology

Program Number: 106061

Associate in Applied Science

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MECTEC 10606100	Engineering Technology Communications	3.0	1.0	4.0
MECTEC 10606101	Engineering Technology Fundamentals	2.0	1.0	2.0
MECTEC 10606120	2-D CAD (Computer Aided Drafting)	1.0	1.0	0.0
MECTEC 10606130	SolidWorks 1	1.0	1.0	0.0
MECTEC 10606160	Fundamentals of Manufacturing/Engineering Materials	2.0	1.0	2.0
MECTEC 10606131	SolidWorks 2	2.0	1.0	2.0
ENGLISH 10801195	Written Communication	3.0	3.0	0.0
MATH 10804114	College Technical Math 1B	2.0	2.0	0.0

### Second Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MECTEC 10606140	Dimensioning Practices	1.0	1.0	0.0
MECTEC 10606141	Geometric Dimensioning & Tolerancing	1.0	1.0	0.0
MECTEC 10606155	Statics And Mechanics	3.0	2.0	2.0
MECTEC 10606161	Manufacturing Processes	2.0	1-2	2.0
MECTEC 10606170	Strength Of Materials	3.0	2.0	2.0
MECTEC 10606132	SolidWorks 3	2.0	1-2	2.0
PSYCH 10809199	Psychology Of Human Relations	3.0	3.0	0.0
MATH 10804116	College Technical Math 2	4.0	4.0	0.0

### Third Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MECTEC 10606104	Engineering Technology Practices	3.0	1.0	4.0
MECTEC 10606116	Machine Design	3.0	2.0	2.0
MECTEC 10606125	Plastics for Mechanical Design	3.0	2.0	2.0
MECTEC 10606163	Engineering Technology Project Management	2.0	1.0	2.0
MECTEC 10606164	Quality Systems	2.0	1.0	2.0
MECTEC 10606152	PLC, Hydraulics, Pneumatics	2.0	1.0	2.0
MECTEC 10606193	Career Development - Mechanical Design Program	1.0	1.0	0.0
PHILOS 10809166	Intro to Ethics: Theory & App	3.0	3.0	0.0

### Fourth Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MECTEC 10606112	Tool Design Technology	3.0	1.0	4.0
MECTEC 10606150	CAE Applications	2.0	1.0	2.0
MECTEC 10606186	Engineering Technology Applications	3.0	0-6	6.0
ENGLISH 10801197	Technical Reporting	3.0	3.0	0.0
PHYSICS 10806154	General Physics 1	4.0	3.0	2.0
MECTEC 10606188	MDT Field Study Experience	1.0	0.0	2.0



# Medical Assistant

Program Number: 315091

*A One Year Technical Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MASST 31509301	Medical Asst Admin Procedures	2.0	2.0	2.0
MASST 31509302	Human Body in Health & Disease	3.0	6.0	0.0
MASST 31509303	Medical Asst Lab Procedures 1	2.0	4.0	0.0
MASST 31509303	Medical Asst Lab Procedures 1	2.0	2.0	2.0
MASST 31509304	Medical Asst Clin Procedures 1	4.0	4.0	4.0
MEDTERM 10501101	Medical Terminology	3.0	3.0	0.0
MEDTERM 10501107	Digital Literacy for Healthcare	2.0	1.0	2.0

### Second Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MEDTERM 31501308	Pharmacology for Allied Health	2.0	4.0	0.0
MASST 31509305	Med Asst Lab Procedures 2	2.0	2.0	2.0
MASST 31509306	Med Asst Clin Procedures 2	3.0	2.0	4.0
MASST 31509307	Medical Office Insurance & Finance	2.0	4.0	0.0
MASST 31509309	Medical Law, Ethics and Professionalism	2.0	4.0	0.0
MASST 31509310	Medical Assistant Practicum	3.0	2.0	0.0
ENGLISH 10801195	Written Communication	3.0	3.0	0.0



# Medical Billing Specialist

Program Number: 301605

*Embedded Technical Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
COMPSOFT 10103165	Outlook	1.0	0.27	1.5
ADMINPRF 10106107	Business Document Applications	3.0	1.0	4.0
ADMINPRF 10106139	Keyboard Skillbuilding	1.0	0.27	1.5
ADMINPRF 10106164	Customer Contact Skills	1.0	1.0	0.5
MEDADMIN 10160178	Medical Language for the Business Professional 1	2.0	1.0	2.0
ENGLISH 10801195	Written Communication	3.0	3.0	0.0

### Second Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ADMINPRF 10106109	Business Spreadsheet Applications	3.0	1.0	4.0
MEDADMIN 10160165	Medical Administrative Procedures	3.0	1.0	4.0
MEDADMIN 10160177	Specialized Insurance Claims	2.0	1.0	2.0
MEDADMIN 10160179	Medical Language for the Business Professional 2	2.0	1.0	2.0



# Medical Coding Specialist

Program Number: 315302

A One Year Technical Diploma

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Pre-Program Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MEDTERM 10501153	Body Structure & Function	3.0	3.0	0.0
MEDTERM 10501101	Medical Terminology	3.0	3.0	0.0
COMPSOFT 10103121	Windows 10	1.0	0.27	1.5
MEDTERM 10501107	Digital Literacy for Healthcare	2.0	1.0	2.0

### Core Program Courses

#### Cluster 1

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MEDREC 10530162	Foundations of HIM	3.0	2.0	2.0
MEDREC 10530182	Human Disease for Health Professions	3.0	3.0	0.0
MEDREC 10530197	ICD Diagnosis Coding	3.0	2.0	2.0

#### Cluster 2

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MEDREC 10530184	CPT Coding	3.0	2.0	2.0
MEDREC 10530185	Healthcare Reimbursement	2.0	1.0	2.0
MEDREC 10530189	Management of Coding Services	1.0	1.0	0.0
MEDREC 10530199	ICD Procedure Coding	2.0	1-2	2.0

#### Cluster 3

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MEDREC 10530168	Advanced ICD Coding	3.0	2.0	2.0
MEDREC 10530187	Advanced CPT Coding	3.0	2.0	2.0
MEDREC 10530188	Certification & Professional Development	2.0	1.0	2.0



# Medical Laboratory Technician

Program Number: 105131

Associate in Applied Science

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
LABASST 10513110	Basic Lab Skills	1.0	0.0	2.0
LABASST 10513111	Phlebotomy	2.0	0.0	4.0
LABASST 10513113	QA Lab Math	1.0	1.0	0.0
LABASST 10513114	Urinalysis	2.0	0.0	4.0
BIOLOGY 20806206	General Anatomy and Physiology	4.0	3.0	2.0
CHEM 20806201	General, Organic & Biological Chemistry	5.0	4.0	2.0
ENGLISH 10801195	Written Communication	3.0	3.0	0.0

### Second Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
LABASST 10513115	Basic Immunology Concepts	2.0	0.0	4.0
LABASST 10513120	Basic Hematology	3.0	0.0	6.0
LABASST 10513121	Coagulation	1.0	0.0	2.0
LABASST 10513109	Blood Bank	4.0	2.0	4.0
SPEECH 10801198	Speech	3.0	3.0	0.0

Choose from Microbiology or General Microbiology:

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
BIOLOGY 20806273	Microbiology-University Medical	5.0	3.0	4.0
BIOLOGY 20806274	General Microbiology	5.0	3.0	4.0

### Third Semester (Summer)

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
SOC 10809197	Contemporary Amer Society	3.0	3.0	0.0
PSYCH 10809199	Psychology Of Human Relations	3.0	3.0	0.0

### Fourth Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
LABASST 10513130	Advanced Hematology	2.0	0.0	4.0
LABASST 10513116	Clinical Chemistry	4.0	2.0	4.0
LABASST 10513133	Clinical Microbiology	4.0	0.0	8.0
LABASST 10513170	Introduction to Molecular Diagnostics	2.0	2.0	0.0
	Elective	2.0		

### Fifth Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
LABASST 10513140	Advanced Microbiology	2.0	2.0	0.0
LABASST 10513141	Pre-Clinical Experience	2.0	0.0	0.0
LABASST 10513151	Clinical Experience 1	4.0	0.0	8.0
LABASST 10513152	Clinical Experience 2	4.0	0.0	8.0





# Metal Fabrication

Program Number: 314572

*A One Year Technical Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
INDMANUF 10623100	Safety for Industry	1.0	0-2	2.0
INDMANUF 10623200	Interpreting Engineering Drawings	2.0	0-4	4.0
MACHT 32420349	Basic Metrology (Part A)	1.0	2.0	0.0
WELD 31442332	Oxy-Fuel Cutting 1	1.0	1.0	1.0
WELD 31442318	Gas Tungsten Arc Welding 1 (GTAW/TIG)	2.0	0.0	4.0
WELD 31442323	Basic Gas Metal Arc Welding (GMAW/MIG)	2.0	2.0	2.0
MTLFAB 31457301	Fabrication 1	2.0	1.0	3.0
MTLFAB 31457302	Fabrication 2	2.0	1.0	3.0
MTLFAB 31457305	CNC Operation	2.0	1.0	3.0
MATH 31804379	Vocational Math 1	1.0	2.0	0.0

### Second Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
WELD 31442326	Flux Cored & Advanced Gas Metal Arc Welding (FCAW/GMAW)	2.0	1.0	3.0
WELD 31442328	Gas Tungsten Arc Welding 2 (GTAW/TIG)	2.0	1.0	3.0
WELD 31442390	Fundamentals of Metallurgy	2.0	4.0	0.0
MTLFAB 31457303	Fabrication 3	2.0	1.0	3.0
MTLFAB 31457304	Fabrication 4	2.0	1.0	3.0
MTLFAB 31457306	CNC Programming	2.0	1.0	3.0
MTLFAB 31457307	Jig and Fixture Development	2.0	1.0	3.0
COMM 32801350	Workplace Communication for Industry	1.0	2.0	0.0



# Microsoft Office

Program Number: 301066

*Embedded Technical Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
COMPSOFT 10103165	Outlook	1.0	0.27	1.5
ADMINPRF 10106107	Business Document Applications	3.0	1.0	4.0
ADMINPRF 10106109	Business Spreadsheet Applications	3.0	1.0	4.0
ADMINPRF 10106231	Business Presentations and Publications	3.0	1.0	4.0
ADMINPRF 10106240	Business Information Management	3.0	1.0	4.0



# Microsoft Office Certificate - Core

Program Number: 901031CERT

*Certificate*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Microsoft Office Certificate Core

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
COMPSOFT 10103121	Windows 10	1.0	0.27	1.5
COMPSOFT 10103165	Outlook	1.0	0.27	1.5
COMPSOFT 10103137	Word Beginning	1.0	0.27	1.5
COMPSOFT 10103133	Excel Beginning	1.0	0.27	1.5
COMPSOFT 10103145	Access	1.0	0.27	1.5
COMPSOFT 10103143	PowerPoint	1.0	0.27	1.5



# Motorcycle, Marine & Outdoor Power Products

Program Number: 314612

*A One Year Technical Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MACHT 32420330	Metal Processes 1	2.0	2.0	2.0
SMENG 31461324	Basic Two- and Four-Cycle Engines	5.0	4.0	6.0
SMENG 31461325	Small Engine Rebuilding - Motorcycle, Marine & Outdoor	5.0	4.0	6.0
SMENG 31461328	Power Products Technician Program Small Engine Lab 1	1.0	0.0	2.0
SMLBUS 10145189	Customer Relations	2.0	2.0	0.0

### Second Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MACHT 32420331	Metals Processes 2	2.0	2.0	2.0
SMENG 31461326	Electrical and Hydraulic Systems	5.0	4.0	6.0
SMENG 31461327	Power Transmissions and Motorcycle, Marine and Outdoor	5.0	4.0	6.0
SMENG 31461329	Power Products Small Engine Lab 2	1.0	0.0	2.0
BUSADM 10102134	Business Organization, Management, and Ethics	3.0	3-0	0.0



# Nursing Assistant

Program Number: 305431

*Less Than One Year Tech Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First, Second or Summer Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
NRSAD 30543300	Nursing Assistant	3	2.77	1.66



# Occupational Therapy Assistant

Program Number: 105141

*An Associate in Applied Arts Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Week	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
OTASST 10514171	Introduction to Occupational Therapy	3.0	2.0	2.0
OTASST 10514172	Medical and Psychosocial Conditions	3.0	2.0	2.0
OTASST 10514173	Activity Analysis and Application	2.0	0.0	4.0
ENGLISH 10801195	Written Communication	3.0	3.0	0.0
BIOLOGY 20806206	General Anatomy and Physiology	4.0	3.0	2.0
PSYCH 20809231	Intro Psychology	3.0	3.0	0.0

### Second Semester

Class Course Week	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
OTASST 10514174	OT Performance Skills	4.0	0-8	8.0
OTASST 10514175	Psychosocial Practice	3.0	1.0	4.0
OTASST 10514176	OT Theory and Practice	3.0	1.0	4.0
OTASST 10514178	Geriatric Practice	3.0	1.0	4.0
PSYCH 20809237	Abnormal Psych	3.0	3.0	0.0
SPEECH 10801198	Speech	3.0	3.0	0.0

### Summer Semester

Class Course Week	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PSYCH 20809233	Developmental Psychology	3.0	3.0	0.0
SOC 10809172	Introduction to Diversity Studies	3.0	3.0	0.0

### Third Semester

Class Course Week	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
OTASST 10514177	Assistive Technology and Adaptations	2.0	0.0	4.0
OTASST 10514179	Community Practice	2.0	0.0	4.0
OTASST 10514182	Physical Rehabilitation Practice	3.0	1.0	4.0
OTASST 10514183	Pediatric Practice	3.0	1.0	4.0
OTASST 10514184	OTA Fieldwork 1	2.0	1.0	2.0
	Elective	3.0		

### Fourth Semester

Class Course Week	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
OTASST 10514185	OT Practice and Management	2.0	1.0	2.0
OTASST 10514186	OTA Fieldwork IIA	5.0	0.0	0.0
OTASST 10514187	OTA Fieldwork IIB	5.0	0.0	0.0



# Office Assistant

Program Number: 311061

*Embedded Technical Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ADMINPRF 10106102	Introduction to Office Professions	1.0	1-0.5	0.5
ADMINPRF 10106107	Business Document Applications	3.0	1.0	4.0
ADMINPRF 10106139	Keyboard Skillbuilding	1.0	0.0	1.5
ADMINPRF 10106182	Information Technology Concepts	3.0	2-2	4.0
ADMINPRF 10106231	Business Presentations and Publications	3.0	1.0	0.0
ENGLISH 10801195	Written Communication	3.0	3.0	0.0
MATH 10804123	Math with Business Applications	3.0	3.0	0.0

### Second Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
COMPSOFT 10103165	Outlook	1.0	0.27	1.5
ADMINPRF 10106108	Proofreading And Editing	3.0	2.0	2.0
ADMINPRF 10106109	Business Spreadsheet Applications	3.0	1.0	4.0
ADMINPRF 10106133	Document Formatting	2.0	1.0	2.0
ADMINPRF 10106164	Customer Contact Skills	1.0	1.0	0.5
ADMINPRF 10106172	Administrative Office Management	3.0	2.0	2.0
ADMINPRF 10106240	Business Information Management	3.0	1.0	4.0



# Optometric Technician

Program Number: 315162

*A One Year Technical Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
OPTOMET 31516325	Optical Dispensing 1	3.0	3.0	2.0
OPTOMET 31516301	Ophthalmic Pre-Testing	3.0	3.0	0.0
OPTOMET 31516305	Basic Optical Concepts	3.0	3.0	2.0
OPTOMET 31516315	Ocular Anatomy	2.0	3.0	0.0
OPTOMET 31516339	Human Relations - Optometric Technician Program	1.0	2.0	0.0

### Second Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
OPTOMET 31516326	Optical Dispensing 2	2.0	2.0	2.0
OPTOMET 31516330	Contact Lenses	3.0	2.5	2.5
OPTOMET 31516335	Ophthalmic Specialty Testing	3.0	4.0	2.0
OPTOMET 31516340	Patient Relations/Pract Manage	2.0	3.33	0.0
OPTOMET 31516345	Preclinical	2.0	0.0	4.0
OPTOMET 31516350	Clinical Experience	3.0	0.0	0.0





# Optometric Technician

Program Number: 315162-ET

*A One Year Technical Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Online First Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
OPTOMET 31516315	Ocular Anatomy	2.0	3.0	1.0
OPTOMET 31516301	Ophthalmic Pre-Testing	3.0	3.0	3.0
OPTOMET 31516339	Human Relations - Optometric Technician Program	1.0	2.0	0.0

### Online Second Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
OPTOMET 31516305	Basic Optical Concepts	3.0	3.0	2.0
OPTOMET 31516325	Optical Dispensing 1	3.0	3.0	2.0

### Online Third Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
OPTOMET 31516326	Optical Dispensing 2	2.0	2.0	2.0
OPTOMET 31516335	Ophthalmic Specialty Testing	3.0	4.0	2.0
OPTOMET 31516346	Preclinic A	1.0	2.0	0.0

### Online Fourth Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
OPTOMET 31516330	Contact Lenses	3.0	2.5	2.5
OPTOMET 31516340	Patient Relations/Pract Manage	2.0	3.33	0.0
OPTOMET 31516347	Preclinic B	1.0	2.0	0.0



# Painting & Decorating Apprentice

Program Number: 504241

*A One Year Technical Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PAINTDEC 50424590	Tech Paint Sem 1	2.0	3.0	1.0

### Second Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PAINTDEC 50424591	Tech Paint Sem 2	2.0	3.0	1.0

### Third Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PAINTDEC 50424592	Tech Paint Sem 3	2.0	3.0	1.0

### Fourth Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PAINTDEC 50424593	Tech Paint Sem 4	2.0	3.0	1.0

### Fifth Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PAINTDEC 50424594	Tech Paint Sem 5	2.0	3.0	1.0

### Sixth Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PAINTDEC 50424595	Tech Paint Sem 6	2.0	3.0	1.0



# Paralegal

Program Number: 101101

Associate in Applied Science

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Prior to start of program

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PARALEG 10110175	Orientation to the Paralegal Profession	1.0	1.0	0.0

### First Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PARALEG 10110101	Introduction to Paralegalism and Legal Ethics	3.0	3.0	0.0
PARALEG 10110141	Computer Applications - Legal	3.0	3.0	0.0
PARALEG 10110173	Contract Law in a Global Economy	3.0	3.0	0.0
ENGLISH 10801195	Written Communication	3.0	3.0	0.0
PSYCH 10809199	Psychology Of Human Relations	3.0	3.0	0.0

### Second Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PARALEG 10110102	Civil Litigation I	3.0	3.0	0.0
PARALEG 10110104	Legal Research	3.0	3.0	0.0
COMM 10801196	Oral/Interpersonal Communication	3.0	3.0	0.0
SOC 10809197	Contemporary Amer Society	3.0	3.0	0.0
PARALEG 10110114	Administration Of Estates - Paralegal Program	3.0	3.0	0.0

### Third Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PARALEG 10110105	Legal Writing	3.0	3.0	0.0
PARALEG 10110106	Family Law	3.0	3.0	0.0
PARALEG 10110176	Career Building Techniques - Paralegal	2.0	2.0	0.0
PARALEG 10110122	Bankruptcy Law	3.0	3.0	0.0

*Math/Science Requirement: Choose one of the following courses:*

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MATH 10804144	Math of Finance	3.0	3.0	0.0
BIOLOGY 10806177	Gen Anatomy & Physiology	4.0	3.0	2.0
BIOLOGY 20806204	Biological Greek and Latin Terminology	3.0	3.0	0.0
BIOLOGY 20806206	General Anatomy and Physiology	4.0	3.0	2.0

### Fourth Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PARALEG 10110107	Legal Aspects of Business Organizations	3.0	3.0	0.0
PARALEG 10110142	Paralegal Internship	3.0	1.0	0.0
PHILOS 10809166	Intro to Ethics: Theory & App	3.0	3.0	0.0
PARALEG 10110103	Civil Litigation 2	3.0	3.0	0.0
PARALEG 10110168	Criminal Law 1 - Paralegal	3.0	3.0	0.0



## Other Program-Related Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PARALEG 10110110	Real Estate Law - Paralegal	3.0	3.0	0.0
PARALEG 10110115	Administrative Law	3.0	3.0	0.0
PARALEG 10110160	Employment Law - Paralegal	3.0	3.0	0.0
PARALEG 10110171	Immigration Law	3.0	3.0	0.0
PARALEG 10110108	E-Discovery and Digital Tools	2.0	3.0	0.0



# Paralegal Post-Baccalaureate

Program Number: 311101

Associate in Applied Science

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Prior to start of first semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PARALEG 10110175	Orientation to the Paralegal Profession	1.0	1.0	0.0

### First Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PARALEG 10110101	Introduction to Paralegalism and Legal Ethics	3.0	3.0	0.0
PARALEG 10110102	Civil Litigation I	3.0	3.0	0.0
PARALEG 10110104	Legal Research	3.0	3.0	0.0
PARALEG 10110141	Computer Applications - Legal	3.0	3.0	0.0
PARALEG 10110176	Career Building Techniques - Paralegal	2.0	2.0	0.0

### Second Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PARALEG 10110105	Legal Writing	3.0	3.0	0.0
PARALEG 10110142	Paralegal Internship	3.0	1.0	0.0
PARALEG 10110114	Administration Of Estates - Paralegal Program	3.0	3.0	0.0
PARALEG 10110122	Bankruptcy Law	3.0	3.0	0.0
PARALEG 10110106	Family Law	3.0	3.0	0.0

### Other Program-Related Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PARALEG 10110110	Real Estate Law - Paralegal	3.0	3.0	0.0
PARALEG 10110115	Administrative Law	3.0	3.0	0.0
PARALEG 10110168	Criminal Law	3.0	3.0	0.0
PARALEG 10110171	Immigration Law	3.0	3.0	0.0
PARALEG 10110160	Employment Law - Paralegal	3.0	3.0	0.0
PARALEG 10110103	Civil Litigation 2	3.0	3.0	0.0
PARALEG 10110173	Contract Law in a Global Economy	3.0	3.0	0.0
PARALEG 10110108	E-Discovery and Digital Tools	3.0	3.0	0.0
PARALEG 10110107	Legal Aspects of Business Organizations	3.0	3.0	0.0



# Paramedic

Program Number: 315313

*Embedded Technical Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
EMS 10531911	EMS Fundamentals	2.0	2.0	0.0
EMS 10531912	Paramedic Medical Principles	4.0	4.0	0.0
EMS 10531913	Adv Patient Asses Principles	3.0	2.0	2.0
EMS 10531914	Adv Pre-Hospital Pharmacology	3.0	2.0	2.0
EMS 10531915	Paramedic Respiratory Management	2.0	1.0	2.0
EMS 10531916	Paramedic Cardiology	4.0	3.0	2.0
EMS 10531925	Paramedic Clinical 1	1.0	0.0	0.0
EMS 10531926	Paramedic Clinical 2	1.0	0.0	0.0

### Second Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
EMS 10531918	Advanced Emergency Resuscitation	1.0	0-2	2.0
EMS 10531919	Paramedic Medical Emergencies	4.0	4.0	0.0
EMS 10531920	Paramedic Trauma	3.0	2.0	2.0
EMS 10531921	Special Patient Populations	3.0	2.0	2.0
EMS 10531922	EMS Operations	1.0	1.0	0.0
EMS 10531927	Paramedic Clinical 3	1.0	0.0	0.0
EMS 10531929	Paramedic Clinical 4	1.0	0.0	0.0

### Third Semester - Summer

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
EMS 10531923	Paramedic Capstone	1.0	0.0	2.0
EMS 10531928	Paramedic Field Internship	3.0	0.0	0.0



# Paramedic Technician

Program Number: 105311

Associate in Applied Science

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
EMS 10531911	EMS Fundamentals	2.0	2.0	0.0
EMS 10531912	Paramedic Medical Principles	4.0	4.0	0.0
EMS 10531913	Adv Patient Asses Principles	3.0	2.0	2.0
EMS 10531914	Adv Pre-Hospital Pharmacology	3.0	2.0	2.0
EMS 10531915	Paramedic Respiratory Management	2.0	1.0	2.0
EMS 10531916	Paramedic Cardiology	4.0	3.0	2.0
EMS 10531925	Paramedic Clinical 1	1.0	0.0	0.0
EMS 10531926	Paramedic Clinical 2	1.0	0.0	0.0

### Second Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
EMS 10531918	Advanced Emergency Resuscitation	1.0	0.0	2.0
EMS 10531919	Paramedic Medical Emergencies	4.0	4.0	0.0
EMS 10531920	Paramedic Trauma	3.0	2.0	2.0
EMS 10531921	Special Patient Populations	3.0	2.0	2.0
EMS 10531922	EMS Operations	1.0	1.0	0.0
EMS 10531927	Paramedic Clinical 3	1.0	0.0	0.0
EMS 10531929	Paramedic Clinical 4	1.0	0.0	0.0

### Third Semester (Summer)

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
EMS 10531923	Paramedic Capstone	1.0	0.0	2.0
EMS 10531928	Paramedic Field Internship	3.0	0.0	0.0

### Fourth Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ENGLISH 10801195	Written Communication	3.0	3.0	0.0
BIOLOGY 20806206	General Anatomy and Physiology	4.0	3.0	2.0
POLISCI 10809122	Intro to Amer Government	3.0	3.0	0.0
PSYCH 10809199	Psychology Of Human Relations	3.0	3.0	0.0

### Fifth Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
SPEECH 10801198	Speech	3.0	3.0	0.0
MATH 10804134	Mathematical Reasoning	3.0	2.0	2.0
SOC 10809172	Introduction to Diversity Studies	3.0	3.0	0.0



# Phlebotomist/Specimen Processor

Program Number: 305132

*Embedded Technical Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Required Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
LABASST 10513110	Basic Lab Skills	1.0	0.0	2.0
LABASST 10513111	Phlebotomy	2.0	0.0	4.0





# Photography

Program Number: 102031

*An Associate in Applied Arts Degree*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PHOTO 10203105	Photo Composition	2.0	2.0	0.0
PHOTO 10203107	Studio Photography 1	3.0	0.0	6.0
PHOTO 10203120	Lighting Technique	2.0	0.0	4.0
VICOM 10206109	Intro to Electronic Design	2.0	0.0	4.0
ENGLISH 10801195	Written Communication	3.0	3.0	0.0
ECON 10809195	Economics	3.0	3.0	0.0
PSYCH 10809199	Psychology Of Human Relations	3.0	3.0	0.0

### Second Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PHOTO 10203108	Studio Photography 2	3.0	0.0	6.0
PHOTO 10203141	Color Photography 1	3.0	0.0	6.0
PHOTO 10203173	Photojournalism	2.0	0.0	4.0
VICOM 10206115	Digital Media for Photographers	3.0	0.0	6.0
COMM 10801196	Oral/Interpersonal Communication	3.0	3.0	0.0
SOC 10809197	Contemporary Amer Society	3.0	3.0	0.0

### Third Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PHOTO 10203121	Commercial Photography 1	3.0	0.0	6.0
PHOTO 10203124	Portrait Photography	2.0	0.0	4.0
PHOTO 10203142	Color Photography 2	3.0	0.0	6.0
PHOTO 10203134	Electronic Imaging	3.0	0.0	6.0
MATH 10804107	College Mathematics	3.0	2.0	2.0
PHILOS 20809276	Business Ethics - Liberal Arts Transfer	3.0	3.0	0.0

### Fourth Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PHOTO 10203109	Studio Photography 3	3.0	1.0	4.0
PHOTO 10203125	Business Of Photography	1.0	0.0	2.0
PHOTO 10203126	Advanced Digital Studio Portrait	2.0	0.0	4.0
PHOTO 10203176	Photographic Communication	2.0	0.0	4.0
PHOTO 10203185	Portfolio Preparation - Photography Program	2.0	0.0	4.0
PHOTO 10203174	Photography on Location	3.0	0.0	6.0
	Elective	2.0		



# Photovoltaics

Program Number: 904801CERT

*Certificate*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Required (Pre-requisite) Course List

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
IND MECH 10462320	DC/AC Circuits	3	0.0	6.0

### Core Course List

Complete (at least 8) credits from the following courses:

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ENERCONS 10481110	Energy Management	3.0	2.0	2.0
RENEWELC 10482138	Introduction to Photovoltaic Technology	2.0	2.0	0.0
PHYSICS 20806291	Introduction to Renewable Energy	3.0	3.0	0.0

### Additional Course List

Complete additional credits from these courses to reach a total of 15 credits:

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
RENEWELC 10482103	Photovoltaic Systems and the National Electric Code	1.0	1.0	0.0
RENEWELC 10482135	Advanced Photovoltaic Electives	3.0	3.0	0.0
RENEWELC 10482137	Photovoltaic Site Assessment	1.0	1.0	0.0
RENEWELC 10482139	Grid-Connected Photovoltaic Design and Installation	2.0	2.0	0.0
RENEWELC 10482140	Grid Connected Photovoltaic System Design	1.0	1.0	0.0
RENEWELC 10482141	Grid Connected Photovoltaic Systems Installation Lab	1.0	0.0	2.0
RENEWELC 10482142	Off Grid Photovoltaic System Design	1.0	1.0	0.0
RENEWELC 10482143	Off Grid Photo Systems Installation Lab	1.0	0.5	1.0
RENEWELC 10482149	Photovoltaic Technical Sales	1.0	1.0	0.0
PHYSICS 20806290	Renewable Energy for International Development	3.0	3.0	0.0



# Physical Therapist Assistant

Program Number: 105241

*An Associate in Applied Science Degree*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Prior to First Year Spring Term

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
BIOLOGY 20806206	General Anatomy and Physiology	4.0	3.0	2.0
ENGLISH 10801195	Written Communication	3.0	3.0	0.0
SOC 10809197	Contemporary American Society	3.0	3.0	0.0
PSYCH 10809199	Psychology Of Human Relations	3.0	3.0	0.0

### First Year Spring Term

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PTASST 10524156	PTA Applied Kinesiology 1	4	2-4	
PTASST 10524139	PTA Patient Interventions	4	2-4	
PTASST 10524140	PTA Professional Issues 1	2	2-0	0.0
ENGLISH 10801197	Technical Reporting	3	3-0	0.0
PSYCH 10809188	Developmental Psychology	3	3-0	0.0

### First Year Fall Term

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PTASST 10524157	PTA Applied Kinesiology 2	3.0	2.0	2.0
PTASST 10524142	PTA Therapeutic Exercise	3.0	1.0	4.0
PTASST 10524143	PTA Therapeutic Modalities	4.0	2.0	4.0
SPEECH 10801198	Speech	3.0	3.0	0.0

### Second Year Spring Term

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PTASST 10524144	PTA Princ of Neuro Rehab	4.0	2.0	4.0
PTASST 10524145	PTA Princ of Musculo Rehab	4.0	2.0	4.0
PTASST 10524146	PTA Cardio and Integumentary Management	3.0	2.0	2.0
PTASST 10524147	PTA Clinical Practice 1	2.0	0.0	0.0

### Interim Course

Occurs at the end of the Spring term.

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PTASST 10524148	PTA Clinical Practice 2	3.0	0.0	0.0

### Second Year Summer Trimester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PTASST 10524149	PTA Rehab Across the Lifespan	2.0	2.0	0.0
PTASST 10524150	PTA Professional Issues 2	2.0	2.0	0.0
PTASST 10524151	PTA Clinical Practice 3	5.0	0.0	0.0
	Elective	3.0		

Trimesters begin in September for Fall, January for Winter, and June for Summer. Dates are not necessarily in sequence with the rest of the college. Trimesters last 15 weeks with an additional week for exams as needed. Inquire to PTA program regarding specific dates, as these may vary from year to year.



# Plumbing Apprentices (ABC)

Program Number: 504279

Apprenticeship Completion

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PLUMBNG 50427550	Trade Plumbing Semester 1	2.0	3.0	1.0

### Second Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PLUMBNG 50427551	Trade Plumbing Semester 2	2.0	3.0	1.0

### Third Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PLUMBNG 50427552	Trade Plumbing Semester 3	2.0	3.0	1.0

### Fourth Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PLUMBNG 50427553	Trade Plumbing Semester 4	2.0	3.0	1.0

### Fifth Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PLUMBNG 50427554	Trade Plumbing Semester 5	2.0	3.0	1.0

### Sixth Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PLUMBNG 50427555	Trade Plumbing Semester 6	2.0	3.0	1.0

### Seventh Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PLUMBNG 50427556	Trade Plumbing Semester 7	2.0	3.0	1.0

### Eighth Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PLUMBNG 50427557	Trade Plumbing Semester 8	2.0	3.0	1.0



# Plumbing Apprentices (JAC)

Program Number: 504273

Apprenticeship Completion

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PLUMBNG 50427753	Water Distribution 1	2.0	3.6	0.4

### Second Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PLUMBNG 50427751	Sanitary Drains 1	2.0	3.6	0.4

### Third Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PLUMBNG 50427755	Sanitary Drains 2	2.0	3.6	0.4

### Fourth Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PLUMBNG 50427754	Water Distribution 2	2.0	3.6	0.4

### Fifth Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PLUMBNG 50427752	Vents and Venting Systems	2.0	3.6	0.4

### Sixth Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PLUMBNG 50427756	Private On-Site Wastewater Treatment Systems (POWTS)	2.0	3.6	0.4

### Seventh Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PLUMBNG 50427757	Green Plumbing Applications	2.0	3.6	0.4

### Eighth Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PLUMBNG 50427758	Plumbing Advanced Topics/TSA	2.0	3.6	0.4



# Practical Nursing

Program Number: 315431

*A One Year Technical Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Pre-Program Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
NRSAD 30543300	Nursing Assistant	3.0	2.77	1.66
NRSAD 31543356	Growth and Development	2.0	4.0	0.0
MEDTERM 10501153	Body Structure & Function	3.0	3.0	0.0
ENGLISH 10801195	Written Communication	3.0	3.0	0.0
SPEECH 10801198	Speech	3.0	3.0	0.0

### First Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
NRSAD 31543301	Nursing Fundamentals	2.0	4.0	0.0
NRSAD 31543302	Nursing Skills	3.0	0.0	6.0
NRSAD 31543303	Nursing Pharmacology	2.0	4.0	0.0
NRSAD 31543304	Nursing: Intro to Clinical Practice	2.0	0.0	0.0

### Second Semester

Class Course Number	Class Name	Credits/Unit	Hours Per Week	
			Lecture	Lab
NRSAD 31543305	Nursing Health Alterations	3.0	6.0	0.0
NRSAD 31543306	Nursing Health Promotion	3.0	6.0	0.0
NRSAD 31543307	Nursing: Clinical Care Across the Lifespan	2.0	0.0	0.0
NRSAD 31543308	Nursing: Intro to Clinical Care Management	2.0	0.0	0.0



# Project Management Certificate for the Office Professional

Program Number: 901065CERT  
*Certificate*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Required Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
COMPSOFT 10103133	Excel Beginning	1.0	0.27	1.5
COMPSOFT 10103139	Excel Intermediate	1.0	0.27	1.5
COMPSOFT 10103186	MS (Microsoft) Project	2.0	0.5	3.0
ADMINPRF 10106164	Customer Contact Skills	1.0	1.0	0.5
BUSADM 10102135	Project Management - Fundamentals	3.0	3.0	0.0

### Additional Courses

Plus, choose one of the following courses:

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
BUSADM 10102134	Business Organization, Management, and Ethics	3.0	3.0	0.0
BUSADM 10102131	Project Management and Sustainable Change	3.0	3.0	0.0
EVTMGMT 10109102	Fundamentals Of Meeting Mgmt	3.0	3.0	0.0



# Radiography

Program Number: 105261

*An Associate in Applied Science Degree*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Pre-Radiography Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
BIOLOGY 20806206	General Anatomy and Physiology	4.0	3.0	2.0
ENGLISH 10801195	Written Communication	3.0	3.0	0.0
MATH 10804107	College Mathematics	3.0	2.0	2.0

### First Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
RADTEC 10526149	Radiographic Procedures 1	5.0	5.0	0.0
RADTEC 10526158	Introduction to Radiography	3.0	3.0	0.0
RADTEC 10526159	Radiographic Imaging 1	3.0	3.0	0.0
RADTEC 10526168	Radiography Clinical 1	2.0	0.0	0.0

### Second Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
RADTEC 10526170	Radiographic Imaging 2	3.0	3.0	0.0
RADTEC 10526191	Radiographic Procedures 2	5.0	5.0	0.0
RADTEC 10526192	Radiography Clinical 2	3.0	0.0	0.0

### Third Semester (Summer)

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
RADTEC 10526193	Radiography Clinical 3	3.0	0.0	0.0

### Fourth Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
RADTEC 10526194	Imaging Equipment Operation	3.0	3.0	0.0
RADTEC 10526195	Radiographic Quality Analysis	2.0	2.0	0.0
RADTEC 10526196	Modalities	3.0	3.0	0.0
RADTEC 10526199	Radiography Clinical 4	3.0	0.0	0.0
COMM 10801196	Oral/Interpersonal Communication	3.0	3.0	0.0
PSYCH 20809231	Intro Psychology	3.0	3.0	0.0

### Fifth Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
RADTEC 10526189	Radiographic Pathology	1.0	1.0	0.0
RADTEC 10526190	Radiography Clinical 5	2.0	0.0	0.0
RADTEC 10526197	Radiation Protection & Biology	3.0	3.0	0.0
SOC 10809197	Contemporary American Society	3.0	3.0	0.0
PSYCH 20809233	Developmental Psychology	3.0	3.0	0.0

### Sixth Semester (Summer)

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
RADTEC 10526174	ARRT Certification Seminar	2.0	0.0	0.0
RADTEC 10526198	Radiography Clinical 6	2.0	0.0	0.0





# Radiography

Program Number: 901942CERT

*Certificate*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
COMPSOFT 10103133	Excel Beginning	1.0	0.27	1.5
RLEST 10194182	Real Estate Law and Sales	4.0	4.0	0.0
RLEST 10194185	Real Estate Broker Management	4.0	4.0	0.0

### Second Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MKTG 10104102	Marketing Principles	3.0	3.0	0.0
MKTG 10104104	Selling Principles	3.0	3.0	0.0
MKTG 10104114	Social Media Principles	3.0	3.0	0.0

### Third Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
RLEST 10194195	Real Estate Internship	3.0	1.0	0.0



# Recreation Management

Program Number: 101094

An Associate in Applied Science Degree

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
RECMGT 10109103	Leisure and Lifestyle	3.0	3.0	0.0
RECMGT 10109162	Introduction to Recreation	2.0	2.0	0.0
COMPSOFT 10103133	Excel Beginning	1.0	0.27	1.5
MKTG 10104102	Marketing Principles	3.0	3.0	0.0
RECMGT 10109189	Foundations of Worksite Wellness	3.0	3.0	0.0
ENGLISH 10801195	Written Communication	3.0	3.0	0.0

### Second Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
RECMGT 10109106	Recreation Programming	3.0	3.0	0.0
RECMGT 10109149	Risk Management in Recreation	2.0	2.0	0.0
RECMGT 10109171	Internship Development and Community Partnerships	2.0	2.0	0.0
COMM 10801196	Oral/Interpersonal Communication	3.0	3.0	0.0
MATH 10804123	Math with Business Applications	3.0	3.0	0.0
	<i>Emphasis Area Course (see below)</i>	3.0		

### Third Semester (Summer)

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
RECMGT 10109175	Recreation Internship Practicum	2	0.0	0.0

### Fourth Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
RECMGT 10109135	Leadership Strategies in Recreation	3.0	3.0	0.0
RECMGT 10109163	Trends and Topics in Recreation	3.0	3.0	0.0
RECMGT 10109195	Recreation Industry Budget and Financial Management	3.0	3.0	0.0
PSYCH 10809199	Psychology Of Human Relations	3.0	3.0	0.0
	<i>Emphasis Area Course (see below)</i>	3.0		

### Fifth Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
RECMGT 10109115	Recreation Administration & Management	3.0	3.0	0.0
RECMGT 10109155	Facility Operations and Maintenance	3.0	3.0	0.0
RECMGT 10109160	Inclusive Recreation	3.0	3.0	0.0
RECMGT 10109190	Recreation Seminar	1.0	1.0	0.0
ECON 10809195	Economics	3.0	3.0	0.0
	<i>Emphasis Area Course (see below)</i>	3.0		

### Activity/Fitness Emphasis

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
RECMGT 10109159	Wellness Coaching and Promotion	3.0	3.0	0.0
RECMGT 10109173	Group Fitness Development	3.0	2.0	2.0
RECMGT 10109176	Personal Trainer Development	3.0	1.0	4.0
RECMGT 10109189	Foundations of Worksite Wellness	3.0	3.0	0.0



If choosing to take Body Structure and Function, students must also complete Anatomy & Physiology for Exercises Lab:

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MEDTERM 10501153	Body Structure & Function - Used in a variety of Degree Programs	3.0	3.0	0.0
BIOLOGY 20806262	Anatomy and Physiology for Exercise Lab	1.0	0.0	2.0

### Outdoor Education Emphasis

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
RECMGT 10109196	Principles of Outdoor Pursuits	3.0	3.0	0.0
RECMGT 10109197	Challenge Course Programming	3.0	3.0	0.0

Choose from one of the following two courses:

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
RECMGT 10109199	Adventure Processing and Facilitation	3.0	3.0	0.0
BIOLOGY 20806280	Environmental Issues	3.0	3.0	0.0



# Renewable Energy

Program Number: 908061CERT

*Certificate*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Core Required Courses

Completion of both of the listed courses is required.

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PHYSICS 2080691	Introduction to Renewable Energy / Renewable Energy Technology	3.0	3.0	0.0
PHYSICS 2080692	Solar Photovoltaic Technology / Solar Energy Technology	3.0	3.0	0.0

### Intermediate Courses

Completion of 3 credits from the listed courses is required.

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PHYSICS 20806290	Renewable Energy for International Development	3.0	3.0	0.0
PHYSICS 20806293	Solar Photovoltaic Installation Lab	1.0	0.0	2.0
NATSCI 20806807	Honors-Renewable Energy	2.0	0.0	0.0
NATSCI 20806299	Independent Study - Science (Renewable Energy Topic)	1.0	3.0	0.0
SOCSOCI 20809269	Energy And Society	3.0	3.0	0.0

Additionally, some previously taken Renewable Energy courses may count towards the requirements. Those courses that qualify would automatically be picked up in the specific individual's Degree Progress (Academic Advising) Report.



# Respiratory Therapist

Program Number: 105151

*An Associate in Applied Science Degree*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Pre-Program Courses

The following courses should be taken during the petition process, prior to program acceptance.

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ENGLISH 10801195	Written Communication	3.0	3.0	0.0
CHEM 20806201	General, Organic & Biological Chemistry	5.0	4.0	2.0

### First Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
RESPC 10515111	Respiratory Survey	3.0	3.0	0.0
RESPC 10515173	Respiratory Pharmacology	3.0	3.0	0.0
MEDTERM 10501101	Medical Terminology	3.0	3.0	0.0
BIOLOGY 20806206	General Anatomy and Physiology	4.0	3.0	2.0

### Second Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
RESPC 10515171	Respiratory Therapeutics1	3.0	2.0	2.0
RESPC 10515172	Respiratory Therapeutics 2	3.0	2.0	2.0
RESPC 10515174	Respiratory/Cardiac Physiology	3.0	3.0	0.0
RESPC 10515175	Respiratory Clinical 1	2.0	0.0	0.0

*Choose from Microbiology or General Microbiology:*

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
BIOLOGY 20806273	Microbiology-University Medical	5.0	3.0	4.0
BIOLOGY 20806274	General Microbiology	5.0	3.0	4.0

### Third Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
RESPC 10515176	Respiratory Disease	3.0	3.0	0.0
RESPC 10515112	Respiratory Airway Management	2.0	1.0	2.0
RESPC 10515113	Respiratory Life Support	3.0	2.0	2.0
RESPC 10515178	Respiratory Clinical 2	3.0	0.0	0.0
RESPC 10515179	Respiratory Clinical 3	3.0	0.0	0.0
SOC 10809197	Contemporary Amer Society	3.0	3.0	0.0

### Fourth Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
RESPC 10515180	Respiratory Neo/Peds Care	2.0	2.0	0.0
RESPC 10515181	Respiratory/Cardio Diagnostics	3.0	2.0	2.0
RESPC 10515182	Respiratory Clinical 4	3.0	0.0	0.0
RESPC 10515183	Respiratory Clinical 5	3.0	0.0	0.0
RESPC 10515184	Neonatal Pediatric Resuscitation (NRP)	1.0	1.0	0.0
PSYCH 10809199	Psychology Of Human Relations	3.0	3.0	0.0



# Retail Management

Program Number: 901044CERT

*Certificate*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Required Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
FSHNMKTG 10104124	Retail Management	3.0	3.0	0.0
SUPDEV 10196191	Principles of Supervision	3.0	3.0	0.0
FSHNMKTG 10104123	Merchandise Plan/Control	3.0	3.0	0.0
FSHNMKTG 10104194	Visual Merchandising	3.0	2.0	2.0



# Risk Management & Insurance

Program Number: 901621CERT

*Certificate*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
INSMGT 10162125	Intro to Business Insurance Contracts (AAI 82)	3.0	3.0	0.0
INSMGT 10162126	Introduction to Loss Investigaton (AIC 33)	3.0	3.0	0.0
INSMGT 10162131	Introduction to Employee Benefits	1.0	3.0	0.0
INSMGT 10162133	Managing Business Risks	3.0	3.0	0.0
INSMGT 10162135	Detecting Employee Fraud	3.0	3.0	0.0
INSMGT 10162140	Risk Management and Insurance Internship	2.0	0.0	0.0



# Risk Management and Insurance

Program Number: 311621

*A One Year Technical Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
BUSADM 10102134	Business Organization, Management, and Ethics	3.0	3.0	0.0
MKTG 10104102	Marketing Principles	3.0	3.0	0.0
INSMGT 10162125	Intro to Property & Casualty Insurance - PreLicensing	3.0	3.0	0.0
INSMGT 10162133	Managing Business Risks	3.0	3.0	0.0
INSMGT 10162135	Detecting Employee Fraud	3.0	3.0	0.0
MATH 10804144	Math of Finance	3.0	3.0	0.0

### Second Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MKTG 10104114	Social Media Principles	3.0	3.0	0.0
FINANCE 10114140	Investments	3.0	3.0	0.0
INSMGT 10162126	Introduction to Loss Investigaton (AIC 33)	3.0	3.0	0.0
INSMGT 10162131	Intro to Life & Health Insurance	3.0	3.0	0.0
INSMGT 10162140	Risk Management and Insurance Internship	2.0	0.0	0.0
ENGLISH 10801195	Written Communication	3.0	3.0	0.0





# Sales Academy

Program Number: 901042CERT

*Certificate*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MKTG 10104104	Selling Principles	3.0	3.0	0.0
FSHNMKTG 10104124	Retail Management	3.0	3.0	0.0
MKTG 10104160	Sales Management	3.0	3.0	0.0



# Sheet Metal Construction

Program Number: 504321

*Apprenticeship Completion*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
SHEETMTL 50432571	Tech Sheet Metal Semester 1	4.0	6.0	2.0

### Second Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
SHEETMTL 50432572	Tech Sheet Metal Semester 2	4.0	6.0	2.0

### Third Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
SHEETMTL 50432573	Tech Sheet Metal Semester 3	4.0	6.0	2.0

### Fourth Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
SHEETMTL 50432574	Tech Sheet Metal Semester 4	4.0	6.0	2.0



# Small Business Entrepreneurship

Program Number: 311451

*A One Year Technical Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
SMLBUS 10145105	Operations Management	3.0	3.0	0.0
SMLBUS 10145106	Small Business Marketing	3.0	3.0	0.0
SMLBUS 10145117	Introduction to Entrepreneurship	3.0	3.0	0.0
SMLBUS 10145185	Customer Service Management	3.0	3.0	0.0
MATH 10804123	Math with Business Applications	3.0	3.0	0.0
ENGLISH 10801195	Written Communication	3.0	3.0	0.0

### Second Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ACCTG 10101106	Accounting Fundamentals	3.0	3.0	0.0
MKTG 10104104	Selling Principles	3.0	3.0	0.0
SMLBUS 10145102	Small Business Development	3.0	3.0	0.0
SMLBUS 10145108	Field Experience	2.0	1.0	0.0
BUSADM 10102143	Management Techniques	3.0	3.0	0.0
	Required Technical Course Selection (See below)	3.0		

### Technical Course Selection Options (Choose 1)

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
BUSADM 10102160	Business Law 1	3.0	3.0	0.0
MKTG 10104111	Innovative Trends in Marketing	3.0	3.0	0.0
MKTG 10104114	Social Media Principles	3.0	3.0	0.0
FSHNMKTG 10104118	Store Operations	3.0	2.0	2.0
MKTG 10104169	Internet Marketing	3.0	3.0	0.0
MKTG 10104180	Global Marketing	3.0	3.0	0.0



# Social Media

Program Number: 902012CERT

*Certificate*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Three Required Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MKTG 10104114	Social Media Principles	3.0	3.0	0.0
GRDSGN 10201198	Social Media/Web Design Strategies	3.0	3.0	0.0
JOURNAL 20801262	Social Media Writing	3.0	3.0	0.0

### One Elective

Student must also complete at least one course (minimum 3 credits) in the following electives:

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MKTG 10104115	Capstone Campaign	3.0	3.0	0.0
MKTG 10104162	Mobile Marketing (Social Media)	3.0	3.0	0.0
VICOM 10206143	Digital Story Telling	3.0	0.0	6.0
JOURNAL 20801253	Documentary Storytelling	3.0	2.0	2.0
SOC 20809291	Technology and Society	3.0	3.0	0.0



# Social Sciences Data Analytics

Program Number: 908092CERT

*Certificate*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Social Science Course

First, complete one (1) course from the listed courses.

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ECON 20809212	Micro Economics	3.0	3.0	0.0
POLISCI 20809227	<i>Political Theory*</i>	3.0	3.0	0.0
PSYCH 20809231	Intro Psychology	3.0	3.0	0.0
SOC 20809203	Intro Sociology	3.0	3.0	0.0
POLISCI 20809221	American Ntl Govt	3.0	3.0	0.0

*\*Students may choose to take American National Government in lieu of Political Theory*

### Specific Courses

After completion of the social science course, complete all three (3) of the listed courses.

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
SOCSOI 20809230	Statistics for the Social Sciences	4.0	4.0	0.0
SOCSOI 20809254	Research Methods for the Social Sciences	3.0	3.0	0.0
SOCSOI 20809294	Data Organization, Visualization, and Management	3.0	3.0	0.0



# Steamfitting-Construction Apprentice

Program Number: 504353

*Apprenticeship Completion*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
STEAM 50435530	Sf Rel Sci/Math/Bpr/Drawing	4.0	6.0	2.0

### Second Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
STEAM 50435531	Sf Refrig/Math Bpr/Drawing	4.0	6.0	2.0

### Third Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
STEAM 50435532	Hydronic Prin/Math/Bpr/Draw	4.0	6.0	2.0

### Fourth Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
STEAM 50435533	Steam Heat Prin/Math/Bpr/Draw	4.0	6.0	2.0

### Fifth Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
STEAM 50435534	Sf Digital Cntr Sys/Comptr Apl	2	3.0	1.0



# Stem Cell Technologies

Program Number: 900073CERT

*Certificate*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester (Spring Only)

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
BIOTECH 10007118	Introduction to Human Stem Cell Concepts	1.0	1.0	0.0
BIOTECH 10007119	Advanced Human Stem Cell Concepts	1.0	1.0	0.0
BIOTECH 10007117	Advanced Human Stem Cell Methods	3.0	0.0	6.0



# Supporting Children's Learning

Program Number: 805222

*Advanced Technical Certificate*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Required Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
EDSVC 10522102	EDU: Techniques for Reading and Language Arts	3.0	1.0	4.0
EDSVC 10522111	EDU: Guiding and Managing Behavior	3.0	2.0	2.0
EDSVC 10522120	EDU: Techniques for Science	3.0	1.0	4.0





# Surgical Technologist

Program Number: 315121

*A One Year Technical Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Pre-Surgical Technologist Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
BIOLOGY 10806177	Gen Anatomy & Physiology	4.0	3.0	2.0
BIOLOGY 20806206	General Anatomy and Physiology	4.0	3.0	2.0
BIOLOGY 20806207	Anatomy and Physiology 1	4.0	3.0	2.0
BIOLOGY 20806208	Anatomy and Physiology 2	4.0	3.0	2.0
MEDTERM 10501101	Medical Terminology	3.0	3.0	0.0
ENGLISH 10801195	Written Communication	3.0	3.0	0.0
SURGT 31512317	Surgical Technologist Functional Microbiology	1.0	2.0	0.0

### First Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
SURGT 31512327	ST: Introduction	4.0	6.0	2.0
SURGT 31512328	ST: Fundamentals 1	4.0	6.0	2.0
SURGT 31512329	ST: Fundamentals 2	2.0	2.0	2.0
SURGT 31512330	ST: Clinical 1	3.0	0.0	0.0

### Second Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
SURGT 31512331	ST: Surgical Procedures	4.0	8.0	0.0
SURGT 31512332	ST: Clinical 2	4.0	0.0	0.0
SURGT 31512334	ST: Clinical 3	4.0	0.0	0.0



# Sustainable Farm to Table: Modern Meat Production

Program Number: 313163

*A One Year Technical Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
CULARTS 10316101	Principles Of Sanitation	1.0	1.0	0.0
CULARTS 10316160	Pasture to Plate	3.0	3.0	0.0
CULARTS 10316161	Protein Identification, Fabrication, and Utilization 1	5.0	1.0	8.0
CULARTS 10316162	Slaughtering	3.0	0.0	6.0
FARMBUS 31090310	Sustainable Agriculture: Meat Animal Production	3.0	6.0	0.0

### Second Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
CULARTS 10316163	Protein Identification, Fabrication, and Utilization 2	5.0	1.0	8.0
CULARTS 10316164	Retail Butcher Shop Operation and Sales	4.0	0.0	8.0
FARMBUS 31090389	Farm to Table Capstone	2.0	0.0	0.0



# Technical Studies Journey Worker

Program Number: 104995

*Associate in Applied Science*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### **Coursework Required for Degree Occupational Specific Courses (39 credits)**

The Occupational Specific Course area is met by a Wisconsin Apprenticeship Completion Certificate issued by the Department of Workforce Development-Bureau of Apprenticeship Standards registered program which included a minimum of 400 hours of prescribed apprentice related instruction in the Wisconsin Technical College System.

### **General Education (21 credits)**

General Education courses must meet the WTCS Associate of Applied Science Degree requirement for a minimum of 21 credits of General Education distributed across the following categories.

<b>General Education Courses</b>	<b>Credits/Units</b>
Communications	6.0
Social Science	3.0
Behavioral Science	3.0
Math and/or Science	3.0
Additional General Education	6.0



# Telecommunications Voice Data Video Installer Technician

Program Number: 504512  
*Apprenticeship Completion*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
TEL&CBL 50451591	Voice Data Video Install Sem 1	2	3.39	0.56

### Second Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
TEL&CBL 50451592	Voice Data Video Install Sem 2	2	3.39	0.56

### Third Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
TEL&CBL 50451593	Voice Data Video Install Sem 3	2	3.39	0.56

### Fourth Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
TEL&CBL 50451594	Voice Data Video Install Sem 4	2	3.39	0.56

### Fifth Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
TEL&CBL 50451595	Voice Data Video Install Sem 5	2	3.39	0.56

### Sixth Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
TEL&CBL 50451596	Voice Data Video Install Sem 6	2	3.39	0.56



# Therapeutic Massage

Program Number: 315371

*A One Year Technical Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MEDTERM 10501153	Body Structure & Function - Used in a variety of Degree Programs	3.0	3.0	0.0
THERMASS 10537136	Musculoskeletal Anatomy for the Massage Therapist	4.0	3.0	2.0
THERMASS 31537340	Therapeutic Massage 1	4.0	2.44	5.55
THERMASS 31537342	Therapeutic Massage 2	4.0	2.44	5.55

### Second Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
THERMASS 10537138	Kinesiology for the Massage Therapist	2.0	2.0	0.0
THERMASS 10537139	Pathology and Medical Terminology for the Massage Therapist	3.0	3.0	0.0
THERMASS 31537344	Specialized Techniques for Therapeutic Massage	4.0	2.0	6.0
THERMASS 31537346	Therapeutic Massage Clinic and Business Practices	4.0	2.0	6.0



# Tool & Die Apprenticeship

Program Number: 504393

Apprenticeship Completion

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
T&D 50439593	Tech T & D Sem 1	2	3-1	

*Alternate First Semester Courses to Satisfy Tech T & D 1 (complete all)*

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MACHT 50420711	Mathematics for the Machine Trades	1.0	1.61	0.38
MACHT 50420715	Mechanical Hardware & Hand Tools for Machine Trades Apprentices	1.0	1.61	0.38

### Second Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
T&D 50439594	Tech T & D Sem 2	2.0	3.0	1.0

*Alternate Second Semester Courses to Satisfy Tech T & D 2 (complete all)*

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MACHT 50420713	Precision Measurement for Machine Tool Trade Apprentices	1.0	1.61	0.38
MACHT 50420714	Engineering Drawings for Machine Tool Trades Apprentices	1.0	1.61	0.38

### Third Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
T&D 50439596	Tech T & D Sem 3	2.0	3.0	1.0

*Alternate Third Semester Courses to Satisfy Tech T & D 3 (complete all)*

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MACHT 50420710	Safety for Machine Tool Trade Apprentices	0.0	0.33	0.16
MACHT 50420720	Cut-Off Machines for Machine Trades Apprentices	0.0	0.33	0.16
MACHT 50420721	Metallurgy & Materials for Machine Trades	1.0	1.61	0.38
MACHT 50420732	Machine Tool Apprenticeship Greening Competencies - SAGE Project	0.0	0.72	0.27

### Fourth Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
T&D 50439597	Tech T & D Sem 4	2.0	3.0	1.0

*Alternate Fourth Semester Courses to Satisfy Tech T & D 4 (complete all)*

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MACHT 50420716	Turning Machines for Machine Trades Apprentices	0.0	0.72	0.27
MACHT 50420717	Milling Machines for Machine Trades Apprentices	0.0	0.5	0.27
MACHT 50420718	Drilling Machines for Machine Trades Apprentices	0.0	0.72	0.27
MACHT 50420719	Grinding Machines for Machine Trades Apprentices	0.0	0.72	0.27

### Fifth Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
T&D 50439598	Tech T & D Sem 5	2.0	3.0	1.0



*Alternate Fifth Semester Courses to Satisfy Tech T & D` 5 (complete all)*

Class Course Number	Class Number	Credits/Units	Hours Per Week	
			Lecture	Lab
MACHT 50420725	Basic CAD/CAM for Machine Trades Apprentices	1.0	1.61	0.398
MACHT 50420726	Jig and Fixture Design for Machine Trades Apprentices	0.0	0.72	0.27
MACHT 50420727	Geometric Design and Tolerancing for Machine Trades Apprentices	0.0	0.72	0.27

**Sixth Semester**

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
T&D 50439599	Tech T & D Sem 6	2.0	3.0	1.0

*Alternate Sixth Semester Courses to Satisfy Tech T & D 6 (complete all)*

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MACHT 50420724	CNC Programming and Planning for Machine Trades Apprentices	1.0	1.61	0.38
MACHT 50420733	CNC Operations for Machine Tool Trades Apprentices	1.0	1.61	0.38

**Seventh Semester**

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
T&D 50439589	Tech T & D Sem 7	2.0	3.0	1.0

*Alternate Seventh Semester Courses to Satisfy Tech T & D 7 (complete all)*

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MACHT 50420728	Stamping Diemaking for Machine Tool Trade Apprentices	1.0	1.61	0.38
MACHT 50420729	Mold Making for Machine Tool Trade Apprentices	1.0	1.61	0.38

**Eighth Semester**

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
T&D 50439591	Tech T & D Sem 8	2	3-1	

*Alternate Eighth Semester Courses to Satisfy Tech T & D 8 (complete all)*

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MACHT 50420723	Electrical Discharge Machining for Machine Tool Trade Apprentices	1.0	0.72	0.27
MACHT 50420712	Communications for Apprentices	1.0	0.77	0.22

**Complete 1 of the following to complete the Eighth Semester Alternate Option**

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
MACHT 50420730	Stamping Design Applications for Machine Trades Apprentices	1.0	1.61	0.38
MACHT 50420731	Molding Die Design Applications for Machine Tool Trade Apprentices	1.0	1.61	0.38



# Veterinary Technician

Program Number: 100911

Associate in Applied Science

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
VETTECH 10091105	Occupational Preparation	1.0	1.0	0.0
VETTECH 10091123	Lab Animal Science 1	2.0	1.0	0.0
VETTECH 10091170	Veterinary Medical Terminology - Veterinary Technician Program	2.0	2.0	0.0
VETTECH 10091171	Animal Care and Management 1	3.0	2.0	0.0
ENGLISH 10801195	Written Communication	3.0	3.0	0.0
BIOLOGY 10806105	Principles of Animal Biology	4.0	3.0	2.0

### Second Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
VETTECH 10091107	Animal Disease 1	2.0	2.0	0.0
VETTECH 10091109	Pharmacology 1 - Animals	2.0	1.0	2.0
VETTECH 10091120	Veterinary Clinical Pathology 1	3.0	1.0	4.0
VETTECH 10091131	Veterinary Office Procedures 1	1.0	1.0	0.0
VETTECH 10091172	Animal Care And Management 2	3.0	2.0	0.0
CHEM 10806178	Life Science Chemistry	5.0	4.0	2.0

### Third Semester (summer)

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
VETTECH 10091158	Internship - Veterinary Technician Program	4.0	0.0	0.0

### Fourth Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
VETTECH 10091108	Animal Disease 2	2.0	2.0	0.0
VETTECH 10091124	Veterinary Clinical Pathology 2	3.0	2.0	0.0
VETTECH 10091127	Surgical Nursing 1	3.0	2.0	0.0
VETTECH 10091128	Animal Nursing 1	2.0	1.0	0.0
VETTECH 10091132	Veterinary Office Procedures 2	1.0	0.0	2.0
VETTECH 10091140	Animal Anatomy & Physiology 1	3.0	1.0	4.0
COMM 10801196	Oral/Interpersonal Communication	3.0	3.0	0.0

### Fifth Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
VETTECH 10091110	Pharmacology 2	2.0	2.0	0.0
VETTECH 10091121	Veterinary Clinical Pathology 3	3.0	1.0	4.0
VETTECH 10091122	Advanced Topics in Veterinary Medicine	1.0	1.0	0.0
VETTECH 10091152	Surgical Nursing 2	3.0	2.0	0.0
VETTECH 10091153	Diagnostic Imaging	3.0	2.0	0.0
SOC 10809197	Contemporary Amer Society	3.0	3.0	0.0
PSYCH 10809199	Psychology Of Human Relations	3.0	3.0	0.0





# Video Production

Program Number: 902061CERT

*Certificate*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
VICOM 10206131	Sound Production Techniques	3.0	0.0	6.0
VICOM 10206130	Video Production	3.0	0.0	6.0
VICOM 10206148	Lighting Techniques for Video Production	2.0	0.0	4.0

### Second Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
VICOM 10206128	Compositing and Special Effects	2.0	4.0	2.0
VICOM 10206129	Motion Design	2.0	0.0	4.0
	<i>Additional Required Course (see below)</i>	2.0		

### Additional Required Course Choices

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
VICOM 10206147	Introduction to DSLR Video Production	2.0	0.0	4.0
VICOM 10206160	Business and the Visual Arts	2.0	0.0	4.0



# Visual Communications

Program Number: 102061

Associate in Applied Arts

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
GRDSGN 10201102	Design Fundamentals	3.0	0.0	6.0
GRDSGN 10201103	Drawing Fundamentals	3.0	0.0	6.0
GRDSGN 10201136	Concept Development	2.0	0.0	4.0
GRDSGN 10201137	Survey of Design Communication	1.0	1.0	0.0
GRDSGN 10201181	Introduction to Computer Graphics	3.0	0.0	6.0
PHOTO 10203130	Intro Digital Photography	2.0	0.0	4.0
ENGLISH 10801195	Written Communication	3.0	3.0	0.0

### Second Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
GRDSGN 10201112	Color	2.0	0.0	4.0
GRDSGN 10201151	Typographic Design	3.0	0.0	6.0
GRDSGN 10201177	Web Page Design	3.0	0.0	6.0
VICOM 10206130	Video Production	3.0	0.0	6.0
VICOM 10206131	Sound Production Techniques	3.0	0.0	6.0
MATH 10804123	Math with Business Applications	3.0	3.0	0.0

### Third Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
GRDSGN 10201121	Graphic Design	3.0	0.0	6.0
GRDSGN 10201195	Advanced Web Page Design	3.0	0.0	6.0
VICOM 10206129	Motion Design	2.0	0.0	4.0
VICOM 10206142	Digital Video Production and Editing	3.0	4.0	2.0
VICOM 10206160	Video Project Management	3.0	0.0	4.0
COMM 10801196	Oral/Interpersonal Communication	3.0	3.0	0.0

### Fourth Semester

VICOM 10206125	Instructional Media Systems	3.0	0.0	6.0
VICOM 10206128	Compositing and Special Effects	3.0	4.0	2.0
VICOM 10206140	Portfolio Preparation - Visual Communication Program	2.0	0.0	4.0
SOC 10809197	Contemporary American Society	3.0	3.0	0.0
PSYCH 10809199	Psychology Of Human Relations	3.0	3.0	0.0
	Elective	3.0		



# Web & Digital Media Design

Program Number: 102013

Associate in Applied Arts

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ENGLISH 10801195	Written Communication	3.0	3.0	0.0
MATH 10804123	Math with Business Applications	3.0	3.0	0.0
GRDSGN 10201102	Design Fundamentals	3.0	0.0	6.0
GRDSGN 10201103	Drawing Fundamentals	3.0	0.0	6.0
GRDSGN 10201136	Concept Development	2.0	0.0	4.0
GRDSGN 10201137	Survey of Design Communication	1.0	1.0	0.0
GRDSGN 10201181	Introduction to Computer Graphics	3.0	0.0	6.0

### Second Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
PSYCH 10809199	Psychology Of Human Relations	3.0	3.0	0.0
GRDSGN 10201112	Color	2.0	0.0	4.0
GRDSGN 10201151	Typographic Design	3.0	0.0	6.0
GRDSGN 10201163	UX Design	3.0	0.0	6.0
GRDSGN 10201177	Web Page Design	3.0	0.0	6.0
GRDSGN 10201198	Social Media/Web Design Strategies	3.0	3.0	0.0

### Third Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
COMM 10801196	Oral/Interpersonal Communication	3.0	3.0	0.0
GRDSGN 10201121	Graphic Design	3.0	0.0	6.0
GRDSGN 10201156	Programming for Designers	3.0	0.0	6.0
GRDSGN 10201157	Social Media Concepting	3.0	0.0	6.0
GRDSGN 10201195	Advanced Web Page Design	3.0	0.0	6.0
VICOM 10206129	Motion Design	2.0	0.0	4.0

### Fourth Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
SOC 10809197	Contemporary American Society	3.0	3.0	0.0
GRDSGN 10201158	Interactive Design Lab	2.0	0.0	4.0
GRDSGN 10201161	Web & Digital Media Design Portfolio Preparation	2.0	0.0	4.0
GRDSGN 10201178	Applied UI Design	3.0	0.0	6.0
GRDSGN 10201189	Web Design Project Management	2.0	0.0	6.0
	<i>Elective</i>	3.0		

### Recommended Electives

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
ITPROG 10152119	Introduction to Programming with JavaScript	3.0	2.0	2.0
GRDSGN 10201153	Integrated Design	2.0	0.0	4.0
GRDSGN 10201183	Electronic Illustration	2.0	0.0	4.0
GRDSGN 10201184	Advanced Design & Layout	2.0	0.0	4.0



# Web & Interactive Design

Program Number: 902011CERT

*Certificate*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Required Courses

#### *First Semester*

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
GRDSGN 10201163	UX Design	3.0	0.0	6.0
GRDSGN 10201178	Web Interactive & Animation	3.0	0.0	6.0
GRDSGN 10201195	Advanced Web Page Design	3.0	0.0	6.0
GRDSGN 10201198	Social Media/Web Design Strategies	3.0	3.0	0.0

#### *Second Semester*

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
GRDSGN 10201156	Programming for Designers	3.0	0.0	6.0
GRDSGN 10201189	Web Design Project Management	3.0	0.0	6.0
VICOM 10206129	Motion Design	2.0	0.0	4.0



# Welding

Program Number: 314421

*A One Year Technical Diploma*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### First Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
INDMANUF 10623200	Interpreting Engineering Drawings	2.0	0.0	4.0
WELD 31442312	Oxy Fuel Welding and Thermal Cutting	2.0	2.0	2.0
WELD 31442314	Arc Welding Theory	2.0	4.0	0.0
WELD 31442315	Basic Arc (SMAW)	2.0	0.0	4.0
WELD 31442318	Gas Tungsten Arc Welding 1 (GTAW/TIG)	2.0	0.0	4.0
WELD 31442323	Basic Gas Metal Arc Welding (GMAW/MIG)	2.0	2.0	2.0
MTLFAB 31457301	Fabrication 1	2.0	1.0	0.0
MATH 31804379	Vocational Math 1	1.0	2.0	0.0

### Second Semester

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
INDMANUF 10623100	Safety for Industry	1.0	0.0	2.0
WELD 31442320	Welding Occupational Development	1.0	2.0	0.0
WELD 31442321	Arc Welding (SMAW) Vertical	2.0	2.0	2.0
WELD 31442322	Advanced Welding Techniques	2.0	2.0	2.0
WELD 31442326	Flux Cored & Advanced Gas Metal Arc Welding (FCAW/GMAW)	2.0	1.0	3.0
WELD 31442328	Gas Tungsten Arc Welding 2 (GTAW/TIG)	2.0	1.0	3.0
WELD 31442390	Fundamentals of Metallurgy	2.0	4.0	0.0
MTLFAB 31457302	Fabrication 2	2.0	1.0	3.0



# Wind Energy Technology

Program Number: 904624CERT

*Certificate*

## Curriculum

The courses listed below outline the requirements for completion for students officially admitted in the 2018-2019 academic year. Requirements for completion may vary depending on the semester in which a student is admitted. Current/continuing students should consult their Academic Requirements report available through their student center account for specific requirements, as requirements are subject to change.

### Required Courses

Class Course Number	Class Name	Credits/Units	Hours Per Week	
			Lecture	Lab
IND MECH 10462320	DC/AC Circuits	3.0	0.0	6.0
RENEWELC 10482101	Introduction to Wind Energy Technology	3.0	1.0	4.0
RENEWELC 10482102	Wind Systems Technician 1	3.0	1.0	4.0
RENEWELC 10482153	Wind Turbine Installation	1.0	0.5	1.0
INDMANUF 10623100	Safety for Industry	1.0	0.0	2.0
INDMANUF 10623200	Interpreting Engineering Drawings	2.0	0.0	4.0
IND MECH 32462303	Industrial Equipment Mechanisms 1	1.0	1.0	1.0
IND MECH 32462306	Industrial Fluid Power 1	1.0	1.0	1.0
IND MECH 10462322	Industrial Electricity and Controls	4.0	0.0	8.0



# Degree Credit Course Descriptions

803 20803221

Hist West Civ 2

3 Credits/Units

809 20809278

Intro to Buddhism

3 Credits/Units

Focuses on Buddhism and the diverse Asian cultures with which it engages from its Indian inception and original encounter with Hindu and Jain traditions to its Chinese (including Japan et. al.) encounter with Daoism and Confucianism. Finally, Tibetan (including Mongolian et. al.) developments and development of Tantric tradition will be addressed along with the emergence of Buddhism in the West. This course will encompass not only intellectual but artistic, social and historical developments. Students will acquire factual knowledge through formative assessments such as on-line quizzes, peer-to-peer review and in-class debates leading to four summative assessment midterms. Students will be able to synthesize diverse data through a research project developed through an outline, paper and final documentary project.

ACCTG 10101106

Accounting Fundamentals

3 Credits/Units

Surveys accounting principles and practices with an emphasis on interpretation, rather than preparation, of financial statements. Presents basic business terminology, cash basis and accrual basis accounting, ratio analysis, payroll, and budgeting. This class is not for students majoring in accounting.

ACCTG 10101111

Accounting 1 - Principles

4 Credits/Units

Introduction to the field of accounting. The accounting cycle of journalizing transactions, posting, adjusting and closing entries, as well as the preparation of accounting statements is emphasized for service industries and merchandising concerns. Details of accounting for cash and receivables are studied. An introduction to a computerized accounting system is also included.

ACCTG 10101113

Accounting 2 - Principles

4 Credits/Units

Procedures of accounting for partnerships and corporations. Additional topics include fixed assets, current liabilities and payroll, long-term liabilities, investments, statement of cash flows, analysis of financial statements, and may include an introduction to cost accounting.

ACCTG 10101118

Management Accounting

4 Credits/Units

Emphasizes the managerial use of accounting reports, the problem-solving functions of accounting in relation to current planning and control, performance evaluation, long-range planning, budgets and cost-volume-profit relationships.

ACCTG 1010121

Accounting 3-Intermediate

4 Credits/Units

This intermediate-level course builds on the material covered in the Accounting Principles-1 and -2 courses. It expands on earlier coverage of both the income statement and balance sheet. Revenue recognition concepts and methods are covered. Emphasis is also placed on each classification of asset. This emphasis includes in-depth coverage of cash, receivables and inventory. Coverage also includes operational asset acquisition, depreciation, and disposal. Present value concepts are studied and applied. Excel spreadsheet software is used in this course.

ACCTG 1010122

Accounting 4-Intermediate

4 Credits/Units

Emphasizes analysis of financial statements. Generally accepted accounting principles are applied in the preparation, analysis and interpretation of financial statements. Particular emphasis is applied to valuation of current and long-term liabilities and stockholders' equity, and earnings per share. Special topics included are deferred income taxes, long-term investments, and leases. Further consideration is applied to errors and their correction, and statements of cash flow. Comparison and analysis is also made between GAAP and international standards(IFRS).

ACCTG 1010123

Tax 1

4 Credits/Units

Introduction to federal and state income tax laws with an emphasis on personal taxes. These areas are included: filing status, personal exemptions and standard deductions; income recognition, itemized deductions, credits, depreciation, gains and losses, and sole proprietorship taxation. The course also requires the preparation of a series of individual income tax returns.

ACCTG 1010125

Cost Management

4 Credits/Units

This course presents typical accounting methods and processes that are used for collecting information for effective decision making for both manufacturing and service environments. Areas emphasized include job order costing, process costing, standard costing, activity based costing, budgeting, cost allocations, cost-volume-profit analysis and capital investment analysis. Students will be required to prepare and analyze various management reports.

ACCTG 1010137

Computerized Accounting Applications

2 Credits/Units

Provides practical experience developing and applying flexible solutions to accounting problems using Excel. Spreadsheet tools that may be utilized include analysis formulas, cross-referencing and linking, lookup, statistical, date/time, database and financial functions; tables, pivot tables, dashboards, transferring Excel information into other programs, logical statements (IF); what-if tools, charting and macros. Students will also benchmark ten-key data entry speed and improve this skill as needed.

ACCTG 1010138

Accounting And Payroll Systems

3 Credits/Units

A survey of accounting and payroll systems covering procedures and methods to capture data and report financial information. Specific topics include flowcharting, internal controls, and transaction work in both manual and computerized environments. Special emphasis is also placed on payroll calculations and the processing of payroll information. Lab intensive course involving hands-on experience with Excel spreadsheet software and accounting software.

ACCTG 1010139

QuickBooks-Beginning

1 Credits/Units

Introduction to QuickBooks-Beginning small business accounting software. Students become familiar with QuickBooks features and learn to use the software to set up a new company, manage business revenue and expenses, process payroll, reconcile bank accounts, track inventory and create useful reports. A tutorial approach will be followed using a textbook and practice problem templates. Prerequisites:

1. Course work or experience in Microsoft Windows and using email is required.
2. Accounting program students should take this course the second half of the semester they take 10-101-111 Accounting 1- Principles (or



they may take it in a semester after they have completed Accounting-Principles). (Non-program students working in the accounting field or with small business management experience should obtain permission from the instructor to register, and take the course in a section during the first half of a semester.

- ACCTG 10101140                      Accounting/Business Internship                      3 Credits/Units**  
Opportunity for students to apply accounting or business skills in a real life business environment. Activities may include working with bank and account reconciliations, accounts payable preparation, spreadsheet work and development, preparing and analyzing financial reports, tax return preparation and other business related duties as requested by the employer.
- ACCTG 10101141                      QuickBooks-Intermediate                      1 Credits/Units**  
QuickBooks-Intermediate is the next course offering after QuickBooks-Beginning which provides student users with in-depth material on advanced topics. Topics will include inventory; Sales Tax; Time Tracking; Payroll Setup and Processing; Estimates and Sales Orders; Budgeting, Forecasting & Business Planning; and Adjustments and Year-End Procedures. A tutorial approach will be followed using a textbook and practice problem company files.
- ACCTG 10101142                      Accounting Capstone                      3 Credits/Units**  
This course will provide students an opportunity to demonstrate their attainment of program outcomes through the completion of a project. This project accounts for a small business through the accounting cycle, review of internal controls, and financial analysis.
- ACCTG 10101154                      Payroll Accounting                      1 Credits/Units**  
This course introduces the student to the many aspects of payroll accounting, administration, and management. The course is intended for accounting students, other business students and outside professionals who have a need or interest in understanding the laws and regulations, the calculations (including all payroll taxes), the government reporting and the accounting entries related to the payroll function.
- ADMINPRF 10106101                      Keyboarding Introduction                      1 Credits/Units**  
Learn computer keyboarding (alphabetic and numeric keypad) using proper technique; develop speed and accuracy.
- ADMINPRF 10106102                      Introduction to Office Professions                      1 Credits/Units**  
Explore the Administrative Professional and Office Specialist programs! Discover the knowledge, attitudes, and skills necessary to succeed personally and professionally in this career field. Experience an office environment by connecting with a mentor at his or her job site. Additional topics include career success, campus resources, skills portfolio, core workplace skills, internship requirements, professional organizations, personality traits, values and work environment preferences, and self-assessment of present career skills. (Formerly called Professional Profile)
- ADMINPRF 10106106                      Business Writing and Research                      3 Credits/Units**  
Apply effective writing strategies to compose employment-related correspondence including business letters, memos, informal reports, and formal reports. Lessons will include the development of using correct-order writing plans as well as the practice of appropriate tone, etiquette, and style. Students will apply writing, researching, and critical thinking skills in the context of real business writing scenarios. Reinforcement of grammar, punctuation, and proofreading will be integrated throughout the course.
- ADMINPRF 10106107                      Business Document Applications                      3 Credits/Units**  
Emphasis is placed on learning to use Microsoft Word software to efficiently and effectively produce business documents. Students will apply Word skills to solve practical problems in a project-based format. Explore fundamentals and best practices in document creation, editing, formatting, collaboration, tables, mail merge, desktop publishing, themes, templates, forms, and macros.
- Recommended prerequisites: Windows competency, including solid file management skills; ability to key 30 WPM. Equipment requirements: Access to a PC Windows platform computer and Microsoft Office 2016 or Office 365, including Word, PowerPoint, Excel, Outlook, Access, and Publisher.
- ADMINPRF 10106108                      Proofreading And Editing                      3 Credits/Units**  
Review the parts of speech and basic grammar. Develop proofreading skills including punctuation, grammar, spelling, and usage errors. Edit business documents for appropriate content and clarity.
- ADMINPRF 10106109                      Business Spreadsheet Applications                      3 Credits/Units**  
Create professional data-driven workbooks utilizing Microsoft Office Excel spreadsheet software. Create charts and complex formulas; utilize advanced functions and apply conditional formatting; work with multiple worksheet, workbooks, and templates; develop an Excel application with data validation, worksheet protection, and macros; work with financial tools and functions; perform what-if analysis with Scenario Manager, Data Tables, and Solver. Recommended prerequisite: Windows competency, including solid file management skills
- ADMINPRF 10106133                      Document Formatting                      2 Credits/Units**  
Apply industry-standard format to business correspondence including memorandums, business letters, and publications. Format tables, design multicolumn documents, generate fillable forms, use SmartArt, and apply graphics.
- ADMINPRF 10106134                      Software Projects                      2 Credits/Units**  
This is a capstone course for the Administrative Professional and Medical Administrative Specialist programs. This course is based upon prior knowledge students learned in previous courses and uses multiple software applications, including but not limited to Microsoft Word, Excel, PowerPoint, and Access. Students manage information, apply critical- thinking skills to solve problems, research topics, and compose business documents, spreadsheets, databases, and presentations.
- ADMINPRF 10106139                      Keyboard Skillbuilding                      1 Credits/Units**  
Refine keyboarding technique, increase speed, and improve accuracy through individualized practice. The student must be able to touch type, which is defined as using the correct key reaches and not looking at the keys while typing, at a minimum rate of 25 words per minute. Equipment requirement: Access to Internet.
- ADMINPRF 10106164                      Customer Contact Skills                      1 Credits/Units**  
Find ways to deliver outstanding customer service. Improve verbal, nonverbal, and listening communication skills; develop problem- solving





techniques to deal with a variety of customers; and find ways to add value to the customer interaction. Examine how technology impacts customer service, review how service breakdowns occur and how to recover, and develop campaigns for building customer loyalty.

**ADMINPRF 10106172                      Administrative Office Management                      3 Credits/Units**  
This course emphasizes the skills necessary to succeed in a global business office in the 21st century. Topics include: teamwork and interpersonal skills, travel arrangements, meetings, minute taking, online survey creation, parliamentary procedure, management and leadership skills, cultural diversity, and time, stress and anger management.

**ADMINPRF 10106182                      Information Technology Concepts                      3 Credits/Units**  
Learn about the most-up-to-date technology in an ever-changing world. Students will gain an in-depth understanding of why computers are essential in business and society, and learn the fundamentals and terms associated with computers and mobile devices, the Internet, networks, programs and apps, cloud computing, digital safety, IT ethics and security while using available technologies including video conferencing.

**ADMINPRF 10106190                      Professional Development                      1 Credits/Units**  
Build an electronic portfolio by creating a resume, cover letter, and thank you letters. Enhance skills in interviewing, requesting references, and networking.

**ADMINPRF 10106194                      Career Management                      1 Credits/Units**  
Identify factors associated with job success: personal branding, employee benefits, ethics in the workplace, performance appraisals, proper etiquette, harassment, conflict resolution, and adopting change. NOTE: Recommended to have taken Written Communication (10-801-195) or Business Writing & Research; Student should be in last semester of the program

**ADMINPRF 10106195                      Internship - Administrative Professional & Medical Administrative Specialist                      1 Credits/Units**  
Students complete a 72-hour internship in an office setting supervised by a cooperating employer. The office setting is a business or medical office depending on the student's program. Students will correspond with the Instructor via video conferencing and written reports. Must be in the last semester before graduation.

**ADMINPRF 10106231                      Business Presentations and Publications                      3 Credits/Units**  
Explore key graphic design principles and best practices for designing and presenting. Create professional business presentations using Microsoft PowerPoint, Prezi, and/or other presentation software. Work with graphics, slide master, sound, video, charts, and tables. Add transitions, narration, and animation to enhance presentations. Explore desktop publishing using Adobe InDesign. Apply basic design principles by learning how to set type, add graphics, and place text. Develop eye-catching handouts, flyers, postcards, and posters. Prerequisite: Windows competency, including solid file management skills.

**ADMINPRF 10106240                      Business Information Management                      3 Credits/Units**  
Concentrates on the fundamentals of managing the record life cycle; rules for paper and electronic filing systems; charge-out procedures; retention schedules; transfer methods; control measurements; imaging systems and information security. Incorporates database skills including how to plan, create, and manage data; modify a database structure; relate tables; find, filter, query and sort data; create forms and reports; import, export, and link database properties.

**AGMECH 10070150                      Precision Farming (Ag Management Solutions)                      1 Credits/Units**  
This course will introduce students to GPS and how it works with agricultural machinery functionality. Basic GPS equipment guidance systems set-up, operation and diagnostics will be utilized. Types of GPS signals and their applications currently used on John Deere agricultural equipment will be covered.

**AGMECH 10070175                      Power Transmissions                      4 Credits/Units**  
The course covers the operation, power flow, diagnosis and servicing of collar shift, synchronized and power shift transmissions. The class also discusses the operation and service of wet and dry clutches differentials, planetary drive axles, P.T.O. drives and mechanical front wheel drives.

**AGMECH 10070176                      Electrical Systems                      5 Credits/Units**  
This class begins with a discussion of the laws of electricity as they relate to the operation of the charging, starting and lighting systems. Diagnostic testing and troubleshooting will be demonstrated on alternators, starters and lighting systems. Methods of repair will be demonstrated where methods are currently used at the dealerships.

**AGMECH 10070177                      Fuel Systems                      3 Credits/Units**  
This course covers the theory of operation, construction and service of diesel engine fuel systems. Also reviewed are diesel engine compression, ignition, theory combustion, chamber design and procedures for installing, timing of fuel quantity for proper combustion. Electronic fuel delivery will be discussed as it relates to engine operation.

**AGMECH 10070178                      Implements 2                      3 Credits/Units**  
This course provides instruction in the theory of operation and service of the grain combine. Students will learn how the combine processes grain, the basic components, means of service and repair of the machine. Lab work is designed to provide students with hands-on experience on combines, grain platforms and corn heads. Service and adjustment activities include the cylinder, gear boxes and power transmission components.

**AGMECH 10070181                      Implements 1                      4 Credits/Units**  
This course provides instruction in the theory of operation, adjustment and service of planting equipment. Students will learn the operation and service of corn planters and grain drills. Emphasis is given to how the corn planter seed meters work and how the attachments operate. In addition, the course also provides information on the theory, operation, adjustment and service of forage harvesting machines. Machines covered include mower conditioners, square balers, round balers and forage harvesters. Bearings, clutches, U-joints and other power transmission components also are covered.

**AGMECH 10070182                      Accessories & Electronics                      3 Credits/Units**  
This course will introduce the student to the type and operation temperature, pressure and speed sensors. Students will be introduced to





- ANIM 10207117**                      **Figure Drawing for Concepting**                      **3 Credits/Units**  
An introduction to drawing the human figure for the purpose of creating concept art for 3D industries. Course syllabus includes approaches to gestural sketching, proportional and anatomical construction, complete figure studies, and digital techniques for making corrections, variations, and enhancing productivity based on current 3D industry practices.
- ANIM 10207120**                      **Animation 2**                      **2 Credits/Units**  
Continuation of the study of motion with emphasis on character movement and animation. A combination of lectures and class demonstration introduces students to forward- and inverse-kinematics, and gradually more complex rigging. The continued study of body mechanics and dynamics by analyzing classic and contemporary professional animation will assist students in translating their own ideas into credible motion in digital form.
- ANIM 10207122**                      **Advanced Digital 3D**                      **2 Credits/Units**  
A continuation of Texturing 1, this course moves students into more complex modeling and surfacing challenges. Specialized techniques such as patch- and advanced spline-modeling are explored as well as specialized shaders, normal maps, and other advanced surfacing options. Students complete the semester with the design and creation of a complex, multi-part object correctly constructed, linked and boned for advanced animation techniques.
- ANIM 10207130**                      **Digital Set Design 1**                      **2 Credits/Units**  
Students concentrate on the planning and construction of architectural and environmental spaces in game-engine software. Basic architectural principles as they relate to animation and appropriate effects for specific themes are explored as well as environmental factors relating to the creation of credible worlds. Class activities include the exploration of specialized perspective problems, world- specific texture-sets, lighting and composition.
- ANIM 10207131**                      **Animation 3**                      **2 Credits/Units**  
By exploring various off-computer techniques for analyzing character motion, students practice translating their observations into digital form and applying them to their own creations. Extensive study of actual footage and professional work helps students make the conceptual transition from real-world to believable virtual motion.
- ANIM 10207133**                      **Digital Set Design 2**                      **2 Credits/Units**  
Students build upon skills learned in Digital Set Design 1 and work toward the completion of a functional digital environment. In- engine animation and playback is discussed along with further studies in architectural principles, interior and exterior lighting, textures and fine-tuning the final appearance of each student's own creation.
- ANIM 10207134**                      **Modeling 3**                      **2 Credits/Units**  
A continuation of modeling skills developed in first two semesters with concentration in creating character and creature models correctly structured for rigging and animation. Realistic and stylized designs are explored as well as advanced UV and basepage techniques.
- ANIM 10207139**                      **Design & Color for Concepting**                      **2 Credits/Units**  
An introduction to the fundamental principles of design and how they relate to both 2D and 3D environments. The course examines differences in interpretation when design principles are applied to a variety of 2D and 3D scenarios. The second half of the semester introduces primary, secondary and tertiary colors leading to an in-depth exploration of color theory and how these concepts relate to 3D media.
- ANIM 10207140**                      **Advanced Animation Studio 1**                      **2 Credits/Units**  
This is the first class in a two-part comprehensive animation studio series. It is a project-based course in which students develop their own projects in consultation with instructors. Extensive studio time provides advanced students with large blocks of instructor and equipment access and allows an in-depth study of particular aspects of digital 3D targeting the completion of a professional quality demo-reel. Group study and interaction is encouraged and detail job tracking is required.
- ANIM 10207141**                      **Production Studio**                      **3 Credits/Units**  
Production Studio is an advanced course in multiple aspects of digital 3D motion. The focus of this course is to develop more intricate and complex character and mechanical animation.
- ANIM 10207142**                      **Animation Internship**                      **2 Credits/Units**  
Students work on-site in a professional setting or work on a specific task in consultation with a professional mentor. Regular reviews with a professional are scheduled to assess the student's progress and work quality. Details of internship arrangements can be developed between the student and the participating company as long as specific minimum course requirements are fulfilled.
- ANIM 10207143**                      **Animation Portfolio**                      **2 Credits/Units**  
Each student finalizes a series of animations and other artwork to be posted online highlighting his/her capabilities. The collection is targeted to potential employers and/or to four-year animation degree programs for further education. In addition, each student prepares a professional-level 2D portfolio and a personal ID package (stationary, business cards, etc.) and is required to participate in the year-end portfolio show in conjunction with other art degree programs.
- ANIM 10207144**                      **Advanced Animation Studio 2**                      **2 Credits/Units**  
This is the second class in a 2-part comprehensive studio series. It is a project-based course in which students develop their own projects in consultation with Instructors and industry professionals. Extensive studio time provides advanced students with large blocks of Instructor and equipment access, and allows an in-depth study of particular aspects of digital 3D targeting the student's particular interests. Group study and interaction is encouraged and detailed job-tracking is required.
- ANIM 10207150**                      **Animation Concepts 1**                      **3 Credits/Units**  
Intensive study of the process of developing visual concepts for 3D execution. Course Traditional and digital drawing techniques cover the design of architectural, mechanical, vehicle, and other assets related to the creation of credible and functional 3D environments.
- ANIM 10207151**                      **Animation Concepts 2**                      **2 Credits/Units**  
Intensive study of the process of developing visual concepts for 3D execution, with concentration on the development of character and creature ideas for 3D execution. Traditional and digital drawing techniques cover the design of functional body-mechanics, personality traits





understanding of the Arabic writing system. This course, combined with Intro to Modern Arabic 2 transfers to the University of Wisconsin-Madison as equivalent to the 5 credit African Lang. & Lit 321: First Semester Arabic.

**ARABIC 20802241**                      **Intro to Modern Arabic 2**                      **3 Credits/Units**  
Intro to Modern Arabic 2 builds on the basic understanding of the Arabic sound and writing system and conversational skills in Modern Standard Arabic established in Intro to Modern Arabic 1. Modern Standard Arabic is the language of newspapers and literature, as well as that of formal speeches and news broadcasts. This course fulfills the needs of those wishing to pursue studies of the Qur'an and classical texts as well as those wishing to be fluent in contemporary Arabic in both its written and formal spoken forms. Knowledge of this form of Arabic can serve as a basis for further studies of regional dialects. At the conclusion of the course, students will be able to speak and write about themselves with complete control of the Arabic writing system. This course, combined with Intro to Modern Arabic 1 transfers to the University of Wisconsin-Madison as equivalent to the 5 credit African Lang. & Lit 321: First Semester Arabic.

**ARCHT 10614100**                      **Introduction to Architecture**                      **3 Credits/Units**  
This course examines the way one perceives the man-made environment, how to better understand it and related disciplines. An overview of architecture and its elements including design, history, terminology, sustainable design, urban design and landscape architecture will be presented.

**ARCHT 10614101**                      **Architectural Theory 1**                      **3 Credits/Units**  
A survey and examination of key underlying design tenets, theory, philosophies; and social, cultural and behavioral factors in applied environmental settings. Theoretical design principles are introduced in lecture and readings that incorporate seminal works of architecture. Students combine the creation of collage diagram analysis with intensive writing experiences as a model for learning theoretical design principles.

**ARCHT 10614111**                      **Architectural Graphics 1**                      **3 Credits/Units**  
Emphasizes architectural drafting and the theory of drafting. Proper architectural lettering, line work and use of drafting tools are discussed. Orthographic projector, isometric, axonometric perspective drawings, contours, shade and shadow are covered in the first semester. Massing studies using the software "Sketch up" is also incorporated.

**ARCHT 10614112**                      **Architectural Graphics 2**                      **3 Credits/Units**  
Using the latest release of AutoCAD, students develop a preliminary set of Construction Document drawings for a residential project. Emphasis is placed on CAD standards, drawing set organization, building element coordination and plotting. Drawing types range in scale from site plans to wall sections. Relevant zoning and building code requirements are reviewed. Prerequisites: 10-614- 111 and 10-614-113.

**ARCHT 10614113**                      **Intro To CAD-Architectural**                      **3 Credits/Units**  
Major emphasis is placed on learning the basic commands necessary to complete two-dimensional construction drawings for the architectural community. Approximately 50 percent of the course is spent on lecture/demonstrations concerning software commands and procedures, while 50 percent of the course is spent in on developing operating skills. A basic understanding of Windows and file management is necessary for success within the course. The current version of AutoCAD is used as the teaching tool. Co-requisite: Architectural Graphics 1, 10-614-111, or consent of instructor.

**ARCHT 10614114**                      **Advanced CAD**                      **2 Credits/Units**  
Students use the latest release of AutoCAD to develop CAD Manager skills by using the program efficiently and consistently. Topics include trouble shooting, file management, CAD standards, template creation, plotting styles, keyboard commands, dynamic block creation, macros and custom toolbars. Working in project teams, students will produce a preliminary set of coordinated AutoCAD drawings for an offsite owner.

**ARCHT 10614115**                      **Introduction to Revit**                      **3 Credits/Units**  
Students are introduced to the industry's leading 3D Building Information Modeling (BIM) software, learning commands for creating parametric BIM models that incorporate both architectural and structural components. These models are used to develop and redline a set of commercial construction documents incorporating site plans, floor plans, elevations, sections, details, schedules and renderings. Family creation is introduced.

**ARCHT 10614118**                      **Design Communications**                      **2 Credits/Units**  
Studio course in techniques and conventions of graphic communication as an aid in the design process. It covers graphic principles, media, sketching and perspective drawing techniques. Emphasis is on developing drawing and rendering skills using pencil, color marker and pastels. Students generate sketches, presentation plans, one- and two-point perspective drawings and use these drawings to generate a variety of architectural presentations. Prerequisite: 10-614-111.

**ARCHT 10614119**                      **Digital Architectural Rendering**                      **1 Credits/Units**  
Students are introduced to a variety of architectural digital rendering techniques and workflows for a variety of industry leading platforms. Workflows for producing architectural graphics for multiple project phases from programming and conceptual design to photorealistic rendering will be explored. Students will gain real world rendering workflows for projects in Autodesk Revit, Autodesk 3DS Max and SketchUp.

**ARCHT 10614120**                      **Professional Practice**                      **2 Credits/Units**  
This course will examine the professional environment in which the architectural technician works related to the organization and conduct of a design/construction practice. Learners will examine this aspect of the profession through a number of different lenses: procuring employment, state laws governing architectural practice, project budgeting, client management, project delivery/team organization modes, contracts and legal issues, risk and liability management, product specifications and substitutions, and construction administration, dispute resolution, and social responsibility. The goal of the course is to broaden and deepen learners' understanding of the profession, its role in society, and his or her place in it.

**ARCHT 10614121**                      **Construction Materials - Architectural Technology Program**                      **3 Credits/Units**  
Emphasizes materials used in building construction and their manufacture and application in various construction systems from wood frame to masonry, steel and precast concrete. Basic properties of materials are discussed as well as how, when and where to use them.

**ARCHT 10614122**                      **Revit MEP**                      **2 Credits/Units**  
Using the industry's leading 3D architectural modeling software, students will incorporate mechanical, electrical, and piping systems into an





architectural BIM model. Building Information Modeling (BIM) concepts and advantages will be discussed throughout the course. Coursework will run in conjunction with skills developed in Intro to Revit. Students will be developing vignettes for each building system type using Revit.

- ARCHT 10614123                      Electrical and Mechanical Systems                      4 Credits/Units**  
Covers the basic principles of plumbing, electrical, lighting, daylighting, HVAC, fire safety, sprinklers, energy efficient design, vertical transportation and acoustics found in buildings today. Particular attention will be paid to the International Building Code and its impact on these systems. Guest speakers and a small student designed project will augment the course.
- ARCHT 10614132                      Building Estimating                      2 Credits/Units**  
Studies problems and responsibilities of the estimator, including plans, specifications and published construction cost data. Emphasis is on understanding estimating techniques and methods of preparing estimates and take-offs.
- ARCHT 10614135                      Building Codes                      2 Credits/Units**  
Emphasis is placed on the study of the International Building Code and the Uniform Dwelling Code. The student will become familiar with using the code and will acquire a general knowledge of codes, standards and federal regulations.
- ARCHT 10614142                      Architectural Detailing                      2 Credits/Units**  
This course provides an in-depth study of materials and building assemblies as it pertains to accepted practices in architectural detailing and design. Emphasis will be placed on detailing techniques commonly found in commercial construction. Topics included are masonry, steel, and concrete construction. Field trips and guest lecturers from the architectural, engineering and construction industry will supplement the course.
- ARCHT 10614145                      Architectural Design Studio                      4 Credits/Units**  
Covers the basic skills used in the building design process. Introduces the student to building siting and massing, program analysis, building circulation, space flow diagrams, adjacency studies, and building context. The design process continues with the integration of the structural steel framing. The student will design the framing plans as well as complete the calculations for the sizing of the individual steel members.
- ARCHT 10614152                      Introduction to Sustainable Design and LEED                      2 Credits/Units**  
The course provides the learner with an overview of sustainable design relevant to the design and construction industry, while concentrating on accreditation within the US Green Building Council LEED® (Leadership in Energy and Environmental Design) v.3 sustainable design program. Concepts discussed: the need for sustainable design, architects as stewards of the environment, construction activities, site selection, stormwater management, landscaping choices, building energy and atmosphere, indoor environmental quality, materials and resources and the Green Associate LEED® exam. Guest speakers and field trips provide additional support.
- ARCHT 10614154                      Site Design                      3 Credits/Units**  
Introduces the student to the basic design issues of the urban environment. Explore building massing and site analysis as they relate to the urban context. Learn about vehicular and pedestrian circulation, zoning analysis, contour manipulation and basic plant material selections. Course places a strong emphasis on in-class presentations utilizing the use of multimedia digital technology.
- ARCHT 10614155                      Advanced Revit                      2 Credits/Units**  
Students develop proficiency in skills introduced in Intro to Revit, including modeling, family creation, design options, importing, rendering, and exporting with the current version of Revit Architecture. Particular emphasis is placed on advanced modeling and family creation. This class also introduces new concepts related to creating and managing 3D BIM models including defining site topography and site-related features, massing, phasing, file linking, and worksharing. Competence will be demonstrated through performance on the CAD station, through saved projects, and through submitted printouts that will include both construction documents and rendered images. For one project, students will be working within a group and submitting a joint project, during which students will develop the essential worksharing skills required to complete large-scale building projects that require multiple drafters. Prerequisites: Architectural Graphics 1, 10-614-111; Intro to CAD-Architectural; 10-614-113; Intro to Revit, 10-614-115.
- ARCHT 10614178                      Building Structures                      4 Credits/Units**  
Study of forces that act on a structural member. These forces affect all types of structures including parts of machines. This course will emphasize the use of statistics as it applies to building structures. Students look at types of force systems, vectors, resultant forces, moments, truss analysis and reactions. Strength of Materials provides the various analytical tools necessary for the sizing of specific structural members based on the loading conditions and strength of the material. The student will gain the knowledge necessary to calculate the sizes of members made of specific materials including wood, steel and masonry.
- ARCHT 10614193                      Job Orientation                      1 Credits/Units**  
Occupational information prepares students to seek employment. Includes personal data sheets, job interviews, portfolio design, and letters of introduction and recommendation. Former graduates are invited to discuss needs of students before employment. Representatives of labor, management, business and the professions are invited to discuss points of interest toward becoming an employee. Prerequisite: third-semester standing.
- ARCHT 10614194                      Portfolio Preparation for Architectural                      1 Credits/Units**  
Techniques and conventions of developing an architectural portfolio will be addressed as students generate personal portfolios for use in seeking employment. Emphasis is on developing professional documentation of work accomplished in school and related activities, both in hard copy and electronic format. Former graduates are invited to discuss current trends in hiring and what makes a portfolio stand out. Each student will display their portfolio in the annual Architectural Technology Portfolio Show to take place each Spring.
- ART 20815200                      Art History: Ancient to Medieval                      3 Credits/Units**  
Surveys the development of Prehistoric, Ancient through Medieval art and architecture found throughout Europe, the near East and Egypt. Emphasis is given to the form and meaning of a select group of artworks and buildings, their stylistic tendencies and respective movements in the history of art, and the socio-political and cultural contexts for these movements.
- ART 20815201                      Basic Design                      3 Credits/Units**  
Design Fundamentals introduces students to the elements of art (line, texture, color, shape and value). Students will investigate how these elements can be manipulated using various principles of design to achieve different effects. Basic color theory will be covered.



<b>ART 20815202</b>	<b>Color &amp; Design</b>	<b>3 Credits/Units</b>
Color and Design provides involvement with practical and theoretical color problems while building knowledge of advanced design concepts.		
<b>ART 20815203</b>	<b>3-Dimensional Design</b>	<b>3 Credits/Units</b>
In this course students explore different ways of manipulating form and space. Projects will introduce students to basic techniques such as modeling, construction and carving.		
<b>ART 20815205</b>	<b>Drawing Fundamentals</b>	<b>3 Credits/Units</b>
This is an introductory drawing class emphasizing sound craftsmanship and the study of basic freehand drawing from direct observation. Class topics include the study of perspective, proportion, composition, and properties of light and shade. Students will explore a variety of drawing media and techniques.		
<b>ART 20815208</b>	<b>Contemporary Art Survey</b>	<b>3 Credits/Units</b>
Examines contemporary art trends, focusing on European and American art produced from 1950-the present. Artists' motivations, intentions, and processes will be considered in relationship to general developments in contemporary art. Traditional media considered will include painting, sculpture, and photography. Recent innovations in media will also be recognized, such as installation, performance, and new technology.		
<b>ART 20815210</b>	<b>Art History: Renaissance to Modern</b>	<b>3 Credits/Units</b>
Surveys the development of European and American art and architecture from the time of the early Renaissance in Italy through the first quarter of the 20th century. Emphasis is given to the form and meaning of a select group of artworks and buildings, their stylistic tendencies and respective movements in the history of art, and the socio-political and cultural contexts for these movements.		
<b>ART 20815211</b>	<b>Art History: Women In Art</b>	<b>3 Credits/Units</b>
This course will present a broad survey of selected outstanding women artists from the 12th to the 20th century. The focus is on painting, sculpture and mixed media from the Medieval Era to the Modern Era, considering a variety of individual European and American artists and their works.		
<b>ART 20815214</b>	<b>Modern Art Survey</b>	<b>3 Credits/Units</b>
Introduces students to modern art's most influential movements, focusing on European and American art produced between 1880- 1950. Painting, sculpture, and photography will be the primary media considered for this time. The principal ideas of these movements will be discussed in relation to their wider intellectual, social, technological, and aesthetic context.		
<b>ART 20815215</b>	<b>Drawing 2</b>	<b>3 Credits/Units</b>
Drawing 2 explores a variety of drawing media and techniques through projects that encourage students to consider subject/content relationships. Students will develop conceptualization skills that will prepare them for working on independent projects.		
<b>ART 20815219</b>	<b>Life Drawing 1</b>	<b>3 Credits/Units</b>
Life Drawing introduces students to drawing the figure in a variety of situations. Students will use different drawing media and techniques as they explore both descriptive and expressive ways to depicting the human figure. Includes study of human anatomy.		
<b>ART 20815220</b>	<b>Life Drawing 2</b>	<b>3 Credits/Units</b>
Continuation of life drawing with emphasis placed on expression, articulation, dramatic effect and refinement of technique.		
<b>ART 20815221</b>	<b>Life Drawing 3</b>	<b>3 Credits/Units</b>
Continued emphasis on expression, articulation, and refinement of technique with increased attention to personalized direction.		
<b>ART 20815232</b>	<b>Digital Design Fundamentals</b>	<b>3 Credits/Units</b>
A comprehensive course to introduce the tools and functions of four essential digital design programs. Learn to create and edit vector artwork in Adobe Illustrator, create and edit photographic content in Adobe Photoshop, develop 3-D forms with SketchUp, and build a website with Adobe Dreamweaver to display a portfolio of the art works and projects created. Out of class work time and reading and some writing is required in addition to in class instruction, work time and critique participation.		
<b>ART 20815235</b>	<b>Creative Photography</b>	<b>3 Credits/Units</b>
Reviews and expands digital camera and Photoshop techniques. Expression through photography as a fine art is developed through a series of problems stressing personal vision and mastery of the photographic media.		
<b>ART 20815236</b>	<b>Advanced Creative Photography</b>	<b>3 Credits/Units</b>
This course continues the exploration of photography as a fine art as presented in Creative Photography. Further exploration of camera and Photoshop techniques intended to foster the understanding of photography as a means of artistic expression.		
<b>ART 20815239</b>	<b>Digital Photography</b>	<b>3 Credits/Units</b>
Provides an introduction to the photographic process through the use of digital cameras to produce images for presentations, the World Wide Web, and electronic publication. Covers basic principles of effective composition, light, exposure and control of motion and focus. Participants provide their own digital camera.		
<b>ART 20815241</b>	<b>Painting 1</b>	<b>3 Credits/Units</b>
Introduces students to the basic techniques of oil painting, with emphasis on composition and color. Students will paint from classroom still life arrangements for the first part of the course. Later in the semester, students are encouraged to develop paintings that explore personal themes.		
<b>ART 20815242</b>	<b>Painting 2</b>	<b>3 Credits/Units</b>
Painting 2 is an intermediate level painting course emphasizing the development of conceptualization skills. Painting projects encourage students to respond to a general theme, subject, or concept by developing a unique and personal image. Students can respond to assignments by working in various paint media (oil, acrylic, watercolor, or collage).		



<b>ART 20815253</b>	<b>Jewelry 1</b>	<b>3 Credits/Units</b>
This course is an introduction to basic jewelry making techniques through technical demonstration and individual projects covering simple forming, fabricating, lost wax casting, cold forging and finishing techniques.		
<b>ART 20815254</b>	<b>Jewelry 2</b>	<b>3 Credits/Units</b>
Jewelry 2-Art Metal gives an introduction to silver smiting, chasing, repousse and advanced stone setting.		
<b>ART 20815256</b>	<b>Art Metal Welding</b>	<b>3 Credits/Units</b>
Designed to increase the understanding of the technical aspects of metal fabrication for art-related endeavours. Due to the technical nature of this class, the emphasis will be on technical concerns rather than on aesthetic concerns. It is to be realized however, that technical aspects are but one consideration when creating art.		
<b>ART 20815290</b>	<b>Ceramics 1</b>	<b>3 Credits/Units</b>
Ceramics 1 introduces clay as an art medium through demonstration and experimentation with basic hand-building methods. It encourages individual involvement with the media and emphasizes personal expression and exploration of texture, form and surface decoration. This course covers electric and raku firing, relevant vocabulary and some of the technical aspects of clay.		
<b>ART 20815291</b>	<b>Ceramics 2</b>	<b>3 Credits/Units</b>
Ceramics 2 covers either the development of basic wheel throwing skills or advanced hand-building techniques. Students work with glaze development through both judicious testing and empirical formulas. Electric firing and raku firing will be explored.		
<b>ART 20815293</b>	<b>Ceramics Independent Study</b>	<b>3 Credits/Units</b>
Students will work independently on ceramics projects under the supervision of an instructor. Instructor permission required.		
<b>ART 20815294</b>	<b>Ceramics Sculpture 1</b>	<b>3 Credits/Units</b>
Focuses on developing the ability to make by hand, ceramic sculpture through creative projects. Forming techniques, glazing and kiln stacking are an integral part of the class and are learned through hands-on activities. Students make creative and innovative sculpture in this laboratory class as well as research and critique works of art.		
<b>ART 20815295</b>	<b>Ceramics Sculpture 2</b>	<b>3 Credits/Units</b>
This course is a continuation of Sculpture 1.		
<b>ART 20815296</b>	<b>Ceramics Firing Techniques/Alternative Methods</b>	<b>3 Credits/Units</b>
The class will focus on different firing techniques. Techniques covered would be Raku, sawdust firings, the use of saggars at different temperatures, vapor glazes and primitive pit kilns, as well as more traditional luster firings and other low temperature techniques. Surface treatments to pots that enhance the uniqueness of the firing would be stressed. Students will have the opportunity to build kilns and manage the firings themselves. If possible, the class would try to have pieces in, and help with, a wood firing and salt firing.		
The class will meet in the Downtown Ceramics studio as well as at the Commercial Ave Campus for some firings.		
<b>ASTRON 20806253</b>	<b>Astronomy: The Solar System</b>	<b>4 Credits/Units</b>
An introductory astronomy course covering the sky and celestial motions, ancient astronomy, the Copernican revolution, gravity and orbits, light and astronomical instruments and the solar system. Recommended evening observing sessions will also be included. (These are off campus meetings for star viewing with the school's binoculars and telescopes.)		
<b>ASTRON 20806254</b>	<b>Astronomy: Stars &amp; Galaxies</b>	<b>4 Credits/Units</b>
An introductory astronomy course covering gravity, light and astronomical instruments, our Sun, stars and stellar evolution (including nebulae, supernovae, white dwarfs, pulsars, and black holes), Milky Way and other galaxies, and cosmology (history, structure, and fate of the universe, big bang theory). Some optional evening observing sessions may also be included (off campus meetings for star viewing with the school's binoculars and telescopes).		
<b>AUTMFG 10628168</b>	<b>Robotics for Industrial Automation 2</b>	<b>2 Credits/Units</b>
FANUC Robotics based advanced study of applications, operation, programming and troubleshooting of Industrial Robots. Prepares the learner to establish and modify robot axis soft limits; navigate the teach pendant to set up the robot for automatic operation; define the Frames of reference used by the coordinate system; create multiple Tool Frames; create a program file; write a functional motion instruction; edit, copy and delete an existing program; demonstrate the use of a wait statement; demonstrate the use of a Call statement; demonstrate the use of an Output statement; and upload and download program memory files. Backup and restore the Controller image		
<b>AUTMFG 10628170</b>	<b>Robotics for Industrial Automation 1</b>	<b>1 Credits/Units</b>
FANUC Robotics based introductory study of applications, operation, programming and troubleshooting of Industrial Robots. Prepares the learner to identify the component parts of a robot; describe teach pendant and robot functions; power up the robot control in proper sequence; jog in Joint and Cartesian movement; identify axis movements; navigate the teach pendant to set up the robot for desired movement; demonstrate working knowledge of arm speed and inching control; select the Frames of reference used by the coordinate system; edit an existing program.		
<b>AUTMFG 10628172</b>	<b>Vision for Robotics in Industrial Automation</b>	<b>2 Credits/Units</b>
This course prepares the learner to program a vision systems as a stand-alone solution and integrate into robotic systems. The student will receive instruction on general vision concepts, including camera setup, lighting, lensing, 2D Single & 2D Multiple View Process and perform hands-on programming with industrial vision systems.		
<b>AUTMFG 10628302</b>	<b>Integration Introduction</b>	<b>2 Credits/Units</b>
The planning, documenting, fabrication, assembly and programming of electro-mechanical components is used to introduce students to the principles of integrating automated machines. This course applies the project management, and CAD 2D skills related to electro-mechanical automated systems. The study of motion sequences and control drawings as well as Gantt chart creation and application will be used within this class. Machine efficiencies and trouble-shooting of desktop electro-pneumatic controls is applied.		





<b>AUTMFG 10628401</b>	<b>PLCs for Industrial Automation 1</b>	<b>1 Credits/Units</b>
Introductory study of PLC Programming overview (parts, principles of operation, size and applications), PLC components (I/O modules, specifications, CPU, memory, programming options), Number systems and codes (binary, decimal, hexadecimal, BCD, ASCII, binary arithmetic), Fundamentals of Logic (binary concept, AND, OR, NOT functions, Boolean algebra, logic gates, word level instructions), Basics of programming in RSLogix500 (memory organization, program scan, programming languages, instruction addressing, XIC, XIO, OTE instructions, creating ladder logic), PLC installation practices, editing, and troubleshooting (enclosures, electrical noise, grounding, voltages, program editing, program monitoring, preventive maintenance, troubleshooting, connecting to your PLC to your PC)		
<b>AUTMFG 10628402</b>	<b>PLCs for Industrial Automation 2</b>	<b>1 Credits/Units</b>
Intermediate knowledge of programmable logic controller (PLC) installation, interfacing, operation, and programming in RSLogix500. Timer instructions (ON-delay, OFF-delay, RTO, cascading timers), Counter instructions (Counter-up, Counter-down, cascading counters, combining counter and timer functions), Data manipulation (Math instructions), Program control instructions (MCR, jump, subroutines, forcing, safety circuit, temporary end, fault routine), computer controlled machines and processes (communication fundamentals) RSLinx communications, Introduction to RSLogix5000 and ControlLogix programming).		
<b>AUTMFG 10628403</b>	<b>Programmable Automation Controller 1</b>	<b>2 Credits/Units</b>
Advanced programmable logic controller (PLC) installation, interfacing, operation, and programming (RSLogix5000). Students learn how to connect advanced PLCs in a typical industrial PLC network utilizing Ethernet, ControlNet, DeviceNet, RS232 and RIO communication paths. Data sharing and distributed PLC programming techniques along with fundamentals of touch panel programming, VFD integration and operation are studied.		
<b>AUTMFG 10628404</b>	<b>Programmable Automation Controller 2</b>	<b>2 Credits/Units</b>
Advanced programmable logic controller (PLC) programming (RSLogix5000). Students learn how to connect advanced PLCs in a typical industrial network, integrating touch panel programming, VFD and Servo motion control. Programming PLCs utilizing Function Block Diagram are studied. Students gain an understanding of SCADA and MES system and PID loops. Students are introduced to a variety of intelligent sensors and vision systems.		
<b>AUTMFG 10628420</b>	<b>Introduction to Logic &amp; Troubleshooting</b>	<b>1 Credits/Units</b>
The course introduces basic troubleshooting tools, methods and techniques. Students will learn about interpreting schematics, Boolean logic, truth tables, and number systems. The course uses software simulations and labs to introduce relays and relay ladder logic. Students apply common troubleshooting techniques and root cause analysis.		
<b>AUTMFG 10628450</b>	<b>Integration of Mechanisms and Controls 1</b>	<b>4 Credits/Units</b>
The student will apply the concepts of robots and automation by building a small automation system. This automation cell will be accomplished within the framework of an assigned team of students. Student will apply learned concepts studied in previous classes. These concepts will assist in building, testing, and running their automated work cell. Student will develop, and apply project planning, time management and cooperative methods with their team members to build their work cell. Student will learn how to design and make parts for this project. Student also will specify and purchase parts as well as, analyze system malfunctions, which may occur to the modular level. Student will practice the skills needed to interface and make repairs.		
<b>AUTMFG 10628451</b>	<b>Integration of Mechanisms and Controls 2</b>	<b>4 Credits/Units</b>
Focuses on integration of a complete manufacturing cell. Typical components include programmable controllers, robot, sensors, drives, conveyors, pneumatics, hard automation, control wiring and vision. Students plan, wire, program, troubleshoot and develop documentation for the whole system.		
<b>AUTMFG 10628500</b>	<b>Introduction to HMI and SCADA Development</b>	<b>2 Credits/Units</b>
This class is designed to give students the knowledge necessary to troubleshoot and maintain a SCADA (supervisory control and data acquisition) system. This includes control strategies, controllers and IO, as well as system software database connections and HMIs.		
<b>AUTMFG 50664718</b>	<b>Automation for Apprentices</b>	<b>2 Credits/Units</b>
Examine industrial automation and applications to various trades. Automation terminology, concepts and applications will be examined. Automated systems, components and devices will be reviewed. Robotics used in modern manufacturing plants will be compared and analyzed. Job duties and tasks associated with safety, inspection, testing, maintenance, repair and servicing will be the primary emphasis.		
<b>AUTOBODY 31405374</b>	<b>Collision Occup Orient</b>	<b>2 Credits/Units</b>
Introduces the computer electronic system for repair of unibody vehicles, and proper anchoring and pulling procedures. Instruction on removing and replacing drivetrain components is included. The proper care and protection of on-board computers in autos is stressed. Sheet metal alignment, and frame and unibody straightening, along with procedures for restoring severely damaged vehicles are studied.		
<b>AUTOBODY 32405301</b>	<b>Basic Sheet Metal Repair &amp; Welding Fundamentals</b>	<b>5 Credits/Units</b>
Course material covers the introduction in the use of an oxyacetylene welding/cutting outfit as related to collision repairs. A heavy emphasis is placed on the mig welding process, types of welds and techniques used of hammer and dolly, pry tools, stud guns, air and electrical tools, hydraulic-porto-power jacks and other straightening tools, used in the processes of metal finishing and plastic filling.		
<b>AUTOBODY 32405302</b>	<b>Refinishing 1</b>	<b>5 Credits/Units</b>
The refinishing phase includes instruction in the proper use and maintenance of the spray gun, refinishing panels and fenders, spot repairing of panels and fenders, and mixing of paint formulas. Application of primers, sealers, single stage, and coat/clear coat are covered. Instruction in shop, tool and paint safety, and state and federal environmental concerns are presented.		
<b>AUTOBODY 32405303</b>	<b>Non-Structural Panel Repair &amp; Glass Servicing</b>	<b>5 Credits/Units</b>
Further development of straightening skills and sheet metal alignment is achieved by performing these activities on automobiles. Such operations as straightening damages sheet metal on fixed parts and removable panels are performed. Instruction on the replacement of fixed glass such as windshields, rear window, and side glass is covered using industry standards. Further instruction includes the components and procedures involved in the removal and installation of movable glass.		
<b>AUTOBODY 32405304</b>	<b>Refinishing 2/Trim &amp; Hardware</b>	<b>5 Credits/Units</b>



The refinishing phase includes further instruction in the proper use of the spray gun, performing partial and complete refinishing repairs on vehicles. Procedures for blending and tinting of the paint to achieve an acceptable color match are practices. Shop and paint safety practices are emphasized. Instruction on the safe removal and installation of trim and hardware is covered along with specialty tools necessary to perform operations using industry accepted procedures.

**AUTOBODY 32405305                      Auto Refinishing/Color Adjustment                      5 Credits/Units**

Vehicle refinishing techniques including preparing adjacent panels for blending, base coat and clear coat blending, color adjustment and testing color match. Complete refinishing and panel blending is performed on repaired vehicles.

**AUTOBODY 32405306                      Collision Structural Welding & Panel Replacement                      5 Credits/Units**

Structural damage analysis, measuring vehicle dimensions, pulling and straightening vehicle structures. Replacement and alignment of non-structural panels will be performed on vehicles. Collision structural section joints will be constructed and welded (GMAW).

**AUTOBODY 32405307                      Adv Collision Structural Repair                      5 Credits/Units**

Application of replacement procedures for structural panels such as front and rear rails, rocker panels, A- pillars, B-pillars, and floor pans. Servicing and removal of drivetrain, suspension steering and other related components utilizing industry accepted procedures. Understanding suspension and wheel alignment angles and diagnostic procedures.

**AUTOBODY 32405308                      Collision Plastics/Composites & Adv Refinishing Applications                      5 Credits/Units**

Identification of automotive plastics, repair decisions, using adhesives and welding to repair plastics. Refinishing techniques include refinishing plastic, multi-stage finishing, and advance blending techniques and custom painting options.

**AUTOBODY 32405311                      Introduction to Airbrushing and Custom Painting                      2 Credits/Units**

This course is for the student who has little or no airbrush experience and to teach the student to disassemble, clean and set-up his or her own airbrush. Provides instruction in paint mixture and how different reducers affect the end result (cleanliness, etc.) This course also demonstrates practice drills and proper techniques for brush strokes towards building control and skill.

**AUTOBODY 32405321                      Advanced Airbrushing and Custom Painting                      2 Credits/Units**

Go in-depth in paint mixture, practice drills and proper techniques for airbrush strokes towards building control and skill. Includes types and methods of stencil use, from hand taping to computer cut materials, as well as overviews of commonly found "hand held" barriers and masks that provide some simple background and fill techniques. We cover "stacking" or use of multiple piece stencils to create popular graphics. Techniques in aging or patina with airbrush. Explore color variation using known theory and methods to build eye pleasing color schemes. Hand Striping: learn the proper set-up for paint mixture and brush shaping which is vital to the art of fine lining, outlining graphics or lettering. An overview of "gold leafing" and other special effects are presented.

**AUTOBODY 32405334                      Collision Damage Analysis and Report Writing                      3 Credits/Units**

This course includes damage analysis, vehicle identification, estimate writing sequence, use of estimation guide for parts and labor costs, and writing damage reports manually and with a computer. Each student has the opportunity to estimate damaged vehicles.

**AUTOBODY 32405340                      Collision Electrical Fundamentals                      2 Credits/Units**

This course is an introduction to automotive electrical systems, including basic electricity, trouble shooting and repair of common electrical circuits, wiring diagrams, soldering, power accessories and restraint systems. Standards for safety when working with electrical systems is emphasized.

**AUTOBODY 32405341                      Collision Mechanical Systems                      2 Credits/Units**

Covers basic operations and servicing principles of brake systems, fuel and exhaust systems, heating and cooling systems, suspension and steering systems, and automotive air conditioning principles including components that make up an AC system. Regulations regarding discharging/recharging and trouble shooting as related to collision repair are also included. Safety practices regarding mechanical systems are covered.

**AUTOBODY 32405361                      Collision Repair/Refinishing Theory 1                      3 Credits/Units**

Covers related information on all phases of auto body welding and metal straightening with hand tools and hydraulic equipment. Collision damage analysis of sheet metal and unibodies is studied. Different types of sheet metal, such as HSS and HSLA, as well as the properties of sheet metal are discussed. Where and how to use plastic filler is presented. Paint equipment such as the operation and maintenance of the spray gun is studied. Extensive discussion takes place on refinish products, surface preparation, sanding and polishing, thinners and reducers and top coat application. Instruction in shop, tool, paint safety, and state and federal environmental concerns and regulations are presented.

**AUTOBODY 32405363                      Collision Repair and Refinishing Theory 2                      3 Credits/Units**

To further promote knowledge of repair skills related to auto collision repair and refinishing, the following discussion areas are included: the evaluation of automobile bodies and damage repair techniques, unibody construction and repair techniques, vehicle preparation, metal correction and parts replacement. Additional instruction includes glass installation, electrical accessories, door and window servicing and trim replacement.

**AUTOBODY 32405365                      Collision Repair and Refinishing Theory 3                      3 Credits/Units**

Introduces the computer electronic system for repair of unibody vehicles, and proper anchoring and pulling procedures. Instruction on removing and replacing drivetrain components is included. The proper care and protection of on-board computers in autos is stressed. Sheet metal alignment, and frame and unibody straightening, along with procedures for restoring severely damaged vehicles are studied.

**AUTOMECH 32404356                      Manual Drivetrain & Axles                      5 Credits/Units**

Clutches, standard transmissions, manual transaxles, drivelines and differentials are studied. Demonstrations and practice provide the opportunity to become proficient in diagnosis, service and complete rebuilding of these systems.

**AUTOTEC 10602102                      Service Repair Procedures                      5 Credits/Units**

Automobile engine theory, design and operation are studied. Other studies included are the diagnosis and repair procedures of the engine cooling, lubricating and exhaust systems. Batteries, starting and charging systems are covered in detail along with the proper use of meters and the latest test equipment. Shop safety and proper use of hand tools is emphasized.



<b>AUTOTEC 10602115</b>	<b>Hybrid and Alternative Fueled Vehicles</b>	<b>2 Credits/Units</b>
This course provides: a brief history of electric and hybrid electric vehicles, electric/hybrid electric vehicle safety procedures and equipment; components and current vehicle overview; hybrid electric vehicle components; current design configurations, current and near future vehicles; an introduction to electric/hybrid electric vehicle test equipment and procedures; and an introduction to electric/hybrid electric vehicle maintenance and trouble shooting. Also, Diesel, alternative fuel systems, including CNG and Fuel Cell, and related components are covered.		
<b>AUTOTEC 10602125</b>	<b>Electrical and Electronics Systems 1</b>	<b>2 Credits/Units</b>
The automotive repair industry demands that technicians have a proficient understanding of the electrical systems which are at the heart of today's vehicles. Students are introduced to basic electricity fundamentals in accordance with industry standards and then apply the concepts to vehicle circuits and components.		
<b>AUTOTEC 10602127</b>	<b>Electrical and Electronics Systems 2</b>	<b>2 Credits/Units</b>
This automotive course focuses on developing the skills needed to diagnose, service, and repair electrical and electronic systems, including batteries, starting and charging systems, lighting systems, horn and wiper systems, and introduction to computer control systems.		
<b>AUTOTEC 10602150</b>	<b>Internal Combustion Engines</b>	<b>5 Credits/Units</b>
The internal combustion automotive engine is studied in detail by discussion, demonstration and laboratory experiments. The latest machining equipment is used to accurately diagnose, disassemble, repair and reassemble an automobile engine. Diagnosis of engine related mechanical problems is covered.		
<b>AUTOTEC 10602152</b>	<b>Driveability Analysis</b>	<b>5 Credits/Units</b>
Practical application of principles, concepts and diagnostic abilities covered in the 2 prerequisite courses. Advanced electrical/electronic diagnostic applications will reinforce prior competency development.		
<b>AUTOTEC 10602153</b>	<b>Manual Drivetrains &amp; Axles</b>	<b>4 Credits/Units</b>
The operation and theory of clutches, transaxles, standard transmissions, drivelines and differentials are covered. Areas of emphasis include diagnosis, repair, testing and periodic maintenance as recommended by major manufacturers. Classroom and shop time is utilized to develop skills in diagnosis and repair of clutches, drivelines and differentials.		
<b>AUTOTEC 10602154</b>	<b>Automatic Transmissions</b>	<b>5 Credits/Units</b>
This automotive course focuses on developing the skills needed to diagnose, service and repair automatic transmissions/transaxles including overhaul procedures.		
<b>AUTOTEC 10602156</b>	<b>Comfort Control Systems</b>	<b>2 Credits/Units</b>
Study includes basic principles of refrigeration and air conditioning including the component parts that make up the A/C units on passenger cars and light trucks. Heating and automatic temperature controls are also studied. Students will receive State of Wisconsin AG 136.09 certification upon completion of this course.		
<b>AUTOTEC 10602157</b>	<b>Technical Braking Systems</b>	<b>5 Credits/Units</b>
Topics include principles of drum and disc brake designs, inspection and diagnosis. Covers wheel and tire diagnosis and repair. Steering and suspension safety inspection is covered. Lab experiences including inspecting, troubleshooting and the repair and replacement of defective or worn parts of the complete brake system. The use of correct procedure and tools is stressed.		
<b>AUTOTEC 10602158</b>	<b>Service Management</b>	<b>1 Credits/Units</b>
The principles of various types of business organizations are examined and applied to automotive wholesale and retail businesses, ultimately focusing on the automobile as part of the service department. Service department operation is covered in detail and depth from large organizations to small organizations. The conventional line method of management is stressed. Employment possibilities and job interviewing techniques are discussed.		
<b>AUTOTEC 10602162</b>	<b>Automobile Accessories</b>	<b>2 Credits/Units</b>
Examines equipment supplied by both major manufacturers of automobiles and after-market suppliers. Classroom and lab activities help students to understand basic electricity, electric circuits and use of test equipment to troubleshoot problems in circuits such as lighting, windshield wipers, power windows, instruments and cruise control.		
<b>AUTOTEC 10602163</b>	<b>Steering &amp; Suspension Systems</b>	<b>5 Credits/Units</b>
Principles of suspension designs, wheel alignment angles, inspection procedures, parts replacement, steering systems, shock absorbers/struts, sway bars and frame design. On-the-job experiences include inspecting and correcting suspension angles, parts replacement, adjusting steering gears. Covers four-wheel alignment.		
<b>AUTOTEC 10602166</b>	<b>Powertrain Management Technology</b>	<b>5 Credits/Units</b>
All engine operating systems are studied: engine breathing, ignition systems, computer control and sensors, fuel and air management and emission systems. Students learn how these systems operate, how to test for proper operation of systems and components, and how to use test equipment.		
<b>BAKING 31314302</b>	<b>Yeast Breads</b>	<b>4 Credits/Units</b>
Students develop manual baking skills and a working knowledge of the production and finish various yeast doughs including straight doughs and pre-ferments. Students learn both handcrafted and machine methods in the make-up of these products.		
<b>BAKING 31314305</b>	<b>Chocolate</b>	<b>2 Credits/Units</b>
Students are introduced to the world of chocolate. The history and production of chocolate is explored. Learners sample a wide variety of chocolates from different companies, as well as specific types of chocolate. Products are made using these different chocolates and then compared and evaluated. Students will also learn how to make a variety of seasonal candies.		
<b>BAKING 31314306</b>	<b>Bakery Retail</b>	<b>1 Credits/Units</b>
The lab is used as a simulated bakery in this course with products being merchandised through the bakery store. Students are responsible for service case presentation as well as effective merchandising displays and customer service.		







biology course recommended.

**BIOLOGY 20806208                      Anatomy and Physiology 2                      4 Credits/Units**  
Anatomy and Physiology 2 features lectures and laboratory exercises dealing with the human body as an integrated structural and functional unit including the cardiovascular system, lymphatic system and immunity, respiratory system, digestive system and metabolism, urinary system, fluid/electrolyte balance and acid/base balance, and reproductive system. It includes dissection of a cat as well as examination of a human cadaver. Note: this is the second semester course of a two-semester sequence and is not acceptable where a one-semester Anatomy and Physiology course is required.

**BIOLOGY 20806215                      Botany                      5 Credits/Units**  
Botany deals with a wide variety of organisms that are of great interest and are basic to our survival. This course covers the basic biology of plants, emphasizing evolution, ecology, taxonomy, physiology, plant breeding and horticulture to provide an overall understanding and appreciation of plant life. A survey of plants and plant-like organisms is presented in this general education, natural science, biology class.

**BIOLOGY 20806219                      Biology for Innovators                      1 Credits/Units**  
Biology for Innovators is designed to serve students interested in pursuing an undergraduate degree in biology. The course is structured to serve as an introduction to a variety of disciplines and associated careers in the biological sciences. In addition, students will have the opportunity to participate in a semester-long service-learning experience benefiting the local high school academic community. In consultation with biology faculty mentors and high school educators, students will select a biological concept or issue, conduct literature research on the topic, and use the "creator space" to design curriculum for area schools.

Students will present their developed curriculum to cooperating area high schools.

**BIOLOGY 20806226                      Introduction To Human Biology                      5 Credits/Units**  
This is an introductory course designed for students who want a laboratory science, but are not majoring in biology. It emphasizes the structure of the human body and the functional interrelationships of the body's systems. Consideration is also given to human genetics, human evolution, ecology, and the role that humans play in the environment. This course includes three hours of lecture per week, two hours of laboratory and a one-hour discussion session. Note: this course does NOT meet the requirements for 20- 806-207 or 208, Anatomy and Physiology 1 or 2, or 20-806-206, General Anatomy and Physiology.

**BIOLOGY 20806262                      Anatomy and Physiology for Exercise Lab                      1 Credits/Units**  
Anatomy and Physiology for Exercise Lab is designed to provide a hands-on learning environment where students master the basic structure and function of the respiratory, cardiovascular, skeletal, nervous, endocrine and muscular systems and relate those systems to exercise. Students will also learn basic nutrition principles. The course is designed to be a co-requisite of Body Structure and Function for students pursuing a Fitness/Health Club Specialist Certificate.

**BIOLOGY 20806271                      Cellular and Molecular Biology                      5 Credits/Units**  
This course addresses concepts in cellular and molecular biology, genetics and mammalian anatomy and physiology.

**BIOLOGY 20806272                      Organismal Biology                      5 Credits/Units**  
This course addresses concepts in evolution and diversity of organisms, plant anatomy and physiology, and ecology. The Biology courses, BIO 271 and BIO 272 can be taken in any sequence. Students that take 272 before 271, should learn about the independent projects, which are writing intensive and provide Communication B credit at UW -Madison.

**BIOLOGY 20806273                      Microbiology-University Medical                      5 Credits/**  
Units Microbiology addresses pathogenic and normal flora microbes (bacteria, fungi, parasites, and viruses), their structure and function, metabolism, nutrition, genetics, growth and their relationship to humans and the environment. This course examines human infectious disease including general diagnosis and treatment, transmission, host defense mechanisms, and processes used to control the growth and spread of infectious agents. This course includes an introduction to standard techniques and procedures used in the microbiology laboratory.

**BIOLOGY 20806274                      General Microbiology                      5 Credits/Units**  
General Microbiology gives a broad overview of the structure, function, ecology, nutrition, physiology and genetics of microorganisms. The course looks at the many roles microorganisms play in our lives, including their association with various diseases (including cancer), and the importance of the human microbiome. The course also covers microbial fermentation and recombinant DNA technologies. Due to the constantly changing information as to how microbes play a vital role in our everyday lives, this course is regularly updated.

**BIOLOGY 20806276                      Principles of Genetics                      4 Credits/Units**  
An introduction to the basic concepts of heredity and cytogenetics including Mendelian, molecular, developmental, and population genetics, genetic engineering and chromosome behavior. Topics include complementation and linkage analysis, gene mapping, library screening, bacterial transformation, plaque assay, restriction analysis, PCR, and sequencing. Lab complements the lecture and provides experiences in molecular genetics laboratory techniques as well as utilization of analytical and simulation model systems.

**BIOLOGY 20806280                      Environmental Issues                      3 Credits/Units**  
Environmental Issues is an introductory (non-laboratory) survey course entirely appropriate for first-year students. Environmental Issues explores diverse problems of human impact on natural systems. Though fundamentally grounded on the basic principles of biology and ecology, this course is designed to encourage interdisciplinary thinking about critical environmental problems. Students explore chemical, biological, political and ethical interactions of environmental systems on scales that range from local to international. The course prepares students for Principles of Ecology and other more advanced courses in Environmental Studies. This course transfers to UW-Madison at the elementary level.

**BIOLOGY 20806281                      Ecology/Conservation Biology                      3 Credits/Units**  
Ecology and Conservation Biology is an intermediate-level (non-laboratory) course, most appropriate for second-year students. A basic knowledge of ecosystem structure and function is used as a springboard to grasping the impact of human activities on natural populations. Emphasis is on computer modeling of endangered species, dwindling populations of endemics, species under threat of over-harvesting, and other groups at risk. This course requires the background knowledge of an introductory environmental science course. This course transfers to UW Madison at the intermediate level as Zoology/Wildlife Ecology 360. Offered during the fall semester.



<b>BIOLOGY 20806286</b>	<b>Environmental Science</b>	<b>4 Credits/Units</b>
Environmental Science is an introductory survey course appropriate for first-year students. This course includes a laboratory component and field trips designed to engage students in exploring environmental systems in the modern world. It emphasizes the interpretation of environmental data presented in graphs and figures and will sharpen student analytical skills through exercises based on both quantitative reasoning and reading comprehension. This course transfers to UW–Madison at the elementary level as IES 126.		
<b>BIOTECH 10007103</b>	<b>Biotechnology Laboratory Skills for a Regulated Workplace</b>	<b>3 Credits/Units</b>
Covers basic concepts and techniques necessary to work effectively in a biotechnology lab. The importance of quality regulations and standards and the role of the technician in producing quality results are emphasized. Laboratory math is introduced and applied. Students learn basic techniques including: measuring, weighing, mixing solutions, following and writing procedures, keeping records, making observations, and using instrument manuals and catalogues. Principles of metrology (measurement) are introduced and students practice using, calibrating and verifying the performance of instruments. Lab included. Co-requisite: 10-806-127 or 10-806-134, and 10-007-136 or consent of instructor.		
<b>BIOTECH 10007104</b>	<b>Chromatography Techniques</b>	<b>3 Credits/Units</b>
Introduces the basic concepts involved in separation of biomolecules. Students complete lab work using a variety of chromatographic methods including: paper, thin layer, gel permeation, gas and high performance liquid chromatography. Students also learn to interpret chromatographic results and practice documentation and reporting skills. Lab included.		
<b>BIOTECH 10007105</b>	<b>Bioprocess Technology</b>	<b>3 Credits/Units</b>
Covers basic techniques of fermentation technology, including the principles of isolation, identification, improvement, preservation and growth of industrial microorganisms. Emphasizes the use of fermentation equipment to obtain products.		
<b>BIOTECH 10007108</b>	<b>Hazardous Materials - Biotechnology</b>	<b>1 Credits/Units</b>
Surveys potential laboratory hazards and safety procedures. Covers regulation of chemicals: flammable, reactive, corrosive and toxic substances.		
<b>BIOTECH 10007110</b>	<b>Biotechnology Applications</b>	<b>1 Credits/Units</b>
Provides a broad introduction to biotechnology including the scientific basis of the technologies and their historical development with an emphasis on current applications in the areas of agriculture, medicine, forensics and the environment.		
<b>BIOTECH 10007111</b>	<b>Biotechnology Career Seminar</b>	<b>1 Credits/Units</b>
Includes a discussion of national, state and local biotechnology industries, career options, the ethical, legal and societal issues raised by the use of biotechnology and the regulatory agencies that oversee the industry.		
<b>BIOTECH 10007112</b>	<b>Biotechnology Employment Skills</b>	<b>1 Credits/Units</b>
Discusses the specific skills needed for particular areas and careers, ethical issues and the business of biotechnology including the basics of intellectual property law. Each student gives a presentation on their occupational work experience.		
<b>BIOTECH 10007115</b>	<b>General Cell Biology</b>	<b>4 Credits/Units</b>
Introduction to cells, emphasizing their structure, diversity, chemistry and physiology. Processes of cellular respiration, photosynthesis and division are discussed. Describes genetic principles and molecular activities involved in DNA, RNA and protein synthesis. Lab included.		
<b>BIOTECH 10007116</b>	<b>Introduction to Human Stem Cell Methods</b>	<b>3 Credits/Units</b>
Covers the basic methods of working with mammalian cell culture, to include aseptic techniques, media preparation, passaging and maintenance of cell lines. Students will work with hESC cultures to thaw, plate, feed, passage cells, and generate embryoid bodies. Molecular characterization includes chromosomal staining and immunodetection and imaging of cell pluripotency markers.		
Instruction will include imaging, including light, fluorescence, and photomicroscopy. Using cultured cells in a regulated environment will be introduced. Prerequisite: General Cell Biology, 10-007-115, and Chromatography, 10-007-104, or consent of instructor.		
<b>BIOTECH 10007117</b>	<b>Advanced Human Stem Cell Methods</b>	<b>3 Credits/Units</b>
Students will continue to maintain and characterize the hESC embryoid bodies generated in Course I. Observations and relevance for spontaneous hESC differentiation will be discussed in detail. Methods for directed differentiation of hESC, iPSC, and adult stem cells into neurons and cardiomyocytes will be introduced. An emphasis on photo-documentation and assembly of a portfolio of results and observations will be submitted for evaluation.		
<b>BIOTECH 10007118</b>	<b>Introduction to Human Stem Cell Concepts</b>	<b>1 Credits/Units</b>
Provides an historical perspective on the identification and use of stem cells, emphasizing practical applications towards regenerative biology in research and industry. Review and discuss scientific articles that establish the foundation for working with stem cells for regenerative medicine, applied and basic research. Prerequisite: General Cell Biology, 10-007-115, or consent of instructor.		
<b>BIOTECH 10007119</b>	<b>Advanced Human Stem Cell Concepts</b>	<b>1 Credits/Units</b>
Introduction of emerging methodologies in the stem cell field, to include adult stem cells, iPSC technologies, relevant cell signaling pathways, and cell differentiation. Current research and industry applications will be discussed. Survey the scientific and popular press to introduce emerging themes and applications in the field of stem cells. Prerequisite: Introduction to Human Stem Cell Concepts, 10-007-118, and General Cell Biology, 10-007-115, or consent of instructor.		
<b>BIOTECH 10007121</b>	<b>Applied Biochemistry</b>	<b>3 Credits/Units</b>
Introduction to major chemical constituents of cells including proteins, carbohydrates, lipids and nucleic acids. The structure and kinetics of enzymes, reaction mechanisms and metabolic pathways are also included. Lab included.		
<b>BIOTECH 10007122</b>	<b>Protein Bioseparations Methods</b>	<b>3 Credits/Units</b>
Introduces the strategies to purify proteins as part of a biotechnology process. Methods include: specific activity assays for enzymes, extraction of proteins from bacterial cells, salting out, dialysis, ion exchange chromatography and polyacrylamide gel electrophoresis. Lab included. Prerequisites: Biotechnology Laboratory Skills, 10-007-103; Chromatography Techniques, 10-007-104; and Chemistry 2, 10-806-129		



(or Chemistry for Biotechnology, 20-806-216); or consent of instructor.

<b>BIOTECH 10007123</b>	<b>Cell Culturing</b>	<b>3 Credits/Units</b>
Covers the basic techniques of plant and animal cell culture. Plant unit includes media preparation isolation of explants and establishment of callus from suspension cultures, growth factor bioassays, regeneration of whole plants from tissue and plant genetic engineering techniques. Mammalian cell unit includes media preparation, maintenance of cultured cells, transfection of cultured cells, cloning, monoclonal antibody production, and ELISA assays. Lab included. Prerequisite: 10-007-115 or consent of instructor.		
<b>BIOTECH 10007124</b>	<b>Molecular Biology 1</b>	<b>3 Credits/Units</b>
Introduces modern molecular biology techniques including basic recombinant DNA techniques and nucleic acid analysis and purification. The polymerase chain reaction, DNA sequence analysis, and DNA fingerprinting are also covered. Lab included. Prerequisite: 1-007115 General Cell Biology, or consent of instructor.		
<b>BIOTECH 10007125</b>	<b>Research Methods in Molecular Biology</b>	<b>3 Credits/Units</b>
Surveys advanced techniques in molecular biology including Southern analysis, and RNA purification and analysis. The course blends discussion of concepts with practical laboratory experience. Lab included.		
<b>BIOTECH 10007126</b>	<b>Occupational Work Experience</b>	<b>3 Credits/Units</b>
Students work in a biotechnology laboratory. Emphasizes the integration of academics and practice experiences. Pre-requisite: successful completion of all program courses in the first three semesters of the program, or consent of instructor and successful completion of a performance exam.		
<b>BIOTECH 10007136</b>	<b>Laboratory Math for Biotechnology</b>	<b>1 Credits/Units</b>
This course introduces mathematical tools that are used in the biotechnology laboratory. Students apply mathematical concepts to solve problems such as: calculating amounts of chemicals required to make solutions, graphing and interpreting data, and calibrating instruments. Basic statistical concepts may also be introduced.		
<b>BIOTECH 10007137</b>	<b>Selected Topics in HPLC</b>	<b>1 Credits/Units</b>
The course covers fundamental concepts of HPLC analysis including hardware basics, analysis modes, column chemistry, sample preparation and quantitation, as well as protein analysis and peptide mapping. Troubleshooting, interrogation of poor peak shape and retention problems are a fundamentally important part of the course, as well as method validation and data analysis.		
<b>BIOTECH 10007152</b>	<b>Making Biotech Products in a Quality Environment</b>	<b>2 Credits/Units</b>
Proposed to review and further illustrate the importance of quality in a laboratory environment, with special emphasis on how a quality system directly impacts laboratory scientists. This laboratory-based course will revolve around the creation of a product to be used in other courses in the biotechnology curriculum. Students will create the product, as well as monitor the quality of the process. Time constraints would mean that not every aspect of a quality system could be modeled or discussed; however, even a single course in this area would be invaluable to our students for both review of concepts and employability.		
<b>BIOTECH 10007155</b>	<b>Quality Regulations and Standards for Biotechnology</b>	<b>2 Credits/Units</b>
This course will cover the history of quality systems (cGMP, GLP, GCP, ISO 9000) and their implementation in the workplace. Emphasis will be placed on the impact of these quality systems on the laboratory technician. Students will also have the opportunity to study regulations and examine the process of disciplinary action under these systems. Current case studies will illustrate the role of governmental and non-governmental oversight in ensuring the quality of the products of regulated workplaces.		
<b>BIOTECH 10007174</b>	<b>Applied Microbiology</b>	<b>4 Credits/Units</b>
This survey course includes the structure, function, ecology, nutrition, physiology, and genetics of microorganisms in industrial, agricultural, food and medical microbiology. It also includes an introduction to standard techniques and procedures used in the microbiology laboratory.		
<b>BRCKMSN 50408510</b>	<b>Tech Brick Sem 1</b>	<b>2 Credits/Units</b>
This course description is unavailable at this time. Please contact the center offering the course for more information.		
<b>BRCKMSN 50408511</b>	<b>Tech Brick Sem 2</b>	<b>2 Credits/Units</b>
This course description is unavailable at this time. Please contact the center offering the course for more information.		
<b>BRCKMSN 50408512</b>	<b>Tech Brick Sem 3</b>	<b>2 Credits/Units</b>
This course description is unavailable at this time. Please contact the center offering the course for more information.		
<b>BRCKMSN 50408513</b>	<b>Tech Brick Sem 4</b>	<b>2 Credits/Units</b>
This course description is unavailable at this time. Please contact the center offering the course for more information.		
<b>BRCKMSN 50408514</b>	<b>Tech Brick Sem 5</b>	<b>2 Credits/Units</b>
This course description is unavailable at this time. Please contact the center offering the course for more information.		
<b>BRCKMSN 50408515</b>	<b>Tech Brick Sem 6</b>	<b>2 Credits/Units</b>
This course description is unavailable at this time. Please contact the center offering the course for more information.		
<b>BUSADM 10102104</b>	<b>Business Statistics</b>	<b>3 Credits/Units</b>
Introduces the theory of and application to basic statistical methods. Emphasizes solving practical business problems. Topics include basic measures, probability, sampling and time series analysis. Knowledge of Excel strongly recommended.		
<b>BUSADM 10102114</b>	<b>Business Communication</b>	<b>3 Credits/Units</b>
Primary focus is on developing advanced interpersonal communication skills. Topics include: effective listening, conveying ideas concisely and persuasively, and adapting one's communication style to best connect with others. Managerial applications are emphasized; examples include: successfully managing difficult ("crucial") conversations while avoiding destructive conflict, customer-facing interactions (such as complaints), business networking, negotiation tactics, and key employee interactions: performance reviews, setting SMART Goals, and disciplinary		



conversations. The course requires extensive “field work” to apply the concepts learned in class to the real world.

**BUSADM 10102115 Introduction to Business 2 Credits/Units**  
This foundation course covers core concepts related to business strategy, marketing, operations and finance, as well as their interrelationships within an organization. Case studies and a computer business simulation or business plan are used to deepen student understanding. Corporate culture, ethics and underlying values, and the international dimension of business are also covered.

**BUSADM 10102131 Project Management and Sustainable Change 3 Credits/Units**  
In Project Management and Sustainable Change, the learner extends their learning from Project Management – Fundamentals by looking deeper into how to affect change by understanding change management models, tools and current principals to realize successful and sustainable changes to enhance business value.

Each learner will demonstrate the application of assessing the current change environment and develop change management strategies and process. In addition students will analyze the effect of perceptions, attitudes, biases, and organization culture on project outputs and outcomes, dealing with barriers, and develop strategies for managing a diverse workforce to affect sustainable change.

**BUSADM 10102132 Strategic Leadership 3 Credits/Units**  
This capstone course for the Business Management program is designed to integrate and enhance skills and behaviors learned throughout the curriculum. Students gain insights from key leadership experts related to leading oneself, others, and organizational change, and apply these insights through an In-Box simulation where they are responsible for all aspects of “turning around” a failing business. A computer business simulation, where students compete against each other, reinforces learnings from prior courses and enhances an overall business perspective. Course includes an exercise in deep self-reflection, designed to build student resolve and ability to be a “high-integrity” ethical leader.

**BUSADM 10102133 Topics in Tactical Management 3 Credits/Units**  
Focuses on refining and building students’ operational management skills. The use of data analysis and research tools to solve business problems and improve performance is emphasized. Students learn tools to “listen to the customer” and use data to recommend strategies and tactics to improve and exceed customer expectations. The course explores quality systems and continuous improvement tools including Lean, Six Sigma, ISO, CQI, with an emphasis on their application to improve business processes.

**BUSADM 10102134 Business Organization, Management, and Ethics 3 Credits/Units**  
This foundation course covers core concepts related to business strategy, marketing, operations and finance, as well as their interrelationships within an organization. Case studies and a computer business simulation are used to deepen student understanding. Corporate culture and the International dimension of business are also covered. An Ethics framework, which will be further explored in upper-level Program classes is introduced, along with a focus on the means businesses use to promote and enforce ethical behavior.

**BUSADM 10102135 Project Management - Fundamentals 3 Credits/Units**  
This is introductory Project Management class develops skills to manage a project from start to finish using the following project management skills: defining projects; planning projects; scheduling projects; monitoring and controlling projects; project closure; and leading projects. Emphasis will be placed on applying these fundamentals, as both a participant and project leader, in case studies and group projects, using worksheet templates, project software tools and Microsoft Project software. Skills covered include but are not limited to project charters, Gantt Charts, critical paths, milestones, risk control and prioritization, project acceptance and closeout, teamwork and problem solving.

**BUSADM 10102143 Management Techniques 3 Credits/Units**  
Focuses on the two keys to effective management: results and relationships, in the context of the traditional managerial elements of planning, organizing, directing and controlling. Students learn techniques for problem solving, critical thinking, decision-making, delegation, motivation, change management, and political savvy behavior, and apply these techniques through simulations, role- plays, and case studies. The course also emphasizes development of Emotional Intelligence (“EI”), including self-assessment, as well as learning and applying specific techniques to improve each element of EI.

**BUSADM 10102150 Introduction to International Business 3 Credits/Units**  
Provides a basic understanding of the forces that affect business in an international environment. The following forces will be explored: economic theories, financial, dynamics of organization, socio-economics, physical, socio-cultural, political, legal, labor, and import/export practices. Sixteen different countries will be reviewed for influences on their business economy.

**BUSADM 10102160 Business Law 1 3 Credits/Units**  
This survey course covers legal principles used in the business world. Major emphasis is placed on contracts along with torts, federal and state courts, criminal law, marital property and bankruptcy and wills. The course is taught on a level suitable for an associate degree student. Federal, state and case law serve as the basis of study.

**CABMIL 31409100 Laminates 2 1 Credits/Units**  
This course covers the process of fabricating custom plastic laminate countertops including seaming and inlaying. Students will learn a variety of tooling and fabrication techniques to produce solid wood, decorative, miter-fold, custom-bevel, and post-formed edge treatments.

**CABMIL 31409101 Surfaces 1 1 Credits/Units**  
This course will take the learner through the process of fabricating a countertop with solid surface (Corian). Students learn about the advantages and limitations of solid surface material in different applications, and types of adhesives for seaming and installation. Students will learn tooling and fabrication techniques for various edge treatments, fabricate a coved backsplash, make a cut-out for an appliance, as well as inlay and repairing solid surface.

**CABMIL 31409102 Surfaces 2 1 Credits/Units**  
This course covers the process of working with fiber phenolic resin and wood countertops. Students will learn how to fit, seam, fabricate edges, install and finish fiber resin countertops, and fabricate butcher-block and breadboard-end wood surfaces.

**CABMIL 31409328 Woodworking 1A 2 Credits/Units**  
Introduces the operation of traditional woodworking equipment. Students perform numerous exercises to gain familiarity with portable power







This course description is unavailable at this time. Please contact the center offering the course for more information.

**CARP 50410596                      Tech Carpentry Semester 4                      2 Credits/Units**

This course description is unavailable at this time. Please contact the center offering the course for more information.

**CARP 50410597                      Tech Carpentry Semester 5                      2 Credits/Units**

This course description is unavailable at this time. Please contact the center offering the course for more information.

**CARP 50410598                      Tech Carpentry Semester 6                      2 Credits/Units**

This course description is unavailable at this time. Please contact the center offering the course for more information.

**CHEM 10806127                      Chemistry 1                      4 Credits/Units**

The first of a two-semester sequence, Chemistry 1 gives the fundamental concepts of inorganic chemistry that includes the topics of measurement, chemical nomenclature, chemical reactions and stoichiometry, atomic structure, thermochemistry, chemical bonding and solution chemistry. It emphasizes the basic principles and quantitative measurements used on chemistry. It consists of three hours of lecture and one, two-hour laboratory period per week. This course is not intended for transfer.

**CHEM 10806129                      Chemistry 2                      4 Credits/Units**

Chemistry 2 is the continuation of 10-806-127. Further study of basic chemical principles including chemical kinetics and equilibria, acid/base chemistry, and electrochemistry. It introduces properties, structures, and reactions of organic compounds. Elementary aspects of biochemistry are considered.

**CHEM 10806134                      General Chemistry                      4 Credits/Units**

This course covers the fundamentals of chemistry. Topics include: the metric system; problem solving; periodic relationships; chemical reactions; chemical equilibrium; acids bases and salts; and gas laws.

**CHEM 10806178                      Life Science Chemistry                      5 Credits/Units**

Covers a wide range of topics including inorganic and organic. Topics included during the inorganic portion of the course included measurements and conversions, matter and the kinetic molecular theory, periodic table, chemical bonding, chemical reactions, solubility, gases, problem solving and solutions, equilibrium and acid-base behavior. The organic chemistry portion introduces chemical structure as well as physical and chemical behavior of organic molecules. Many of these topics are related to the field of animal science. Basic laboratory skills and techniques are emphasized.

**CHEM 20806200                      Chemistry for Non-Science Majors                      5 Credits/Units**

This is a course for non-science majors, intending to take only a single semester of chemistry to fulfill the college-level lab science requirement. Emphasis on application of chemical concepts to phenomenon observed in everyday life, technology, and related social issues. Includes discussion of measurement, classifying matter, physical and chemical changes, chemical symbols, writing equations, atomic structure, nuclear changes, periodicity, states of matter, chemical bonding, the mole, solutions, acids and bases, redox reactions, fossil fuels and the history and methodology of chemistry.

**CHEM 20806201                      General, Organic & Biological Chemistry                      5 Credits/Units**

This course covers a broad range of topics suitable for many allied-health fields. Topics covered during the general chemistry portion of the course include measurement, problem solving, periodic table, chemical reactions, radioactivity, gases, solutions and acid-base behaviors. The organic chemistry portion introduces the structure and chemical behavior of major types of organic molecules. Also introduces the structure and function of major biological molecules such as carbohydrates, lipids and proteins.

Although suitable for many programs, this course will generally not substitute for College Chemistry 1 if a program specifically requires that course or its equivalent.

**CHEM 20806209                      College Chemistry 1                      5 Credits/Units**

The first semester of a two-semester sequence in college chemistry that includes the topics of measurement, chemical nomenclature, chemical reactions and stoichiometry, atomic structure, gas laws, thermochemistry, chemical bonding and solution chemistry. This course is for students who need one or two semesters of what is typically considered freshman college chemistry. Laboratory work assists in understanding chemical concepts and developing problem-solving skills. Students may complete the year of general college chemistry with 20-806-212.

**CHEM 20806212                      College Chemistry 2                      5 Credits/Units**

College Chemistry 2 is a continuation of 20-806-209. This course covers the principles and applications of organic chemistry, reaction kinetics, equilibrium, thermodynamics, electrochemistry, coordination compounds, nuclear chemistry and environmental chemistry. Lab activities explore traditional analytical chemistry techniques, making extensive use of computer-assisted data analysis. This course involves rigorous quantitative problem solving, and a solid mathematics background is recommended.

**CHEM 20806216                      Chemistry for Biotechnology                      3 Credits/Units**

This course is meant to serve as a review of foundational general chemistry to help comprehension of chemical topics encountered in biotechnology. As such it includes topics in organic chemistry and intermolecular interactions, kinetics, chemical equilibrium, including acid/base and buffer equilibrium, and basic thermodynamics.

**CHEM 20806256                      Organic Chemistry 1 Lecture                      4 Credits/Units**

The first semester of a two-semester organic chemistry sequence. Includes the electronic structure and bonding of atoms and molecules; the nomenclature, mechanisms, reactions and properties of the following classes of compounds - alkanes, alkenes, alkynes, alkyl halides, alcohols, ethers, thiols, and sulfides; instrumental (IR, NMR) methods of analysis and their interpretation. Includes a three hour per week laboratory component as well as four hours per week lecture/discussion. CrLfCrLFTThe first semester of a two semester organic chemistry sequence. Includes the electronic structure and bonding of atoms and molecules; stereochemistry; acids and bases; oxidation and reduction; the nomenclature, reactions, and properties of the following classes of compounds - alkanes, alkenes, alkynes, alkyl halides, alcohols, ethers, and epoxides. Includes the theory and interpretation of IR spectrophotometry and mass spectrometry.

**CHEM 20806257                      Organic Chemistry 2 Lecture                      4 Credits/Units**



Continuation of Organic Chemistry 1. Includes the theory and interpretation of NMR and UV-VIS spectrophotometry; the nomenclature, mechanisms, reactions and properties of the following classes of compounds alkenes, aromatic, aldehydes, ketones, enols/enolates, carboxylic acids, carboxylic acid derivatives, amines, aryl halides, and phenols. Includes multiple-step syntheses involving all organic classes of molecules. This course completes the lecture portion of 1-year long sequence of basic organic chemistry curriculum.

**CHEM 20806266                      Organic Chemistry 1 Lab                      2 Credits/Units**

This course covers traditional material taught in Organic Chemistry, as well as basic organic laboratory techniques, including correct documentation of work in a laboratory notebook, thin layer chromatography, distillation, recrystallization and separations. It will also include various characterization techniques, including IR, gas chromatography, melting point determination, and refractometry.

Lastly, it will cover many of the organic transformations and mechanisms covered in most basic organic chemistry lecture courses, including: substitution and elimination reactions, esterification, and a multi-step extractions. This course will also include a presentation component.

**CHEM 20806267                      Organic Chemistry 2 Lab                      2 Credits/Units**

This course covers traditional material taught in Organic Chemistry, as well as basic organic laboratory techniques, including correct documentation of work in a laboratory notebook, thin layer chromatography, distillation, recrystallization and separations. It will also include various characterization techniques, including NMR, IR, gas chromatography, melting point determination, and refractometry. Lastly, it will cover many of the organic transformations and mechanisms covered in most basic organic chemistry lecture courses, including polymerization, Diels-Alder, Aldol, Grignard syntheses, green chemistry, unknown characterization with multiple techniques and multi-step synthesis. This course will also include written and oral presentation components.

**CHINESE 20802230                      Introduction to Mandarin Chinese                      3 Credits/Units**

Introduction to Mandarin Chinese. This course will introduce students to the fundamental phonetic system and grammar of standard spoken Chinese and written language including 400 Chinese characters. This course will teach modern standardized simplified Chinese characters rather than the more complex traditional characters. The course will meet for four hours each week for three credits.

**CHINESE 20802231                      Introduction to Mandarin Chinese 2                      3 Credits/Units**

This course builds on the introduction to the fundamental phonetic system and grammar of standard spoken Chinese and written language and Chinese characters provided in Introduction to Mandarin Chinese I. This course will teach modern standardized simplified Chinese characters rather than the more complex traditional characters. The course will meet for four hours each week for three credits.

**CIVILET 10607120                      Methods In Civil Engineering                      2 Credits/Units**

An introductory engineering course that familiarizes students with the civil engineering and construction processes from project concept to completion. Provides new students opportunity to develop and improve their problem-solving skills and prepare for subsequent technical courses.

**CIVILET 10607125                      Intro To Cad Civil Engineer                      2 Credits/Units**

This course introduces computer aided drafting (CAD) and will utilize software related to civil engineering design. This course will focus on: basic drawing techniques, creating and editing objects and text, proper utilization of layers, and creating blocks and templates.

**CIVILET 10607133                      Estimating                      3 Credits/Units**

Stresses estimating for general civil engineering work. Covers the preparation of detailed estimates as prepared by contractors for bidding purposes, the general estimate as prepared by engineers, and approximate estimates. Areas covered: highways, water and sewer lines, bridges, culverts, streets and general construction grading. Prerequisite: 10-607-177, fourth-semester standing or consent of instructor.

**CIVILET 10607147                      Civil Drawing 1                      3 Credits/Units**

Emphasis on development of graphical communication. Begins with basic manual drafting skills including line work, lettering, drafting tools use and free hand sketching of construction details. Transition in the last half of the semester to a CAD-based environment stressing geometric construction principles and simple engineering drawings.

**CIVILET 10607148                      Civil Drawing 2                      2 Credits/Units**

Applications-oriented class with CAD emphasis. More complex drawing projects including mapping, roadway design elements and structural detail applications. Drawing organization and standards, data conversion and sharing, third-party add-ins. Prerequisites: 10-607-147 and 10-607-156.

**CIVILET 10607149                      Aggregates And Concrete                      2 Credits/Units**

Introduces the fundamental principles of aggregates, Portland cement concrete and bituminous concrete. Emphasizes standards-based sampling and testing in laboratory and field environments. Tests are performed according to standards set by the American Society for Testing and Materials (ASTM) and American Association of State Highway and Transportation Officials (AASHTO).

Students communicate results in written reports.

Prerequisites: 10-804-114, and 10-103-137.

**CIVILET 10607155                      Survey 1                      3 Credits/Units**

Basic measurement concepts, procedures, errors and computations underlying the technical aspects of surveying. Students use modern instrumentation to perform elevation, distance, and angular measurements. Coordinate geometry is introduced as a computational tool. Computations are done both manually and on computer using commercial software.

**CIVILET 10607156                      Survey 2                      3 Credits/Units**

Principles, computations and field methods, from design to stakeout, involved in three-dimensional curvilinear survey applications. AASHTO and WisDOT vertical and horizontal alignment standards; geometric and volumetric calculations. Field work reflecting different construction surveys are performed utilizing modern instrumentation. Prerequisite: 10-607-155. Corequisites: 10-607-147 and 10-804-116.

**CIVILET 10607158                      Survey 3                      3 Credits/Units**

Advanced concepts and procedures building on knowledge and skills attained in previous surveying classes. Concepts include geodetic









include sketching techniques, orthographic projection, and isometric drawings.

<b>CONST 31410310</b>	<b>Materials and Estimating 2</b>	<b>1 Credits/Units</b>
This course builds on material and estimating skills learned in Materials and Estimating 1. Students will create estimates using Excel spreadsheets. In the capstone project, students will create a bid for building one of the student project homes. The bid will then be used as the basis of a sales presentation delivered to professionals from the home building industry.		
<b>CONST 31410311</b>	<b>Commercial Construction</b>	<b>1 Credits/Units</b>
This course focuses on construction techniques and materials that are used primarily in commercial construction settings. Students will frame with steel, install metal framed doors, erect concrete forms and install suspended ceilings. Entry into apprenticeship and other commercial construction career pathways will be explored.		
<b>CONST 31410324</b>	<b>Remodeling Techniques</b>	<b>1 Credits/Units</b>
Explores the differences between new building construction and remodeling existing buildings. Topics covered include site protection, safe demolition techniques, lead and asbestos hazards, removing existing walls, replacing windows and doors, and tying into the existing structure.		
<b>CONST 31410328</b>	<b>Construction Techniques 1</b>	<b>5 Credits/Units</b>
This course continues instruction on roof framing and introduces installation methods for roof shingles, windows and doors, soffits and fascia, exterior trim and siding. Basic stair construction is also included. Building science topics of insulation, drainage planes and greener building techniques are also discussed.		
<b>CONST 31410329</b>	<b>Construction Techniques 2</b>	<b>5 Credits/Units</b>
This course emphasizes interior finish including, but not necessarily limited to, installing wall board, hanging interior doors, installing interior trim, installing kitchen and bathroom cabinets, and completing a punch list.		
<b>CONST 31410335</b>	<b>Intermediate Carpentry Lab</b>	<b>2 Credits/Units</b>
Students will practice carpentry skills learned in Introduction to Construction and Construction and Remodeling Techniques 1. They will continue to work, under faculty supervision, on the sheds and the home that they began in the fall semester. They may also complete a small remodeling project. Carpentry tasks will include framing, roofing, window and door installation and exterior finishing. Students who successfully complete this practicum with a grade of B or better will receive an additional Golden Hammer credential upon graduation.		
<b>CONST 31410337</b>	<b>Workplace Safety</b>	<b>1 Credits/Units</b>
This course will cover several key areas of OSHA workplace safety, including: erection of ladders and scaffolds, HASCOM (Hazardous Materials Communication), selection and use of PPE (Personal Protective Equipment), proper machined guarding, and prevention of slips, trips and falls.		
<b>CONST 31410345</b>	<b>Materials and Estimating 1</b>	<b>1 Credits/Units</b>
This course introduces students to using building plans to create materials and labor estimates. Material selection and methods for calculating labor rates will also be covered.		
<b>CONST 31410363</b>	<b>Building Science and Sustainability</b>	<b>1 Credits/Units</b>
In order to design and build quality, energy efficient and resource efficient homes, it is important to understand the interaction of building systems. In this course, students explore the structural, HVAC, electrical and plumbing systems in a home and how their performance can be measured and optimized to create sustainable homes.		
<b>CONST 31410385</b>	<b>Introduction to 3D Computer Assisted Drafting</b>	<b>1 Credits/Units</b>
In this course, students create three dimensional building models using Sketch Up and a building information modeling software such as Chief Architect. Those models will then be used to create construction documents.		
<b>CONST 31410399</b>	<b>Fundamentals Of Construction</b>	<b>3 Credits/Units</b>
This course provides an introduction to the identification, safe use and care of hand and portable power tools. Lab work includes the construction of sawhorses using techniques learned in class.		
<b>CONST 31410410</b>	<b>Fundamentals of Construction 1</b>	<b>2 Credits/Units</b>
This course provides an introduction to the identification, safe use, and care of hand and portable power tools. Lab work includes the construction of sawhorses using techniques learned in class. Students must also complete Fundamentals of Construction 2 (one credit) to fulfill the Fundamentals of Construction (total 3 credits) requirement for the Construction & Remodeling Program.		
<b>CONST 31410411</b>	<b>Fundamentals of Construction 2</b>	<b>1 Credits/Units</b>
This course provides an introduction to the identification, safe use and care of hand and portable power tools, especially those used for finish carpentry. Lab work includes the construction of cornhole games using techniques learned in class. This course fulfills the third and final credit of the Fundamentals of Construction program requirement for students in the Construction & Remodeling program.		
<b>COOKING 60303652</b>	<b>Foreign/Ethnic Foods</b>	<b>0 Credits/Units</b>
This course will provide a variety topics using Foreign/Ethnic Foods.		
<b>COSMET 10502330</b>	<b>Making the Cut</b>	<b>1 Credits/Units</b>
Making the Cut is an orientation course designed to maximize the students understanding of the Barber/Cosmetology Academy which is offered to waitlisted individuals prior to enrollment in the program. Students are introduced to the industry, receive an orientation to the program competencies, assessed on their preparedness, skill and abilities to ensure an educational match and increase the chance of successful program completion.		
<b>COSMET 31502321</b>	<b>Cosmetology Techniques 1</b>	<b>3 Credits/Units</b>
Introduces various services performed by the barber/cosmetologist. Emphasis is on hair analysis, shampooing, basic permanent waving and haircutting techniques, scalp and hair conditioning treatments, and introductory hair styling services. Students spend the first part of the semester working on manikins and each other. During the second part of the semester, students develop skills through instruction in the salon		



while working on clients.

<b>COSMET 31502322</b>	<b>Cosmetology Techniques 2</b>	<b>2 Credits/Units</b>
A continuation of Techniques 1, this course emphasizes the development of advanced techniques in hair cutting, styling and permanent waving. This course also introduces the hands on application of various hair coloring techniques, chemical relaxing, manicuring, pedicuring, and facial services. Students continue to work on clients with instruction and guidance.		
<b>COSMET 31502323</b>	<b>Cosmetology Techniques 3</b>	<b>3 Credits/Units</b>
Emphasizes advanced training in the techniques presented in Techniques 1 and 2. Students continue to work on clients to further develop skills to prepare them for entering the job market and passing the state examination.		
<b>COSMET 31502324</b>	<b>Cosmetology Techniques 4</b>	<b>3 Credits/Units</b>
Continuation of Techniques 3		
<b>COSMET 31502325</b>	<b>Cosmetology Techniques 5</b>	<b>4 Credits/Units</b>
Continuation of Barber Cosmetology Techniques		
<b>COSMET 31502326</b>	<b>Cosmetology Techniques 6</b>	<b>4 Credits/Units</b>
Continuation of Cosmetology Techniques 5.		
<b>COSMET 31502327</b>	<b>Cosmetology Techniques 7</b>	<b>4 Credits/Units</b>
Continuation of Cosmetology Techniques 6.		
<b>COSMET 31502328</b>	<b>Cosmetology Techniques 8</b>	<b>4 Credits/Units</b>
Continuation of Cosmetology Techniques 7.		
<b>COSMET 31502340</b>	<b>Cosmetology Theory 1</b>	<b>5 Credits/Units</b>
Students study the theory related to introductory salon services such as professional image, hair cutting and product knowledge. Included are terminology, care and proper usage. Students study bacteriology, decontamination and first aid procedures, trichology, and the basic theory of shampooing and conditioning hair. Basic permanent waving, hair design, and hairstyling services are also included.		
<b>COSMET 31502341</b>	<b>Cosmetology Theory 2</b>	<b>4 Credits/Units</b>
This course includes the anatomy and physiology of the skin and nails, manicuring, pedicuring, skin care and facial services. Advanced hair styling and chemical relaxing are included. Theories of hair coloring and hair cutting methods are continued. This course also covers the history of the industry and related governing laws.		
<b>COSMET 31502342</b>	<b>Cosmetology Theory 3</b>	<b>4 Credits/Units</b>
Presents advanced techniques and industry trends as determined by the instructors, including advanced hair coloring techniques. Electricity as it relates to the salon is included. Preparation for taking the State Board exam begins.		
<b>COSMET 31502343</b>	<b>Cosmetology Theory 4</b>	<b>3 Credits/Units</b>
Theories of hair coloring and hair cutting methods are continued.		
<b>COSMET 31502392</b>	<b>Cosmetology Sales and Advertising 1</b>	<b>1 Credits/Units</b>
Introductory sales course stressing the proper application of sales techniques to skilled occupations. The sales and advertising techniques as applied to job disciplines are designed not only to create greater efficiency on the job, but also to improve working relationships with fellow employees and clients. Includes the application of sales approach, demonstration and close.		
<b>COSMET 31502393</b>	<b>Cosmetology Sales and Advertising 2</b>	<b>1 Credits/Units</b>
Students learn to recognize different types of salons and the opportunities each has to offer. Students also learn to identify and overcome obstacles that they may encounter. Students gain a firm grasp of duties of a salon employee.		
<b>COSMET 31502395</b>	<b>Cosmetology State Board Review</b>	<b>1 Credits/Units</b>
Prepares students to the State Board exam.		
<b>COSMET 31502398</b>	<b>Cosmetology Client Relations</b>	<b>1 Credits/Units</b>
This course examines client relations, service, and retention. Students explore how a business can enhance their competitive position by adopting and implementing a variety of service initiatives relating to the cosmetology industry. Topic areas range from practicing necessary customer service skills, such as communication, listening and conflict management. Creating professional cover letters and resumes enhancing employment possibilities are included in this course. Emphasis is given to the fundamentals of grammar, spelling, sentence structure and paragraph development.		
<b>COSMET 50502521</b>	<b>Trichology, Bacteriology, Sterilization and Sanitation</b>	<b>2 Credits/Units</b>
Examine topics related to the structure and disorders of the hair and scalp. Become familiar with the proper selection of shampoos, conditioners and treatments for providing hair care and scalp services. Study design decisions and become familiar with the techniques associated with basic hair cutting. Identify dexterity, procedures and techniques in hair cutting and hair styling needed to provide client satisfaction. Understand bacteriology and sanitation as it relates to providing hair care services.		
<b>COSMET 50502522</b>	<b>Hair Cutting, Design and Chemical Services</b>	<b>2 Credits/Units</b>
Gain an understanding of chemical services. Study the physical and chemical changes that must take place in all chemical services performed. Practice the application of chemicals and the placement of permanent wave rods to achieve the desired chemical services.		
<b>COSMET 50502523</b>	<b>Hygiene, Facial Anatomy, Skin Care, and Make-up</b>	<b>2 Credits/Units</b>
Study the anatomy of the face in order to be able to accurately perform related services. Become familiar with skin care, hair removal and make-up. Design, shape and trim facial hair to enhance a client's appearance. Explore the basic principles of electricity in an effort to better understand the safe handling of appliances in the salon / spa.		



<b>COSMET 50502524</b>	<b>Nail Care and State Regulations</b>	<b>2 Credits/</b>
Units Learn to recognize various nail irregularities, disorders and diseases in order to determine when to continue service or refer the client to a physician. Practice different procedures that are used to provide nail care services. Review barber/cosmetology laws and rules and its application to providing services to the client's in a safe and sanitary manner. Review for State Exam and the final exam for your apprenticeship training.		
<b>COURT 10170111</b>	<b>Court Reporting 1</b>	<b>4 Credits/Units</b>
Prepares the learners to use machine shorthand (StenEd Computer Compatible Theory) to write consonants, vowels, numbers, multi-syllabic words, multi-consonant words, punctuation, and special symbols, short forms and phrases, words in their singular and plural forms, and prefixes and suffixes.		
<b>COURT 10170112</b>	<b>Court Reporting 2</b>	<b>4 Credits/Units</b>
Continuation of machine shorthand covering theory, keyboard, and phonetics necessary to write and read conflict-free computer shorthand. Introduces speed building while focusing on accuracy in writing, transcribing, and readback of shorthand notes. Includes vocabulary development.		
<b>COURT 10170113</b>	<b>Court Reporting 3</b>	<b>4 Credits/Units</b>
Continuation of machine shorthand covering theory, keyboard, and phonetics necessary to write and read conflict-free computer shorthand. Introduces speed building while focusing on accuracy in writing, transcribing, and readback of shorthand notes. Includes vocabulary development.		
<b>COURT 10170114</b>	<b>Court Reporting 4</b>	<b>4 Credits/Units</b>
Continuation of machine shorthand covering theory, keyboard, and phonetics necessary to write and read conflict-free computer shorthand. Introduces speed building while focusing on accuracy in writing, transcribing, and readback of shorthand notes. Includes vocabulary development.		
<b>COURT 10170115</b>	<b>Court Reporting 5</b>	<b>4 Credits/Units</b>
Continues speedbuilding and vocabulary expansion for writing and transcribing material from legal proceedings (testimony, jury charges, voir dire, expert witnesses, depositions, and opening/closing statements) and technical areas (testimony, literary, congressional, scientific, and medical). Stresses fluent and accurate readback.		
<b>COURT 10170116</b>	<b>Court Reporting 6</b>	<b>4 Credits/Units</b>
Continues speedbuilding and vocabulary expansion for writing and transcribing material from legal proceedings (testimony, jury charges, voir dire, expert witnesses, depositions, and opening/closing statements) and technical areas (testimony, literary, congressional, scientific, and medical). Stresses fluent and accurate readback.		
<b>COURT 10170121</b>	<b>CAT Class 1</b>	<b>1 Credits/Units</b>
Technology course for Court Reporting program that focuses on computer basics and transcript production, dictionary management, realtime translation, and reporter technology utilizing Case CATalyst software from Stenograph, LLC.		
<b>COURT 10170122</b>	<b>CAT Class 2</b>	<b>1 Credits/Units</b>
Technology course for Court Reporting program that focuses on computer basics and transcript production, dictionary management, realtime translation, and reporter technology utilizing Case CATalyst software from Stenograph, LLC.		
<b>COURT 10170124</b>	<b>CAT Class 4</b>	<b>1 Credits/Units</b>
Technology course for Court Reporting program that focuses on computer basics and transcript production, dictionary management, realtime translation, and reporter technology utilizing Case CATalyst software from Stenograph, LLC		
<b>COURT 10170125</b>	<b>CAT Class 5</b>	<b>1 Credits/Units</b>
Technology course for Court Reporting program that focuses on computer basics and transcript production, dictionary management, realtime translation, and reporter technology utilizing Case CATalyst software from Stenograph, LLC.		
<b>COURT 10170131</b>	<b>English for Realtime Reporters 1</b>	<b>1 Credits/Units</b>
Focuses on the rules of English grammar, spelling, punctuation, and capitalization, including vocabulary (word knowledge), through instruction and activities designed for students to develop spelling and vocabulary skills and demonstrate ability to apply the rules of grammar, spelling, punctuation, and capitalization to sentences, paragraphs, and transcripts through systematic testing and/or projects.		
<b>COURT 10170132</b>	<b>English for Realtime Reporters 2</b>	<b>1 Credits/Units</b>
Focuses on the rules of English grammar, spelling, punctuation, and capitalization, including vocabulary (word knowledge), through instruction and activities designed for students to develop spelling and vocabulary skills and demonstrate ability to apply the rules of grammar, spelling, punctuation, and capitalization to sentences, paragraphs, and transcripts through systematic testing and/or projects.		
<b>COURT 10170134</b>	<b>English for Realtime Reporters 4</b>	<b>1 Credits/Units</b>
Focuses on the rules of English grammar, spelling, punctuation, and capitalization, including vocabulary (word knowledge), through instruction and activities designed for students to develop spelling and vocabulary skills and demonstrate ability to apply the rules of grammar, spelling, punctuation, and capitalization to sentences, paragraphs, and transcripts through systematic testing and/or projects.		
<b>COURT 10170135</b>	<b>English for Realtime Reporters 5</b>	<b>1 Credits/Units</b>
Focuses on the rules of English grammar, spelling, punctuation, and capitalization, including vocabulary (word knowledge), through instruction and activities designed for students to develop spelling and vocabulary skills and demonstrate ability to apply the rules of grammar, spelling, punctuation, and capitalization to sentences, paragraphs, and transcripts through systematic testing and/or projects.		
<b>COURT 10170170</b>	<b>Court Reporting Procedures</b>	<b>3 Credits/Units</b>
Covers professional reporting procedures, including transcript production; daily copy reporting; using general and legal reference materials; legal citations; professional standards and ethics; technology, such as videotaped depositions and computer-assisted transcription; reporting depositions, commission hearings and business meetings; operating a freelance reporting business; and resume preparation. Requires a		





minimum testimony writing speed of 180wpm.

**COURT 10170171                      Legal Terminology    2 Credits/Units**  
Focuses on legal terminologies customarily encountered in the judicial system in the following areas: civil law; criminal law; and discovery, trial, and appellate processes. Methods of researching legal citations are also emphasized.

**COURT 10170172                      Court Reporting Internship    3 Credits/Units**  
The objective of the class is to gain experience and knowledge through observation of the working reporter in the judicial and educational environment. Students will also participate by writing in actual situations relating to the freelance, courtroom, and realtime environments. Mock RPR and CRR tests are administered and mock interviews conducted. Requires a minimum testimony writing speed of 180wpm.

**CRIMJUST 10504103                      Professional Development Seminar for Criminal Justice    1 Credits/Units**  
This course is designed for second year students who are preparing to enter into the job search process. Prepares the student for the hiring process for a Criminal Justice career including applications, resumes, interviews and hiring process standards. Also incorporates the B.E.S.T. (Basic Employability Skills Training) curriculum developed by the Manhattan Area Technical College and the Kansas Department of Commerce.

**CRIMJUST 10504143                      Criminology for Law Enforcement    3 Credits/Units**  
Exposes criminal justice students to these questions: what is crime and why is it a problem? Focusing on those questions, the course will look at what is known about crime and how it is known. Also touches on crimes, criminals and theories, while focusing on the police in the criminal justice system. Prerequisite: completion of first-year courses

**CRIMJUST 10504152                      Emergency Management    3 Credits/Units**  
Introduces the student to the principles, theories, and practices of emergency management. The philosophy of comprehensive Emergency Management will be discussed including mitigation, preparedness, response and recovery. In addition, students will obtain ICS-100 and FEMA IS-700 certification.

**CRIMJUST 10504170                      Introduction to Corrections    3 Credits/Units**  
Examines the concept of punishment and its form, functions, and enforcement throughout history, with an emphasis on the operation, structure, clientele, and issues confronting the institutions, agencies, and programs encompassing the corrections system including jails, prisons, and probation and parole.

**CRIMJUST 10504171                      Private Sector Security    3 Credits/Units**  
This course is a comprehensive examination of the relationship of the criminal justice system to business and industrial security. It also provides an overview of the administrative, personnel, and physical aspects of the private security field.

**CRIMJUST 10504185                      Introduction to Computer Forensics    3 Credits/Units**  
Introductory computer forensics concepts, terminology and management of digital evidence. This course will cover the identification and collection and preservation (First Responder) of computer related and digital evidence, the acquisition of digital evidence, basic forensic analysis concepts, and presentation of digital evidence to the investigator, the District Attorney's Office, judges, and to juries. The course will also cover the incorporation of digital evidence into the investigation and prosecution of criminal investigations. An application and Criminal History Check must be submitted to the Program Director prior to registration for this course.

**CRIMJUST 10504186                      Introduction to Internet and Network Concepts    3 Credits/Units**  
Internet related investigations -- terminology and management of evidence gathered from online sources. Internet Service Provider Overview. Hacking Investigations, chatroom, e-mail, website, Phishing, online auction sites, instant messaging, newsgroups and bulletin board, internet related fraud methods, BoNets, viruses, worms, etc. This course includes includes an overview of how various computer networks work, how to read log files, IP addressing schemes, IP telephony, overview of various file-sharing networks commonly found in forensic investigations. Basic overview of network intrusion detection, response and reporting. Overview of Netanalysis, Kazaalyzer, and other standard forensic tools. An application and Criminal History Check must be submitted to the Program Director prior to registration for this course.

**CRIMJUST 10504187                      Legal Issues and Digital Evidence    3 Credits/Units**  
This course covers the 4th Amendment, ECPA, HIPPA, FERPA, Search Warrants (computer, online), Subpoenas, Preservation Letters & 2703, and the Patriot Act as it affects digital evidence. Dealing with ISPs, Wisconsin Statutes covering computer related crimes (child pornography, use of computers to facilitate child sex crimes, child enticement, stalking, and the computer crimes statutes), Federal computer crimes statutes, corporate law and e-discovery issues. Also included are evidence in the courtroom -- presentation of data retrieved from computer or online sources, and expert testimony in the courtroom.

**CRIMJUST 10504188                      Advanced Computer Forensics Concepts/Forensics Practicum    3 Credits/Units**  
This course is an overview of advanced computer forensics topics such as encryption, password cracking tools, data hiding techniques, stenography, anti-forensic tools and their effect on investigation, forensic problem solving (reconstruction of web pages from web cache, reverse engineering of P2P networks, images, etc.) INFO2 (Recycle Bin) files, in-depth discussion of file carving & Windows artifacts, hidden partitions, thumbs.db files, advanced MAC (modified, accessed, created) time discussion, metadata, Microsoft Vista and Bitlocker, X Box Forensics, digital deception, etc. The course will also cover an overview of how cell phone networks, cell phones, personal data assistants, and other devices work.

This course would be a culmination of skills from previous courses. Students would be expected to take a case study from beginning to the end of investigation and course process. Students would receive a case study problem, and would be expected to write incident reports, collect evidence, acquire digital evidence, and perform the forensic investigation of several types of digital evidence, write reports regarding the forensic examinations, participate in trial preparation and courtroom testimony.

**CRIMJUST 10504189                      Introduction to Video Evidence    3 Credits/Units**  
Video is one of the most powerful tools to help law enforcement investigate and solve crimes. Video is one of the most prevalent forms of evidence collected in modern criminal investigations. This course is designed to introduce the student to various aspects of video evidence within the criminal justice system. Students will gain an overview of the various types of video evidence and their respective roles in criminal investigations. Basic, practical experience will be gained in video evidence collection, report writing and court testimony. Knowledge will be





In this course, the learner will enforce Wisconsin traffic laws, detect traffic violations, issue traffic citations, direct traffic, identify responsibilities of a first responding officer, manage the response to a scene, take necessary steps to enable effective follow-up as needed, conduct an initial investigation at a crash scene, identify the mechanics of measuring and documenting traffic crash scenes, complete the Wisconsin Motor Vehicle Accident Report, record the crash scene using photography, take appropriate enforcement action based on information gathered, and recognize and interpret indicators of impaired driving.

**CRIMJUST 30504310                      Application of Investigations                      2 Credits/Units**  
Through classroom lecture, on-campus lab, and WI Department of Justice 720 Academy integration exercises students will learn and apply skills addressed in the following Phase III topics of the Department of Justice 720 Academy curriculum framework: Ethics II: Moral Reasoning and Professional Responsibility, Cultural Competence II: Fair and Impartial Policing, Interrogations, Testifying in Court, Crimes III and Physical Evidence. The Department of Justice Phase III written examination will be administered at the conclusion of this course.

**CRIMJUST 30504311                      Application of Traffic Response                      2 Credits/Units**  
Through classroom lecture, and on-campus lab, students will learn and apply skills addressed in the following Phase III topics from the WI Department of Justice 720 Academy curriculum framework: Traffic Law Enforcement - Core and Radar, Traffic Crash Investigations & Incident Management, Operating a Motor Vehicle While Intoxicated (OMVWI), Standardized Field Sobriety Tests (SFST), and Report Writing. The Department of Justice Phase III written examination will be administered at the conclusion of this course.

**CRIMJUST 30504312                      Health and Fitness                      1 Credits/Units**  
Through classroom lecture and on-campus lab students will apply Phases I-III Health Fitness WI Department of Justice 720 Academy curriculum framework program requirements and Officer Wellness Suicide Prevention. The Department of Justice Phase III written examination will be administered at the conclusion of this course.

**CRIMJUST 30504313                      Overview of Criminal Justice                      1 Credits/Units**  
Through classroom lecture and WI Department of Justice 720 Academy integration exercises, students will learn and apply skills addressed in the following WI Department of Justice 720 Academy Phase I curriculum framework topics: Academy Orientation, Fundamentals of Criminal Justice, Ethics, Cultural Competency, Agency Policy, and Professional Communication. The Department of Justice Phase I written examination will be administered at the conclusion of this course.

**CRIMJUST 30504314                      Overview of Investigations                      2 Credits/Units**  
Through classroom lecture, on-campus lab, and WI Department of Justice 720 Academy integration exercises students will learn and apply skills addressed in the following Department of Justice 720 Academy curriculum framework Phase I topics: Constitutional Law I, Crimes I, Juvenile Law I, Interviews, Report Writing, and Physical Evidence. The Department of Justice Phase I written examination will be administered at the conclusion of this course.

**CRIMJUST 30504315                      Overview of Patrol Response                      2 Credits/Units**  
Through classroom lecture, and on-campus lab, and WI Department of Justice integration exercises students will learn and apply skills addressed in the following WI Department of Justice 720 Academy curriculum framework Phase I topics: Critical Thinking and Decision-Making, Basic Response (RESPOND), Radio Procedures, Introduction to TraCS, Traffic Law Enforcement, and First Aid/CPR/AED. This course will also include the WI DOJ 720 Academy Integration Exercises. This course will also include the WI DOJ 720 Academy Integration Exercises. The Department of Justice Phase I written examination will be administered at the conclusion of this course.

**CRIMJUST 30504316                      Overview of Tactics                      1 Credits/Units**  
Through classroom lecture, and on-campus lab and WI Department of Justice 720 Academy integration exercises, students will learn and apply skills addressed in the following Department of Justice 720 Academy curriculum framework Phase I topics: Fundamentals of Firearms, Vehicle Contacts I, Officer Wellness, and DAAT. The Department of Justice Phase I written examination will be administered at the conclusion of this course.

**CRIMJUST 30504317                      Principles of Emergency Vehicle Response                      2 Credits/Units**  
Through classroom lecture, and on-campus lab, and WI Department of Justice 720 Academy integration exercises students will learn and apply skills addressed in the following Department of Justice 720 Academy Phase II topics: Emergency Vehicle Operation and Control (EVOC) and Vehicle Contacts II. The Department of Justice Phase II written examination will be administered at the conclusion of this course.

**CRIMJUST 30504318                      Principles of Investigations                      2 Credits/Units**  
Through classroom lecture, and on-campus lab, and WI Department of Justice 720 Academy integration exercises students will learn and apply skills addressed in the following Phase II topics of the WI Department of Justice 720 Academy curriculum framework: Constitutional Law II, Physical Evidence Collections, and Crisis Management. The Phase II Written Exam will be given in this course. The Department of Justice Phase II written examination will be administered at the conclusion of this course.

**CRIMJUST 30504319                      Principles of Patrol Response                      2 Credits/Units**  
Through classroom lecture, and on-campus lab, and WI Department of Justice 720 Academy integration exercises students will learn and apply skills addressed in the following WI Department of Justice 720 Academy curriculum framework Phase II topics: Professional Communication Skills II, Incident Command Systems and NIMS, Hazardous Materials and WMD, Tactical Response, Crisis Management, and Tactical Emergency Casualty Care. The Department of Justice Phase II written examination will be administered at the conclusion of this course.

**CRIMJUST 30504320                      Principles of Tactics                      3 Credits/Units**  
Through classroom lecture and on-campus lab and integration exercises, students will learn and apply skills addressed in the following Phase II topics from the Department of Justice 720 Academy curriculum frameworks including: Professional Communication Skills II, DAAT, Firearms II, Tactical Response, and a Tactical Emergency Casualty Care. The Department of Justice Phase II written examination will be administered at the conclusion of this course.

**CRIMJUST 30504350                      Basic Jail Officer Certification                      4 Credits/Units**  
Jail Officer Certification Academy provides the curriculum required for jail officer certification required by the Wisconsin Law Enforcement Standards Board. This course focuses on the philosophical and tactical principles of working as a correctional officer in Wisconsin. It includes a skills-assessment examination prior to completion to verify student competence. Topics covered include state law and administration code



provisions governing county jail operations, the basic constitutional rights of prisoners, as established by Federal Courts, and basic guidelines regarding effective correctional practices and procedures. Upon the successful completion of the program, a student will be eligible for certification with the Wisconsin Department of Justice, Law Enforcement Training and Standards Board as a jail officer.

Students seeking admission to the Jail Officer Certification must be at least 18 years of age; possess a high school diploma or equivalent; complete the Wisconsin Department of Justice Application for Enrollment - Jail Officer Training (DJ-LE-327); possess a valid Wisconsin Driver's License; complete a criminal history records check; and complete a satisfactory oral interview. Students accepted into the Jail Officer Certification Course must undergo a physical assessment by a Wisconsin licensed physician.

Enrollment is regulated by the Wisconsin Department of Justice.

**CUL ARTS 10316101 Principles Of Sanitation 1 Credits/Units**  
Covers food service sanitation principles and the role of food service personnel in the prevention of contamination and food borne illness. Certification through the National Restaurant Association Educational Foundation is a requirement for completion and can be used to apply for state certification.

**CUL ARTS 10316104 Advanced Skills Lab 1 3 Credits/Units**  
Provides students with an introduction to classical and ethnic cooking techniques common to full-service restaurants. Students will have an opportunity to apply and develop skills in the MATC Gourmet Dining Room, a simulated restaurant environment.

**CUL ARTS 10316106 Food Theory 2 Credits/Units**  
This course provides the opportunity for the learner to develop the knowledge, skills, and understanding of food preparation in commercial kitchens that will enhance their careers.

**CUL ARTS 10316108 Culinary Baking Fundamentals 1 Credits/Units**  
Provides a general understanding of basic baking principles and knowledge of the functions and appropriate usage of the major ingredients used in production baking. Different types of bakery products are classified according to their characteristics. Ingredient cost-outs are calculated.

**CUL ARTS 10316111 Professional Cooking 1 4 Credits/Units**  
Students will learn basic skill sets and foundation block of professional cooking in a practical environment. The class develops foundation skills that are used in every kitchen. Emphasis of the class is: sanitation, knife skills, heat transfer, protein cooking, working in teams, Mise en place, sauce production and starch cookery.

**CUL ARTS 10316112 Cuisines of the World 2 Credits/Units**  
Students will explore foods from North America and other prominent regions of the world. Gives students the opportunity to further practice and reinforce cooking techniques and knife skills needed to produce stocks and sauces, starches, meats, and other food items. Protein fabrication and heat transfer techniques are also covered.

**CUL ARTS 10316115 Culinary Baking Lab 2 Credits/Units**  
A chef who develops a basic understanding of the baking process will be better able to manage any kitchen situation, including the pastry department. Mastery is not the goal of this course, but rather to develop a foundation in baking principles through hands-on application in a modern baking lab using production equipment. Students will prepare a variety of standard bakery products to obtain knowledge about the many processes of baking. Prerequisites: Culinary Baking Fundamentals, 10-316-108 or concurrent enrollment.

**CUL ARTS 10316118 Meat Cutting 2 Credits/Units**  
Provides hands-on experience of cutting and fabricating wholesale cuts of meat. The importance of safety and hygiene, equipment utilization and yield costing are also discussed.

**CUL ARTS 10316121 Professional Cooking 2 4 Credits/Units**  
Further continuation of 316-119 lab with emphasis placed on the demands of running a kitchen and developing quality products and sticking to details. Students will elevate their skills; heat transfer, sanitation, critical thinking, team work, and sauce production. The last eight weeks of the class are devoted to fish & shellfish cookery. The final segment is interpreting menus from the students.

**CUL ARTS 10316130 Advanced Skills Lab 2 4 Credits/Units**  
Expanding on the first semester of Intro to Advanced Skills Lab 1, students will incorporate the culinary skills they have learned over the last one-and-a-half of the culinary arts program. Utilizing up to date cooking techniques and following industry standards for high-end foods students will maintain all aspects of the kitchen with the utmost care. With an emphasis on working on presentation, flavors, cooking skills and time management students will gain a real work environment with the lab component of learning to prepare high-end foods. Students are expected to have completed the first semester of Intro to Gourmet before entering the Gourmet Foods class.

**CUL ARTS 10316132 Waitstaff Training 2 Credits/Units**  
Waitstaff training encompasses the art of service and the importance of front of the house work in the culinary program. Students learn how to properly interact with guest and provide high quality service to guest. They learn the fundamentals of table service and proper techniques for service. Along with gaining insight on guest service students learn the procedures for entering guest orders and interacting with the kitchen staff. They will be provided with management opportunities that will require critical thinking and make important decision on how to handle specific situations.

**CUL ARTS 10316133 Garde Manger/Decorative Foods 2 Credits/Units**  
This course is designed to give the students a fundamental working knowledge of the cold kitchen. Students will have hand on working experiences and be tested for their knowledge of Garde Manager using quizzes, a written midterm, final exam and one cold platter as a capstone group project. Students will be required to work on projects independently and in-group settings. Students will begin the class by learning the history of Garde Manager and produce products that are made every day on the cold side of our industry to include; ice carving, charcuterie, sandwiches, crackers, cheese and even pickles.

**CUL ARTS 10316135 Dining Room Operations 2 Credits/Units**







Prepares dental assistant students for professional success in a dental practice or another dental health care environment. Students develop professional appearance and image. More importantly, they learn to work within ethical guidelines and legal frameworks. In preparation for entering the work force, dental assistants customize or develop their portfolios and lay out an on-going professional development plan. Prerequisite: acceptance into the Dental Assistant program.

**DENTHYG 10508101                      Dental Health Safety                      1 Credits/**

Units Prepares dental auxiliary students to respond proactively to dental emergencies, control infection, prevent disease, adhere to OSHA Standards, and safely manage hazardous materials. Students also take patient vital signs and collect patient medical/dental histories. CPR certification is prerequisite: students will be required to show proof of certification before beginning the course.

**DENTHYG 10508102                      Oral Anatomy, Embry, Histology                      4 Credits/Units**

Prepares Dental Hygienist students to apply detailed knowledge about oral anatomy to planning, implementation, assessment, and evaluation of patient care. Students identify distinguishing characteristics of normal and abnormal dental, head, and neck anatomy and its relationship to tooth development, eruption, and health.

**DENTHYG 10508103                      Dental Radiography                      2 Credits/Units**

Prepares dental auxiliary students to operate x-ray units and expose bitewing, periapical, extra oral, and occlusal radiographs. Emphasis is placed on protection against x-ray hazards. Students also process, mount, and evaluate radiographs for diagnostic value. In this course students demonstrate competency on a manikin. In addition, students expose bitewing radiographs on a peer, role-play patient. Students gain further experience in exposing radiographs on patients in the clinical portion of their program. This course also provides the background in radiographic theory required for students to make informed decisions and adjustments. Pre-requisites: completion of, or concurrent enrollment in, Dental Health Safety, 10-508-101, and Dental and General Anatomy, 31-508- 304.

**DENTHYG 10508105                      Dental Hygiene Process 1                      4 Credits/Units**

Introduces Dental Hygiene students to the basic technical/clinical skills required of practicing Dental Hygienists include the use of basic dental equipment, examination of patients, and procedures within the dental unit. Under the direct supervision of an instructor, students integrate hands-on skills with entry-level critical thinking and problem-solving skills. The course also reinforces the application of Dental Health Safety skills.

**DENTHYG 10508106                      Dental Hygiene Process 2                      4 Credits/Units**

This clinical course builds on and expands the technical/clinical skills student dental hygienists began developing in Dental Hygiene Process 1.

Under the direct supervision of an instructor, students apply patient care assessment, planning, implementation, and evaluation skills to provide comprehensive care for calculus case type 1 and 2 patients and perio case patients. This course also introduces the application of fluoride and desensitizing agents, whole mouth assessments, comprehensive periodontal examinations, application of sealants, and patient classification. Students also begin performing removal of supragingival stain, dental plaque, calcified accretions, and deposits. In addition, they gain further experience in exposing radiographs on patients.

**DENTHYG 10508107                      Dental Hygiene Ethics & Profes                      1 Credits/Units**

Helps student dental hygienists develop and apply high professional and ethical standards. Students apply the laws that govern the practice of dental hygiene to their work with patients, other members of a dental team and the community. Emphasis is placed on maintaining confidentiality and obtaining informed consent. Students enhance their ability to present a professional appearance.

**DENTHYG 10508108                      Periodontology                      3 Credits/Units**

This course prepares student dental hygienists to assess the periodontal health of patients, plan prevention and treatment of periodontal disease, and to evaluate the effectiveness of periodontal treatment plans. Emphasis is placed on the recognition of the signs and causes of periodontal disease and on selection of treatment modalities that minimize risk and restore periodontal health.

**DENTHYG 10508109                      Cardiology                      1 Credits/Units**

This course focuses on the characteristics and contributing factors of dental decay. Dental Hygiene students help patients minimize caries risk by developing treatment plans, communicating methods to patients, and evaluating treatment results. Prerequisites: satisfactory completion of all first semester, second year Dental Hygiene courses and concurrent enrollment in 10-508-124.

**DENTHYG 10508110                      Nutrition and Dental Health                      2 Credits/Units**

Prepares student dental hygienists to counsel patients about diet and its impact on oral health. Students learn to distinguish between balanced and unbalanced diets and to construct diets that meet the needs of patients with compromised dental/oral health. Students also learn to counsel patients about the effect of eating disorders on dental health.

**DENTHYG 10508111                      General and Oral Pathology                      3 Credits/Units**

This course prepares the student dental hygienist to determine when to consult, treat or refer clients with various disease, infection or physiological conditions. Students learn to recognize the signs, causes, and implications of common pathological conditions including inflammatory responses, immune disorders, genetic disorders, developmental disorders of tissues and cysts, oral tissue trauma, and neoplasm of the oral cavity.

**DENTHYG 10508112                      Dental Hygiene Process 3                      5 Credits/Units**

This clinical course builds on and expands the technical/clinical skill student dental hygienists developed in Dental Hygiene Process 2.

In consultation with the instructor, students apply independent problem-solving skills in the course of providing comprehensive care for calculus case type 1, 2, and 3 patients and perio case type 0, I, II, and III patients. This also introduces root detoxification using hand and ultra-sonic instruments, a selection of dental implant prophylaxis treatment options, and administration of chemotherapeutic agents. Students also adapt care plans in order to accommodate patients with special needs.

**DENTHYG 10508113                      Dental Materials                      2 Credits/Units**

Prepares dental auxiliary students to handle and prepare dental materials such as liners, bases, cements, amalgam, resin restorative materials, gypsum products, and impression materials. They also learn to take alginate impressions on manikins and clean removable appliances. This course is aligned to serve accepted students of Dental Hygiene and Dental Assistant programs.



<b>DENTHYG 10508114</b>	<b>Dental Pharmacology</b>	<b>2 Credits/Units</b>
Prepares student dental hygienists to select safe and effective patient premedication and within the scope of dental hygiene practice. Students will also learn to recognize potential pharmacological contraindications for specific patients and to take measures to avoid negative impact or alert other members of the dental team to possible negative impact.		
<b>DENTHYG 10508115</b>	<b>Community Dental Health</b>	<b>2 Credits/Units</b>
This course prepares the Dental Hygienist student to play a proactive role in improving the dental health of community members of all ages. Students perform and interpret dental health research to determine community dental health needs.		
<b>DENTHYG 10508117</b>	<b>Dental Hygiene Process 4</b>	<b>4 Credits/Units</b>
This clinical course builds on and expands the technical/clinical skills student dental hygienists developed in Dental Hygiene Process 3. With feedback from the instructor, students manage all aspects of cases in the course of providing comprehensive care for calculus case type 0, 1, 2, and 3 patients and for perio case type 0, I, II, and III patients. Emphasizes maximization of clinical efficiency and effectiveness. Prepares student dental hygienists to demonstrate their clinical skills in a formal examination situation.		
<b>DENTHYG 10508118</b>	<b>Dental Anxiety and Pain Management</b>	<b>2 Credits/Units</b>
This course prepares the student dental hygienist to work within the scope of dental hygiene practice to manage anxiety and pain for dental patients. Students learn to prepare and administer local anesthesia and nitrous oxide safely. The course also addresses the recommendation of alternative pain control measures.		
<b>DENTHYG 10508304</b>	<b>Dental &amp; General Anatomy</b>	<b>2 Credits/Units</b>
Prepares Dental Assistant students to apply fundamentals of general and dental anatomy to informed decision making and to professional communication with colleagues and patients. Prerequisites: acceptance into the Dental Assistant program.		
<b>DIESEL 10412112</b>	<b>Mobile Hydraulics</b>	<b>3 Credits/Units</b>
Prepares the student with the knowledge and skills needed to adjust, diagnose, service and repair mobile hydraulic systems found on trucks and construction equipment.		
<b>DIESEL 10412125</b>	<b>Cab Climate Control and Refrigeration Systems</b>	<b>3 Credits/Units</b>
Lectures/labs provide skills to diagnose, maintain and service air conditioning and transport refrigeration equipment found on truck trailers and off-road equipment.		
<b>DIESEL 10412137</b>	<b>Preventive Maintenance Inspections</b>	<b>4 Credits/Units</b>
This course will provide the opportunity to perform preventive maintenance inspections and conduct minor repairs on heavy-duty trucks and equipment. An overview of the Federal Motor Carrier Safety Regulations as they relate to the inspection, repair and maintenance of commercial motor vehicles will also be included.		
<b>DIESEL 10412138</b>	<b>Diesel Shop Management</b>	<b>2 Credits/Units</b>
The student will gain the knowledge needed to function in a typical service department setting. The student will learn what it takes to manage a service department, the costs involved in running the department and the day-to-day problems that arise in the service department. General business operational procedures, record keeping and cost effectiveness will also be part of this course.		
<b>DIESEL 10412140</b>	<b>Diesel Shop Skill Fundamentals</b>	<b>1 Credits/Units</b>
Includes a discussion of the job requirements, skills needed, career options and employment opportunities in diesel equipment repair and maintenance. Introduces shop procedures, safety practices, tools and using service manuals.		
<b>DIESEL 10412144</b>	<b>Fundamental Diesel Electrical/Electronics Systems</b>	<b>3 Credits/Units</b>
Theory and laboratory experiences in this course are designed to introduce the student to the diesel electrical/electronic systems used on today's modern trucks and construction equipment. Fundamental theory of electricity and electronics, troubleshooting techniques, use of digital multimeter and current clamp, types of electrical circuits, wiring, components, batteries and the use of wiring diagrams will be covered.		
<b>DIESEL 10412145</b>	<b>Electrical/Electronics Systems Diagnostics</b>	<b>3 Credits/Units</b>
Theory and laboratory experiences in this course are designed to give the student the knowledge and skills needed to diagnose, service, and repair heavy-duty electrical systems found on today's modern trucks and off-road equipment.		
<b>DIESEL 10412155</b>	<b>Heavy Duty Drivetrains</b>	<b>4 Credits/Units</b>
This course prepares the student with the knowledge and skills needed to adjust, diagnose, maintain, service and repair heavy duty drivetrains found on trucks and construction equipment.		
<b>DIESEL 10412164</b>	<b>Brake and Suspension Systems</b>	<b>4 Credits/Units</b>
Prepares the student with the knowledge and skills needed to adjust, diagnose, service and repair heavy duty brakes and suspension systems. Students will also perform vehicle alignment procedures and utilize various alignment equipment.		
<b>DIESEL 10412176</b>	<b>Diesel Fuel Systems</b>	<b>4 Credits/Units</b>
Lectures and labs allow students to diagnose, service, and repair diesel fuel systems found on trucks and agricultural equipment.		
<b>DIESEL 10412177</b>	<b>Diesel Engine Diagnostics</b>	<b>2 Credits/Units</b>
Lectures and labs use the latest in diagnostic equipment to evaluate engine performance and diagnose power complaints on mechanical and computer controlled diesel fuel injection systems.		
<b>DIESEL 10412178</b>	<b>Diagnostic Strategies</b>	<b>2 Credits/Units</b>
Explores the logical thought process used analyzing and diagnosing system malfunctions and performance problems. Practical hands-on experiences of diagnostic and problem solving techniques will be included. Also included will be evaluating failures, classifying failures, problems and documentation of findings.		
<b>DIESEL 10412184</b>	<b>Diesel Engine Technology</b>	<b>2 Credits/Units</b>



Study in this course will allow the student to develop a basic knowledge of design, construction and operating principles of the diesel engine. Service, maintenance and the types of repairs made on diesel engines and diesel engine support systems will be a major emphasis of the course.

**DIESEL 10412185 Diesel Engine Repair 4 Credits/Units**  
Teaches students to maintain, service and repair diesel engines and engine support systems. The course also includes precision measuring, failure analysis and parts inspection.

**DIESEL 10412188 Electronic Control Systems 2 Credits/Units**  
This course provides the student with the experience needed to diagnose and service modern electronic control systems used on trucks and construction equipment. The course includes electronic controlled diesel engines, ABS brake systems, electronic controlled transmissions and other computer controlled electronic vehicle systems.

**DIESEL 10412190 Diesel Equipment Laboratory Experience 1 1 Credits/Units**  
Students service various trucks, construction and industrial equipment. Emphasizes daily shop operations, procedures and safe work habits. Simulated on-the-job experiences develop and apply students' knowledge and skills. Prerequisite: all first year courses.

**DIESEL 10412195 Occupational Experience 1 - Diesel Equipment Technology Program 2 Credits/Units**  
As interns, students work on electrical/electronic systems, vehicle and equipment maintenance, heavy duty brakes, suspensions, drive trains and general shop maintenance. Types of jobs and competencies employed may vary depending on what area of the industry the employer represents. Technical competencies for this course may be performed either alone, as an experienced technician's helper or a combination thereof. Prerequisites: all first year program courses.

**DRAMA 20810230 Intro To Theatre 3 Credits/Units**  
This is a beginning study of theatre especially as it relates to modern audiences. Students will examine and experience theatre in its various forms. A survey of theatre history from a global perspective provides the foundation for a greater understanding and perspective of the art. This course is an opportunity to explore playwriting, acting, directing and design leading to critical analysis of production. Students are expected to analyze scripts and attend performances turning in written reviews. The sequence of this course begins with audience perspective layered with historical and performance perspectives.

**DRAMA 20810232 International Arts Intensive-Theatre 3 Credits/Units**  
Provides a unique immersion in which participants will study the interdisciplinary nature of the arts. Students will travel to an international arts center to explore the connections that exist among the disciplines of music, theater, and visual art. Historical, geographical, and cultural perspectives will be examined to enhance understanding of live performance experiences in both theater and music. Based on site-specific study, students will apply aesthetic values to the description of music and theater styles.

**DRAMA 20810235 Stagecraft 1 3 Credits/Units**  
Stagecraft 1 is an overview of the backstage elements involved in theatrical production. It provides basic knowledge of scenery, lighting, rigging, sound, props, costumes and stage management. Students have the opportunity to mix classroom with practical experience.

**DRAMA 20810236 Stagecraft 2 3 Credits/Units**  
Develops the skills introduced in Technical Theater 1 and explores the design aspects of scenery, lighting, sound and costumes for the stage. Students are encouraged to develop interest in theory, design execution and portfolio preparation.

**DRAMA 20810238 Cultural Diversity in Contemporary American Theater 3 Credits/Units**  
Cultural Diversity in Contemporary American Theater investigates the representation of gender, ageism, sexual identity and racial stereotypes in written and performance forms. The course explores how popular images are created and reinforced by writers, directors, and performers. Students will analyze performance, scripts, and video documentation, as well as developing an original work of theatrical expression.

**DRAMA 20810260 Drama Practicum 1 Credits/Units**  
Drama Practicum is designed to engage and challenge students actively involved in theatre programming at Madison College or with a partner theatre organization from the community. This practicum stresses the self-development of artistic proficiencies of theatre students. There is a minimum of 25 hours of service required for a 1 credit practicum. A minimum of 35 service hours are required for the 2 credit practicum.

**DRAMA 20810262 Acting 1 3 Credits/Units**  
Acting 1 explores the actor's process in preparing for a role. It covers basic acting principles, including action, objective, obstacles, conflict, beats and being in the moment. It incorporates fundamentals of movement, voice and improvisation essential to the art of acting. Students will examine scripts, do character analysis, maintain actors' journals and perform five graded exercises.

**DRAMA 20810263 Acting 2 3 Credits/Units**  
Acting 2 continues the actor's preparation and execution of believable roles as a member of an ensemble. Particular attention is addressed to script analysis, character development, and ensemble performance in relation to theatrical genre.

**DRAMA 20810270 Movement Theory & Training for Actors 1 Credits/Units**  
Movement Theory and Training for Actors is an introductory course designed to assist acting students to better understand physical movement, the relationship between training and energy, and the use of physical movement in character development.

**EARLYCHL 10307115 ECE: Infant Toddler Capstone 3 Credits/Units**  
The capstone is the last course all students take prior to completing the Infant Toddler Credential. This course integrates the theory, practice, and reflection of courses 1-3 and requires demonstration of best practices. Supervised demonstration in the learner's own infant/toddler setting. Student portfolio development is required. Students must be in an early childhood setting with infants or toddlers during this course.

**EARLYCHL 10307130 ECE: Preschool Capstone 3 Credits/Units**  
The capstone is the last course all students take prior to completing the Preschool Credential. The intent of this capstone course is to cover and revisit some important themes from the prior five courses. The student will synthesize the information and demonstrate mastery of the competencies through the completion of a portfolio.





- EARLYCHL 10307148**                      **ECE: Foundations of ECE**                      **3 Credits/Units**  
 This course introduces you to the early childhood profession. Course competencies include: integrate strategies that support diversity and anti-bias perspectives; investigate the history of early childhood education; summarize types of early childhood education settings; identify the components of a quality early childhood education program; summarize responsibilities of early childhood education professionals; explore early childhood education models.
- EARLYCHL 10307151**                      **ECE: Infant & Toddler Development**                      **3 Credits/Units**  
 In this course you will study infant and toddler development as it applies to an early childhood education setting. Course competencies include: analyze development of infants and toddlers (conception to three years); correlate prenatal conditions with development; summarize child development theories; analyze the role of heredity and the environment; examine research-based models; examine culturally and developmentally appropriate environments for infants and toddlers.
- EARLYCHL 10307161**                      **Infants/Toddlers-Grp Care**                      **3 Credits/Units**
- EARLYCHL 10307166**                      **ECE: Curriculum Planning**                      **3 Credits/Units**  
 This course examines the components of curriculum planning in early childhood education. Course competencies include: examine the critical role of play; establish a developmentally appropriate environment; examine care giving routines as curriculum; develop activity plans and unit plans that promote child development and learning; analyze early childhood curriculum models. Corequisite: 10-307-174.
- EARLYCHL 10307167**                      **ECE: Health, Safety, & Nutrition**                      **3 Credits/Units**  
 This course examines the topics of health, safety and nutrition within the context of the early childhood educational setting. Course competencies include: follow governmental regulations and professional standards as they apply to health, safety and nutrition; provide a safe, healthy, and nutritionally sound early childhood program; adhere to child abuse and neglect mandates; apply Sudden Infant Death Syndrome (SIDS) risk reduction strategies; incorporate health, safety and nutrition concepts into the children's curriculum.
- EARLYCHL 10307174**                      **ECE: Practicum 1**                      **3 Credits/Units**  
 In this practicum course you will learn about and apply the course competencies in an actual childcare setting. The first of four training experiences develops skill in interacting with children and staff. MATC faculty help students through periodic observation and conferences. In addition, there is a weekly discussion which focuses on what students are observing and learning in their practicum sites and on developing skills as team members. Students taking Practicum 1 must also be enrolled in at least one other Early Childhood Education course. The preferred course would be Health, Safety, and Nutrition.
- EARLYCHL 10307178**                      **ECE: Art, Music & Lang Arts**                      **3 Credits/Units**  
 This course will focus on beginning level curriculum development in the specific content areas of art, music and language arts. Course competencies include: examine the critical role of play; establish a developmentally appropriate environment; develop activity plans that promote child development and learning; analyze care giving routines as curriculum; create developmentally appropriate language; literature and literacy activities; create developmentally appropriate art, music, and movement activities.
- Recommended prerequisite: 10-307-166.
- EARLYCHL 10307179**                      **ECE: Child Development**                      **3 Credits/Units**  
 This course examines child development within the context of the early childhood education setting. Course competencies include: analyze social, cultural and economic influences on child development; summarize child development theories; analyze development of children age three through age eight; summarize the methods and designs of child development research; analyze the role of heredity and the environment. Recommended prerequisite: 10-307-151.
- EARLYCHL 10307187**                      **ECE: Children w diff Abilities**                      **3 Credits/Units**  
 This course focuses on the child with differing abilities in an early childhood education setting. Course competencies include: provide inclusive programs for young children; apply legal and ethical requirements including, but not limited to, ADA and IDEA; differentiate between typical and exceptional development; analyze the differing abilities of children with physical, cognitive, health/medical, communication, and/or behavioral/emotional disorders; work collaboratively with community and professional resources; utilize an individual educational plan (IEP/IFSP) for children with developmental differences; adapt curriculum to meet the needs of children with developmental differences; cultivate partnerships with families who have children with developmental differences. Recommended prerequisites: 10-307-151 and 10-307-179.
- EARLYCHL 10307188**                      **ECE: Guiding Child Behavior**                      **3 Credits/Units**  
 This course examines positive strategies to guide children's behavior in the early childhood education setting. Course competencies include: summarize early childhood guidance principles; analyze factors that affect the behavior of children; practice positive guidance strategies; develop guidance strategies to meet individual needs; create a guidance philosophy. Recommended prerequisite: 10-307-151.
- EARLYCHL 10307192**                      **ECE: Practicum 2**                      **3 Credits/Units**  
 In this second training experience, students apply the knowledge and skills acquired in Practicum 1 and related class work under the supervision of MATC faculty and teacher-caregivers at centers. Planning and implementing activities are included and conferences are scheduled to help students. Required concurrent enrollment in 10-307-178 or instructor consent and recommended concurrent enrollment in 10-307-188.
- EARLYCHL 10307194**                      **ECE: Math Science & Soc St**                      **3 Credits/Units**  
 This course will focus on beginning level curriculum development in the specific content areas of math, science and social studies. Course competencies include: examine the critical role of play; establish a developmentally appropriate environment; develop activity plans that promote child development and learning; create developmentally appropriate math, science and social studies activities. Recommended prerequisite: 10-307-166. Required prerequisite: 10-307-178 or instructor consent.
- EARLYCHL 10307195**                      **ECE: Family & Community Rel**                      **3 Credits/Units**  
 In this course you will examine the role of relationships with family and community in early childhood education. Course competencies include: analyze contemporary family patterns; trends and relationships; utilize effective communication strategies; establish ongoing relationships with families; advocate for children and families; work collaboratively with community resources. Recommended prerequisite: 10-307-188.









This course description is unavailable at this time. Please contact the center offering the course for more information.

**ELEC 50413701                      Fundamentals of Electricity for Apprentices                      1 Credits/Units**

Explore the principles and applications of direct current and Ohm's Law, and examine the various types of circuits and meters during this apprenticeship course. Discuss additional topics such as electrical power, magnetism, relays, energy, and transducers.

Electrical testing and measurement will be reviewed, and electrical safe work practices will be examined.

**ELECENG 10662112                      AC/DC Electronics 3                      3 Credits/Units**

Topics include analysis of series and parallel AC RLC circuits, utilizing series and parallel equivalent circuits, superposition, Delta-Wye transformations, and Nodal Analysis. Real, reactive, and apparent power in AC circuits along with ideal loads in both single and three phase circuits are studied. Lab work includes analysis, computer simulation and actual measurements.

**ELECENG 10662124                      Advanced Circuit Analysis                      3 Credits/Units**

Topics include variable frequency analysis of RLC circuits, first order Bode plots and correlation of time and frequency response.

Semiconductor devices and circuits, including diodes, bipolar transistors and field effect transistor are studied. The time and frequency response of single stage BJT and FET amplifiers is examined. Lab work includes analysis, computer simulation and actual measurements.

**ELECT 10605101                      Electronics Internship Level 1                      3 Credits/Units**

This course provides the opportunity for students to apply classroom theory and skills in a business environment. Activities may include PCB assembly, embedded programming, troubleshooting, and repair. Students learn useful skills based on field experience.

**ELECT 10605102                      Electronics Internship Level 2                      3 Credits/Units**

This course provides the opportunity for students to apply classroom theory and skills in a business environment. Activities may include PCB assembly, embedded programming, troubleshooting, and repair. Students learn useful skills based on field experience.

**ELECT 10605107                      Certified IPC Application Specialist (CIS) A-610                      1 Credits/Units**

Certified IPC Application Specialist (CIS) training focuses on what line workers, operators, inspectors and buyers need to know to inspect or make acceptance/rejection decisions. IPC-A-610, Acceptability of Electronic Assemblies is the most widely used standard published by the IPC. Certification in this industry-traceable program demonstrates a commitment to continuous improvement of product quality and reliability. The CIS program provides individuals with a portable credential that represents their understanding of IPC-A-610.

**ELECT 10605108                      Certified IPC Application Specialist (CIS) J-STD-001                      1 Credits/Units**

Certification in this industry-developed and approved hands-on solder training and certification program helps enhance employee skills and performance. The CIS program provides individuals with a portable credential that recognizes their soldering skills and understanding of this internationally recognized standard.

**ELECT 10605112                      AC/DC Electronics 1                      3 Credits/Units**

Covers basic concepts of electric circuits including: Ohm's Law; Kirchhoff's Voltage, and Current Laws; power calculations; and components such as resistors, switches, fuses, conductors, insulators, capacitors, inductors, relays, and other basic electronic components. Also covers use of test equipment.

**ELECT 10605113                      Analog Circuit Techniques                      3 Credits/Units**

This introductory electronics course covers devices, circuits and applications. This course uses analog electronics devices — diodes, field effect and bipolar transistors and operational amplifiers to learn basic theory and use of test equipment in testing and troubleshooting. Lab procedures emphasize the use of documentation (schematics, layout diagrams, parts lists, data sheets) and troubleshooting procedures.

**ELECT 10605114                      AC/DC Electronics 2                      3 Credits/Units**

This course continues to develop the concepts learned in AC/DC Electronics 1, 10605112. This course covers RL, RC, RLC circuits; transformers; filters; series and parallel resonance; bridge circuits; Thevenin and Norton theorems; wave shaping; internal resistance; motors; generators; three phase power; power factor and corrections; reactive and apparent power; wye and delta systems. Lab sessions require in-depth technical lab reports.

**ELECT 10605115                      Analog Circuit Principles                      3 Credits/Units**

This course continues to develop the concepts learned in Analog Circuit Techniques, 10-605-113. The theory and application of field effect and bipolar transistor amplifiers, operational amplifiers and oscillators are covered with an emphasis on circuits including gain, impedance and frequency response. Lab procedures emphasize increased proficiency with electronic test equipment.

**ELECT 10605116                      Engineering Project Principles                      3 Credits/Units**

This is a project based course centering on analog circuit applications. This course emphasizes hands-on skills, assembly, testing and troubleshooting, documentation, group work and presentations.

**ELECT 10605118                      Digital Circuit Techniques                      3 Credits/Units**

This introductory electronics course covers schematics, component identification, engineering notation, basic logic gates, numbering systems, component identification, and soldering techniques for through hole and surface mount components. IPC-A-610\* Standard for Acceptance Criteria for Electronic Assemblies is followed for inspection of assemblies. Following the RoHS directive, lead free solder and assemblies are used in this course. \*IPC certification is not automatic upon course completion. IPC certification is awarded separately from the academic credits.

**ELECT 10605119                      Digital Circuit Principles                      3 Credits/Units**

Covers digital logic circuits including basic gates, flip-flops, decoders, counters, shift registers, multiplexing circuits, comparators and other similar devices. It also covers Boolean algebra and minimization techniques as well as Field Programmable Gate Arrays (FPGA). Lab work includes individual project design, including layout, construction, testing and documentation.

**ELECT 10605123                      Embedded Device Concepts                      3 Credits/Units**





Programmed devices are covered in this course with a hardware emphasis. Algorithms, event sequencing, flow diagrams, visual programming and Embedded C programming are covered as well as compiling, downloading embedded code into target hardware and basic troubleshooting of simple embedded programs in C. This course also covers variables, memory management, conditionals, mathematical operations, functions and loops. There is considerable emphasis on troubleshooting within this course.

**ELECT 10605131                      Technical Calculus 1                      4 Credits/Units**

This introductory course studies analytic geometry, binomial series, differentiation of algebraic, exponential, log and trig functions and integration of algebraic functions. An emphasis is placed on the application of each of these topics to problems in science and engineering.

**ELECT 10605132                      Technical Calculus 2                      4 Credits/Units**

This course is a continuation of Technical Calculus 1. Topics include integration techniques, partial derivatives, graphing conics, double integrals, polar coordinates, and first and second order differential equations. Emphasis is placed on applications to problems in science and engineering.

**ELECT 10605136                      Biomedical Electronics                      3 Credits/Units**

Course covers the biological and medical applications of electronics. Topics include biological systems and signals (ECG, EEG, etc.); sensor and transducer circuits including: thermistors, thermocouples, and strain gauges. Other topics include instrumentation amplifiers and circuits; noise reduction; passive and active filtering; medical imaging systems; and medical telemetry systems.

Prerequisite: 10-605-112 or equivalent.

**ELECT 10605143                      Motors and Control Circuits                      3 Credits/Units**

This advanced course covers AC and DC motors, stepping motors, feedback systems, servo controllers, sensors, relays, SCRs, Triacs, MOSFETs, programmable logic controllers, industrial controllers, and applied systems and online microcomputer controls.

**ELECT 10605145                      Programmable Logic Controls                      3 Credits/Units**

Studies basic operation, interfacing and programming of PLCs and Human Machine Interfaces (HMI). Concepts, construction and troubleshooting of ladder logic and proprietary programming systems are covered.

**ELECT 10605151                      Instrumentation and Troubleshooting                      3 Credits/Units**

This advanced course covers the approach, methodology and techniques in trouble shooting electronic circuits and systems as well as the calibration, uses and limitations of common electronic test equipment.

**ELECT 10605152                      Digital Systems Analysis                      3 Credits/Units**

This is a project based advanced course focusing on digital circuits, embedded controllers and interfacing. The course emphasizes hands-on skills, assembly, testing and troubleshooting, documentation, working in groups and presentations.

**ELECT 10605160                      Virtual Reality                      3 Credits/Units**

Course covers the concept of virtual reality (VR); its history and development; human senses; hardware and important concepts and methods of software design and development. Course also covers sensors and actuators (visual, audio, tactile); displays including screens, goggles, headsets, etc.; telepresence and telerobotic systems; and applications in a variety of fields including entertainment, design, business, medical, telerobotics, remote control, education and others.

**ELECT 10605172                      Applied Electronic Math 2                      2 Credits/Units**

Continues to develop the mathematics skills needed by technicians to be successful in their field and is closely tied to the other second-semester electronics courses. Laboratory sessions continue to integrate math with electronic applications. Course is only offered in the last 8 weeks of each semester.

**ELECT 10605173                      Embedded Programming                      3 Credits/Units**

This introductory course covers the fundamentals of electronic computer language, systems and structure. Embedded processor hardware is studied from a system level perspective. Programming structures such as loops, branching, data storage, bit-level processing (masking), functions, arrays, pointers and structures will be covered. Languages include ANSI C, Embedded C Language and principles of assembly language.

**ELECT 10605176                      Microcontrollers                      3 Credits/Units**

This course covers microcontrollers and digital systems. Topics include Embedded C programming of Microcontrollers, Basic architectural concepts, parallel and serial I/O, Interrupts, Timer Subsystems, Analog to Digital conversion, Asynchronous Serial Communications (USART), CAN Bus communications, Synchronous Serial Communications (MSSP/SPI/IC2 Bus), Pulse Width Modulation (PWM), and basic control concepts.

**ELECT 10605178                      Networks, Interfacing and Programming                      3 Credits/Units**

This advanced course focuses on networking fundamentals and implementation with an emphasis on Linux. Explores Network layers and Protocols, LabView and FPGA Programming, wireless standards, and Hardware Configuration and programming of various Ethernet connected devices (computers, microcontrollers, remote sensors, control equipment and other hardware).

**ELECT 10605270                      AC/DC Circuit Techniques and Principles                      3 Credits/Units**

Provides students with hands-on experiences with instruments such as oscilloscopes, digital multimeters, signal generators and other measuring equipment. Covers circuit analysis for series and parallel circuits, Ohms Law, Kirchoff's current and voltage laws, linearity, superposition, Thevenin's theorem, Circuit analysis using Nodal and Mesh Analysis and concepts of AC signals, RC, LC and RLC circuits, filters, resonance. Concepts are reinforced with hands-on experiments coupled with mathematical analysis.

**EMS 10531102                      Emergency Medical Technician 1                      2 Credits/Units**

Based upon the State of Wisconsin/U.S. Department of Transportation/National Highway Transportation Safety Administration curriculum, this approximately 54 hour course covers modules 1-3 and includes classroom instruction, lectures, discussion, demonstrations, skill practice on the roles and responsibilities of being an Emergency Medical Services Provider, as well as basic communication and documentation skills, anatomy and physiology, performing a patient assessment, critical thinking, and basic airway management. This course is a co-requisite of the





**EMS 10531922**                      **EMS Operations**                      **1 Credits/Units**  
This course provides the paramedic student with the knowledge of operational roles and responsibilities to ensure patient, public, and EMS personnel safety.

Co-requisites are required with this course and are specific to the Paramedic daytime or evening track.

**EMS 10531923**                      **Paramedic Capstone**                      **1 Credits/Units**  
This course provides the student with a final opportunity to incorporate their cognitive knowledge and psychomotor skills through labs and scenario-based practice and evaluations prior to taking the National Registry written and practical examinations. Technical skills attainment (TSA) for each student will be compiled and/or documented within this course as required by the DHS-approved paramedic curriculum. Co-requisites are required with this course and are specific to the Paramedic daytime or evening track.

**EMS 10531925**                      **Paramedic Clinical 1**                      **1 Credits/Units**  
This course provides the student with the opportunity to enhance his or her learning through the practice of paramedicine in health care environments such as the Emergency Department, Respiratory Therapy, and Operating Room, with actual patients under the supervision of clinical preceptors. Students will also participate in multidisciplinary high-fidelity human patient simulator experiences as a part of this course. Successful completion of this course requires the student to meet all clinical competency requirements at the paramedic level as defined by WI DHS EMS.

Co-requisites are required with this course and are specific to the Paramedic daytime or evening track.

**EMS 10531926**                      **Paramedic Clinical 2**                      **1 Credits/Units**  
This course provides the student with the opportunity to enhance his or her learning through the practice of paramedicine in health care environments such as the Emergency Department, Trauma-Life Support Center, Burns Center, and Cardiac Cath Labs, with actual patients under the supervision of clinical preceptors. Students will also participate in multidisciplinary high-fidelity human patient simulator experiences as a part of this course. Successful completion of this course requires the student to meet all clinical competency requirements at the paramedic level as defined by WI DHS EMS.

Co-requisites are required with this course and are specific to the Paramedic daytime or evening track.

**EMS 10531927**                      **Paramedic Clinical 3**                      **1 Credits/Units**  
This course provides the student with the opportunity to enhance his or her learning through the practice of paramedicine in health care environments such as the Emergency Department, Pediatric Care, and Birthing Centers, with actual patients under the supervision of clinical preceptors. Students will also participate in multidisciplinary high-fidelity human patient simulator experiences as a part of this course. Successful completion of this course requires the student to meet all clinical competency requirements at the paramedic level as defined by WI DHS EMS.

Co-requisites are required with this course and are specific to the Paramedic daytime or evening track.

**EMS 10531928**                      **Paramedic Field Internship**                      **3 Credits/Units**  
This course provides the student with the opportunity to enhance his or her learning through the practice of paramedicine and EMS Operations in the field environment with actual patients under the supervision of an approved paramedic preceptor. Successful completion of this course requires the student to meet all clinical and field competency requirements at the paramedic level as defined by WI DHS EMS.

Co-requisites are required with this course and are specific to the Paramedic daytime or evening track.

**EMS 10531929**                      **Paramedic Clinical 4**                      **1 Credits/Units**  
This course provides the student with the opportunity to enhance his or her learning through the practice of paramedicine in field and health care environment experiences with actual patients under the supervision of instructors or approved preceptors. Students may also have the opportunity to participate in formal high-fidelity human patient simulator experiences as a part of this course.

Corequisites are required with this course and are specific to the Paramedic daytime or evening track.

**EMS 30531360**                      **Advanced Emergency Medical Technician**                      **4 Credits/Units**  
Students learn advanced patient assessment, communication skills and beginning advanced life support interventions. Prepares students to obtain licensure as an EMT Intermediate Technician in the State of Wisconsin. Prerequisite: valid EMT–Basic License.

**ENERCONS 10481110**                      **Energy Management**                      **3 Credits/Units**  
Students will perform critical examinations of energy consuming facilities both domestic and commercial for the purpose of identifying energy conservation opportunities. In addition, the student will identify various energy conservation techniques as well as equipment which can be installed to further conserve energy.

**ENGLISH 10801195**                      **Written Communication**                      **3 Credits/Units**  
Develops writing skills which includes prewriting, drafting, revising, and editing. A variety of writing assignments is designed to help the learner analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Also develops critical reading and thinking skills through the analysis of a variety of written documents.

**ENGLISH 10801197**                      **Technical Reporting**                      **3 Credits/Units**  
Prepare and present written, oral, and visual communication products, including instructions, proposals, informal and formal reports. Produce clear, usable communication by incorporating information design principles, arranging content to satisfy diverse audience needs, and presenting visuals for various contexts. Designed as an advanced course to develop collaborative communication practices, information literacy skills, and ethically responsible professional communication strategies.

**ENGLISH 20801201**                      **English 1**                      **3 Credits/Units**  
The first course in communication skills at the college level, developing student abilities in critical reading, writing, listening, and speaking, for both exposition and argumentation. The course emphasizes summarizing, analyzing, and synthesizing information from sources, and develops





research and presentation skills. The class assumes competence in English grammar and paragraph structure.

**ENGLISH 20801202 English 2 3 Credits/Units**

This course is a continuation of English 1. Students will use advanced research skills to write papers from across the curriculum. Research papers will be informative and persuasive in nature and will be based on topics from academic disciplines (social sciences, literature and the humanities, or science and mathematics). Students will conduct research using primary and secondary library resources, surveys and questionnaires, observation, and interviews and will use the MLA format and one other format (APA, Chicago) to document their sources. Students will be asked to prepare 25-35 pages of polished writing.

**ENGLISH 20801204 Introduction to Literature 3 Credits/Units**

Recommended as a first course in literary analysis, this course introduces students to the major genres of literature and addresses issues related to writing about literature and/or other texts. Individual sections may focus on a particular literary theme or emphasis.

**ENGLISH 20801207 World Indigenous Literatures 3 Credits/Units**

World Indigenous Literatures studies indigenous issues in an international context by comparing literature and film produced by Native American and other indigenous writers and filmmakers in the U.S., Canada, New Zealand, Australia, and the Indigenous Pacific. The selection of authors represents indigenous people who have remained in their homelands as minority nations within First World countries.

**ENGLISH 20801211 Gay & Lesbian Literature 3 Credits/Units**

This course examines work by representative authors in American literature written by and about lesbian and gay people from the 19th century to the present, including short stories, novels, drama, poetry and film. Works will be analyzed in regard to both specific and universal messages they have to offer, for non-gay and gay readers alike.

**ENGLISH 20801212 Ethnic Literature 3 Credits/Units**

Special Topics in Ethnic Literature explores questions of identity within various cultural contexts. Writers represent one or more ethnic groups working in one or more genres of literature with emphasis on developments in voice, genre, and style over chronological and geographical periods. Individual sections may vary in particular emphasis.

**ENGLISH 20801213 Native American Literature 3 Credits/Units**

Native American Literature introduces students to rich, complex and varied literary traditions reflected in the works of contemporary Native American storytellers in fiction, poetry, drama, and film. Issues of language, cultural identity, historical witness, and current social and political experiences are reflected in these genres. The works are discussed in terms of specific cultural and universal themes, and their place in the emerging Native American literary canon.

**ENGLISH 20801214 African American Literature 3 Credits/Units**

African American Literature introduces students to the rich, complex and varied literary traditions reflected in the works of African American writers. Studies developments and achievements in voice, genre, and style and explores issues of language, cultural identity, historical witness, and social and political experience. Individual sections may focus on a particular theme, genre, or period for emphasis.

**ENGLISH 20801215 British Literature 1 3 Credits/Units**

This course examines major authors, works, and periods of British literature from its foundations to the early eighteenth-century within the context of historical, cultural, and philosophical developments.

**ENGLISH 20801216 British Literature 2 3 Credits/Units**

British Literature 2 examines British fiction, biography, autobiography, poetry, and drama from the 1740s through the late twentieth century.

**ENGLISH 20801217 American Literature 1 3 Credits/Units**

Examines major authors and works from the early 16th to the late 19th century in American prose, drama, and poetry.

**ENGLISH 20801218 American Literature 2 3 Credits/Units**

Examines major authors and works from the late 19th century to the present in American prose, drama, and poetry.

**ENGLISH 20801219 Western World Lit: Classical Antiquity to the Middle Ages 3 Credits/Units**

This course studies Egyptian and Sumerian myths and legends, and the outstanding literary masterpieces of Western literature, from the Old Testament and Homer to the end of the Renaissance (16th century). The first semester is not a prerequisite of the second.

**ENGLISH 20801220 Western World Lit: Early Renaissance to Present 3 Credits/Units**

This is a study in the outstanding literary masterpieces of Western literature from the Neoclassic period to modern times. The first semester is not a prerequisite of the second.

**ENGLISH 20801221 Literature and Popular Culture 3 Credits/Units**

Students analyze, interpret, and discuss literature and diverse forms of popular culture as artistic and cultural representation. Each offering of literature in popular culture will be organized in the same way: a) Four units that deal with four different aspects of the course topic. b) Each unit will ask students to read a selection of each of the following: critical works—usually an article or articles or excerpts from a book—that offer definition of the genre, provided historical context, establish a relation between the thematic content and culture, and fosters discussion and critical analysis. c) Each unit will have at least two primary “texts”, including, but not limited to books, journal articles, films, sound recordings, graphic novels, electronic environments, blogs, & multimedia presentations. d) Written assignments will include, but will not be limited to: informal discussion board postings and responses to other postings, summaries and definitions, formal response papers and essays, one sustained project that brings together the themes and elements discussed in the class. e) Other assignments may include reading quizzes.

**ENGLISH 20801222 U.S. Latino Literature 3 Credits/Units**

This course explores U.S. Latino texts, including poetry, fiction, drama, and autobiography by Mexican-American, Puerto-Rican American, Cuban-American and Dominican-American writers. Writers from other Latino groups may also be included. Class discussion examines the rich and varied literary traditions of Latino communities in the United States. Students analyze issues of theme, genre, language, cultural identity and social and political experiences, as reflected in the texts chosen for the course.



Classes are conducted in English. All required texts were originally written in English or are offered in English translation.

- ENGLISH 20801223**                      **Peace, Conflict, and Literature: The Arts of the Contact Zone**                      **3 Credits/Units**  
Mary Louise Pratt defines Contact Zones as “social spaces where cultures meet, clash, and grapple with each other, often in contexts of highly asymmetrical relations of power.” She goes on to describe the Arts of the Contact Zone as “exercises in storytelling ... collaborative work ... ways for people to engage suppressed aspects of history ... ground rules for communication across lines of difference and hierarchy.” This course will introduce students to the arts of the contact zone by introducing them to 1) representations of peace and conflict in literature and film; 2) the theory of and strategies for conflict resolution and peace building. Through reading, writing, observations, presentations, discussion, and field and project work, students in this course will critically explore representations of peace and conflict at the personal, local, civil, and international levels. Students will explore across genres, media, time periods, cultures, and disciplines. Throughout this exploration, students will examine literature and film in order to 1) identify and describe sources of conflict; 2) analyze and explain how conflict is communicated, prevented, and/or resolved; and 3) discover how great writers and thinkers as well as ordinary citizens can work for peace.
- ENGLISH 20801224**                      **Special Topics in International Literature**                      **3 Credits/Units**  
Special Topics in International Literature provides the opportunity for students to study, in English, the great works of literature from other countries and other languages. The course focuses on writers representative of a particular language and/or culture working in one or more genres of literature, with emphasis on developments in content and style. Individual sections may vary in particular emphasis.
- ENGLISH 20801226**                      **Introduction to African Literature**                      **3 Credits/Units**  
Introduction to African Literature focuses mainly on the literature of Africa from before colonization to the present. It introduces students to the rich, complex, and varied literary traditions reflected in the works of African writers. It studies developments and achievements in voice, genre, and style and explores issues of language, cultural identity, historical witness, and social and political experience. Individual sections will focus on a particular theme, genre, or period for emphasis.
- ENGLISH 20801227**                      **Children’s Literature**                      **3 Credits/Units**  
Introduces students to the major genres of literature for young people such as folklore, illustrated works, and short novels. Students will read a variety of works from different eras and study ways children’s literature and the understanding of childhood have developed.
- ENGLISH 20801229**                      **Contemporary Lit**                      **3 Credits/Units**  
This course surveys contemporary literature (mainly British and American) in relation to contemporary society and to major developments in the arts of fiction, drama and poetry. Readings mainly cover material published in the last 25 years.
- ENGLISH 20801230**                      **Classical Mythology**                      **3 Credits/Units**  
Classical Mythology surveys principal myths and legends of Greek and Roman literature in relation to the historical and sociological context of ancient society as well as their importance and influence in modern times. The course will include the reading and analysis of translations of original classical works.
- ENGLISH 20801231**                      **19th c. Russian Literature in Translation**                      **3 Credits/Units**  
19th c. Russian Literature in Translation will provide the opportunity for students to study, in English, the great works of literature from 19th c. Russia. While World Literature courses already provide a broad survey of literature from around the world, this course would focus on the specific culture and literature of Russia during the 19th century.
- ENGLISH 20801232**                      **20th c. Russian/Soviet Literature in Translation**                      **3 Credits/Units**  
This course is designed to present a survey of Russian literature in a period of political, cultural, and aesthetic revolution, beginning with avant-garde movements before the Bolshevik Revolution and the dynamic literary response in the 1920s to the revolution itself, including examples of Socialist Realism, dissident and émigré literature, continuing through the periods of the Thaw and Perestroika. Readings include Chekhov, Zamyatin, Olesha, Bulgakov, Pasternak, Solzhenitsyn and others.
- ENGLISH 20801240**                      **Creative Writing**                      **3 Credits/Units**  
Students learn to manage the creative process through exercises and activities that lead to short stories and poetry; drama and creative non-fiction may be addressed as well. Reading assignments allow students to become familiar with principles and practice of various genres of creative writing and classroom activities prepare students for participating in workshop discussions.
- ENGLISH 20801241**                      **Creative Writing/Fiction**                      **3 Credits/Units**  
Students develop skills in writing prose fiction including character development, scene structure, dialogue and dramatic tension as they build toward the construction and revision of short stories, novellas, etc. Reading assignments allow students to become familiar with principles and practice of fiction. Class meetings follow a workshop format.
- ENGLISH 20801242**                      **Creative Writing/Drama**                      **3 Credits/Units**  
Students write monologue and dialogue, develop characters and build scripted scenes and short dramas for stage, video, cinema, or docudrama. Reading assignments allow students to become familiar with principles of dramatic practice. Class meetings follow a workshop format. Course may be paired with 810-237, Creating Original Theatre to create a six-credit writer-performer workshop.
- ENGLISH 20801243**                      **Creative Writing/Poetry**                      **3 Credits/Units**  
Students develop poetic technique in open and traditional forms as they draft, critique, and revise poems. Reading assignments allow students to become familiar with principles and practice of poetry and poetics. Class meetings follow a workshop format.
- ENGLISH 20801244**                      **Creative Writing/Non Fiction**                      **3 Credits/Units**  
Students merge literary techniques with the skills of reportage to develop works of creative non-fiction. Reading assignments allow students to become familiar with principles and practice of literary non-fiction. Class meetings follow a workshop format.
- ENGLISH 20801249**                      **Film Writing**                      **3 Credits/Units**  
Film Writing is an intermediate-level creative writing course for the aspiring writer who wants to learn the craft of scriptwriting for feature film and/or television. Because of its emphasis on narrative structure and visual storytelling, Film Writing is also an excellent training ground for fiction writers, poets, technical and business writers, and writers working in social media. Typical outcomes of the course include a better understanding of how to tell a story, improved dialog skills, and enhanced ability to “show” rather than “tell.” Class sessions involve lecture, film



viewing, and writing workshops.

**ENGLISH 20801250 Women In Literature 3 Credits/Units**

Women in Literature examines women as both subjects and writers of literature. Students read works from a number of genres and eras, studying ways female writers have contributed to, challenged and enlarged the literary tradition. Introduces readers to literary works by and about women and teaches analytical skills, especially feminist literary criticisms. The works are selected to represent varied perspectives in race, class and sexual preference.

**EVTMGT 10109102 Fundamentals Of Meeting Mgmt 3 Credits/Units**

Students explore the core issues of meeting planning from the fundamentals to the new trends shaping the meetings industry. Development of meeting timelines, checklists and request for proposal are introduced. Further focus includes the process meeting planners must use in site selections, the value of meeting objectives and format, and attendee expectations.

**EVTMGT 10109104 Meeting Design 3 Credits/Units**

Designing meeting experiences that engage participants and deliver return on investment is critical for meeting professionals. Students explore adult learning styles and theories as well as develop tools and techniques to ensure the meetings success and a positive return on investment is delivered. This course takes an in-depth look at identifying the stakeholder objectives and learner outcomes, designing effective meetings and events, and measuring return on investment.

**EVTMGT 10109108 Mtgs Industry Budget/Finance 2 Credits/Units**

Establishing a realistic and sound budget is vital to creation of successful meetings. This course examines the steps in developing a meeting budget. Students learn techniques for projecting and managing budgets including per person methodology and break-even analysis. Emphasis is placed on situations oriented to the meeting industry.

**EVTMGT 10109109 Special Event Management 3 Credits/Units**

Demonstrates professional practices used to create, market, plan and implement special events. Emphasis is on applying creativity to develop events with unique purposes and presentations combining elements such as site selection, décor, lighting, sound, and entertainment as well as food and beverage to reflect the theme of the event.

**EVTMGT 10109110 Meeting Coordination 3 Credits/Units**

Provides a solid understanding of the numerous tasks and details involved in developing and coordinating a meeting and/or event. Students explore meeting room design, commonly used audio-visual equipment, the use of speakers, and how effective management of food and beverage impact successful meeting and event planning.

**EVTMGT 10109111 Registration/Housing Logistics 2 Credits/Units**

Registration is the first impression that attendees have of your meeting. Careful planning in designing a registration process is critical to setting attendees expectations, perceptions and the tone of the meeting. Meeting participants want and need comfortable and convenient accommodations, to their exact requirements. Creating rooming lists, coordinating the housing logistics, and managing sleeping room blocks to reduce or eliminate attrition are critical success factors for the planner and the meeting. This course enables students to identify and develop tools that allow attendees a seamless meeting experience.

**EVTMGT 10109112 Exhibition Management 3 Credits/Units**

Provides the student with an understanding of the growing role of exhibitions and trade shows as a source of revenue for the organizer as well as an opportunity for buyers and sellers to interact face-to-face in an educational environment. Building an exhibition from the start of the planning process through the close of the show is presented. Students examine key elements in designing a show floor; careers within exhibition management, factors needed to take into account when selecting a site for an exhibition, identify contractors necessary for producing the show; and learn how to effectively interact and communicate with exhibitors throughout the process. As part of this course, a job-ready assessment will be given.

**EVTMGT 10109113 Risk Management, Negotiations, and Legal Issues 3 Credits/Units**

Includes crisis planning and risk management, the art and science of negotiations, and contract and legal issues in the meetings industry. Students learn how to identify issues that are negotiable, the steps in the negotiation process and commonly used negotiation techniques. The class also focuses on basic contract provisions and key clauses of a facility contract as well as the unique elements and differences of hotel and convention center contracts. Includes discussion of legal principles and precedents as they apply to the meetings industry.

**EVTMGT 10109114 Meeting/Event Mgmt Internship 2 Credits/Units**

Course provides both theoretical and hands-on experience planning, setting up and managing a meeting or event. Emphasis is on developing and implementing proper procedures to ensure professional results. The student is required to use their knowledge of finance, decision making, problem solving, organization and communication. Prerequisite: Third semester program student or consent of instructor.

**EVTMGT 10109116 Fundamentals of Green Meetings and Events 2 Credits/Units**

This course provides students with a solid foundation of what is a green meeting, commonly used terminology, and how to execute a socially responsible and environmentally responsible meeting or event. Through a green lens, students will explore core strategies and principles in planning a green meeting. Further focus includes green tools and resources available to plan a green meeting.

**EVTMGT 10109117 Partnership Development 3 Credits/Units**

Students learn how to analyze a meeting to identify sponsorship and fundraising opportunities. These partnerships build support for a meeting, increase marketing effectiveness, and increase meeting profitability.

**EVTMGT 10109119 Event Professional Best Practices 3 Credits/Units**

This course focuses on the core knowledge and skills that are crucial in the meetings and events industry. We will examine the factors involved with job success, including professional etiquette, ethics, communication and listening skills. Learn the foundation of customer service by implementing industry standards and expectations. Students will create a professional portfolio, as well as learn about proactive job search techniques, professional networking and interview skills.

**FARMBUS 10090381 Agriculture Business Management 3 Credits/Units**



A farm business is a complex set of enterprises that all need to be managed effectively to be successful and sustainable. Students will learn to develop a business plan, set short and long term goals, identification and implementation alternatives for reaching goals, and strategies and tools to monitor success. The student will learn organize and maintain farm business records as well as how to interpret and analyze the records to make sound farm management decisions. All competencies will be assessed by the using the student's own farm or agriculture business or with simulations established by the instructor.

- FARMBUS 10090382**                      **Principles of Sustainable Soil and Crop Management**                      **3 Credits/Units**  
The soil is the foundation on which farming is based. Creating a soil and crop management system that enhances the soil health and quality is one of the most fundamental practices a farmer can do. This class will provide a basic understanding of the nature of soil, and the impacts our management has on the health and productivity of the soil. Students will gain an understanding of soil fertility and learn how to management soil nutrients to meet crop needs and will evaluate the economic impacts of various soil and crop management systems.
- FARMBUS 10090385**                      **Principles of Animal Science and Management**                      **3 Credits/Units**  
This course provides animal science fundamentals including animal health, animal environments, anatomy and physiology, genetics and reproduction, animal feedstuffs, and animal-related safety. This course also emphasizes the skills, techniques and concepts of sound feeding management. Students will determine animal feed needs, evaluate nutritional value and economics of feed types and methods. Participants will experience animal concepts through the completion of hands-on activities.
- FARMBUS 10090386**                      **Agriculture Finance and Economics**                      **3 Credits/Units**  
Agriculture is a vital industry in Wisconsin's Economy. Students will explore the diversity and impacts agriculture plays on the economy. Students will learn major aspects of agribusiness financial management through extensive problem solving, financial analysis and financial planning. Students will describe and calculate sweet 16 ratios, business cash flows, inventory controls, budgeting and borrowing considerations of various types of agribusinesses. Students will also explore agricultural economic dimensions and impacts, economic principles, calculation of economic returns, and evaluation of economic alternatives. Students will use these tools for their own operation or on simulations developed by the instructor.
- FARMBUS 31090310**                      **Sustainable Agriculture: Meat Animal Production**                      **3 Credits/Units**  
Introduces farm practices through on-farm sessions. Livestock terminology, selection, reproduction, nutrition, management, marketing, and species characteristics of meat animals. Investigate basic animal husbandry: feeds, rations, rotational grazing, pasture management.
- FARMBUS 31090389**                      **Farm to Table Capstone**                      **2 Credits/Units**  
Customized, project-based course for farm-to-table students. Apply skills learned in the program at participating facilities such as a farm, meat processor, slaughtering facility, or culinary business, on or off campus.
- FILM 20810250**                      **Introduction to Film**                      **3 Credits/Units**  
Examines techniques of film production and explores the relationship between film form and film meaning. Students view films that represent significant movements in the evolution of the medium and learn how to research and write analytical essays about these films.
- FILM 20810254**                      **History Of World Cinema**                      **3 Credits/Units**  
History of World Cinema examines the history of the film medium, primarily as an art form but also as a form of communication, in the United States and internationally from its origin in the 1800s to the present, highlighting significant movements in its development. Students view domestic and foreign films as a basis for study.
- FINANCE 10114120**                      **Financial Planning**                      **3 Credits/Units**  
This is a comprehensive course incorporating the review of investment statements, tax documents, insurance policies and other inputs to a well-rounded financial program. Cash flow analysis and Goal Based Planning are compared through specific examples and projects that an Investment Advisor/Financial Planner would deal with on a regular basis. An understanding of personal finance and investments are recommended. This course assumes the student understands the time value of money.
- FINANCE 10114126**                      **Corporate Finance**                      **3 Credits/Units**  
This intermediate-level course views finance from the perspective of the financial manager. Topics include techniques of financial analysis, forecasting and budgeting, operating and financial leverage, working capital management, the time value of money, cost of capital, long-term debt and stock financing, dividends and retained earnings. Students are expected to apply both principles of accounting and finance.
- FINANCE 10114127**                      **Financial Analysis**                      **3 Credits/Units**  
A capstone course for the Finance program. Students work in teams to analyze an industry and work individually to analyze a specific company. The project familiarizes students with common sources of business and financial information and develops their analytical skills. A final oral and written report is required.
- FINANCE 10114128**                      **Financial Institutions**                      **3 Credits/Units**  
Introductory-level course which considers the role of financial institutions in the economy. Topics include financial intermediation, the Federal Reserve System, financial markets and instruments, and non-bank financial institutions, including savings and loan associations, credit unions, finance companies, insurance companies, pension funds, mutual funds and governmental financial institutions.
- FINANCE 10114130**                      **Personal Finance**                      **3 Credits/Units**  
This introductory course considers finance from the point of view of the individual or family unit. Topics include budgets, insurance, housing, borrowing, saving, investing and estate planning. Students complete personal finance projects applying the material learned.
- FINANCE 10114140**                      **Investments**                      **3 Credits/Units**  
This advanced course considers alternative investment media and markets. Topics include the investment environment, fundamental and technical analysis, timing, selectivity and diversification, and computer-based investment management. Investment analysis will make use of a student-developed spreadsheet platform.
- FIRET 10503100**                      **Fire Recruit Academy**                      **5 Credits/Units**  
200 hours of fire fighting training prepares students for the State of Wisconsin Firefighter I and Firefighter 2 certification examinations. Completion of the EMT Basic Course also will provide the student with a diploma in Fire Service Certification.



<b>FIRET 10503143</b>	<b>Building Construction</b>	<b>3 Credits/Units</b>
Covers the basic principles of construction and specific classifications of construction as they relate to fire prevention, fire resistance, fire and smoke containment, and performance under fire conditions. Specific building styles, including high-rise and multi-family dwelling units, are also studied. and multi-family dwelling units, are also studied.		
<b>FIRET 10503144</b>	<b>OSHA for the Fire Service</b>	<b>3 Credits/Units</b>
This course introduces the basic concepts of occupational health and safety as it relates to emergency service organizations. Topics include risk and hazard evaluation and control procedures for emergency service organizations.		
<b>FIRET 10503151</b>	<b>Fire Prevention</b>	<b>4 Credits/Units</b>
Provides functional information regarding the history and philosophy of fire prevention, organization and operation of a fire prevention bureau, use of fire codes, and identification and correction of fire hazards. Meets all requirements for Fire Inspector 1 certification with the State of Wisconsin.		
<b>FIRET 10503154</b>	<b>Hazardous Materials Chemistry</b>	<b>2 Credits/Units</b>
This course provides basic chemistry relating to the categories of hazardous materials including recognition, identification, reactivity, and health hazards encountered by emergency services.		
<b>FIRET 10503156</b>	<b>Strategies, Tactics &amp; Inc Mgmt</b>	<b>4 Credits/Units</b>
Provides an in-depth analysis of the principles of emergency response through utilization of an incident management system. Prepares students to pursue current national ICS training requirements.		
Prerequisites: 10-503-191, 10-503-143, 10-503-144, 10-503-100, 10-503-154, 10-503-151, 10-503-148, 10-503-195.		
<b>FIRET 10503157</b>	<b>Fire Investigation</b>	<b>3 Credits/Units</b>
Provides learners with the fundamentals and technical knowledge needed for proper fire scene investigation. Prerequisites: all first, second, and third semester courses.		
<b>FIRET 10503191</b>	<b>Principles of Emergency Services</b>	<b>2 Credits/Units</b>
This course provides an overview to fire protection and emergency services; career opportunities in fire protection and related fields; culture and history of emergency services; fire loss analysis; organization and function of public and private fire protection services; fire departments as part of local government; laws and regulations affecting the fire service; fire service nomenclature; specific fire protection functions; basic fire chemistry and physics; introduction to fire protection systems; introduction to fire strategy and tactics; life safety initiatives.		
<b>FIRET 10503192</b>	<b>Principles Emergency Services/Survival</b>	<b>3 Credits/Units</b>
This course introduces the basic principles and history related to the national firefighter life safety initiatives, focusing on the need for cultural and behavior change throughout the emergency services. Prerequisite: all first, second, and third semester courses.		
<b>FIRET 10503193</b>	<b>Fire Protection Systems</b>	<b>3 Credits/Units</b>
Provides information relating to the features of design and operation of fire detection and suppression systems.		
Prerequisites: 10-503-151, 10-503-152, and 10-503-157.		
<b>FIRET 10503194</b>	<b>Fire Protection Hydraulics</b>	<b>3 Credits/Units</b>
This course provides a foundation of theoretical knowledge in order to understand the principles of the use of water in fire protection and to apply hydraulic principles to analyze and to solve water supply problems.		
<b>FIRET 10503195</b>	<b>Fire Behavior &amp; Combustion</b>	<b>3 Credits/Units</b>
This course explores the theories and fundamentals of how and why fires start, spread and are controlled.		
<b>FIRET 30503300</b>	<b>Fire Recruit Academy - Fire Service Certification Program</b>	<b>5 Credits/Units</b>
200 hours of fire fighting training prepares students for the State of Wisconsin Firefighter I and Firefighter 2 certification examinations. Completion of the EMT Basic Course also will provide the student with a diploma in Fire Service Certification.		
<b>FRENCH 20802221</b>	<b>French 1 - Liberal Arts Transfer</b>	<b>4 Credits/Units</b>
French 1 is for students beginning the study of French. It emphasizes development of basic communicative skills through practice in listening, speaking, reading and writing. Stresses vocabulary and grammar to enhance students' ability to speak and write in French. Study of customs and values provide an increased awareness of francophone cultures. On completion students are able to participate in uncomplicated conversations on everyday topics.		
<b>FRENCH 20802222</b>	<b>French 2 - Liberal Arts Transfer</b>	<b>4 Credits/Units</b>
French 2 emphasizes continued development of more complex communicative skills through practice in listening, speaking and writing. Upon completion, students possess the listening, speaking, reading and writing skills necessary to handle simple, everyday survival tasks in francophone cultures. Vocabulary and grammar are studied to enhance students' abilities to speak and write in French.		
<b>FRENCH 20802223</b>	<b>French 3 - Liberal Arts Transfer</b>	<b>4 Credits/Units</b>
In French 3 a review of grammar from previous semesters is initiated and vocabulary is broadened. Emphasis is placed on speaking and writing in French in "paragraphs" as a full participant in a conversation. Everyday situations in francophone cultures, including education, family life, leisure activities and travel, will provide students with the opportunity to expand their survival skills in francophone cultures. Readings of cultural and literary significance will provide vehicles for discussion and composition.		
<b>FRENCH 20802224</b>	<b>French 4 - Liberal Arts Transfer</b>	<b>4 Credits/Units</b>
This course is designed for the student who has completed three semesters of college French, or three years of high school French. The review of grammar from 20-802-223, French 3, is completed and vocabulary is broadened. Emphasis is placed on speaking and writing creatively in French on a variety of topics. Everyday situations in francophone cultures, including education, family life, leisure activities and travel, will provide students with the opportunity to expand their survival skills in francophone cultures. Readings of cultural and literary		







Traditional Healing in Cross Cultural Context is a study abroad course that will prepare general education and occupational students to experience how indigenous people embody the idea of health and healing in everyday life. In this interdisciplinary course, students will explore the concepts of traditional healing and indigenous cosmology as it relates to the health of the individual, the community, and the earth. Students will also engage in independent research and collaborative projects to support the formulation of a personal wellness philosophy. All students will participate in a service learning component as part of the course.

**GLBL ED 10140107                      Perspectives on Study Abroad                      1 Credits/Units**

This course is required for all students accepted into a Madison College sponsored semester-long Study Abroad program. It is designed as an introduction to and support of residence and study in another country. Students will learn cultural theories, learning styles, cross-cultural communication skills, and strategies for development of cross-cultural competencies. The course will facilitate the intense learning process that occurs when individuals are placed in a new cultural context and will challenge students to explore their own cultural assumptions.

**GLBL ED 10140112                      Renewable Energy for the Developing World                      3 Credits/Units**

The 1 credit Renewable Energy for the Developing World provides an examination of energy and economics in developing countries with special consideration given to renewable energy sources. The course has 10 days of travel and study abroad in Costa Rica. Students will learn to specify, design, and install renewable energy systems for the developing world. Students will install operational renewable energy systems in the field with current renewable energy equipment. An alternate 3 credit course is also offered for transfer credit as 20-806-290, (Renewable Energy for International Development) that also includes 8 weeks of online instruction.

**GRDSGN 10201102                      Design Fundamentals                      3 Credits/Units**

In this class you will be introduced to the elements and principles of design. This semester long class meets 6 hours a week, and introduces students to the design elements of line, shape, space, color, texture, color, and typography through hands on explorations and creative exercises. The supporting design principles and theories are taught, along with course materials that introduces students to Graphic Design history, and the role of Graphic Design in contemporary society.

**GRDSGN 10201103                      Drawing Fundamentals                      3 Credits/Units**

An introductory course to build draftsmanship and confidence in basic observational drawing skills. It includes the study of proportion, line and tone, light source, composition, perspective, human anatomy and life drawing. This is a foundation course with emphasis on technical skill-building, class discussion of contemporary and historical art, daily sketchbook practice and hands-on learning.

**GRDSGN 10201106                      Illustration                      3 Credits/Units**

An advanced course that explores diverse conceptual image making practices for a variety of illustrative disciplines. Emphasis is placed on creativity, style and media exploration, and producing full-color portfolio pieces using a combination of traditional and digital techniques. The course also introduces historical and contemporary usages of Illustration and elements of professional practice such as time keeping, invoicing and how to maintain and communicate effectively with clients.

**GRDSGN 10201112                      Color                      2 Credits/Units**

Explores the fundamental components of color essential to all artists and designers. Lectures and exercises introduce color theory, psychology, perception, value, harmonies and trends. Various projects utilizing traditional and digital tools and media establish the impact of color in developing successful, contemporary, visual solutions to design and illustration assignments.

**GRDSGN 10201117                      Illustrative Figure Drawing                      3 Credits/Units**

Incorporates traditional figure-drawing techniques and approaches with a concern for illustrative usage and figure indication for design and layout situations.

**GRDSGN 10201121                      Graphic Design                      3 Credits/Units**

Explore the role, meaning and making of graphic design in our society. The course covers icons and symbols, logos and identity, pattern, texture, layout, design trends, design history, resources for designers as well as the professional practices and the field of graphic design today. Projects cover a range of applications, with emphasis on concept, process, presentation and communication.

**GRDSGN 10201128                      Print & Digital Production                      3 Credits/Units**

?Practical training in production of digital composition. The student learns to solve realistic print and digital design problems from rough layout through production by completing a variety of increasingly complex assignments.

**GRDSGN 10201136                      Concept Development                      2 Credits/Units**

Introduces exercises and processes to foster creativity and the development of unique ideas for graphic design, advertising and digital applications. Emphasis is placed on improving research, brainstorming, writing, speaking and critical thinking skills. Working individually, in teams and in groups, students will come up with unexpected solutions to realistic and contemporary industry problems. Visual presentations cover a wide range of levels of finish and incorporate traditional and digital media and rendering techniques.

**GRDSGN 10201137                      Survey of Design Communication                      1 Credits/Units**

This course focuses on the Graphic and Web/Interactive design professions, the personal qualities and aptitudes of a designer, and the broad range of career opportunities and tasks performed. The course also offers students an introduction to the requirements and demands of the program and a career in the design industry.

**GRDSGN 10201144                      Principles of Letterpress: Design and Printing                      3 Credits/Units**

This course introduces students to the art of letterpress printing. Projects provide a foundation in designing for letterpress, including typography, composition, image creation/selection, color separation, and ink and paper selection. Through a series of projects, students will be introduced to professional practices in a letterpress shop, terminology, prepress, registration, and locking up. Prints will be generated on a variety of presses, including a Vandercook cylinder proof press, a Chandler & Price platen job press, and an automated Heidelberg windmill platen press. Artwork will be created with metal and wood handset type, linoleum/other relief blocks, and photopolymer plates created using Adobe Illustrator software.

**GRDSGN 10201145                      Introduction to Screen Printing                      2 Credits/Units**

Investigation into the tools, techniques and technologies of serigraphy, also known as screen printing. Students learn the safety issues surrounding this printing format. Students investigate a variety of stencil methods and produce at least one project in each of four methods.



Students are also introduced to the use of the variety of inks, fabrics and papers used for differing end products, as well as the use of solvents for diluting inks and cleaning up. Projects include the development of a retail product produced through screen printing that may be offered for sale in Madison College enterprise centers. Laboratory hours are allotted to provide flexible accumulation of credit hours. Budgets and production schedules are applied to projects.

**GRDSGN 10201146                      Advanced Screen Printing Workshop                      2 Credits/Units**

This course is focused on advancing the skills of learners who have completed the Introduction to Screen Printing course and/or work experience. Emphasis will be put on concept, planning, and high-quality production of a variety of print projects. Projects will focus on further investigation into the use of specific inks, multiple layers of ink, screen mesh and stencil issues, various substrates and archival considerations. At least one multiple color fabric (or T-shirt) project will be addressed employing Plastisol inks and heat set equipment.

**GRDSGN 10201147                      Advanced Letterpress Workshop                      2 Credits/Units**

This course will enable students who have completed the Principles of Letterpress course (or comparable coursework/experience) to continue to grow their knowledge and experience in letterpress printing. Projects will be both collaborative and self-directed. Students will become more familiar with press maintenance, set-up and the workings of a print shop. Amalgamation of printing processes (letterpress, screen printing, offset printing) will be introduced. Students will gain entrepreneurial experience through creation of products for sale in the college bookstore.

**GRDSGN 10201149                      Advanced Figure Drawing                      3 Credits/Units**

This course offers an advanced combination of traditional figure-drawing techniques and approaches, with an emphasis on illustrative usage and figure indication for design and layout situations.

**GRDSGN 10201151                      Typographic Design                      3 Credits/Units**

This class is an investigation of all things type related. Students will develop an eye for type and understand how to use it effectively in their design work. Topics include the principles of good typography, type terminology and history, font selection and pairing, letter, word and line spacing, typographic hierarchy, paragraphs and layout, character and paragraph styles, using a grid, trends in typography and the importance of type as the foundation of graphic design. Class projects cover a range of applications in print and digital media.

**GRDSGN 10201152                      Applied Drawing                      2 Credits/Units**

A variety of traditional and digital tools, techniques, styles and media are used to enhance the drawing skills of visual artists and designers. Levels of drawing from loose sketches to tightly finished art are explored, but the emphasis is placed on simplified, gestural and stylized drawing important to concept, composition, presentation and communication. Projects will be predominantly black and white, although some tone and limited color may be incorporated.

**GRDSGN 10201153                      Integrated Design                      2 Credits/Units**

In this course, students simulate the experience of helping a client launch a new business. Students produce a cohesive set of projects including logo and identity, brand standards guide, web presence, motion graphics, and unique print collateral materials appropriate to support this new venture. Smaller independent projects provide additional opportunities to include multi-piece collections for their portfolio. This is an advanced-level course. The level of work produced is expected to be portfolio quality. Technical proficiency with computer software is assumed. The ability to work independently and self-directed is a must.

**GRDSGN 10201154                      Design Project Management                      3 Credits/Units**

This class covers general business practices, work-flow and advance production techniques in the design field through applied projects. Collaboration is emphasized where teams apply business practice in developing a product from concept to actual launch. Students will work through the process of producing a photo shoot and prepare files for a variety of media channels. This is an advanced level course with an emphasis on portfolio level work and professionalism.

**GRDSGN 10201155                      Content Management Systems for Designers                      3 Credits/Units**

This course will introduce the basics of creating web sites using Content Management Systems (CMS). Students will learn how to publish blogs, posts and pages, work with themes, employ widgets, create custom menus, activate plugins, and utilize page templates. Students will use self-hosted and cloud-hosted platforms. Additionally, the course will use HTML, CSS, Dreamweaver and other text editing software, and ftp software. Students are required to acquire server space to host their work.

**GRDSGN 10201156                      Programming for Designers                      3 Credits/Units**

Students will be introduced to the programming languages that drive front-end user interface design. In this course, you'll learn the fundamental programming concepts and syntax of the JavaScript programming language, as well as other languages and techniques.

**GRDSGN 10201157                      Social Media Concepting                      3 Credits/Units**

Create campaignable content for platforms such as Facebook, Instagram, Snapchat and others. The focus will be idea based and will include writing, image making (illustration and photography), and video. Daily content, social media contests and ways to encourage user generated content will be covered.

**GRDSGN 10201158                      Interactive Design Lab                      2 Credits/Units**

This course introduces students to working in a contemporary digital workflow and provides a studio-like experience. Students will focus on concept, user experience, and most importantly, design execution. They will use the skills they have acquired and work to develop real-world design solutions for a variety of digital mediums.

**GRDSGN 10201161                      Web & Digital Media Design Portfolio Preparation                      2 Credits/Units**

Students work to prepare a portfolio of their work for prospective employers. Students are supervised and assisted in choice and number of samples, and portfolio layout. Lectures are given on job interviewing and job markets. Faculty approval of a finished portfolio is required for graduation.

**GRDSGN 10201162                      Graphic Design Portfolio Preparation                      2 Credits/Units**

Students prepare a portfolio of their work and various business materials to apply for employment. Students are supervised and assisted in choice and number of samples, and portfolio layout. Lectures are given on job interviewing and job markets. Faculty approval of a finished portfolio is required for graduation.





- GRDSGN 10201163**                      **UX Design**    **3 Credits/Units**  
 User Experience (UX) Design is all about people—designing interfaces that people will use. Thinking about how they interact with interfaces. Students will learn how to apply user-centered design principles to improve websites, forms, mobile apps, etc. We will delve into user research, wireframing & prototyping, and user testing while using the latest software & tools.
- GRDSGN 10201169**                      **Business of Graphic Design & Illustration**    **2 Credits/Units**  
 This course introduces students to the business aspects of entrepreneurial and freelance design and illustration. Topics include setting up a business, creating a brand identity, finding your niche, targeting markets, developing a creative process, networking, portfolios, capability kits, writing business and marketing plans, tax and legal considerations, contracts, business forms, bookkeeping, pricing, referrals and writing estimates, proposals and invoices.
- GRDSGN 10201177**                      **Web Page Design**    **3 Credits/Units**  
 During this course, students learn basic web design skills by creating several exercises and web sites. These projects build on each other, and increase in complexity. Students are taught industry standard best practices for coding HTML5 and CSS, web typography, graphic preparation, incorporating javascript, usability and accessibility. Students are also introduced to uploading files, server space, testing and browser compatibility. Hand coding, web page layout software, and cloud-based layout platforms are all utilized. Exploration and analysis of existing sites on the web will also be a focus and source of information and inspiration.
- GRDSGN 10201178**                      **Applied UI Design**    **3 Credits/Units**  
 This course will utilize current methods for creating intentional user interaction and animation. Primary focus will be with HTML5, CSS, and JavaScript, as well as prototyping software to produce animated effects and interaction appropriate for screen, tablet and mobile.
- GRDSGN 10201181**                      **Introduction to Computer Graphics**    **3 Credits/Units**  
 An introduction to professional software used in the preparation of digital files including photography, graphic design, layout, typography and illustration using Adobe Photoshop, InDesign, and Illustrator. This is a foundation course for web, print, new media and other communication graphics.
- GRDSGN 10201182**                      **Applied Computer Graphics**    **3 Credits/Units**  
 The students enhance their knowledge and skill in the use of design, illustration and page layout software (Adobe Creative Cloud) through the creation of a variety of design and illustration projects. Emphasis on original, strong images and type integration, as well as preparing files for print and screen.
- GRDSGN 10201183**                      **Electronic Illustration**    **2 Credits/Units**  
 Focuses on illustration creation and preparation for both print and interactive media. Drawing upon the student's understanding of rendering in vector (such as Adobe Illustrator) and raster (such as Adobe Photoshop) software applications, students create illustrations and graphics that demonstrate originality, creativity, conceptualization and technical skills. Students will be introduced to Flash 2D animation and its integration with the digital illustration process.
- GRDSGN 10201184**                      **Advanced Design & Layout**    **2 Credits/Units**  
 This course focuses on concept and the creation of unique and unifying visual solutions to a wide variety of design applications. Students will learn how to create focal points and hierarchy across multiple-page publications, digital applications and other common branding elements. Projects are designed to give freedom to explore various styles and a range of ideas that mimic a typical agency setting.
- GRDSGN 10201189**                      **Web Design Project Management**    **2 Credits/Units**  
 Real client projects will provide opportunities to work in teams, manage projects, conceptualize, organize and acquire content, develop architecture and assemble a production plan. Advanced web page layout features such as templates, libraries, use of CSS, implementation of javascript and spy widgets will be introduced.
- GRDSGN 10201193**                      **Mobile Web Design**    **3 Credits/Units**  
 The future of the web is mobile; learn the latest strategies in web design theory and technology to create a powerful experience on any device. This course is designed for students who wish to expand their knowledge of websites to the most modern of Internet users - people who use their mobile phones and tablets to access the Internet. In this course you will gain practical knowledge of the different types of mobile web design, mobile web usability, accessibility and mobile web optimization.
- GRDSGN 10201195**                      **Advanced Web Page Design**    **3 Credits/Units**  
 Continues to focus on the design, page layout and graphic preparation skills necessary to produce full-functioning webpages. Students create several web examples, incorporating more complex features and skills. Practical exercises are implemented to focus on specific production skills. Design continues to be emphasized through examples, critiques and demonstrations. Information is delivered primarily through lecture, demonstration and hands-on learning exercises.
- GRDSGN 10201198**                      **Social Media/Web Design Strategies**    **3 Credits/Units**  
 This course will introduce essential strategies that make for successful websites and social media campaigns. Topics covered include: User Experience, User Research, Content Strategy, Information Architecture, Search Engine Optimization, Analytics, Accessibility, Social Media, and the Mobile Web. Students work on real world case studies to learn and practice skills that can be applied in any profession that works with social media or websites.
- HISTORY 20803204**                      **Making of Modern Europe**    **3 Credits/Units**  
 Renaissance, Reformation, and Revolution introduces the major political, economic, social and cultural trends, which characterize European society from the Renaissance through the French Revolution. The primary focus is an examination of the changes and conflicts that mark the transition from medieval society to Modern European society, and the impact that this transition has for individuals, groups, institutions, and the world view of Europeans in the early modern period.
- HISTORY 20803205**                      **Europe and Modern World**    **3 Credits/Units**  
 This is an introductory course in European history concentrating on the 19th- and 20th-century experiences of European societies through examination of major social, economic, political and intellectual development. One emphasis is on the changes that caused the transformation of Europe from a pre-industrial to a modern industrial society. A second emphasis focuses on a specific place and time period in order to



understand how this process of transformation affected different European nations at different points in their history.

**HISTORY 20803206                      British History Since 1688 - Liberal Arts Transfer                      3 Credits/Units**  
This course will consider and examine the historical developments behind Great Britain's transition from being a largely rural, aristocratically-governed, economically underdeveloped, and politically unstable kingdom in the seventeenth century to its becoming an urban, democratic and parliamentary, economically powerful, and politically stable nation (and empire) by the twentieth century. It will devote considerable attention to explaining how Great Britain shifted from having a constitutional monarchy dominated by the aristocratic elites to its developing a representative, parliamentary democracy that ultimately allowed for the son of circus performers (John Major) to serve as prime minister in the late twentieth century. The course will examine and analyze why Great Britain served as the birthplace for what would be called the Industrial Revolution. More significantly, British History since 1688 will further investigate how the British government moved from supporting laissez-faire capitalism in the first half of the nineteenth century to constructing the collectively-inspired welfare state after World War II. This course will examine the creation, exploitation of, and the dissolution of the British Empire and analyze how the empire's creation and dissolution has affected British imperial and domestic history--especially how the immigration of former "imperial subjects" to Great Britain has profoundly affected the ethnic, religious, and cultural composition of what has been assumed to be a homogenous nation.

**HISTORY 20803211                      Am Hist 1607-1865                      3 Credits/Units**  
In this course the origin and growth of the United States is studied. It also surveys American political, economic and social development from the founding of the colonies through the Civil War.

**HISTORY 20803212                      Am Hist 1865-Pres.                      3 Credits/Units**  
American History 1865 to the Present is an introductory survey course covering political, social and cultural trends in the United States between the end of Civil War and the present. In addition to presenting what happened in the United States during this period, the course explores the diverse sources historians use to explain the past.

**HISTORY 20803214                      Native American History - Liberal Arts Transfer                      3 Credits/Units**  
Native American History is a survey course focusing on Native American cultures and histories from early times to the present. Particular attention is placed on the variety of lifestyles of native peoples, their early reactions to Euro-Americans, outstanding native leaders, assimilation efforts and relations with the U.S. government.

Completion of 20-803-211, American History 1607-1865; or 20- 803-212, American History 1865 to Present, is recommended.

**HISTORY 20803220                      History Of West Civilization 1                      3 Credits/Units**  
This course introduces students to the history of western culture using the materials from the humanities, including history, art, architecture, literature, drama, philosophy and religion, and music. Course examines the history of western societies from the earliest civilizations up to the Renaissance (approx. 3000 BC to 1500 AD). Class will discover and explore the cultural legacy created by past societies that we embrace as part of western culture and to evaluate the style or cultural essence of the different peoples who have made important contributions to that culture. Students explore historical materials that reflect the human response to physical and social experiences in order to discover what being human involves over time in different places and situations. We also explore the humanities materials to discover how humans have expressed their humanity.

**HISTORY 20803224                      History of Sub Saharan Africa                      3 Credits/Units**  
History of Sub-Saharan Africa is an introduction to the civilizations of Africa from early man through the present that focuses on African society before western penetration, the basic nature of African institutions, the colonial experience of Africa and the development of Africa since independence in 1960.

**HISTORY 20803225                      World In 20th Century                      3 Credits/Units**  
This course focuses on the emergence of a global society in the twentieth century through a chronological examination of the events and trends, which created a more closely connected world, resulting in a "global society" by the end of the century. The course approaches the history of this century through emphasis on themes of particular significance to the creation of global society. Themes include globalization, the growth of mass culture, technology, ideology/religion, and the varied responses of different cultures to the ideas and events of the century.

**HISTORY 20803226                      East Asian Civilization                      3 Credits/Units**  
East Asian Civilization will explore the historical, cultural, social and philosophical roots of East Asia. East Asia or the Pacific Rim includes China (also Taiwan, Hong Kong and Macao), Japan, Korea and Mongolia. This area is expected to be the newest economic and political powerhouse and has led many scholars to already name the 21st century the "Pacific Century." The purpose of this course will be to introduce students to this vast, complex and strategic area by primarily using history and culture. It will stress major themes in East Asian civilization and these themes will connect to form a whole picture.

**HISTORY 20803229                      Vietnam/American-1945-Present                      3 Credits/Units**  
This course will survey the intersection of Vietnamese and American history from 1945 to the present. It will examine the roots of our involvement in Southeast Asia after World War II through the defeat of the French in the 1950's. It will explore the principal causes and effects of the expanded war in the 1960's both in Vietnam and in the United States—upon Americans and upon Vietnamese. It will conclude with a section discussing the legacy of the war exploring continuing issues like U.S./Vietnamese relations, Southeast Asian refugees in the U.S. and the effect of the war on veterans.

**HISTORY 20803230                      Women In History                      3 Credits/Units**  
Public Man, Private Woman: Bronze Age to Glass Ceiling introduces students to women's history, specifically the various roles played by and assigned to women in western societies and focusing on the question of how and why women's lives have changed during the past thirty centuries. Students will examine women's experiences and their images in the past by analyzing the lives of selected notable women as well as broad categories of women, e.g. prostitutes, peasant wives, noblewomen, feminists. The traditional historical periods covered include the Ancient (Greece and Rome), the Medieval (Europe) and the Modern (Europe and the U.S. since 1500).

**HISTORY 20803233                      Gender and Women's History in Cultural Representations                      3 Credits/Units**  
Introduction to gender and women's history from pre-history to the 19th century from a humanities perspective. We will develop a critical analysis by studying cultural representations of women and men within the social and historical context of race, class, gender, sexuality. Our analysis will be shaped by an intersectional approach, which means that gender will always be examined in interaction with race,



class, sexuality and dis/ability to reveal how identities and systems of power are shaped by multiple forces. We will study a range of cultural representations ranging from literary and visual arts, to mass media, to material, to political to explore how gendered representations produce social, political and personal implications.

- HISTORY 20803234                      Gender and Women's Global History                      3 Credits/Units**  
Introduction to gender and women's history from the 19th century to the present with a global perspective. Students will be asked to think critically about the power relations that affect the lives of diverse women in the U.S.-diverse in terms of race, class, ability, sexuality and other markers of power-and will be asked to contemplate the positions of diverse women from around the world.
- HISTORY 20803240                      Afro-American History                      3 Credits/Units**  
Broad introductory survey of significant experiences that have shaped U.S. race relations, beginning with the west coast of Africa during the Middle Ages and moving through the last 30 years of this century in the United States. Special attention is given to slavery, family, politics, education and civil rights.
- HISTORY 20803241                      Introduction to Judaism                      3 Credits/Units**  
The course will trace the development of Judaism from early antiquity through the present. Beginning with the origins of Rabbinic Judaism roughly 2000 years ago, the course will describe Judaism in the context of other Near Eastern religions of that era, and it will trace how Judaism has changed and remained consistent around the world.
- HOSPT 10109101                      Exploring Hospitality                      3 Credits/Units**  
Introduces new students to the broad spectrum of the leisure services industry. Typical career areas include food service, lodging, travel/tourism, and recreation. The course explores educational options and program career opportunities as well as historical and operational perspectives of the career areas mentioned.
- HOSPT 10109125                      Hospitality Leadership                      3 Credits/Units**  
Introduces theories, principles and practical application of management skills in the hospitality and tourism industry. Students analyze their current skills and develop a personal management philosophy appropriate to the service industry.
- HOSPT 10109131                      Rooms Division Operation                      3 Credits/Units**  
Investigates the organization, performance and evaluation of the rooms division of a lodging facility (front desk, reservations, housekeeping and telephone systems) as essential components of operational success and guest satisfaction.
- HOSPT 10109134                      Cost Control/Revenue Management                      3 Credits/Units**  
Cost Control presents concepts and techniques of cost control in the hospitality industry. Students select and apply methods, procedures and systems to control costs, and analyze the application, theory and concepts. Focuses on concepts for hospitality and tourism managers who are responsible for making strategic and proactive decisions to maximize revenues in a cost efficient way. Fixed product supply and varying consumer demand make this a challenge. These managers must dedicate critical attention to core product revenue maximization due to the perishable (time-sensitive) nature of a service based product. Performance in this task is measured within the firm's revenue management system, where the goal is to generate maximum revenue.
- HOSPT 10109136                      Hospitality Law                      3 Credits/Units**  
A preventive approach to the laws and liabilities, as well as responsibilities of owners/operators of hotels, restaurants and travel facilities. Reviews precedent-setting court decisions, legal fundamentals, negligence doctrines, civil rights issues and the relationship between providers and the guests/clients.
- HOSPT 10109157                      Hospitality Internship                      2 Credits/Units**  
Provides on-the-job field experience required for graduation from the program. Requirements include fifteen hours per week of work experience, a written report analyzing four major management responsibilities, and a professional oral presentation of the written report.
- HOSPT 10109182                      Global Studies Seminar                      3 Credits/Units**  
This unique learning and travel experience gives students the opportunity to enhance their understanding of the global marketplace. Upon completion of the course and travel students will be familiar with the history, culture, social and business issues of the host country. Students will examine current trends and business practices relating to (but not limited to) management, marketing, hospitality and global strategies. Participation in this course requires travel to the host country. This experience is designed to help students develop a lifelong global mindset and to enhance abilities to communicate, work on international teams and think creatively.
- HRMGT 10116145                      Introduction to Human Resources                      3 Credits/Units**  
Topics include: the nature of human management, strategic human resource planning, issues in human resources, planning, equal employment opportunity, analyzing and staffing jobs, training and developing human resources.
- HRMGT 10116147                      Wage, Salary & Benefits Admin                      3 Credits/Units**  
Topics include: Basic systems and plans of compensating employees, incentives and executive compensation, principles and techniques in the administration of employee benefit programs.
- HRMGT 10116148                      Labor Relations                      3 Credits/Units**  
Topics include employee rights and discipline; union-management relations; collective bargaining and grievance management; and assessment systems.
- HRMGT 10116149                      Effective Staffing                      3 Credits/Units**  
This course provides a comprehensive approach to planning for staffing; employing a wide range of recruiting methods; and identifying optimal selection methods.
- HRMGT 10116152                      Organizational Training and Development                      3 Credits/Units**  
This course provides an overview of the Training and Development function in organizations. There will be many opportunities to design and practice methods for planning for training, needs analysis, management development, and organization development. Students will learn effective techniques for on-the-job training, developing job aids, and designing classroom instruction. Introductory information on topics such



as embedded learning, e-learning, and simulations will also be included.

**HRMGT 10116153 Meeting Facilitation 1 Credits/Units**  
This course provides both information about meeting facilitation and an environment for practice. The ultimate goal is for students to learn to conduct effective meetings.

**HRMGT 10116168 Employment Law 3 Credits/Units**  
Topics include: unemployment compensation laws; workers' compensation laws; hiring and firing practices; sexual harassment in the workplace; the Americans with Disabilities Act; and labor law basics under the National Labor Relations Act. Course examines current "black letter law" together with case decisions. Content is appropriate for persons whose career plans involve employee management.

**HRMGT 10116169 Human Resources Capstone 1 Credits/Units**  
This final course in the Human Resource Management program integrates and enhances knowledge and skills developed throughout the program. Topics include staffing, labor relations, compensation, training and development, and employment law.

**HUMSVC 10520105 Introduction to Human Services 3 Credits/Units**  
Examines the scope, values and principles of the human service profession. Introduces the typical roles and duties of human service workers. Students assess their own motivations, attitudes and interests. In addition to the regular classroom hours, 45 hours of volunteer work in a community human services agency are required. Prerequisites: Human Services Associate course prerequisites.

**HUMSVC 10520106 Orientation to Human Services Populations 3 Credits/Units**  
Introduces social problems that contribute to the dysfunction of individuals, groups, families and communities. Addresses problems, needs, conditions and events that bring people to human service organizations. Prerequisites: Human Services Associate course prerequisites.

**HUMSVC 10520116 Group Work Skills 3 Credits/Units**  
Students learn principles and techniques needed to lead informational and supportive groups based on the solution-focused model. Students practice group work skills during class.

Prerequisite: 10-520-117.

**HUMSVC 10520117 Interviewing 3 Credits/Units**  
Students learn principles and techniques needed to conduct informational and supportive interviews. Students practice interviewing skills during class. Prerequisites: Human Services Associate course prerequisites.

**HUMSVC 10520120 Community Service Agencies 3 Credits/Units**  
Focuses on characteristics and functions of human services organizations and the roles of human service workers in those organizations. Covers organizational skills of assessment, planning, budgeting, grant writing, evaluation and consulting.

Prerequisite: 10-520-105.

**HUMSVC 10520130 Social Change Skills 3 Credits/Units**  
Introduces principles and strategies of planned change and the role of human services workers as community organizers. Covers how consumers affected by a social problem can clearly define an issue, set a goal and organize to bring about social change.

Prerequisite: 10-520-106.

**HUMSVC 10520135 Issues in Alcohol and Other Drug Abuse 3 Credits/Units**  
Provides students with a basic understanding of the use and abuse of alcohol and other drugs. Emphasizes historical and social perspectives on drug use, trends of use and legal and social responses to illicit drug use. Additionally, this course provides an accurate description of the effects of psychoactive drugs, identifies methods of substance abuse treatment and introduces the student to local treatment services.

Prerequisites: Human Services Associate course prerequisites.

**HUMSVC 10520136 Counseling Alcoholics and Other Drug Abusers 3 Credits/Units**  
Trains students in basic listening and responding skills, familiarizes students with the 12 core functions performed by AODA counselors (screening, intake, orientation, assessment, treatment planning, counseling, case management, crisis intervention, client education, referral, reports, record keeping and consultation) and provides a structured learning environment in which students can develop skills in these core functions.

**HUMSVC 10520139 Human Services Agency Experience 1 4 Credits/Units**  
Students develop skills as human services workers by working directly or indirectly with clients in community agencies 16 hours per week. An agency supervisor and a faculty member closely supervise students. The human services staff makes field placement assignments.

**HUMSVC 10520140 Human Services Agency Experience 2 4 Credits/Units**  
Students continue their on-the-job training in community agencies for 20 hours per week. By the end of the course, students have the skills of an entry-level human services worker.

**HUMSVC 10520141 Introduction to Community Mental Health 3 Credits/Units**  
Introduces the major diagnostic categories of mental illness, with a focus on the psychiatric management of these mental illnesses. Examines the unique treatment needs of people who have a coexisting psychiatric-disorder and substance-abuse problem.

**HUMSVC 10520142 Psychopharmacology 3 Credits/Units**  
This course uses a bio-psycho-social framework to explore the use and misuse of psychoactive drugs. We will learn about the interactions between chemicals and neurons, the psychological and physiological effects on the individual, the impact the individual has on society and the role culture may have on substance misuse and treatment. In addition, we will explore topics relating to biology, pharmacology, neuroscience, chemistry and further our understanding on history, law, sociology and the political climate. The intent of this course is to instill a better



understanding of why people use drugs, what effects drugs have on people, the intersections of the individual within the larger systems and various treatment approaches.

**HUMSVC 10520150                      AODA Special Populations                      3 Credits/Units**  
Provides an understanding of the unique AODA concerns, problems and needs of particular special populations, including youth, women, older adults, people with disabilities, gays and lesbians, ethnic and other minority groups.

**HUMSVC 10520157                      Human Services Counseling Skills                      3 Credits/Units**  
Introduces basic concepts of ego counseling, Rogerian counseling, transactional analysis, rational-emotive therapy, reality therapy, narrative therapy and solution focused therapy. Covers how counseling theories identify and define problems, explain personality development and treat problem situations. Prerequisites: 10-520-116 and 10-520-117.

**HUMSVC 10520188                      Human Services Experience Conference 1                      3 Credits/Units**  
A small-group seminar designed as a companion/supportive course to the agency experience. Relates theory and principles of practice to agency field-study experience. Students learn to develop supportive relationships with clients and apply the values of confidentiality and client self-determination. They learn how their values and personal experiences affect their work with clients.

Prerequisites: 10-520-105, 10-520-116, 10-520-117 and concurrent enrollment in 10-520-139.

**HUMSVC 10520189                      Human Services Experience Conference 2                      3 Credits/Units**  
Students develop skills specific to their fieldwork placement and complete a major project to enhance their cultural competence.

Taken concurrently with: 10-520-120 and 10-520-140.

Prerequisites: 10-520-139 and 10-520-188.

**HVAC 50401590                      Trade Hvac Semester 1                      2 Credits/Units**  
This course description is unavailable at this time. Please contact the center offering the course for more information.

**HVAC 50401591                      Trade Hvac Semester 2                      2 Credits/Units**  
This course description is unavailable at this time. Please contact the center offering the course for more information.

**HVAC 50401592                      Trade Hvac Semester 3                      2 Credits/Units**  
This course description is unavailable at this time. Please contact the center offering the course for more information.

**HVAC 50401593                      Trade Hvac Semester 4                      2 Credits/Units**  
This course description is unavailable at this time. Please contact the center offering the course for more information.

**HVAC 50401594                      Trade Hvac Semester 5                      2 Credits/Units**  
This course description is unavailable at this time. Please contact the center offering the course for more information.

**HVAC 50401595                      Trade Hvac Semester 6                      2 Credits/Units**  
This course description is unavailable at this time. Please contact the center offering the course for more information.

**HVAC 50401596                      Trade Hvac Semester 7                      2 Credits/Units**  
This course description is unavailable at this time. Please contact the center offering the course for more information.

**HVAC 50401597                      Trade Hvac Semester 8                      2 Credits/Units**  
This course description is unavailable at this time. Please contact the center offering the course for more information.

**HYDPNEU 50419501                      Hydraulics for Apprentices                      1 Credits/Units**  
Gain the knowledge of the uses and applications of hydraulics required in the apprentice trades. Hydraulic systems, devices and components will be examined. Job duties and tasks related to safety, inspection, testing, maintenance and repair will be included.

**HYDPNEU 50419502                      Pneumatics for Apprentices                      1 Credits/Units**  
Gain the knowledge of the uses and applications of pneumatics required in the apprentice trades. Pneumatic systems, devices and components will be examined. Job duties and tasks related to safety, inspection, testing, maintenance and repair will be included.

**IND MECH 10462304                      Industrial Fluid Distribution Systems                      2 Credits/Units**  
Covers installation and repair of fluidic systems. Includes fittings, thread cutting, pipe sweating, roll grooving, solder, plastic cementing, repair equipment and tools. Pumps, valves, water supply systems and fire protection distribution systems covered.

**IND MECH 10462306                      Metal Processes Maintenance                      2 Credits/Units**  
Includes machine shop operations, sheet metal work, soldering and brazing, forging and heat treatment, grinding, tool sharpening, metal casting and other metal applications as related to industrial machinery repair.

**IND MECH 10462311                      Industrial Equipment Mechanisms 2                      1 Credits/Units**  
Mechanical drive components and systems are studied with emphasis on selection, application, and proper installation techniques. Includes hands-on assembly, alignment, lubrication, and disassembly of drive shafts, bearings, seals, gaskets, belt, chain and gear drives, clutches and brakes, couplings and universal joints, linear motion components, and power transmission accessories.

**IND MECH 10462314                      Industrial Maint Mechanic 1                      3 Credits/Units**  
Emphasizes basic tools used for maintenance. Presents information on lock out/tag out, confined space and safe rigging practices, manufacturing machine types and operations, torque, metal properties and hardness, gaskets, pumps, gears, motors, pulleys and alignment.

**IND MECH 10462316                      Industrial Maintenance Mechanic 2                      3 Credits/Units**





Emphasizes on-the-job installing, troubleshooting and maintaining manufacturing systems with special focus on automated systems. This course is completed as an internship.

**IND MECH 10462318                      Maintenance Management                      2 Credits/Units**

Emphasizes maintenance management and quality control techniques to give maintenance students an understanding of their roles in an organization. Covers maintenance record keeping, parts ordering and shop operation.

**IND MECH 10462320                      DC/AC Circuits                      3 Credits/Units**

Introduces the practical DC/AC concepts including electrical quantities and components and measurement instruments for AC and DC circuits used in commercial, industrial, and sustainable energy fields. Students measure voltage, current, resistance and power for single and three phase AC and DC sources. Also covers fundamentals of magnetism in electrical components, calculations of electrical components.

**IND MECH 10462322                      Industrial Electricity and Controls                      4 Credits/Units**

Studies basic principles related to electro-mechanical systems as well as motors, transformers, frequency drives and various electro-mechanical devices to enhance AC power distribution and control systems. Introduces programmable logic controllers in the on/off mode.

**IND MECH 10462324                      Programmable Logic Controllers 1                      3 Credits/Units**

Fundamentals of programmable logic controller (PLC) installation, interfacing, operation, and programming. Students learn about PLCs connected to Windows-based PCs running state-of-the-art programming tools. Students study discrete and analog input and output; hardware sensor interfacing and troubleshooting techniques; fundamentals of digital systems and will program PLCs using timer, counter, latch, data movement, sequencing, integer arithmetic and other instructions.

**IND MECH 10462326                      Programmable Logic Controllers 2                      3 Credits/Units**

Advanced programmable logic controller (PLC) installation, interfacing, operation, and programming. Students learn how to connect advanced PLCs in a typical industrial PLC network utilizing Ethernet, DH+, RS232 and RIO communication paths. Data sharing and distributed PLC programming techniques along with fundamentals of touch panel programming and operation are studied.

**IND MECH 10462327                      Electronic Circuits for Maintenance                      3 Credits/Units**

Presents semiconductor devices with an emphasis on their practical use. Students construct and troubleshoot power supplies, amplifiers, electronic switches, relay drivers, photo-optical isolators and power control electronics. Students learn to identify and troubleshoot diodes, bipolar transistors (BJTs), field-effect transistors (FETs), silicon controlled rectifiers (SCRs and Triacs), light emitting diodes (LEDs) and other components found in industrial electronics.

**IND MECH 10462328                      Interfacing Sensors with Computer Controls                      3 Credits/Units**

Applies various sensors to analog input modules of programmable controllers and to A/D converters for computer systems.

**IND MECH 10462330                      Heating and Air Conditioning 1                      3 Credits/Units**

Covers basic environmental equipment maintenance. Presents applications of HVAC components, refrigeration controls, condensers, hydronics, boilers, heat exchangers, dampers, compressors, plumbing, pumps, measurement, blowers and preventive maintenance/repair. Also covers EPA CFC certification.

**IND MECH 10462332                      Heating and Air Conditioning 2                      3 Credits/Units**

Advanced environmental equipment installation and maintenance course which puts the theory learned in 32-401-308 into practice including boiler competencies.

**IND MECH 10462334                      Facilities Maintenance                      3 Credits/Units**

Covers safety, schematics, wall framing, electrical services, insulation, drywall applications, painting, floor applications, roofing and siding applications. Includes the study of appropriate applications of material to facilities.

**IND MECH 10462336                      Building Automation                      3 Credits/Units**

Develops skills required to install, analyze, modify, and calibrate HVAC (Heating, Ventilating, and Air Conditioning) control systems. The fundamentals of control systems will be studied and applied to common control strategies most often found in commercial HVAC systems.

**IND MECH 10462340                      Manufacturing Systems, Application and Control                      3 Credits/Units**

Introduces computer control systems and fundamentals of motion control. Presents programmable logic controllers (PLCs) along with design, integration and troubleshooting techniques.

**IND MECH 32462303                      Industrial Equipment Mechanisms 1                      1 Credits/Units**

Studies basic principles of physics specific to electro-mechanical systems. Emphasizes measurement, lubrication, energy, power, machines and fluid and chemical properties, as well as installation, timing and synchronization of machine drive components. Includes hands-on disassembly and assembly of industrial components.

**IND MECH 32462306                      Industrial Fluid Power 1                      1 Credits/Units**

Fundamentals of fluid power (hydraulic and pneumatic) and its components as well as principles, functions and terminology. Covers the application of basic fluid power systems to various machines along with maintenance and troubleshooting.

**INDMANUF 10623100                      Safety for Industry                      1 Credits/Units**

This course reviews basic safety standards for industry as outlined by OSHA. Designed for general industry workers, it focuses on identification, avoidance, control, and prevention of safety and health hazards a worker may encounter on a general industry site. Those who successfully complete the hourly and course requirements receive an OSHA 10-hour completion card. The Manufacturing Skill Standards Council (MSSC) safety standards are also reviewed.

**INDMANUF 10623200                      Interpreting Engineering Drawings                      2 Credits/Units**

Focuses on the basic principles of engineering drawings and manufacturing processes. Through interpretation and sketching, students learn to visualize the part, section or assembly views. Students study isometric and orthographic views on a drawing. The student will also use drawings pertinent to the trades with examples in GD&T, welding, facilities, piping, sheet metal, equipment manuals, electrical symbols, and



fluid power symbols.

<b>INDMANUF 10623300</b>	<b>Fluid Power 1 for Industry</b>	<b>1 Credits/Units</b>
Provides students with the fundamentals of fluid power (hydraulic and pneumatic) and a considerable literacy in the principles of pneumatics and hydraulics. Students will attain an understanding of basic pneumatics principles and practical circuits applying the recently learned principles. The course is intended to gain a general understanding of components and terminology as well as principles and functions. This course has a heavy emphasis on recognizing fluid power components, component symbols, units, equations, and terminology.		
<b>INDMANUF 10623301</b>	<b>Fluid Power 2 for Industry</b>	<b>2 Credits/Units</b>
Intended to develop an understanding of basic Fluid Power Circuits. Covers the application of basic fluid power systems to various machines along with maintenance and troubleshooting. The maintaining and design considerations of both hydraulic and pneumatic systems will be explored in this course with an emphasis on component selection and circuit efficiencies.		
<b>INDMANUF 10623310</b>	<b>Mechanisms for Industry 1</b>	<b>1 Credits/Units</b>
This course is an introduction to the mechanical systems, with lab exercises in safety procedures, Lock-out Tag-out (LOTO), key and setscrew fasteners, speed and torque measurements, efficiencies, shafts and pillow block, shaft alignment, flexible and rigid motor soft foot detection and correction. The course will survey precision measurement, lubrication, bearing types and applications, vibration analysis, and fasteners.		
<b>INDMANUF 10623408</b>	<b>Computer-Assisted Design-2D</b>	<b>2 Credits/Units</b>
Learn to visualize, sketch and create 2D drawings in a wide variety of disciplines using AutoCad. The course will introduce the creation and revision drawings pertinent to the trades with examples in Welding, Facilities, Piping and Instrumentation (P & ID's), Sheet Metal, Equipment Manuals (technical documents, installation/repair manuals), Electrical, and Fluid Power Facilities and Mechanical Drawings.		
<b>INDMANUF 10623409</b>	<b>Computer-Assisted Design-3D</b>	<b>2 Credits/Units</b>
Introductory study of working with simple 3D sketches and partly, creation. Strong emphasis on working with existing assemblies, and understanding component relationships. Students will work with OEM component 3D models and manipulating them into assemblies. Students will gain an understanding of drawing sets, and bill of materials.		
<b>INDMANUF 20623260</b>	<b>Introduction to Engineering</b>	<b>3 Credits/Units</b>
This course provides students with an overview of engineering based on a "hands-on" experience with a client-centered engineering design project, which includes: 1) a team-based design project, 2) a survey of engineering disciplines, 3) an introduction to computer tools and lab techniques, and 4) management of a project budget. Instruction will include an introduction to technical fabrication skills required to produce a prototype design product. This course is intended for students intending to transfer to four-year engineering degree programs.		
Prerequisite: Students must have previously completed a minimum of 12 credits of college transfer course work, including 20-804-231 Calculus and Analytic Geometry, with a cumulative GPA of 2.5 or more.		
<b>INDSGN 10304100</b>	<b>Survey of the Interior Design Profession</b>	<b>1 Credits/Units</b>
This course is required for all students accepted into the Interior Design Program and is taken during the summer prior to their Fall enrollment. Focuses on the interior design profession, the personal qualities and aptitudes of the interior designer, and the broad range of career opportunities and tasks performed. The course also offers students an introduction to the requirements and demands of the program and a career in the interior design industry.		
<b>INDSGN 10304102</b>	<b>Fundamentals of Design</b>	<b>3 Credits/Units</b>
The focus of this course is on the principles and elements of design that form the conceptual basis from which to solve and evaluate design problems.		
<b>INDSGN 10304104</b>	<b>Basic Architectural Drawing</b>	<b>3 Credits/Units</b>
This course will introduce students to basic manual and computer-aided drawing for interior design. Students will learn how to properly use equipment and produce two-dimensional drawings.		
<b>INDSGN 10304105</b>	<b>Building and Furniture Construction</b>	<b>3 Credits/Units</b>
This course will provide the student with a foundation of knowledge to interpret blueprints and identify building construction methods, materials, and systems. Students will also examine building codes and basic furniture construction, as well as performance features.		
<b>INDSGN 10304107</b>	<b>Interior Design Textiles</b>	<b>3 Credits/Units</b>
Students study fibers, yarns, fabric construction and terminology, finishes, and performance criteria. Emphasizes specification of textiles for interior design applications.		
<b>INDSGN 10304120</b>	<b>Advanced Architectural Drawing</b>	<b>2 Credits/Units</b>
This course will build on the Basic Architectural Drawing coursework and further develop student skills in computer-aided drawing techniques for interior design. Computer-aided three-dimensional modeling will also be introduced and explored as a method to communicate design.		
<b>INDSGN 10304125</b>	<b>Residential Design 1</b>	<b>3 Credits/Units</b>
This course builds knowledge of human factors, codes, and professional standards as they relate to residential furniture arrangements and interior spaces. Students apply their knowledge of the elements and principles of design, architectural drawing standards, and building construction methods to design and document functional and aesthetically pleasing residential interiors.		
<b>INDSGN 10304127</b>	<b>Materials and Finishes</b>	<b>2 Credits/Units</b>
This course will focus on interior finish products and their applications. Students will learn to specify and calculate quantities of materials using industry standards.		
<b>INDSGN 10304129</b>	<b>History of Interior Design 3</b>	<b>Credits/Units</b>
This course will focus on periods of art, artists, architecture and furniture from Egyptian times to the 21st century.		
<b>INDSGN 10304132</b>	<b>Kitchen &amp; Bath Design</b>	<b>5 Credits/Units</b>



Focuses on designing kitchens and baths, including the specification of cabinets, countertops, appliances, fixtures, materials and finishes. In addition, students develop the CAD skills necessary to produce typical project drawings and documentation for a kitchen design problem using a kitchen cabinet software package.

**INDSGN 10304133                      Commercial Design                      5 Credits/Units**

Focuses on the design, specification and documentation of commercial office spaces using conventional furniture and open office systems. Students apply their knowledge of materials, finishes, furniture, lighting and building construction through all phases of the design process. In addition, students further develop CAD skills necessary to produce project documentation and presentations for a comprehensive commercial design problem.

**INDSGN 10304135                      Lighting                      2 Credits/Units**

This course focuses on light sources, luminaire options, the quality and quantity factors of lighting specification, and the lighting plan and schedule. Students design and specify a residential lighting plans.

**INDSGN 10304142                      Sales & Professional Practice                      3 Credits/Units**

Covers essential interior design business practices and procedures, including business formations, fees, contracts, project management, business forms and record keeping. Professional work conduct and interior design sales techniques are also covered.

**INDSGN 10304143                      Residential Design 2                      3 Credits/Units**

Students demonstrate their accumulated skills through the resolution of a comprehensive residential design project.

**INDSGN 10304145                      Interior Design Internship                      2 Credits/Units**

Provides an opportunity to gain practical work experience through supervised internships at an approved job site to gain practical knowledge of the interior design skills learned in the classroom.

**INDSGN 10304146                      Trends and Issues in Interior Design                      2 Credits/Units**

This course provides the opportunity for students to learn and investigate current topics and trends in the interior design field. Topics include Universal Design and Aging-in-Place principles and Sustainability/Green Design practices.

**INDSGN 10304147                      Portfolio Development                      2 Credits/Units**

This course will provide students with direction and guidance to develop and prepare a professional portfolio for both the Annual Portfolio Show and employment. Students will investigate a variety of manual and digital methods allowing for effective representation of their skills and strengths.

**INDSGN 10304161                      Visual Communication for Interior Design                      3 Credits/Units**

Students develop skills in manually sketching and rendering three-dimensional drawings of interior spaces to communicate design concepts. Additionally, students create professional-quality presentation boards and visual displays using both physical and digital methods.

**INSMGT 10162125                      Intro to Business Insurance Contracts (AAI 82)                      3 Credits/Units**

This course provides an understanding of the property and casualty insurance protection any business or individual should have. Whether you plan on owning your own business or managing a business or department, this course provides valuable information. A comprehensive study of policy language as well as the Wisconsin state insurance laws are covered. This course also meets the state requirement for Property & Casualty PreLicensing.

**INSMGT 10162126                      Introduction to Loss Investigator (AIC 33)                      3 Credits/Units**

The claim function, factors influencing claims, the steps involved in analyzing, negotiating, and litigating first and third party claims, and the basics of property and liability losses will be covered in this class.

**INSMGT 10162131                      Introduction to Employee Benefits                      1 Credits/Units**

This course provides an overview of individual and group health coverage, disability insurance, individual and group life insurance, paying life insurance proceeds, ownership rights, beneficiaries, and the Wisconsin and federal laws that must be followed with these coverages. In addition, basic insurance terms and concepts as well as provider relationships are covered. This meets the state requirements for Life & Health pre-licensing and is a required course for the Risk Management & Insurance Diploma.

**INSMGT 10162133                      Managing Business Risks                      3 Credits/Units**

This course will serve as a core. Risk Management is a foundational concept in insurance today. The legal foundations of loss exposures, the risk management process, and risk management programs will be discussed for all areas.

**INSMGT 10162135                      Detecting Employee Fraud                      3 Credits/Units**

The course will cover all of the major methods employees use to commit occupational fraud. Students learn how and why occupational fraud is committed as well as how the conduct can be detected, deterred, investigated and resolved.

**INSMGT 10162136                      Current Issues in Risk Management and Insurance                      1 Credits/Units**

This course focuses on trends and issues facing the Risk Management and Insurance Industries. Presentations on current topics, and tours of facilities, are provided by Risk Management firms and Insurance organizations. Locations vary each semester but travel is required with this course. Check with the instructor for current travel plans and costs prior to enrolling.

**INSMGT 10162140                      Risk Management and Insurance Internship                      2 Credits/Units**

Provides an opportunity for students to apply insurance and/or risk management skills in a real life business environment. These paid internships OR unpaid mentorships may be in insurance agencies, insurance companies or other risk management settings. Duties may vary depending on the opportunity. Written assignments affiliated with the internship will also be required. Reserved for students enrolled in Risk Management and Insurance studies either in the Certificate program or as a focus in their current major.

Students must have completed at least one degree credit insurance course.

**IT 10107111                      Exploration of Information Technology                      1 Credits/Units**







Troubleshooting will be emphasized.

**ITNET 10150151                      Advanced Networking Topics                      3 Credits/Units**  
This class introduces more advanced networking topics from the CCNP exams, such as: Implementing VLAN based solutions with secure layer 2 and layer 3 services, implementing High Availability in a LAN and WAN, implementing QoS on converged networks, specific IP QoS mechanisms for implementing the DiffServ QoS model, wireless security and basic wireless management. Quality of Service (QoS) will be used to design and implement a structure to prioritize voice and data applications across the network. Wireless will include mobility between lightweight access points. Troubleshooting and teamwork will be emphasized.

**ITNET 10150155                      CCNP Route                      3 Credits/Units**  
This class will focus on preparing the student to take the Cisco CCNP Route certification exam. Topics will cover the current version of the certification exam such as: Network Principles, Layer 2 and 3 Technologies, VPN Technologies, and Infrastructure Security and Services. This class is set up as a remote access instructor-led class.

**ITNET 10150190                      Wireless Topics                      3 Credits/Units**  
This is an introductory course on Wireless Networking. The course encompasses the design, planning, implementation, operation and troubleshooting of Wireless Networking. The course will provide a comprehensive overview of technologies, security, and design best practices. The course will include hands-on installation and configuration of Wireless Client Adapters, Routers, Access Points, Repeaters, Bridges and other wireless devices. The class will introduce multiple-vendor equipment.

**ITNET 10150194                      Firewall/VPN Technologies                      3 Credits/Units**  
This course introduces the security student to the common technologies used for defending the perimeter of a modern business network. In depth hands-on exercises are used to instruct the student in the related technologies including NAT, PAT, ACL construction, application gateways, and stateful packet inspection. The student additionally learns a common implementation of both site-to-site and remote access VPN's. The student must demonstrate the ability to implement a basic firewall that simulates the perimeter of a basic business network.

**ITNET 10150195                      Networking Internship                      3 Credits/Units**  
An on-the-job experience, with instructor supervision, in Madison area networking companies and in companies that maintain and manage computer networks. The emphasis is on hands-on design, installation, configuration, management, documentation, troubleshooting and maintenance of LANs.

**ITPROG 10152103                      C# Web Development Using ASP.NET                      3 Credits/Units**  
Students learn to develop Microsoft ASP.NET Core applications that deliver dynamic content to the web. An emphasis is placed on server-side programming and the role that ASP.NET Core plays. As part of the class, students create ASP.NET Core MVC applications, display dynamic data from a database using MySQL connection and data objects and Entity Framework Core ORM.

Students will also be introduced to ASP.NET Core WebAPI.

**ITPROG 10152109                      Python Programming                      3 Credits/Units**  
This is an introductory scripting course in the Python programming language. Topics include: basic programming techniques, I/O, data processing, file manipulation, program control logic, functions, modules, and exception handling. NOTE: Working knowledge of Microsoft Windows (computer Literacy, proficiency with a mouse, file management).

**ITPROG 10152111                      Java Programming                      3 Credits/Units**  
Introduces programming and object-oriented design concepts using the Java programming language. Students learn all the Java programming basics and use a simple text editor as a development environment. Design concepts and programming tools will be integrated with an emphasis on practical business solutions.

**ITPROG 10152112                      Advanced Java Programming                      3 Credits/Units**  
Focuses on the server side of application programming for the web. Topics include: Java servlets, database access with JDBC, JavaServer Pages, JavaBeans and source code management. A portion of the class deals with application design issues in a web environment.

**ITPROG 10152113                      Enterprise Java Programming                      3 Credits/Units**  
The third class of the Java sequence explores advanced Java topics within the J2EE application framework. Topics include JDBC, EJBs, Servlets, JSPs, XML, JMS, JNDI, DAOs, object-relational mapping frameworks, web services, unit testing, logging, custom tag libraries, application build and deployment, version control, web applications and enterprise applications.

**ITPROG 10152119                      Introduction to Programming with JavaScript                      3 Credits/Units**  
Teaches the basic concepts of programming using the JavaScript language. Topics include: embedding JavaScript in HTML, eventdriven programming techniques, program control logic, and an introduction to object-oriented programming.

**ITPROG 10152120                      Website Development-HTML5                      3 Credits/Units**  
Teaches the fundamentals and techniques of developing business websites using XHTML-compliant HTML5. Topics include webpage design, tables, image manipulation, image maps, forms, cascading style sheets (CSS) and an introduction to JavaScript in conjunction with forms. All work is done directly with HTML5. NOTE: Working knowledge of Microsoft Windows (computer literacy, proficiency with a mouse, file management).

**ITPROG 10152121                      Advanced Website Development                      3 Credits/Units**  
Provides the student with experience in the design and implementation of business Internet websites using advanced command syntax. Topics include: testing and improving website performance, responsive web design, advanced cascading style sheets (CSS), Bootstrap/W3.CSS, XML, document type definitions, and XML schemas.

**ITPROG 10152124                      Introduction to Databases                      3 Credits/Units**  
Introduces the student to relational database concepts using the MS Access and MySQL database environments. Students then study concepts that lead to good relational database design including an introduction to normalization. Basic SQL statements are practiced also. NOTE: Students are required to have a working knowledge of Microsoft Windows operating system (computer literacy, proficiency with a



mouse, file management).

**ITPROG 10152125                      SQL Database Programming                      3 Credits/Units**  
Presents relational database concepts and teaches beginning to intermediate Structured Query Language (SQL) using an Oracle database. Students learn to create and maintain database objects and to store, retrieve, and manipulate data. Demonstrations and hands-on practice reinforce the fundamental concepts.

**ITPROG 10152130                      Systems Design                      3 Credits/Units**  
Practical, introductory-level systems design experience. Covered are the components that make up the system, such as servers, databases and user interface; as well as coding design with a focus on object-oriented design. Surrounding software development practices, such as introductory debugging are also included. The course often forays into the latest technologies in the everchanging technological landscape by describing their motivation and their use.

**ITPROG 10152131                      Systems Analysis                      3 Credits/Units**  
In this course, the student learns to analyze the business organization as a system, to structure both the information and processes of a business or organization, and to complete the systems development process through the logical design phase. The course utilizes an object-oriented methodology for the systems development process.

**ITPROG 10152132                      Web Software Developer Internship                      3 Credits/Units**  
Opportunities for students to gain experience in Web software development through an internship in an actual information systems department. Students will seek internship opportunities and interview to be selected for internships. The student spends approximately 216 hours over the course of the semester at the internship site. If no internship is available, a special project may be substituted for the internship by consent of the instructor. Activities can include requirements gathering, software development, and testing of new and existing web software. In addition, students will share internship experiences with other students at the end of the term.

**ITPROG 10152139                      iOS Development                      3 Credits/Units**  
The purpose of this course is to introduce students to the development of iOS applications (e.g., iPhone/iPad/iPod/Apple Watch devices). Students will work with modern development concepts using the Swift programming language. Students will be introduced to Object-Oriented, Functional Programming, event-driven programming, and multi-threaded programming. Students will start developing iOS applications using the Xcode IDE and the iOS Simulator.

**ITPROG 10152157                      Ruby on Rails Development                      3 Credits/Units**  
Introduces the student to dynamic web page development using the Ruby on Rails web development framework. The course will also use the popular MySQL open source database management system. Topics will include an introduction to the Ruby programming language, installing Ruby and Ruby on Rails, an overview of the Rails Framework, ActiveRecord basics, ActionController coding, Action Views, AJAX and the Web 2.0, ActionMailer basics, security, deployment, and scaling. Students will produce a very modern web application that can be adapted to many professional web development needs.

**ITPROG 10152158                      Modern JavaScript                      3 Credits/Units**  
Learn timely and innovative approaches to front end web development with JavaScript (JS). This course will introduce students to many facets of front end web development including: Popular JS frameworks such as Angular, React, and Vue. Transpiling JS with TypeScript. Behavior and test driven development (BDD/TDD). Along with front end modeling techniques for fun, productive, portable, and verifiable JS code.

**ITPROG 10152166                      PHP Web Development with MySQL                      3 Credits/Units**  
This course introduces the student to dynamic web page development using the PHP programming language. Students will learn how PHP works, how to effectively use many of its powerful features, and how to design and build their own PHP web applications. The popular MySQL open source database management software (DBMS) will also be introduced as a powerful backend for PHP websites.

**ITPROG 10152167                      Advanced PHP and MySQL Web Development                      3 Credits/Units**  
This course prepares the student to implement professional PHP and MySQL web applications. Students will learn advanced techniques for session management, validation, and authentication. Advanced web application features such as shopping carts, content management using Drupal, web forums and connecting to web services are discussed. Installation and customization of open source PHP web applications are also covered.

**ITPROG 10152168                      AJAX and JavaScript Web Development                      3 Credits/Units**  
AJAX turns static web pages into interactive applications, allowing you to deploy rich-client applications. Course covers the basics of DHTML, JavaScript, and the XmlHttpRequest call. Students learn how to add JavaScript and AJAX to existing programs, and design new applications to exploit the power of Web 2.0. Students learn the three layers of AJAX framework, and when (and how) to use each. Students learn how to create rich clients, use visual effects, add client-side validation, and handle forms.

**ITPROG 10152174                      IT Mobile Development Internship                      3 Credits/Units**  
Opportunities for students to learn and practice Mobile applications development in a hands on experience in a local IT employer. Objectives commensurate with student's background and experience. Students will seek internship opportunities and interview to be selected for internships. Activities include determining requirements for an application in either Android or iOS, then developing and testing this application. In addition, students will share their internship experiences with other interns. If an internship experience is not available, students may (with instructor approval) complete a mobile development project under supervision of the instructor.

**ITPROG 10152189                      Android Applications Development                      3 Credits/Units**  
This course introduces developing applications for Android devices. Topics include Android UI layout and widgets, both in XML and programmatically; Android SDK versions and compatibility; model-view-controller (MVC); introduction to fragments; action bar, menus, lists and dialogs; device dependency issues. Heavy emphasis will be placed on overall design and efficiency. It is not necessary to own an Android device, though the applications developed in the course can be deployed to one. Basic Java programming knowledge is assumed. Development and debugging in Android Studio IDE is covered.

**ITSECUR 10151102                      IT Security Awareness                      1 Credits/Units**  
Provides a basic survey of the importance of IT security awareness and data confidentiality. This course walks users through basic aspects



of information security in a very broad, easy to understand way and explains the value of securing data. The course will also present best practices in access control and password policies.

NOTE: Working knowledge of Microsoft Windows (computer literacy, proficiency with a mouse, file management) required.

**ITSECUR 10151114                      Linux Server 2 (Security)                      3 Credits/Units**

This class provides students with the tools they need to perform common administrative functions in some of the most popular scripting environments. The class will examine PHP in the context of an Apache webserver, and then it will examine using GNU BASH and Microsoft PowerShell scripting from the command line to complete every day administrative functions. Tools include: Bash, PHP, Apache, and PowerShell.

**ITSECUR 10151133                      Computer Forensics                      3 Credits/Units**

This course provides a broad overview of computer forensics and investigation tools and techniques. All major personal computer operating system architectures and disk structures will be discussed, as well as what computer forensic hardware and software tools are available. The details of data acquisition, computer forensic analysis, email investigations, image file recovery, investigative report writing, and expert witness requirements. The course provides a range of laboratory and hands-on assignments that teach about theory as well as the practical application of computer forensic investigation. Open Source tools include: The Sleuth Kit, dd, Scalpel, etc...

**ITSECUR 10151137                      Intrusion Detection                      3 Credits/Units**

This course provides a broad overview of the tools and techniques commonly used for detecting network sourced attacks. In depth hands-on exercises are used to instruct the student in the proper selection and application of a given tool for the intended task. Also included are basic strategies for documenting and reporting on detected events. The student must demonstrate the ability to plan, design, and build a network IDS that fulfills the security needs of a common business or organization. Open Source tools include: tcpdump, snort, barnyard, etc...

**ITSECUR 10151142                      Web Application Security                      3 Credits/Units**

This course provides a broad overview of the tools and techniques commonly used for web application security testing. In depth hands-on exercises are used to instruct the student in the proper selection and application of a given tool for the intended task. Also included are basic strategies for documenting and reporting on the outcome of the test. The student must demonstrate the ability to plan, and execute a basic web security audit in an environment that simulates a common business or organization. Open Source tools include: The BURP suite, Python, etc...

**ITSECUR 10151164                      Penetration Testing                      3 Credits/Units**

This course provides a broad overview of the tools and techniques commonly used for penetration testing. In depth hands-on exercises are used to instruct the student in the proper selection and application of a given tool for the intended task. Also included are basic strategies for documenting and reporting on the outcome of the test. The student must demonstrate the ability to plan, and execute a basic network security audit in an environment that simulates a common business or organization. Open Source tools include: NMap, Metasploit, Medusa, etc...

**ITSECUR 10151168                      Security Design                      3 Credits/Units**

This course affords the network security specialist the opportunity to design a secure network in a team environment using the skills learned from the prerequisite classes. The student must demonstrate the ability to design, plan and execute an infrastructure that represents the services offered by a common business or organization. The student will research their part of the design and must prepare written document including notes, diagrams, references, and implementation instructions of their part of the total design.

**ITSECUR 10151197                      Network Security Internship                      3 Credits/Units**

An on-the-job experience in Madison area companies that maintain, manage and secure computer networks. The emphasis is on hands-on design, installation, configuration, management, documentation, troubleshooting, maintenance and securing of LANs. By consent of instructor, a special project may be substituted for the internship.

**ITTECSUP 10154104                      A+ Hardware Essentials                      3 Credits/Units**

This course presents a comprehensive overview of computer system fundamentals. Through hands-on activities and labs, students gain skills in assembling, configuring and maintaining PCs and operating system software. Participants learn to apply troubleshooting skills to properly diagnose and resolve common hardware and software problems. This course can help prepare students for CompTIA's A+ 220-901 exam. CompTIA's A+ Certification is a widely accepted IT industry standard certification for an entry-level IT PC support professional. NOTE prerequisite: Working knowledge of Microsoft Windows (computer literacy, proficiency with a mouse, file management).

**ITTECSUP 10154105                      A+ Software Essentials                      3 Credits/Units**

This course presents intermediate level exposure to computer operating systems and the hardware on which it runs. Students work through hands-on activities and labs to learn and apply troubleshooting skills to properly diagnose, document, and resolve common operating system problems. Students also gain an understanding of appropriate customer support techniques and operational procedures. This course can help prepare the student for CompTIA's A+ 220-902 exam. CompTIA's A+ Certification is a widely accepted IT industry standard certification for an entry-level IT PC support professional.

**ITTECSUP 10154118                      Infrastructure Automation                      3 Credits/Units**

This class provides students with the tools they need to manage and automate IT Infrastructures. Students will learn the basics of scripting and tool creation using Windows PowerShell. Along with developing scripts and tools in PowerShell, students will learn about other tools and trends for managing on-premises and cloud infrastructures.

**ITTECSUP 10154122                      IT Service Concepts                      3 Credits/Units**

This course is an introduction to the broad range of customer service topics an entry-level user support specialist is expected to know. The course explores the kinds of knowledge, skills and abilities needed for a successful career in the support industry. Topics include successful communication with technology users, end-user training, budgeting and other management priorities, the evolution of IT support, and best practices of the ITIL framework.

**ITTECSUP 10154146                      Help Desk Tools and Techniques                      3 Credits/Units**

This course presents the core service desk processes and the technical roles and responsibilities of an IT support professional. The course examines the support software options for logging, tracking, and managing data, escalating calls, and resolving problems through hands-on,





real-world projects using current, ITIL and ITSM based Help Desk software.

**ITTECSUP 10154147 Supporting Emerging Technologies 3 Credits/Units**  
Students explore new and emerging technologies, and learn how to provide technical support to early adopters of those technologies. Participants diagnose and solve information technology problems by examining the core functions of emerging technologies and by using advanced troubleshooting techniques. Topics include new operating systems and devices, mobile computing support, new technology support techniques and support in a virtualized environment.

**ITTECSUP 10154148 Help Desk Specialist Internship 3 Credits/Units**  
Learn the "value-added" importance of an IT support professional by performing at least 216 hours at area IT Support or Help Desk operations. Under instructor supervision, receive on-the-job Help Desk work experience in area companies. By consent of instructor, a special project or participation in the WolfPack Techies support team may be substituted for the internship.

**ITTECSUP 10154171 Windows Server 1 3 Credits/Units**  
Gain the skills necessary for supporting and configuring a Windows server including the installation and configuration of Windows Active Directory environment. Configure and deploy network services such as DHCP and DNS. Learn the practical skills required to create and implement Group Policy and configure security policies while preparing for Microsoft MCSA Exam 70-410.

**ITTECSUP 10154172 Windows Server 2 3 Credits/Units**  
Gain the skills to support and maintain Windows Active Directory environment. Gain practical experience managing a Windows Active Directory infrastructure with DNS and VPNs. Configure Network Policy Services, Active Directory account policies and advanced Group Policy processes while preparing for Microsoft MCSA exam 70-411.

**ITTECSUP 10154184 Enterprise Client 3 Credits/Units**  
Learn how to install, configure and administer a desktop operating system for an enterprise office environment. Topics include Windows installation, device configuration, establishing network connectivity, configuring appropriate NTFS and share permissions, and learning the operation of VMWare Workstation. NOTE prereq: Students are required to have a working knowledge of Microsoft Windows operating system (computer literacy, proficiency with a mouse, file management).

**ITTECSUP 10154190 Linux Server 1 3 Credits/Units**  
Introduces Linux with a focus on system administration skills. Topics include installation, file and directory management, command execution, input/output redirection and pipes, shell scripts, network services, security, troubleshooting and the X Window system.

**ITTECSUP 10154198 Systems Administration Internship 3 Credits/Units**  
Provides work experience in an area data center environment offering a variety of experiences managing and operating computer systems. The student spends approximately 15 hours per week at the internship site. By consent of instructor, a special project may be substituted for the internship.

**JOURNAL 20801245 Introduction to Journalism 3 Credits/Units**  
This introductory course in journalism provides students with a better understanding of the unique role and responsibility of the journalist working in a democratic society. The course covers the problems and techniques of the news reporter and provides practical experience in news gathering, editing, interviewing and copyrighting through lab work and submission to the student newspaper. Students focus on "Level 1" journalism: spot news reporting, such as crime, politics, and community gatherings such as sports and music events.

**JOURNAL 20801246 Investigative Journalism 3 Credits/Units**  
In this course, students will move beyond basic news writing and reporting skills. Students will focus on the role of investigative reporting in society and the public's right to know. Workshop-style training will be led by the instructor. The learner will develop investigative techniques to examine issues of ethics, fairness and accuracy. Students will identify patterns of systemic problems, not just one isolated incidents affecting individuals, as well as explain complex social problems and reveal any evidence of wrongdoing or abuse of power. These discoveries will be developed into an in-depth feature story that illustrates the importance of organization in the feature writing process for publication.

**JOURNAL 20801251 Introduction to Mass Communication 4 Credits/Units**  
Focuses on the history, evolution, and societal role of our media. This course is divided into three modules. Module 1 ("Storytelling and the Written Word") focuses on the evolution of books, newspapers, and magazines. In addition, students will learn how the written communication is changing because of social media and media convergence. Module 2 ("Sound and Visual Stories") examines the music industry, radio, television, and film. In addition, the video gaming industry is explored. Module 3 ("The Business, Ethics, and Laws of Media") focuses on advertising, public relations, and media conglomeration. In addition, laws and ethical situations affecting our media will be discussed.

**JOURNAL 20801252 World Issues Journalism 3 Credits/Units**  
This course focuses on radio news reporting skills that are applied to world issues: water, energy, food, war, and free speech. Students will investigate these issues to produce audio podcast news stories. Students will learn how to write radio news scripts before orally presenting them using audio podcast software.

**JOURNAL 20801253 Documentary Storytelling 3 Credits/Units**  
Documentary Storytelling is an introduction to the craft of telling non-fiction and news stories through the medium of digital video. This course will teach news reporting and writing skills needed for the documentary format, along with journalism theory, law, and ethics of video journalism. Students will also learn basic digital camcorder operation, storyboard development, video editing, sound editing, and podcasting.

**JOURNAL 20801254 Media Ethics and Democracy 3 Credits/Units**  
Analyze ethical principles and professional norms influencing reporting practices. Critique journalistic breakdowns, identify emerging areas of professional challenges, and apply best practices during the reporting, publication, and audience engagement process. Learn how to differentiate between legitimate and fake news and the process to cultivate media literacy.

**JOURNAL 20801262 Social Media Writing 3 Credits/Units**  
This course examines the rhetorical and publishing strategies used for innovative new media formats, in particular social media platforms. Students will look at the differences between linear and interactive writing, interactive publishing, and the role of the interactive writer. An



emphasis is placed on the skills needed for quality storytelling via social media communication. Students will also learn how social media platforms can be used as researching tools (i.e. crowd sourcing), and they will implement social media research campaigns. Throughout the course, the students' writing and research work will be showcased as text, video, and audio stories published on their own Web/blog sites.

**JOURNAL 20801269                      On-Air Performance                      3 Credits/Units**

This course is an introduction to the skills and theory of on-air radio and television/video announcing. Students will learn the on-air broadcast skills of presenting news information to mass audiences in both audio and television/video formats. Students will also examine newscast theory and the history of radio and television news.

**JOURNAL 20801271                      Journalism Practicum 1                      1 Credits/Units**

Journalism Practicum 1 provides real-world journalism skills and experiences for students. Students will spend the semester working on the staff of The Clarion, which is the student media organization, consisting of its newspaper, Web platform, television news program, and outreach services (i.e. classroom presentations; volunteer events; co-sponsorship of lecture series). In Journalism Practicum 1 students will perform service hours contributing news and feature stories and photographs to The Clarion. Students of Journalism Practicum 1 will attend editorial meetings, contribute story ideas and report, write and edit news and feature stories.

Students who take Journalism Practicum 1 as a one-credit course must spend at least 36 hours working as a news reporter for The Clarion. Students who take Journalism Practicum 1 as a two-credit course must spend 72 hours working as a Clarion journalist.

**JOURNAL 20801272                      Journalism Practicum 2                      1 Credits/Units**

Journalism Practicum 2 is a follow-up to Journalism Practicum 1. It provides real-world journalism skills and experiences for students. Students will spend the semester working on the staff of The Clarion. In Journalism Practicum 2 students will perform service hours engaged in issue-based journalism for The Clarion media organization. These students will develop enterprise and investigative news and feature stories for The Clarion; they will also copy, edit and fact check these longer, issue-based news stories. Students of Journalism Practicum 2 will attend editorial meetings, contribute story ideas and then develop these story ideas according to the deadlines.

Students who take Journalism Practicum 2 as a one-credit course must spend at least 36 hours working as a news reporter for The Clarion. Students who take Journalism Practicum 2 as a two-credit course must spend 72 hours working as a Clarion journalist.

**JOURNAL 20801273                      Journalism Practicum 3                      1 Credits/Units**

Journalism Practicum 3 is a follow-up to Journalism Practicum 2. Students will spend the semester working on the staff of The Clarion. In Journalism Practicum 3 students perform service hours engaged in news reporting, copyediting and new media activities for The Clarion media organization. In addition to continuing the news reporting and writing that they did for Journalism Practicums 1 and 2, students will develop visual and digital video stories, as well as work with basic elements of newspaper design. Students of Journalism Practicum 3 will attend editorial meetings, contribute news and new media story ideas and then develop these story ideas according to deadlines.

Students who take Journalism Practicum 3 as a one-credit course must spend at least 36 hours working as a news reporter for The Clarion. Students who take Journalism Practicum 3 as a two-credit course must spend 72 hours working as a Clarion journalist.

**JOURNAL 20801274                      Journalism Practicum 4                      1 Credits/Units**

Journalism Practicum 4 is a follow-up to Journalism Practicum 3. Students will spend the semester working on the staff of The Clarion. In Journalism Practicum 4, students will perform service hours engaged in high-level editing, managing and directing activities for The Clarion media organization. In addition to continuing the news reporting, news writing, video journalism, and photojournalism that they did for Journalism Practicums 1, 2, and 3, students will assume high-level management roles, as well as work with advanced elements of newspaper design and broadcast direction. Students of Journalism Practicum 4 will lead editorial meetings, direct supporting staff, and manage the development of all Clarion operations.

Students who take Journalism Practicum 4 as a one-credit course must spend at least 36 hours working as a news reporter for The Clarion. Students who take Journalism Practicum 4 as a two-credit course must spend 72 hours working as a Clarion journalist.

**LABASST 10513109                      Blood Bank                      4 Credits/Units**

Emphasis is focused on basic blood banking concepts and procedures including forward and reverse blood typing, screening for antibodies, antigen typing, selection of appropriate blood products and compatibility testing. Further work explores protocols to identify antibodies and workup adverse reactions to transfusions and hemolytic disease states.

**LABASST 10513110                      Basic Lab Skills                      1 Credits/Units**

This course explores health career options and fundamental principles and procedures of the clinical laboratory. It incorporates medical terminology, basic laboratory equipment, safety and infection control procedures, and simple laboratory tests.

**LABASST 10513111                      Phlebotomy                      2 Credits/Units**

This course provides opportunities for learners to perform routine venipuncture, routine capillary puncture and special collection procedures. Pre-requisite: Completion of or concurrent enrollment in 10-513-110.

**LABASST 10513113                      QA Lab Math                      1 Credits/Units**

This course focuses on performing the mathematical calculations routinely used in laboratory settings. Students explore the concepts of quality control and quality assurance in the laboratory.

**LABASST 10513114                      Urinalysis                      2 Credits/Units**

This course prepares you to perform a complete urinalysis which includes physical, chemical and microscopic analysis. You will explore renal physiology and correlate urinalysis results with clinical conditions.

**LABASST 10513115                      Basic Immunology Concepts                      2 Credits/Units**

This course provides an overview of the immune system including laboratory testing methods for diagnosis of immune system disorders, viral and bacterial infections.

Pre-requisites: 10-513-110, 10-513-111, 10-513-114. Co-requisites: 10-513-120, 10-513-121, 10-513-122, 10-513-123, and 20-806-273.



**LABASST 10513116**                      **Clinical Chemistry**                      **4 Credits/Units**  
Introduces techniques and procedures for routine analysis using photometric and potentiometric techniques, immunoassays, separation techniques, and the use of automated laboratory instrumentation. Covers pathophysiology and methodologies for analyzing carbohydrates, electrolytes, proteins and blood gases. Includes studies of cardiac markers, tumor markers, endocrine function, lipids, trace metals and enzymes.

Prerequisites: ?10513115,10513120,10513121,10513109, and 20806273.

**LABASST 10513120**                      **Basic Hematology**                      **3 Credits/Units**  
This course covers the theory and principles of blood cell production and function, and introduces the student to basic practices and procedures in the hematology laboratory.

Pre-requisites: 10-513-110, 10-513-111, 10-513-113, and 10-513-114. Co-requisites:10-513-115, 10-513-121, 10-513-122, 10-513-123, and 20-806-273.

**LABASST 10513121**                      **Coagulation**                      **1 Credits/Units**  
This course introduces theory and principles of coagulation and explores mechanisms involved in coagulation disorders. Emphasis is placed on laboratory techniques used to diagnose disease and monitor treatment.

**LABASST 10513130**                      **Advanced Hematology**                      **2 Credits/Units**  
This course explores mechanisms involved in the development of hematological disorders. Emphasis is placed upon laboratory techniques used to diagnose disorders and monitor treatment.

Pre-requisites: 10-513-115, 10-513-120, 10-513-121, 10-513-122, 10-513-123, and 20-806-273.

**LABASST 10513133**                      **Clinical Microbiology**                      **4 Credits/Units**  
This course presents the clinical importance of infectious diseases with emphasis upon the appropriate collection, handling and identification of clinically relevant bacteria. Disease states, modes of transmission and methods of prevention and control, including antibiotic susceptibility testing, will also be discussed.

Prep-requisites: 10-513-115, 10-513-120, 10-513-121, 10-513-122, 10-513-123, and 20-806-273. Co-requisites: 10-513-130, 10-513-131, and 10-153-132.

**LABASST 10513140**                      **Advanced Microbiology**                      **2 Credits/Units**  
This course provides an overview of acid fast organisms, fungi, parasites, and anaerobic bacteria. The organisms, their pathophysiology, epidemiology, the diseases and conditions that they cause, laboratory methods of handling, culturing and identification will be discussed.

**LABASST 10513141**                      **Pre-Clinical Experience**                      **2 Credits/Units**  
This course provides opportunities to practice the principles and procedures of laboratory medicine in a clinical laboratory setting. Students learn to operate state of the art instruments and report results on Laboratory Information Systems. Clinical content is reviewed and students run a mock-clinical laboratory from specimen acquisition to result reporting. Resume writing and interviewing techniques are also discussed.

Pre-requisites: satisfactory completion of 1st and 3rd semester Clinical Laboratory Technician program courses and concurrent enrollment in Advanced Microbiology, 10-513-140 and Clinical Experience 1, 10-513-151.

**LABASST 10513151**                      **Clinical Experience 1**                      **4 Credits/Units**  
Provides opportunities to practice the principles and procedures of laboratory medicine on-site, in a clinical laboratory facility. Students will practice on state of the art instrumentation in several areas of the clinical laboratory. Students will prepare a portfolio of professional experiences, assessments and evaluations, class projects and a resume for employment.

**LABASST 10513152**                      **Clinical Experience 2**                      **4 Credits/Units**  
Provides continuing practice for the principles and the procedures of laboratory medicine as an entry level Clinical Laboratory Technician in a clinical laboratory setting. You will learn to operate state of the art instruments and report results on Laboratory Information Systems.

**LABASST 10513170**                      **Introduction to Molecular Diagnostics**                      **2 Credits/Units**  
The Molecular Diagnostics course will give students background knowledge in DNA and RNA structure and functioning including nuclear packaging, transcription, translation and modifications. We will also cover basic genetic inheritance. Specific methods we will perform or discuss will include nucleic acid isolation and detection, target amplification and sequencing of target genes. We will also address the use of molecular methods to identify microorganisms, classify neoplasms and characterize MCH loci.

**LANG INT 31538303**                      **Cultural Competency and the Medical Setting**                      **2 Credits/Units**  
An orientation to some of the factors that influence people to speak, act, negotiate and make decisions. The objective is to modify personal assumptions and habits that impede success in the workplace, at whatever level of employment, whether domestic or international. Students will learn how styles of thinking, value systems and political/social realities affect relationships. Special consideration will be given to international communication, negotiations, marketing and host international visitors. Class is taught in English.

**LANG INT 31538304**                      **Introduction to Interpreting in Spanish**                      **2 Credits/Units**  
Specific theories and practices in interpreting oral communication from English to Spanish and Spanish to English. Includes theories of interpretation, techniques of interpretation, interpretation strategies, interpretation procedures, and modes of interpretation. Class is taught in English and Spanish.

Prerequisite: 31- 538-301.

**LANG INT 31538305**                      **Introduction to Basic Translation Skills in Spanish**                      **2 Credits/Units**  
Principles and procedures for the translation of written materials. Includes an introduction to translation, translation preparation, translation procedures, basics of grammar in the target languages English and Spanish. Analysis of the Spanish language from the translator's point of



view. Includes the structure of Spanish, cultural and stylistic components, paragraph and document development, mechanics and punctuation for editing, and writing resources. Class is taught in English and Spanish.

Prerequisite: 31-538-302.

- LDRSHP 20810267 Leadership As An Art 3 Credits/Units**  
This course has as its central focus the development of leadership and group dynamics theory and assists the student in developing a personal philosophy of leadership, an awareness of moral and ethical responsibilities of leadership and an awareness of one's own ability and style of leadership. It provides the opportunity to develop essential leadership skills through study and observation of the application of these skills. The course encourages participants to develop their leadership behavior.
- LITTRANS 20802250 Literature in Translation 3 Credits/Units**  
Each section of Literature in Translation has a subtitle that represents the course content (e.g., Latin American Literature or Modern Francophone Literature). Reading selections and course activities introduce students to important literary works associated with the region or linguistic tradition named in the section's subtitle. Course materials include translated versions of texts originally written in a language other than English. No knowledge of the original language is required for enrollment in the course.
- MACHT 10420126 Manufacturing Materials 2 Credits/Units**  
Instructional units include safety, oxy-acetylene welding, brazing and cutting, shielded metal arc welding, gas metal arc welding, gas tungsten arc welding, flux cored arc welding, plasma arc cutting and conventional machining.
- MACHT 32420304 Intermediate Metrology Applications 1 Credits/Units**  
Course studies precision inspection methods while utilizing optical and electronic precision measuring instruments such as the profilometer, optical comparator, microscope, laser alignment machines, the Coordinate Measuring Machine and state-of-the-art computerized vision system.
- MACHT 32420322 Machine Tool 1 4 Credits/Units**  
Introduces the basic concepts and skills using engine lathes, power saws, Drill presses and bench applications. Emphasizes safety and proper operation of tools and machines, speeds, feeds, cutting tools, tool geometry, tool grinding and work-holding devices. Stresses dimensional accuracy, finish and quality as well as team-building and work ethics.
- MACHT 32420323 Machine Tool 2 4 Credits/Units**  
Expands on basic concepts and skills using engine lathes, power saws, drill presses, bench applications, CNC setup and operation. Emphasizes safety and proper operation of tools and machines, speeds feeds, cutting tools, tool geometry, tool grinding and workholding devices. Stresses dimensional accuracy, finish and quality with team-building and work ethics.
- MACHT 32420324 Machine Tool 3 4 Credits/Units**  
Expands the concepts and skills using engine lathes, power saws, drill presses, bench applications, and advanced CNC setup and operation. Emphasizes safety and proper operation of tools and machines, speeds feeds, cutting tools, tool geometry, tool grinding and work-holding devices. Stresses dimensional accuracy, finish and quality with team-building and work ethics.
- MACHT 32420325 Machine Tool 4 4 Credits/Units**  
Expands on basic concepts and skills using engine lathes, power saws, drill presses, bench applications, CNC setup and operation. Emphasizes safety and proper operation of tools and machines, speeds feeds, cutting tools, tool geometry, tool grinding and workholding devices. Stresses dimensional accuracy, finish and quality with team-building and work ethics.
- MACHT 32420326 Machine Tool 5 4 Credits/Units**  
Skills and knowledge necessary for advanced setups and procedures on milling machines, grinders, and lathes. Introduces both tool and cutter grinding and the selection and use of carbide tooling. Special emphasis is given to Electrical Discharge Machine and electrode development. CNC machining applications to complete course projects is enhanced. Safety, precision measurement and craftsmanship are stressed.
- MACHT 32420327 Machine Tool 6 5 Credits/Units**  
Provides the student with the skills and knowledge necessary for advanced setups and procedures on milling machines, grinders, and lathes. Students are also introduced both tool and cutter grinding and the selection and use of carbide tooling. Special emphasis is given to Electrical Discharge Machine and electrode development. CNC machining applications to complete course projects is also enhanced. Building a stamp die. Safety, precision measurement and craftsmanship are stressed.
- MACHT 32420328 Machine Tool 7 4 Credits/Units**  
Set-up and operate a CNC EDM machine, CNC machining center, and select and use superabrasives for grinding and machining. Advanced machining setups, procedures, and operations will be covered to enable students to accomplish the machining projects. Safety, precision measurement, and craftsmanship are stressed.
- MACHT 32420329 Machine Tool 8 5 Credits/Units**  
Set-up and operate a CNC EDM machine, CNC machining center, and select and use superabrasives for grinding and machining. Includes advanced machining setups, procedures, and operations to accomplish the machining of a small MUD plastic injection mold or special machining project. Safety, precision measurement, and craftsmanship are stressed.
- MACHT 32420330 Metal Processes 1 2 Credits/Units**  
This basic metalworking course is designed to provide the student with instruction in metalworking processes. Instructional units include safety, layout and measuring, machining, oxy-acetylene welding, brazing and cutting, arc welding and properties of metals.
- MACHT 32420331 Metals Processes 2 2 Credits/Units**  
This study of metals provides instruction in sheetmetal work, soldering and brazing, forging and heat treatment, grinding, tool sharpening, metal casting, MIG and TIG welding, metal fabrication and the repair of metal objects.





<b>MACHT 32420336</b>	<b>Manufacturing w/Solid Modeling 3D</b>	<b>2 Credits/Units</b>
This course builds on the concepts learned in Manufacturing w Solid Modeling--2D. Learners will utilize Solid Modeling software and CAM software to create true 3D models with surfacing concepts. Students will gain competency in file management by saving, converting, and working with different file types. Learners will create geometry in each application and convert files between CAD and CAM. Students will apply various tool paths theories to the designs they have created. Such theories include Surfacing, High Speed Machining, Hard Milling/ Turning, 2 and 4 Axis Wire, Live lathe tooling and 4 Axis milling.		
<b>MACHT 32420337</b>	<b>Manufacturing w/Solid Modeling-2D</b>	<b>2 Credits/Units</b>
This course offers instruction on individual computer workstations in a computer lab. This computer-aided drafting (CAD) instruction uses Solid Modeling software that is capable of creating 3D models and manufacturing drawings. In this course you will spend half of the time creating 3D models using 2 and 2.5D features while exploring the concepts of working in 3D space. Once the solid models are created students will import the solid models into CAM (Computer-aided manufacturing) software and utilize machining concepts to produce manufactured part using 2.5D programming methods such as pocketing, contouring & drilling for milling machines as well as turning, facing, grooving and threading for turning centers.		
<b>MACHT 32420346</b>	<b>Intro to CNC - G-code Programming</b>	<b>2 Credits/Units</b>
Hands-on and lecture course exposing student to Computer Numerical Control (CNC). Emphasizes CNC vertical milling machines and CNC turning centers. Covers history, basic CNC understanding and beginning programming including G-codes, M-codes. Students will utilize simulation software that will verify manually written code.		
<b>MACHT 32420348</b>	<b>Applied CNC-Conversational and Setup</b>	<b>2 Credits/Units</b>
This introductory Applications class familiarizes students with the basic setup procedures of CNC milling machines and CNC turning centers. They will set up rough stock and execute existing programs to produce finished parts. Once students learn these concepts they utilize the conversational programming software on the various CNC machines to program and produce parts.		
<b>MACHT 32420349</b>	<b>Basic Metrology (Part A)</b>	<b>1 Credits/Units</b>
This course description is unavailable at this time. Please contact the center offering the course for more information.		
<b>MACHT 32420351</b>	<b>Elements of Basic Metrology</b>	<b>2 Credits/Units</b>
This course introduces the principles of basic dimensional measurement, layout techniques for machines, use of direct and indirect measuring tools as well as the use of length standards relative to calibration of measuring instruments and the basic operation of the Coordinate Measuring Machine.		
<b>MACHT 32420370</b>	<b>Manufacturing w/Solid Modeling-Advanced</b>	<b>1 Credits/Units</b>
This advanced course requires students to draw complex solid models utilizing CAD software. These Models will then be imported into CAM software to use advanced programming methods to produce high quality parts. Mill Programming will include 2D, 2.5D, 3D, 4-Axis and an introduction to 5 Axis and 3+2 techniques. Lathe programming will include advanced turning and live tooling.		
<b>MACHT 32420388</b>	<b>Tool and Fixture Design</b>	<b>1 Credits/Units</b>
Introduces tool design and gauging. Emphasizes jigs, fixture design, clamping, locating devices and tooling and production methods. Presents preset and qualified tooling for NC/CNC as they relate to conventional practice.		
<b>MACHT 32420389</b>	<b>Applied CNC - Intermediate Operations</b>	<b>2 Credits/Units</b>
This applications class builds on CNC concepts learned in previous classes. Emphasis is on CNC Turning Center, CNC Milling machine, and CNC Wire set up and operation. Students will produce parts that they have modeled and programmed in Manufacturing w/Solid Modeling 1 and 2 as well as instructor provided programs.		
<b>MACHT 32420390</b>	<b>Fundamentals of Metallurgy</b>	<b>2 Credits/Units</b>
Introduces metallurgy, emphasizing applications, selection, identification methods and alloy influences. Studies metal properties using testing, micro-structure interpretation and heat-treatment processes. Covers tool steels, weld heat effects, failure analysis and machinability variations in cast iron, alloy steels and non-ferrous materials in detail.		
<b>MACHT 32420391</b>	<b>Applied CNC - Advanced Operations</b>	<b>1 Credits/Units</b>
Our most advanced CNC applications course devoted to machining complex tool paths, including mold cavities and graphite electrodes. Stresses hands-on instruction and operation of CNC turning centers, vertical milling machines, machining centers.		
<b>MACHT 32420393</b>	<b>Job Orientation - Machine Tooling Technics Program</b>	<b>1 Credits/Units</b>
Covers specific occupational information including personal data sheets, job interviews, resumes and recommendations. Guest speakers lecture on employment, management and industry trends.		
<b>MACHT 32420394</b>	<b>Tool Making Theory 1</b>	<b>2 Credits/Units</b>
Lecture course supporting Machine Tool 5 & 6 lab activities. Major emphasis on the nomenclature, theory, construction features, design, and the technology of stamping and forming dies. Student also will spend time designing and planning a special die, mold or advanced CNC project.		
<b>MACHT 32420395</b>	<b>Tool Making Theory 2</b>	<b>2 Credits/Units</b>
Lecture course supporting Machine Tool 7 & 8 lab activities. Major emphasis on nomenclature, theory, construction features, design and the technology of mold dies. The seven molding processes will be discussed. Students also will spend time designing and planning a special mold, tool, or CNC project.		
<b>MACHT 50420512</b>	<b>Machinist 1</b>	<b>2 Credits/Units</b>
This course description is unavailable at this time. Please contact the center offering the course for more information.		
<b>MACHT 50420513</b>	<b>Machinist 2</b>	<b>2 Credits/Units</b>
<b>MACHT 50420514</b>	<b>Machinist 3</b>	<b>2 Credits/Units</b>



<b>MACHT 50420515</b>	<b>Machinist 4</b>	<b>2 Credits/Units</b>
This course description is unavailable at this time. Please contact the center offering the course for more information.		
<b>MACHT 50420516</b>	<b>Machinist 5</b>	<b>2 Credits/Units</b>
This course description is unavailable at this time. Please contact the center offering the course for more information.		
<b>MACHT 50420517</b>	<b>Machinist 6</b>	<b>2 Credits/Units</b>
This course description is unavailable at this time. Please contact the center offering the course for more information.		
<b>MACHT 50420710</b>	<b>Safety for Machine Tool Trade Apprentices</b>	<b>0 Credits/Units</b>
Examines safe work practices for machinists, tool and die makers and related trades. Apprentices will explore industrial safety standards; personal protective equipment; machine guards and protective devices; MSDS and chemical safety; electrical hazards, and more. Course relates 5S concepts to safe work practices and trade work processes.		
<b>MACHT 50420711</b>	<b>Mathematics for the Machine Trades</b>	<b>1 Credits/Units</b>
Provides applied mathematics instruction from a review of basic arithmetic; basic algebra; applications, based on geometry; right triangle trigonometry, oblique angle trigonometry and compound angles. This course was formerly module 1 in related instruction.		
<b>MACHT 50420712</b>	<b>Communications for Apprentices</b>	<b>Credits/Units</b>
Introduces the apprentice to basic communication concepts relating to the workplace. It is designed specifically for the apprentice to acquire the necessary skills of giving instructions, writing a technical memo, and explaining a technical process. Throughout the course the apprentice will brainstorm, write, edit, revise, and use one-on-one communication delivery in a small group. The course combines lecture and hands-on activities utilizing information which the apprentice brings from the workplace.		
<b>MACHT 50420713</b>	<b>Precision Measurement for Machine Tool Trade Apprentices</b>	<b>1 Credits/Units</b>
Designed to acquaint the apprentice with the measurement systems and tools most frequently used in layout and machining processes. Learning outcomes relate to semi-precision through super-precision measuring tools and equipment combined with opportunities to investigate new technologies.		
<b>MACHT 50420714</b>	<b>Engineering Drawings for Machine Tool Trades Apprentices</b>	<b>1 Credits/Units</b>
Acquaints the apprentice with the interpretation of engineering prints and other technical and manufacturing documentation. The primary focus will be on that part of manufacturing most closely related to machining and tooling. Background information is provided relative to the process used to create and finish the product or piece part on the prints being studied. This course was formerly module 4 in related instruction.		
<b>MACHT 50420715</b>	<b>Mechanical Hardware &amp; Hand Tools for Machine Trades Apprentices</b>	<b>1 Credits/Units</b>
Provides instruction for the apprentice in recognition, selection, and operation of mechanical hardware and hand tools. Apprentices are taught to use outside sources to select correct component or tool sizes, characteristics, and operating parameters. Apprentices will sharpen drills and single point cutting tools.		
<b>MACHT 50420716</b>	<b>Turning Machines for Machine Trades Apprentices</b>	<b>0 Credits/Units</b>
Acquaints the apprentice with the terminology, methods, and operations for turning machines used in the metal-working industry. Apprentices will learn to perform calculations needed to operate turning machines including speed and feed calculations. Apprentices will make calculations necessary to setup a turning machine for screw threads and taper operations.		
<b>MACHT 50420717</b>	<b>Milling Machines for Machine Trades Apprentices</b>	<b>0 Credits/Units</b>
Related instruction on the basic principles of vertical and horizontal milling machines for the machine tool apprentice. Instruction includes safety, basic parts and functions of the machines, work holding devices, tooling requirements, and feeds and speeds.		
<b>MACHT 50420718</b>	<b>Drilling Machines for Machine Trades Apprentices</b>	<b>0 Credits/Units</b>
Focuses on the terminology, construction, and operations of drilling machines in the metal-working industry. Be aware that in-depth information regarding cutting tools, hardware, and hand tools will be addressed in their own courses. Efforts should be made to reference information found in other courses in order to assist the apprentice in the application and assimilation of information.		
<b>MACHT 50420719</b>	<b>Grinding Machines for Machine Trades Apprentices</b>	<b>0 Credits/Units</b>
Focuses on the terminology, construction and operations of grinding machines in the metal-working industry. Be aware that in-depth information regarding cutting tools, hardware and hand tools will be addressed in their own courses. Efforts should be made to reference information found in other courses in order to assist the apprentice in the application and assimilation of information. This course instructs apprentices in the use of traditional grinding machines and the attachments and accessories frequently encountered in manufacturing operations that use common grinding processes.		
<b>MACHT 50420720</b>	<b>Cut-Off Machines for Machine Trades Apprentices</b>	<b>0 Credits/Units</b>
Acquaint the apprentice with the basic types of		
<ul style="list-style-type: none"> <li>• cutoff machines used in industry, cutoff machine applications</li> <li>• cutoff machine tooling, and cutoff machine safety.</li> </ul>		
<b>MACHT 50420721</b>	<b>Metallurgy &amp; Materials for Machine Trades</b>	<b>1 Credits/Units</b>
Provides the opportunity for the apprentice to develop the knowledge, skills, process, and understanding of hardness testing, carbons and low alloy steel, tool steels, stainless steels, cast iron, aluminum and aluminum alloys, die cast alloys, copper and copper alloys, plastics, heat treating and nondestructive testing. This course was formerly module 11 in related instruction.		
<b>MACHT 50420723</b>	<b>Electrical Discharge Machining for Machine Tool Trade Apprentices</b>	<b>0 Credits/Units</b>
This course is designed to give the apprentice a basic understanding of the theory and process of sinker and wire EDM in toolmaking. This course uses the EDM Technical Manual distributed by POCO Graphite, Inc., which contains the most current information available in the industry. Competencies are designed for apprentices working in tool & die technologies using EDM.		



<b>MACHT 50420724</b>	<b>CNC Programming and Planning for Machine Trades Apprentices</b>	<b>1 Credits/Units</b>
Introduction to CNC programming for apprentices, with a focus on CNC turning and milling centers. Apprentices will create setup sheets, develop tool lists, calculate speeds and feeds, assign tool offsets and write CNC programs.		
<b>MACHT 50420725</b>	<b>Basic CAD/CAM for Machine Trades Apprentices</b>	<b>1 Credits/Units</b>
Designed to provide the apprentice with the concepts and techniques used in computer-aided design (CAD) and computer-aided manufacturing (CAM) as part of their related instruction.		
<b>MACHT 50420726</b>	<b>Jig and Fixture Design for Machine Trades Apprentices</b>	<b>0 Credits/Units</b>
Introduces the apprentice to the concepts of jig and fixture design as part of their apprenticeship related instruction. Topics include the basic elements of tool design, jig and fixture application, and the actual design of tooling.		
<b>MACHT 50420727</b>	<b>Geometric Design and Tolerancing for Machine Trades Apprentices</b>	<b>0 Credits/Units</b>
Acquaints the apprentice with the skills to interpret the geometric dimensions and tolerances found on engineering drawings and in other industrial documents. Instruction concentrates on interpreting the symbols, identifying tolerance zones and determining ways to check parts for conformity to the specified geometric controls. Reference is made to ASME Y14.5M - 1994.		
<b>MACHT 50420728</b>	<b>Stamping Diemaking for Machine Tool Trade Apprentices</b>	<b>1 Credits/Units</b>
Introduces the apprentice to the basics of stamping and diemaking. Topics include the basic terminology, blanking, piercing, bending and related basic operations. In addition learners will discover the basics of the theory and background knowledge related to stamping and die making. This course was designed for related instruction for tool and die, stamping die and mold makers.		
<b>MACHT 50420729</b>	<b>Mold Making for Machine Tool Trade Apprentices</b>	<b>1 Credits/Units</b>
Introduces the apprentice to the basic mold making process, mold construction and components, and materials. The course provides related instruction for the tool and die, stamping die and mold makers apprenticeship programs.		
<b>MACHT 50420730</b>	<b>Stamping Design Applications for Machine Trades Apprentices</b>	<b>1 Credits/Units</b>
This course provides the stamping die maker apprentice with the opportunity to design from part specifications two elementary stamping dies. This course provides related instruction for the tool and die, stamping die and mold makers apprenticeship.		
<b>MACHT 50420731</b>	<b>Molding Die Design Applications for Machine Tool Trade Apprentices</b>	<b>1 Credits/Units</b>
Provides the Mold Maker apprentice with their final experience in the related instruction portion of their apprenticeship. The apprentice will design a cavity mold and a core and cavity mold using either manual drafting or computer software to complete these projects. This course provides related instruction for the tool and die, stamping die and mold makers apprenticeships.		
<b>MACHT 50420732</b>	<b>Machine Tool Apprenticeship Greening Competencies - SAGE Project</b>	<b>0 Credits/Units</b>
Competencies were designed to be included in the related instruction for the machine tool trades apprenticeships. Competencies may be introduced in this course and then reinforced in other courses that make up related instruction. For example, competencies 1, 3, 4 and 9 could be reinforced in the safety courses, and competencies 2, 5, 6, 7, and 8 could be reinforced in the various machining courses.		
<b>MACHT 50420733</b>	<b>CNC Operations for Machine Tool Trades Apprentices</b>	<b>1 Credits/Units</b>
Apprentices will examine CNC related operations and safety. Course competencies include classifying types of equipment, comparing CNC tooling, setup, and work holding operations. Additional CNC programming skill development is included in the course. CNC controls and communications are explored as well.		
<b>MASST 31509301</b>	<b>Medical Asst Admin Procedures</b>	<b>2 Credits/Units</b>
Introduces medical assistant students to office management and business, business administration, and the electronic medical record (EMR) in the medical office. Students learn to schedule appointments, perform filing, recordkeeping, inventory of supplies, telephone and reception duties, as well as effective communication with patients and other medical office staff.		
Prerequisites or Corequisites: Computer classes and admittance to the Medical Assistant program.		
<b>MASST 31509302</b>	<b>Human Body in Health &amp; Disease</b>	<b>3 Credits/Units</b>
Focuses on diseases that are frequently first diagnosed and treated in the medical office setting. Students learn to recognize the causes, signs, and symptoms of diseases of the major body systems as well as the diagnostic procedures, usual treatment, prognosis and prevention of common diseases.		
Prerequisite or Corequisite: Medical Terminology, 10-501-101.		
<b>MASST 31509303</b>	<b>Medical Asst Lab Procedures 1</b>	<b>2 Credits/Units</b>
<b>MASST 31509304</b>	<b>Medical Asst Clin Procedures 1</b>	<b>4 Credits/Units</b>
Introduces medical assistant students to the clinical procedures performed in the medical office setting. Students perform basic examining room skills including screening, vital signs, patient history, minor surgery and patient preparation for routine and speciality exams in the ambulatory setting.		
Prerequisite: All other first semester courses; corequisites: Medical Assistant Lab Procedures 1, 31-509-303; admittance to the Medical Assistant Program.		
<b>MASST 31509305</b>	<b>Med Asst Lab Procedures 2</b>	<b>2 Credits/Units</b>
Prepares students to perform laboratory procedures commonly performed by medical assistants in the ambulatory care setting under the supervision of a physician. Students perform phletomy, immunology, hematology and chemistry laboratory procedures.		
Prerequisite: All first semester courses. Corequisite: Medical Assistant Clinical Procedures 2, 31-509-306 and Medical Assistant Practicum, 31-509-310.		



**MASST 31509306**                      **Med Asst Clin Procedures 2**                      **3 Credits/Units**  
Prepares students to perform EKG, spirometry, and administer medications including topical, oral, and injectable.

Must have completed all first semester courses.

**MASST 31509307**                      **Medical Office Insurance & Finance**                      **2 Credits/Units**  
Introduces medical assistant studies to health insurance and finance in the medical office. Students perform bookkeeping procedures, apply managed care guidelines and complete insurance claim forms. Students used medical coding and managed care terminology to perform insurance-related duties.

Prerequisites: Medical Terminology, 10-501-101; Human Body in Health & Disease; 31-509-302; and computer courses.

**MASST 31509309**                      **Medical Law, Ethics and Professionalism**                      **2 Credits/Units**  
Prepares students to display professionalism and perform within ethical and legal boundaries in the health care setting. Students maintain confidentiality, examine legal aspects of the medical record, examine legal and bioethical issues, and demonstrate awareness of diversity.

Prerequisites or Corequisites: 10-501-101 and 31-509-302.

**MASST 31509310**                      **Medical Assistant Practicum**                      **3 Credits/Units**  
Requires medical assistant students to integrate and apply knowledge and skills from all previous medical assistant courses in actual ambulatory health care settings. Learners perform medical assistant administrative, clinical, and laboratory duties under the supervision of trained mentors to effectively transition to the role of a medical assistant. This is a supervised, unpaid, clinical experience.

Prerequisites: Medical Assistant Lab Procedures 1, 31-509-303; Medical Assistant Clinical Procedures 1, 31-509-304; corequisites: Medical Assistant Lab Procedures 2, 31-509-305; Medical Assistant Clinical Procedures 2, 31-509-306.

**MATH 10804107**                      **College Mathematics**                      **3 Credits/Units**  
This course is designed to review and develop fundamental concepts of mathematics pertinent to the areas of: 1) arithmetic and algebra; 2) geometry and trigonometry; and 3) probability and statistics. Special emphasis is placed on problem solving, critical thinking and logical reasoning, making connections, and using calculators. Topics include performing arithmetic operations and simplifying algebraic expressions, solving linear equations and inequalities in one variable, solving proportions and incorporating percent applications, manipulating formulas, solving and graphing systems of linear equations and inequalities in two variables, finding areas and volumes of geometric figures, applying similar and congruent triangles, converting measurements within and between U.S. and metric systems, applying Pythagorean Theorem, solving right and oblique triangles, calculating probabilities, organizing data and interpreting charts, calculating central and spread measures, and summarizing and analyzing data.

**MATH 10804114**                      **College Technical Math 1B**                      **2 Credits/Units**  
Topics include: computational geometry; right and oblique triangle trigonometry; and trigonometric functions on the unit circle. Emphasis will be on the application of skills to technical problems.

**MATH 10804115**                      **College Technical Math 1**                      **5 Credits/Units**  
Topics include: solving linear, quadratic, and rational equations; graphing; formula rearrangement; solving systems of equations; percent; proportions; measurement systems; computational geometry; right and oblique triangle trigonometry; trigonometric functions on the unit circle; and operations in polynomials. Emphasis will be on the application of skills to technical problems.

**MATH 10804116**                      **College Technical Math 2 4**                      **Credits/Units**  
Topics in College Technical Mathematics 2 include: vectors; trigonometric functions and their graphs; identities; exponential and logarithmic functions and equations; radical equations; equations with rational exponents; equations of a circle; velocity; sine and cosine graphs; complex numbers in polar and rectangular form; trigonometric equations; conic sections; and analysis of statistical data. Emphasis will be on the application of skills to technical problems.

**MATH 10804123**                      **Math with Business Applications**                      **3 Credits/Units**  
This course integrates algebraic concepts, proportions, percents, simple interest, compound interest, annuities, and basic statistics with business/consumer scenarios. It also applies math concepts to the purchasing/buying and selling processes.

**MATH 10804134**                      **Mathematical Reasoning**                      **3 Credits/Units**  
All college students, regardless of their college major, need to be able to make reasonable decisions about fiscal, environmental, and health issues that require quantitative reasoning skills. A collaborative, activity-based approach is used in this course to explore numerical relationships, graphs, proportional relationships, algebraic reasoning, and problem solving using linear, exponential and other mathematical models. Students will develop conceptual and procedural tools that support the use of key mathematical concepts in a variety of contexts

This course is not designed for Science, Engineering, or Math students and/or others who require calculus.

This course may be used as the prerequisite for Quantitative Reasoning, Principles of Geometry, General Chemistry, and/or Survey of Physics.

**MATH 10804144**                      **Math of Finance**                      **3 Credits/Units**  
This course takes an algebraic approach to solving financial problems. Topics include personal finance and retirement, mathematics of retailing, mathematics of banking and lending, and statistical applications. Major emphasis is placed on solving problems involving the time value of money by using a financial calculator. The material in this course develops a sound base for subsequent courses by using an analytical approach to problem solving.

**MATH 20804200**                      **Principles Of Geometry**                      **3 Credits/Units**  
This is an introductory college level course that provides a foundation in geometry necessary for the study of analytic geometry, trigonometry, or calculus. The class covers the facts of geometry, cultivates geometric intuition, and fosters the practice of deductive reasoning.



**MATH 20804201 Intermediate Algebra 4 Credits/Units**  
Intermediate Algebra studies the construction and resulting properties of the real number system. Students simplify and factor algebraic expressions using fundamental laws and order of operations, solve first and second degree equations and inequalities in one variable, solve exponential and logarithmic equations, graph first degree and second degree equations and inequalities in two variables, solve  $2 \times 2$  and  $3 \times 3$  systems of equations, simplify and solve equations involving rational expressions, and simplify and solve equations involving fractional exponents and radicals. Students are introduced to linear, quadratic, square root, absolute value, exponential, and logarithmic functions. The basic definitions of functions, relations, one-to-one functions, and inverses are discussed along with the algebra and composition of functions.

**MATH 20804202 Intermediate Algebra I 3 Credits/Units**  
Understand the structure of the real numbers (their construction, operations and properties); solve first degree (linear) equations and inequalities in one variable; graph first degree equations and inequalities in two variables; be introduced to the concept of the function and the use of functional notation; solve systems of equations in a two-dimensional Cartesian plane; perform algebraic operations on polynomials; factor algebraic expressions; solve polynomial equations by factoring and solve applications problems that relate to all of the above.

Transferability: by itself this course does not transfer; however, upon successful completion of this course and 20-804-203, Intermediate Algebra 2, four credit hours of Intermediate Algebra are available for transfer.

**MATH 20804203 Intermediate Algebra 2 3 Credits/Units**  
This course is a continuation of Intermediate Algebra 1, 20-804-202. Students expand their understanding of the structure of the real numbers (their construction, operations and properties); perform algebraic operations on rational and radical expressions; solve rational and radical equations; solve inequalities; solve absolute value equalities and inequalities; solve systems of three equations in three variables using the methods of substitution, addition (elimination), matrices and determinants; study complex numbers (their construction, operations and properties); solve second degree equations and inequalities in one variable; graph quadratic equations; solve exponential and logarithmic equations; understand and use functional notation and the arithmetic of functions; and solve application problems relative to the above topics.

Transferability: upon successful completion of this course and 20-804-202, Intermediate Algebra 1, four credit hours of Intermediate Algebra are available for transfer.

**MATH 20804210 Math for Elementary Teachers 3 Credits/Units**  
This course will challenge students to think mathematically rather than mastering any particular mathematical facts. The focus is more on how you learn rather than on what you learn. This course is an introduction to problem solving and mathematical thinking. The focus of this course is on the process of mathematics rather than specific techniques or content. Students will engage in mathematical problem solving in a variety of contexts and learn a number of ways of approaching new problems which are broadly applicable.

**MATH 20804211 Quantitative Reasoning 3 Credits/Units**  
This course is intended to develop analytic reasoning and the ability to solve quantitative problems. Topics to be covered may include: construction and interpretation of graphs; descriptive statistics; geometry and spatial visualizations; math of finance; functions and modeling; probability; and logic. Appropriate use of units and dimensions, estimates, mathematical notation and available technology will be emphasized throughout the course.

Note: This course satisfies Part A of the Quantitative Reasoning requirement for the UW system and is intended for students who do not plan to take any further mathematics.

**MATH 20804212 College Algebra 3 Credits/Units**  
College Algebra includes fundamental topics covered in Intermediate Algebra with a more careful look at the mathematical details and a greater emphasis on the concept of function. It covers quadratic, polynomial, rational, exponential and logarithmic functions, equations and inequalities; the use of matrices and determinants in solving linear systems of equations, solving non-linear systems; sequences and series.

**MATH 20804213 Trigonometry 3 Credits/Units**  
Trigonometry includes study of the six trigonometric functions and their inverse functions; solve right and oblique triangles; know and apply basic identities and simplify trigonometric expressions using identities; solve trigonometric equations; graphing trigonometric functions; understand and apply De Moivre's theorem and the nth-root theorem; understand and use complex numbers and polar coordinates; solve application problems that rely on trigonometry.

**MATH 20804214 Math for Elementary Teachers 2 3 Credits/Units**  
A second course in mathematics needed for teaching K-8. Emphasis will be on the student communication how and why standard and alternative algorithms work. Content will focus on problem solving strategies and word problems involving geometry, measurement, algebra, statistics, and probability. The courses in this sequence can be taken in any order.

**MATH 20804215 Computer Science 1 3 Credits/Units**  
This project based class uses the object-oriented programming language Java. This course is intended for students with no prior programming experience. Students participating in this course will learn the fundamentals of structured programming. The course topics include computer hardware basics and the compiling process, general formatting requirements, basics of elementary programming, selections, loops, methods, arrays and text input and output. Testing and debugging techniques will be implemented in this course.

**MATH 20804216 Computer Science 2 3 Credits/Units**  
This course introduces the concept of Object Oriented Programming (OOP). The student will use the concept of objects and classes as a design philosophy, and learn how to build classes and objects that take advantage of an OOP style versus a linear programming style. More advanced topics include: Inheritance, Polymorphism, Abstract Classes and Interfaces. This course also introduces, algorithm complexity, lists, stacks queues and recursions. The student will also study and implement different search and sorting algorithms.

**MATH 20804220 Finite Math 3 Credits/Units**  
Finite Mathematics provides the necessary mathematical preparation for the understanding of various quantitative methods in modern management theory and the social sciences. The topics included are: sets, relations, linear functions, matrix theory, the solutions of linear systems by graphical, algebraic, Gauss-Jordan, and inverse matrix methods, linear programming by graphical and simplex methods, the mathematics of finance, counting and probability, game theory, decision theory, and other related topics.





- MATH 20804221**                      **Calculus Methods for Business and Social Sciences I**                      **5 Credits/Units**  
 Calculus Methods for Business and Social Sciences I is an introduction to calculus and related topics designed primarily for prebusiness and social science students. The course covers the essential concepts of differential and integral calculus for one and several variables. The topics to be covered are functions, derivatives and their applications, exponential and logarithm functions, integration and its applications, integration techniques, calculus of several variables, and differential equations.
- MATH 20804223**                      **Calculus Methods for Business and Social Sciences II**                      **3 Credits/Units**  
 Calculus Methods for Business and Social Sciences II is a sequel to Calculus Methods for Business and Social Sciences I, 20-804-221, and is designed primarily for pre-business and social sciences students who need to develop more mathematical techniques than are covered in 20-804-221. The course will include a review of the techniques of single-variable calculus and business applications; expansion of the topics from multivariable calculus; Taylor approximations, polynomials, and series; first-order differential equations and two dimensional systems of differential equations; and difference equations with models from and applications in business and the social sciences.
- MATH 20804228**                      **Calculus w Algebra & Trigonometry 1**                      **5 Credits/Units**  
 Designed for students of mathematics, science, and engineering who need some extra knowledge in precalculus and need a first semester calculus course. The course includes a review of the algebraic topics of absolute values, polynomials, factoring, quadratic equations, exponents and radicals, and simplification of algebraic expressions. It includes a review of the trigonometric topics of radian measure, trigonometric functions and their graphs, and trigonometric identities. The calculus topics covered include an introduction to the basic properties of limits, rate of change of functions, continuity, derivatives of algebraic and trigonometric functions, their products quotients and compositions, curve sketching, determining maxima and minima, and related rate problems.
- MATH 20804229**                      **Math Analysis**                      **5 Credits/Units**  
 Mathematical Analysis is an integrated treatment of topics from college algebra and trigonometry lays a sound foundation for higher courses in mathematics. This course includes linear and quadratic functions, other polynomial functions, rational functions, radical functions, exponential and logarithmic functions, the trigonometric functions, and some analytic geometry in the plane.
- MATH 20804230**                      **Calculus w Algebra & Trigonometry II**                      **5 Credits/Units**  
 This course continues the work begun in Calculus with Algebra and Trigonometry I. It is intended for students who need both extra knowledge of pre-calculus and also a first semester calculus course. The topics covered include exponential and logarithmic functions and their derivatives, inverse trigonometric functions and their derivatives, applications of derivatives, conic sections, and integration and its applications. This course, when preceded by its companion, Calculus with Algebra and Trigonometry I, is equivalent to taking both 804-229, Math Analysis and 804231, Calculus and Analytic Geometry I.
- MATH 20804231**                      **Calculus and Analytic Geometry 1**                      **5 Credits/Units**  
 Calculus 1 is designed for students of mathematics, science, and engineering. This is an introduction to the basic properties of limits, rate of change of functions, continuity, derivatives of algebraic and elementary transcendental functions, their products quotients and compositions, curve sketching, finding maxima and minima, and indefinite and definite integration with applications.
- MATH 20804232**                      **Calculus and Analytic Geometry 2**                      **5 Credits/Units**  
 Calculus and Analytic Geometry 2 is designed for students of mathematics, science, and engineering. Topics covered include the techniques of integration, numerical approximation of definite integrals, applications of integration and an introduction to first order differential equations, analysis of infinite sequences and series, parametric equations and derivatives of parametric curves, polar coordinates in the plane and integrals using polar coordinates, the analytic geometry of the conic sections, an introduction to vectors in two and three dimensions, scalar and vector cross products, graphs of quadratic surfaces.
- MATH 20804233**                      **Calculus 3**                      **5 Credits/Units**  
 Calculus 3 is designed for students of mathematics, science, and engineering. Topics covered include differentiation of vectors, space curves and curvature, functions of more than one variable, level curves and level surfaces, limits and continuity, partial derivatives, total differential, tangent planes, the gradient operator, the directional derivative, multivariable forms of the chain rule, locating maxima, minima, and saddle points, the method of Lagrange multipliers, multiple integrals in rectangular, polar, cylindrical and spherical coordinates, transformations of multiple integrals and the Jacobian, surface area, applications of multiple integrals to geometry and mechanics, line integrals in two and three dimensions, vector fields, circulation and flux in two dimensions, Green's Theorem, the curl and divergence operators, surfaces and surface area defined parametrically, Gauss' and Stokes' Theorems, applications of vector calculus to geometry, mechanical work, fluid mechanics and electromagnetic fields, an introduction to the theory and solution of first and second order ordinary differential equations.
- MATH 20804240**                      **Basic Statistics**                      **4 Credits/Units**  
 In Basic Statistics appropriate statistical techniques are studied for the systematic collection, presentation, analysis and interpretation of experimental results, including surveys and quality control. The focus is on understanding the techniques of statistical inference (confidence intervals and hypothesis testing) and interpreting results as found in articles and reports. It emphasizes the inherent uncertainty when decisions are made on the basis of sample data. Includes descriptive statistics, basic probability theory, sampling distributions and the Central Limit Theorem; the binomial, normal, Student t, chi-square, and F distributions; and techniques of 1- and 2-sample tests, linear regression, correlation, an introduction to analysis of variance and selected nonparametric procedures.
- MATH 20804241**                      **Introduction to Engineering Statistics**                      **3 Credits/Units**  
 This is an introductory course with many examples and applications chosen from the engineering disciplines and physical science. The course covers techniques for the collection, presentation, analysis and interpretation of experimental results and develops procedures to deal with the uncertainty present in making inferences and decisions based on sample data. Topics covered include descriptive statistics; probability concepts, random variables and discrete probability distributions; continuous probability and sampling distributions, the Central Limit Theorem; hypothesis tests and confidence intervals for one- and two-sample problems; one-way analysis of variance and basic ideas in experimental design; linear regression, model checking, and inference.
- MATH 20804252**                      **Introduction to Computer Engineering**                      **3 Credits/Units**  
 Presents logic components built with transistors, Boolean algebra, basic combinational logic design, basic synchronous sequential logic design, basic computer organization and design, and introductory machine-and assembly-language programming and its implementation on a Field Programmable Gate Array. The course introduces students to a team based project in assembly programming providing the experience of a real life computer engineering design project. (Designed to be a transfer course to the UW-Madison Electrical Engineering Program as



ECE 252.).

**MATH 20804255**                      **Techniques in Ordinary Differential Equations**                      **3 Credits/Units**  
This course presents techniques for solving and approximating solutions to ordinary differential equations. Topics will include solving first order differential equations, solving second-and higher-order linear differential equations, Laplace and Fourier transforms, systems of first order linear differential equations, numerical methods, and Sturm-Liouville Theory.

**MATH 20804256**                      **Elementary Matrix and Linear Algebra**                      **3 Credits/Units**  
This course covers the principles of linear algebra and the theory of matrices with an emphasis in understanding the fundamental concepts and being able to perform calculations. An introduction to formal, logically sound proofs of important theorems is also integrated into the course.

**MATH 20804265**                      **Introduction to Discrete Mathematics**                      **3 Credits/Units**  
Introduces students to discrete mathematical techniques and structures, such as logic, integers, recursion, sets, counting, probability, graphs, trees, and algorithms. The course also develops students' ability to think mathematically and write proofs. Many applications are drawn from computer science, and the course prepares computer science students for future study. The course is also suitable for majors in mathematics, math education, and engineering, as well as anyone interested in the beauty of numbers, patterns, and logical reasoning.

**MATH 31804379**                      **Vocational Math 1**                      **1 Credits/Units**  
Vocational Mathematics 1 is a review of basic mathematics that consists of an introduction to using a scientific calculator, order of operations, fractions, decimals, use of percentage, units of measurement including the metric system, the reading of analog instruments for length measurement, and practical plane geometry.

**MATH 31804381**                      **Machine Tool Math 1**                      **2 Credits/Units**  
Open only for Machine Tool and Industrial Maintenance students. This course includes the study of machine tool problems involving calculations with fractions, decimals, and percentage. Includes work with the metric system, measurement conversion, geometry, trigonometry of right triangles, and use of a scientific calculator. Formulas with application to the trade are also studied.

**MATH 31804382**                      **Machine Tool Math 2**                      **1 Credits/Units**  
This is a continuation of Machine Tool Math 1. Consists of advanced machine tool problems whose solutions involve right and oblique triangles. Compound angles and numerical control calculations are also studied.

**MECTEC 10606100**                      **Engineering Technology Communications**                      **3 Credits/Units**  
Develops skills in creating engineering sketches through the application of drafting standards and procedures. Principles covered include view selection, orthographic projection, section and auxiliary views, and their utilization in working drawings. The need for engineering sketching is reinforced through a hands-on project requiring measurement, inspection and sketching of orthographic views. In addition, materials, fabrication and assembly methods related to the project will also be explored.

Corequisites: 10-606-120 and 10-606-130.

**MECTEC 10606101**                      **Engineering Technology Fundamentals**                      **2 Credits/Units**  
Introduces the student to the knowledge and skills required to function in today's engineering office environment. Engineering office format, procedures, standards, ethics and application level of engineering office related software is introduced. Students explore the engineering design process and participate in various problem solving and conflict resolution techniques. Career paths available to the Mechanical Design graduate will also be explored. Students utilize Net Meeting, video conferencing and Internet shared data.

**MECTEC 10606104**                      **Engineering Technology Practices**                      **3 Credits/Units**  
Focuses on the creation of complete sets of engineering detail and assembly drawings including the accompanying engineering documentation, bill of materials and the application of geometric dimensioning and tolerancing standards. Emphasis is placed on product design analysis, the engineering change process, product data management and an introduction to stress analysis and rapid prototyping. Other areas of study include: threaded fasteners, non-threaded fasteners, springs and gears.

Prerequisite: 10-606-140.

**MECTEC 10606112**                      **Tool Design Technology**                      **3 Credits/Units**  
The fundamentals of tool design are presented to acquaint the student with the language and methods used in designing jigs and fixtures. Through the research and selection of standard tooling components, working tool design drawings are completed. Also explored are common plastic part design and tooling considerations through actual design problems.

Prerequisite: 10-606-104.

**MECTEC 10606116**                      **Machine Design**                      **3 Credits/Units**  
The principles of statics and strength of materials are reviewed and applied to the design of machine elements in this course. Topic areas studied include calculations, labs, and software to revolving around properly selecting machine components for force-workpower, stress, repeated loading, fasteners, springs, belts, chains, gears, bearings, keys and couplings. In addition, machine design principles will be studied and applied through software applications (SolidWorks) and hands-on labs in the mechanical systems training lab (Lab Volt Lab).

Prerequisite: 10-606-170.

**MECTEC 10606120**                      **2-D CAD (Computer Aided Drafting)**                      **1 Credits/Units**  
Introduces the basic capabilities of the current version of 2D CAD software as it applies to mechanical design. Emphasis is placed on basic commands and input required for their application in creating two-dimensional mechanical working drawings.

Corequisites: 10-606-100 and 10-606-130.

**MECTEC 10606125**                      **Plastics for Mechanical Design**                      **3 Credits/Units**







design and analysis problems. Topics covered include simple stresses, mechanical properties of materials, center of gravity, moment of inertia, shear force and bending diagrams and beam design. Related engineering analysis software is utilized throughout the course.

Prerequisite: 10-606-155.

**MECTEC 10606186                      Engineering Technology Applications                      3 Credits/Units**  
A comprehensive application of the Mechanical Design Technology program, in which student teams will implement the design project plan previously developed in the Manufacturing Analysis course. Implementation of the design project plan will be carried out through a 3-step concurrent engineering design process: Ideation, Refinement, and Implementation. A final presentation of the design project will be presented in a formal design project notebook, as well as through a formal team design project presentation.

Pre-requisite: 10-606-163.

**MECTEC 10606188                      MDT Field Study Experience                      1 Credits/Units**  
MDT students will be placed in a local engineering office environment, where technical skills learned throughout the MDT program will be observed and practiced in collaboration with the participating company. Students will document the time spent at the company, while being mentored by participating engineering personnel and MDT faculty. In addition, soft skills required to satisfactorily work on the job will be emphasized.

**MECTEC 10606193                      Career Development - Mechanical Design Program                      1 Credits/Units**  
Acquaints students with the process and the development of a plan for securing employment in the mechanical design field. Includes letters of introduction, resume design, personal data sheets, portfolio design and job interview techniques. Presentations by industry professionals in the areas of human resources, management, design and job placement will overview the industry perspective and requirements for employment in the career of mechanical design. Prerequisite: third-semester standing.

**MECTEC 20606231                      Introductory Engineering Graphics                      3 Credits/Units**  
A freshman course which provides the undergraduate engineering student with a background in descriptive geometry, orthographic projection, engineering drawing techniques, and computer-aided engineering graphics. Topics covered include point-line and plane relationships in projection; multi-view engineering drawings; auxiliary and section views; mechanical fasteners; engineering drawing applications. (Designed for engineering transfer students as the equivalent of ME 231 at UW-Madison.)

**MEDADMIN 10160165                      Medical Administrative Procedures                      3 Credits/Units**  
This class is designed to emphasize administrative procedures in the electronic medical office environment. Using an electronic practice management program, students learn to enter patient information, schedule appointments, complete patient billing and reimbursement, create insurance claims, post insurance payments, create patient statements, and run financial and clinical reports. Other topics include telephone procedures, introduction of diagnostic and procedural coding, diversity in healthcare, effective business meetings, travel arrangements and itineraries, and qualities of a successful healthcare professional.

**MEDADMIN 10160166                      Healthcare Documentation Techniques and Procedures                      3 Credits/Units**  
Emphasizes the skilled proofreading, editing (including detailed coverage of grammar and punctuation), formatting and reference use techniques needed to produce high quality reports demanded by medical facilities.

**MEDADMIN 10160177                      Specialized Insurance Claims                      2 Credits/Units**  
Identifies in-depth insurance knowledge for private and government insurance programs including indemnity, HMO, PPO, Medicare, medical Assistance, third party liability, worker's compensation, etc. Covers knowledge of deductibles, coinsurance, copayments, exclusions, medical necessity, referrals, prior authorization, coordination of benefits, COBRA, charity Care, collections, pre-existing periods, allowed amounts, malpractice, dental, inpatient and outpatient benefits, and lifetime maximums. Claims reimbursement methods, contractual allowances, fee schedules, and other rules to facilitate timely payment of claims are also incorporated.

**MEDADMIN 10160178                      Medical Language for the Business Professional 1                      2 Credits/Units**  
This course is designed to give the beginning business student an insight into medical language. Students will explore how medical terms are formed, become familiar with the meaning of many word roots, prefixes, and suffixes, and spell, define, and pronounce many medical terms by understanding word components. Students will also exhibit mastery in the use of medical dictionaries and reference materials. Fundamentals will be discussed as they relate to evaluation of health practices by body system and by the body as a whole.

**MEDADMIN 10160179                      Medical Language for the Business Professional 2                      2 Credits/Units**  
This course is a continuation of Medical Language for the Business Professional 1 and is designed to give the business student continued insight into medical language. Students will continue exploration of medical terms, become familiar with the meaning of many word roots, prefixes, and suffixes, and spell, define, and pronounce many medical terms by understanding word components. Students will also exhibit mastery in the use of medical dictionaries and reference materials. Fundamentals will be discussed as they relate to evaluation of health practices by body system and by the body as a whole.

**MEDADMIN 10160191                      Introduction to Healthcare Documentation                      2 Credits/Units**  
This course provides an introduction to healthcare documentation practices and develops a working knowledge of basic document, medical language, and medical report formats. The student will develop technology, medical knowledge, English language, proofreading, editing, and research skills, achieving beginning production and accuracy standards.

**MEDREC 10530162                      Foundations of HIM                      3 Credits/Units**  
Introduces learners to the healthcare delivery system, and the external forces that influence healthcare delivery. Sets an understanding for the expectations and standards related to professional ethics, confidentiality and security of health information. Differentiates the use and structure of healthcare data elements, data standards, and the relationships between them. Prepares learners to collect and maintain health data to ensure a complete and accurate health record.

**MEDREC 10530168                      Advanced ICD Coding                      3 Credits/Units**  
Advanced ICD Coding - 3 Credits Requires the student to apply and expand the knowledge gained from the basic courses, ICD Diagnosis Coding & ICD Procedure Coding, to more difficult cases. The student will develop critical-thinking skills by using current references to research



coding questions and issues. Computerized encoding software is utilized.

Prerequisite: Cluster 2 courses; Co-requisite other Cluster 3 courses

<b>MEDREC 10530182</b>	<b>Human Disease for Health Professions</b>	<b>3 Credits/Units</b>
Focuses on the common diseases of each organ/body system as encountered in all types of health settings by health professionals. Emphasis is placed on understanding the etiology (cause), signs and symptoms, diagnostic tests, treatment (including pharmacologic) of each disease.		
<b>MEDREC 10530184</b>	<b>CPT Coding</b>	<b>3 Credits/Units</b>
Prepares students to assign CPT codes, supported by medical documentation with entry-level proficiency. Students apply CPT instructional notations, conventions, rules and official coding guidelines when assigning CPT codes to case studies and actual medical record documentation.		
<b>MEDREC 10530185</b>	<b>Healthcare Reimbursement</b>	<b>2 Credits/Units</b>
Prepares the students to compare and contrast health care payers, illustrate the reimbursement cycle and to comply with regulations related to fraud and abuse. Students assign Diagnosis Related Groups (DRGs), Ambulatory Payment Classifications (APCs), and Resource Utilization Groups (RUGs) with entry-level proficiency using computer encoding and grouping software.		
<b>MEDREC 10530187</b>	<b>Advanced CPT Coding</b>	<b>3 Credits/Units</b>
Requires the student to apply and expand the knowledge gained from the basic course, CPT Coding, to more difficult cases. The student will develop critical-thinking skills by using current references to research coding questions and issues. Computerized encoding software is utilized.		
<b>MEDREC 10530188</b>	<b>Certification &amp; Professional Development</b>	<b>2 Credits/Units</b>
This course prepares students for coding certification and includes mock coding certification exams. Students participate in professional development activities and discuss career progression opportunities.		
<b>MEDREC 10530189</b>	<b>Management of Coding Services</b>	<b>1 Credits/Units</b>
This course focuses on common coding management issues including coding quality, coding productivity, and workflow processes. Recruitment, training, and retention of coding staff is included.		
<b>MEDREC 10530197</b>	<b>ICD Diagnosis Coding</b>	<b>3 Credits/Units</b>
Prepares students to assign ICD diagnosis codes supported by medical documentation with entry-level proficiency. Students apply instructional notations, conventions, rules, and official coding guidelines when assigned ICD procedure codes to case studies and actual medical record documentation.		
<b>MEDREC 10530199</b>	<b>ICD Procedure Coding</b>	<b>2 Credits/Units</b>
Prepares students to assign ICD procedure codes supported by medical documentation with entry-level proficiency. Students apply instructional notations, conventions, rules and official coding guidelines when assigned ICD procedure codes to case studies and actual medical record documentation.		
<b>MEDTERM 10501101</b>	<b>Medical Terminology</b>	<b>3 Credits/Units</b>
Focuses on the component parts of medical terms: prefixes, suffixes and word roots. Students practice formation, analysis and reconstruction of terms. Emphasis is on spelling, definition and pronunciation. Introduction to operative, diagnostic, therapeutic and symptomatic terminology of all body systems, as well as systemic and surgical terminology, is included.		
Prerequisite: COMPASS scores of Reading 80 & Writing 46-99 or comparable equivalent course courses.		
<b>MEDTERM 10501107</b>	<b>Digital Literacy for Healthcare</b>	<b>2 Credits/Units</b>
Provides an introduction to basic computer functions and applications utilized in contemporary healthcare settings. Students are introduced to the hardware and software components of modern computer systems and the application of computers in the workplace. Emphasizes the use of common software packages, operating systems, file management, word processing, spreadsheets, databases, Internet, and electronic mail.		
<b>MEDTERM 10501153</b>	<b>Body Structure &amp; Function - Used in a variety of Degree Programs</b>	<b>3 Credits/Units</b>
A concise introduction to human body structure and function. Normal and abnormal states of the body and basic disease processes affecting the body are emphasized. Common problems encountered in a variety of health care settings are presented.		
<b>MEDTERM 31501308</b>	<b>Pharmacology for Allied Health</b>	<b>2 Credits/Units</b>
Introduces students to medications and basic pharmacology principles. Students apply basic pharmacodynamics to identify common medications and calculate dosages in preparation for medication administration.		
<b>MILLWRGT 50423561</b>	<b>Prnt Rdg/Math/Tools &amp; Methods</b>	<b>2 Credits/Units</b>
This course description is unavailable at this time. Please contact the center offering the course for more information.		
<b>MILLWRGT 50423562</b>	<b>Prnt Rdg/Math/Mech Pwr Trans 1</b>	<b>2 Credits/Units</b>
<b>MILLWRGT 50423563</b>	<b>Prnt Rdg/Math/Mech Pwr Trans 2</b>	<b>2 Credits/Units</b>
<b>MILLWRGT 50423564</b>	<b>Print Reading/Math/Fluid Power</b>	<b>2 Credits/Units</b>
This course description is unavailable at this time. Please contact the center offering the course for more information.		
<b>MILLWRGT 50423565</b>	<b>Prnt Rdg/Math/Pipefit/Mech</b>	<b>2 Credits/Units</b>
This course description is unavailable at this time. Please contact the center offering the course for more information.		
<b>MILLWRGT 50423566</b>	<b>Print Reading/Math/Metalwork</b>	<b>2 Credits/Units</b>



<b>MILLWRGT 50423567</b>	<b>Print Reading/Math/Electrical</b>	<b>2 Credits/Units</b>
This course description is unavailable at this time. Please contact the center offering the course for more information.		
<b>MILLWRGT 50423568</b>	<b>Prnt Read/Math/Mach Repair</b>	<b>2 Credits/Units</b>
This course description is unavailable at this time. Please contact the center offering the course for more information.		
<b>MKTG 10104102</b>	<b>Marketing Principles</b>	<b>3 Credits/Units</b>
This foundation course introduces students to the marketing process and how it operates in today's dynamic organizations. The entire marketing mix is examined on a broad scale. Topics include: market segmentation and targeting strategies, market research, consumer behavior, product development, pricing policies, distribution, and an overview of promotion. This basic course provides a comprehensive overview of the exciting world of marketing.		
<b>MKTG 10104103</b>	<b>Marketing Research</b>	<b>3 Credits/Units</b>
Businesses today need current, accurate information upon which to base their decisions. In this class, students learn not only how to gather marketing information from primary and secondary sources using online and other sources, but also how to apply that information to make better marketing decisions.		
<b>MKTG 10104104</b>	<b>Selling Principles</b>	<b>3 Credits/Units</b>
Introductory course designed to acquaint the student to the basic principles, concepts, and theories of business and consumer selling. Special emphasis is given to developing the selling process which includes prospecting and qualifying, planning and preapproaching, approaching the customer, the sales presentation/demonstration, handling objections, closing the sale and post-sale service and follow-up. This course will also provide the learner with an opportunity to explore careers, opportunities, and benefits of personal selling		
<b>MKTG 10104111</b>	<b>Innovative Trends in Marketing</b>	<b>3 Credits/Units</b>
Explore cutting-edge technologies and practices used by companies to engage consumers. Topics may include Virtual Reality, Augmented Reality, Artificial Intelligence, big data, video game business models, and cryptocurrencies. Involves research, projects, and presentations. ?		
<b>MKTG 10104112</b>	<b>Marketing Design Strategies</b>	<b>3 Credits/Units</b>
This course provides participants with opportunities to explore proven theories and practices of design principles and marketing communication strategies. Participants are challenged to create powerful marketing print and digital publications by utilizing current desktop publishing and image editing technologies.		
<b>MKTG 10104113</b>	<b>Leadership Ethics in the Digital Age</b>	<b>3 Credits/Units</b>
The ability to influence people is critical to your personal and professional success. Today's marketers face rapid technological advancements in digital products and social media and its applications, which requires serious ethical considerations. This class will explore leadership principles, practices and contemporary ethical implications to develop the leader within you.		
<b>MKTG 10104114</b>	<b>Social Media Principles</b>	<b>3 Credits/Units</b>
Social Media has transformed Advertising from a long-term Mass medium to a one-to-one communication utilizing almost instant feedback. How businesses are using Social Media as advertising tools as well as how to create and deploy a Social Media Campaign will be the main focus of this class. Additionally, the history and development of Social Medias such as Facebook, YouTube, Twitter and LinkedIn will be explored as well as the many ethical and potential legal concerns that have arisen over these new forms of communication. Finally, the concept of Viral Marketing will be examined and how it allows a Social Message to explode a message to millions of users in a brief time.		
<b>MKTG 10104115</b>	<b>Capstone Campaign</b>	<b>3 Credits/Units</b>
The creation, execution and follow through of real-life campaigns will be the focus of this advanced class. Students will use current advertising tools in conjunction with a real business to research, design, create and implement a multi-media campaign. Previous knowledge of available advertising mediums including current social platforms (Twitter, Facebook, Hootsuite and other tools) are essential for this class. Students will be expected to work extensively outside of class time on the campaigns.		
<b>MKTG 10104125</b>	<b>Principles of Advertising</b>	<b>3 Credits/Units</b>
Students are introduced to the theory and practice of integrated marketing communications. All elements in the promotions mix are summarized but the major emphasis is on advertising. Students examine the characteristics of major media alternatives including radio, television, newspapers, magazines, outdoor, direct response and alternative media. Advertising research, planning and creativity are also explored and practiced.		
<b>MKTG 10104126</b>	<b>Public Relations</b>	<b>3 Credits/Units</b>
This course will focus on Public Relations fundamentals necessary for Integrated Marketing Communications. Various forms and styles of PR tools will be covered including Press Releases (traditional and social media press releases) Digital Media and Web PR, Press Kits and Press Rooms, Reputation Management, Crisis Communication, Cause Related Marketing, and Sponsorship.		
<b>MKTG 10104160</b>	<b>Sales Management</b>	<b>3 Credits/Units</b>
The role of the Manager in the Sales process is explored in this advanced sales class. Creating a sales program, developing your sales force, motivating sales people, and developing companies to be more selling focused will all be explored through research, case studies, practical applications and projects. Sales skills will be enhanced though the role of a strong Sales Manager.		
<b>MKTG 10104162</b>	<b>Mobile Marketing (Social Media)</b>	<b>3 Credits/Units</b>
Mobile internet usage continues to explode and it has been predicted that it will overtake desktop internet usage in the next five years. Successful businesses need to understand the current mobile landscape and how to harness the power of mobile marketing to reach key target markets. This survey course will examine how mobile marketing fits into your overall digital and social media strategy. We will investigate geo-marketing, localized marketing, designing for mobile media, mobile websites, mobile advertising, m-commerce and mobile spending, SMS and mobile apps. Students will develop a creative mobile marketing campaign that integrates with a traditional marketing plan.		
<b>MKTG 10104164</b>	<b>Marketing Digital Design</b>	<b>3 Credits/Units</b>
Through extensive hands-on experience website builder sites are explored. The conceptual and practical aspects of website design are emphasized. Participants are introduced to principles and practices of Web Usability and Accessibility requirements. Participants are actively		



engaged in creating a website.

**MKTG 10104165 Marketing Internship 3 Credits/Units**

Students are assisted in selecting a supervised work experience related to a specific area of marketing. A team consisting of the employer, the student intern and MATC instructor/advisor work together to plan the objectives of the work experience as well as evaluate the intern's performance. Available to Marketing program students only. Prior to taking this course, students must complete two full semesters of Marketing program coursework and an overall GPA of 2.0 or higher.

**MKTG 10104169 Internet Marketing 3 Credits/Units**

This introductory course is designed to acquaint students to the basic foundations of internet marketing as part of the marketing communication mix. Emphasis areas include inbound marketing, relevant content development, SEO (Search engine optimization), SEM, Google AdWords, simple dashboard Google Analytics, PPC, web content analysis and webvertising options.

**MKTG 10104180 International Marketing 3 Credits/Units**

Students explores how marketing strategies and tactics must be managed and adapted for success in different cultural, economic, geographic and political environments around the world. Students will develop marketing and management skills and perspectives in order to work effectively in the global marketplace.

**MKTG 10104187 Global Studies Seminar 3 Credits/Units**

This unique learning and travel experience gives students the opportunity to enhance their understanding of the global marketplace. Upon completion of the course and travel students will be familiar with the history, culture, social and business issues of the host country. Students will examine current trends and business practices relating to (but not limited to) management, marketing, hospitality and global strategies. Participation in this course requires travel to the host country. This experience is designed to help students develop a lifelong global mindset and to enhance abilities to communicate, work on international teams and think creatively.

**MKTG 10104188 Marketing Portfolio 1 Credits/Units**

E-portfolios are essential for today's job hunting marketplace. This course will help you to organize the marketing projects you have worked on throughout the program into an e-portfolio format. Additionally you will add other collateral materials to your portfolio including a resume that includes e-screening words for marketing, professional reference page and cover letter, and e-tabs within your portfolio. Your project collection on a thumb drive or your student drive will assist you with your portfolio preparation.

Must be taken in final semester of Marketing program or by obtaining Consent of Instructor.

**MKTG 10104802 Honors - Marketing 3 Credits/Units**

Allows a qualified Honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an Honors Project Contract. Credits 1 – 3. May be taken more than once.

Pre-requisite: 1) minimum of 12 credits at Madison College, a 3.5 or higher GPA, and a previous or concurrent course with Honors Instructor; or 2) High School GPA of 3.5 or higher, and permission of Honors Instructor.

**MTLFAB 31457301 Fabrication 1 2 Credits/Units**

In Fabrication 1 students will be introduced to the fundamentals of metal cutting and forming. Students will create assemblies from industrial drawings conforming to industry standards. Emphasis will be placed on the safety, basic layout techniques, bending calculations, and operation of manual and mechanical cutting/forming equipment.

**MTLFAB 31457302 Fabrication 2 2 Credits/Units**

In Fabrication 2 students will translate the competencies established in Fabrication 1 to programmable forming equipment. Students will create assemblies from industrial drawings conforming to industry standards. Emphasis will be placed on safe operation procedures, the selection of tooling, and calculations required to properly operate programmable forming equipment.

**MTLFAB 31457303 Fabrication 3 2 Credits/Units**

Fabrication 3 builds upon the competencies established in the prior Fabrication courses. Students will create assemblies from industrial drawings conforming to industry standards. Emphasis will expand upon operational safety, tooling types and selection, multiple types and combinations of bending, as well as assembly techniques.

**MTLFAB 31457304 Fabrication 4 2 Credits/Units**

The Fabrication Capstone course utilizes all the program competencies learned and combines them into final projects. Students will choose from established projects and create material lists, operational procedures, fabricate components, assemble, join, and finish.

All assemblies must be inspected per industry standards.

**MTLFAB 31457305 CNC Operation 2 Credits/Units**

The CNC Operation course will develop student's ability to operate Computerized Numerical Control cutting equipment. Students will be trained in safety, program selection, operational procedures, editing and the basic maintenance of the equipment. Students will be introduced to programing methods applicable to each OEM manufacturer.

**MTLFAB 31457306 CNC Programming 2 Credits/Units**

The CNC programing class students will develop ability to generate component programs utilizing computer software. Students will generate shape geometry, create parts, develop nests and cut parts.

**MTLFAB 31457307 Jig and Fixture Development 2 Credits/Units**

Students will develop the concepts of design and building simple to intermediate jigs and assembly fixtures. Students will use computer software and metal fabrication equipment to build jig and fixtures for projects used in the class.

**MUSIC 20805205 Class Voice 1 1 Credits/Units**

Class Voice 1 is a fundamental course in singing which includes principles of voice production, correct breathing, tone placement, resonance,







perspectives will be examined to enhance understanding of live performance experiences in both theater and music. Based on site-specific study, students will apply aesthetic values to the description of music and theater styles.

**MUSIC 20805260**                      **Music Theory Fundamentals**                      **3 Credits/Units**  
Music Theory Fundamentals serves as an introduction to Western musical notation and aural skills. Through a systematic study of musical vocabulary, rhythm, melody, and harmony, students will acquire the skills necessary in order to visually recognize, aurally identify, transcribe, analyze and compose music according to standards of Western notation.

This course may also serve as preparation for Theory 1 (20-805-261) and Aural Skills 1 (20-805-267). Open to all students.

**MUSIC 20805261**                      **Music Theory 1**                      **3 Credits/Units**  
Through a study of melodic and harmonic compositional language, students will analyze and compose music in the style of the common practice period. Students complete a final composition project exhibiting principles of voice leading. Requires literacy in Western musical notation, understanding of keys, and major and minor scales.

Students must also register for Aural Skills 1 (20805267).

**MUSIC 20805262**                      **Music Theory 2**                      **3 Credits/Units**  
This course further develops the content of Music Theory 1 by expanding diatonic harmonic structures to include seventh chords and non-diatonic harmonies. Students will analyze music featuring tonal modulation. Students will also analyze musical forms employing both micro- and macro-level terminology. Theoretical skills will be applied to practical keyboard exercises. Completion of a final composition project in homophonic texture and in the prevailing style of the common practice period is required.

**MUSIC 20805263**                      **Jazz History**                      **3 Credits/Units**  
This course provides an introductory survey of major jazz performers, styles, and compositions in the 20th and 21st centuries. Students will examine musical developments in the genre of jazz as they relate to major historical events, social movements, and cultural trends in the United States. Students will examine historical recordings to develop listening skills and distinguish specific characteristics among a variety of jazz styles. Attendance at two live performances separate from regular class meetings is required.

**MUSIC 20805267**                      **Aural Skills 1**                      **1 Credits/Units**  
Students will apply music reading and analytical skills learned in co-requisite Music Theory 1 to the performance and transcription of rhythm, melody and harmony. Students will sing simple melodies and rhythms alone and in ensemble, sing harmonies in ensemble, and notate comparable melodies, rhythms and harmonic progressions through aural recognition.

Co-requisite: 20-805-261.

**MUSIC 20805268**                      **Aural Skills 2**                      **1 Credits/Units**  
Students will apply music reading and analytical skills learned in co-requisite Music Theory 2 to the performance and transcription of rhythm, melody and harmony. Students will sing intermediate tonal melodies and perform multi-part rhythms alone and in ensemble, sing harmonies in ensemble, and notate comparable melodies, rhythms and harmonic progressions through aural recognition.

**MUSIC 20805270**                      **Madison College Chorale**                      **1 Credits/Units**  
Madison College Chorale is a chorus of mixed voices open to those who enjoy singing—all college students, staff, faculty and general public. It focuses on music of diverse cultures and times. MATC Chorale provides an opportunity to participate in learning and performing choral music.

**MUSIC 20805271**                      **Madison College Chorale 2**                      **1 Credits/Units**  
Madison College Chorale 2 is a continuation of choral group for mixed voices open to those who enjoy singing—all college students, staff, faculty and general public. It focuses on music of diverse cultures and times. Madison College Chorale 2 provides an opportunity to participate in learning and performing choral music. No auditions.

**MUSIC 20805272**                      **Madrigal Choir**                      **1 Credits/Units**  
Madrigal Choir is a small vocal ensemble that sings and performs choral repertoire from madrigals and other choral literature.

Corequisite: enrollment in MATC Chorale.

**MUSIC 20805278**                      **Hist Pop/Rock Music**                      **3 Credits/Units**  
History of Popular & Rock Music explores the history of popular and rock music in the United States from 1954 to the present, focusing on significant music genres, important artists/bands, the role of identity in music, and social history. The course intends to promote creative and critical thinking by emphasizing music literature, form and style analysis, and social and cultural criticism. Through our discourse, we will strive to connect musical and social histories by situating popular works/performances within the complex and volatile landscape of Western cultures throughout the last century to present day.

**MUSIC 20805279**                      **World Drumming Ensemble 1**                      **1 Credits/Units**  
High-energy ensemble participation focuses on world drumming techniques and styles, ensemble listening skills, and techniques for creative improvisation. Warm-up activities, dexterity exercises, traditional music, and contemporary compositions lead a public performance at the end of the semester. Previous drumming experience and the ability to read music are not required.

**MUSIC 20805280**                      **World Drumming Ensemble 2**                      **1 Credits/Units**  
The World Drumming Ensemble is a high-energy ensemble that focuses on world drumming techniques and styles, ensemble listening skills, and techniques for creative improvisation. Warm-up activities, dexterity exercises, traditional music, and contemporary compositions lead a public performance at the end of the semester.

**MUSIC 20805281**                      **World Drumming Ensemble 3**                      **1 Credits/Units**  
The World Drumming Ensemble is a high-energy ensemble that focuses on world drumming techniques and styles, ensemble listening skills, and techniques for creative improvisation. Warm-up activities, dexterity exercises, traditional music, and contemporary compositions lead a public performance at the end of the semester.



- MUSIC 20805282**                      **World Drumming Ensemble 4**                      **1 Credits/Units**  
World Drumming Ensemble is a high-energy ensemble that focuses on world drumming techniques and styles, ensemble listening skills, and techniques for creative improvisation. Warm-up activities, dexterity exercises, traditional music, and contemporary compositions lead a public performance at the end of the semester.
- NATSCI 20806299**                      **Independent Study - Science (Renewable Energy Topic)**                      **1 Credits/Units**  
Students will work independently on a science project under the supervision of an instructor. Instructor permission is required.
- NATSCI 20806807**                      **Honors-Renewable Energy**                      **2 Credits/Units**  
Allows a qualified Honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an Honors Project Contract. Credits 1 – 3. May be taken more than once.
- Pre-requisite: 1) minimum of 12 credits at Madison College, a 3.5 or higher GPA, and a previous or concurrent course with Honors Instructor; or 2) High School GPA of 3.5 or higher, and permission of Honors Instructor.
- NRSAD 10543101**                      **Nursing Fundamentals - Associate Degree Nursing Program**                      **2 Credits/Units**  
This course focuses on basic nursing concepts that the beginning nurse will need to provide care to diverse patient populations. Current and historical issues impacting nursing will be explored within the scope of nursing practice. The nursing process will be introduced as a framework for organizing the care of patients with alterations in cognition, elimination, comfort, grief/loss, mobility, integument, and fluid/electrolyte balance.
- NRSAD 10543102**                      **Nursing Skills - Associate Degree Nursing Program**                      **3 Credits/Units**  
This course focuses on development of clinical skills and physical assessment across the lifespan. Content includes mathematic calculations and conversions related to clinical skills, blood pressure assessment, aseptic technique, wound care, oxygen administration, tracheostomy care, suctioning, management of enteral tubes, basic medication administration, glucose testing, enemas, ostomy care, and catheterization. In addition, the course includes techniques related to obtaining a health history and basic physical assessment skills using a body systems approach.
- NRSAD 10543103**                      **Nursing Pharmacology - Associate Degree Nursing Program**                      **2 Credits/Units**  
This course introduces the principles of pharmacology, including drug classifications and their effects on the body. Emphasis is on the use of the components of the nursing process when administering medications.
- NRSAD 10543104**                      **Nsg: Intro Clinical Practice**                      **2 Credits/Units**  
This introductory clinical course emphasizes basic nursing skills and application of the nursing process in meeting the needs of diverse clients. Emphasis is placed on performing basic nursing skills, the formation of nurse-client relationships, communication, data collection, documentation, and medication administration.
- NRSAD 10543105**                      **Nursing Health Alterations - Associate Degree Nursing Program**                      **3 Credits/Units**  
This course elaborates upon the basic concepts of health and illness as presented in Nursing Fundamentals. It applies theories of nursing in the care of clients through the lifespan, utilizing problem solving and critical thinking. This course will provide an opportunity to study conditions affecting different body systems and apply therapeutic nursing interventions. It will also introduce concepts of leadership, team building and scope of practice.
- NRSAD 10543106**                      **Nursing Health Promotion - Associate Degree Nursing Program**                      **3 Credits/Units**  
This course will cover topics related to health promotion in the context of the family. We will cover nursing care of the developing family, which includes reproductive issues, pregnancy, labor and delivery, post-partum, the newborn, and the child. Recognizing the spectrum of healthy families we will discern patterns associated with adaptive and maladaptive behaviors applying mental health principles. An emphasis is placed on teaching and supporting healthy lifestyle choices. Nutrition, exercise, stress management, empowerment, and risk reduction practices are highlighted. Study of the family will cover dynamics, functions, discipline styles and stages of development.
- NRSAD 10543107**                      **Nursing: Clinical Care Across Lifespan**                      **2 Credits/Units**  
This clinical experience applies nursing concepts and therapeutic interventions to clients across the lifespan. It also provides an introduction to concepts of teaching and learning. Extending care to include the family is emphasized.
- NRSAD 10543108**                      **Nursing: Introduction to Clinical Care Management**                      **2 Credits/Units**  
This clinical experience applies nursing concepts and therapeutic nursing interventions to groups of clients. It also provides an introduction to leadership, management and team building.
- NRSAD 10543109**                      **Nursing: Complex Health Alterations 1**                      **3 Credits/Units**  
This class prepares the learner to expand knowledge from previous courses in caring for clients with alterations in musculoskeletal, cardiovascular, respiratory, endocrine, and hematologic systems as well as clients with fluid/electrolyte and acid-base imbalance, and alterations in comfort.
- NRSAD 10543110**                      **Nursing: Mental Health Community Concepts**                      **2 Credits/Units**  
This class will cover topics related to the delivery of community and mental health care. Specific health needs of individuals, families and groups will be addressed. Attention will be given to diverse and at-risk populations. Mental health concepts will concentrate on adaptive/maladaptive behaviors and specific mental health disorders. Community resources will be examined in relation to specific types of support offered to racial, ethnic, economically diverse individuals and groups.
- NRSAD 10543111**                      **Nursing: Intermediate Clinical Practice**                      **3 Credits/Units**  
This intermediate level clinical course develops the RN role when working with clients with complex health care needs. A focus of the course is developing skills needed for managing multiple clients and priorities. Using the nursing process, students will gain experience in adapting nursing practice to meet the needs of clients with diverse needs and backgrounds.
- NRSAD 10543112**                      **Nursing Advanced Skills**                      **1 Credits/Units**  
This course focuses on the development of advanced clinical skills. Content includes advanced IV skills, blood product administration, chest



tube systems, basic EKG interpretation and nasogastric/feeding tube insertion.

- NRSAD 10543113                      Nursing: Complex Health Alterations 2                      3 Credits/Units**  
This course prepares the learner to expand knowledge and skills from previous courses in caring for clients with alterations in the immune, neuro-sensory, musculoskeletal, gastrointestinal, hepatobiliary, renal/urinary and the reproductive systems. The learner will also focus on management of care for clients with high risk perinatal conditions, high risk newborns and the ill child. Synthesis and application of previously learned concepts will be evident in the management of clients with critical/life threatening situations.
- NRSAD 10543114                      Nursing: Management and Professional Concepts                      2 Credits/Units**  
This advanced clinical course covers nursing management and professional issues related to the role of the RN. Emphasis is placed on preparing for the RN practice.
- NRSAD 10543115                      Nursing: Advanced Clinical Practice                      3 Credits/Units**  
This advanced clinical course requires the student to integrate concepts from all previous courses in the management of groups of clients facing complex health alterations. Students will have the opportunity to further develop critical thinking skills using the nursing process in making clinical decisions. Continuity of care through interdisciplinary collaboration is emphasized.
- NRSAD 10543116                      Nursing Clinical Transition                      2 Credits/Units**  
This clinical experience integrates all knowledge learned in the previous courses in transitioning to the role of the graduate nurse. The course promotes relatively independent clinical decisions, delegation, and working collaboratively with others to achieve client and organizational outcomes.
- NRSAD 10543127                      Paramedic to AD Theory 1                      3 Credits/Units**  
This course will focus on basic nursing concepts that the beginning nurse will need to provide care to diverse populations. The nursing process will be introduced as a framework for organizing care of patients with alterations in cognition, elimination, comfort, grief/loss, mobility, skin integrity, and related principles of pharmacology.
- NRSAD 10543128                      Paramedic to AD Theory 2                      3 Credits/Units**  
This course will cover topics related to health promotion in the context of the family. Nursing care of the developing family topics including reproductive, pregnancy, labor and delivery, postpartum, and the newborn child will be covered. Patterns of adaptive and maladaptive behaviors, family dynamics, and grief and loss will be addressed utilizing mental health principles. An emphasis is placed on teaching and supporting healthy lifestyle changes. Nutrition, exercise/stress management, and risk reduction practices are addressed. Perioperative, malignancy, and chronic illness concepts are reviewed with related pharmacology concepts.
- NRSAD 10543129                      Paramedic to AD Skills                      2 Credits/Units**  
This course focuses on development of basic skills, clinical skills, and physical assessment across the lifespan. Content includes basic supportive and hygienic cares, mathematic calculations and conversions related to clinical skills, aseptic technique, wound care, tracheostomy care and suctioning, the management of enteral tubes, medication administration, enemas, ostomy care, and physical assessment skills using a body systems approach.
- NRSAD 10543130                      Paramedic to RN Clinical                      2 Credits/Units**  
This clinical course emphasizes basic nursing skills and application of the nursing process to clients and families across the lifespan. Emphasis is placed on assessment, relationships, communication, data collection, documentation, and medication administration.
- NRSAD 10543164                      Orientation Associate Degree Nursing                      3 Credits/Units**  
Introduction to the Associate Degree Nursing Program for licensed practical nurses. Prerequisite: Admission to the ADN program and permission of the program director.
- NRSAD 10543291                      Community Cultural Health Care                      3 Credits/Units**  
This theory and clinical course promotes an understanding of diverse cultures by looking at cultures and healthcare systems through classroom activity and a supervised field experience within a host country. The field experience host country will expose students to health issues, needs, services and systems within the host country. Students will have opportunities to prepare and present health education, provide health care and share in the history and epidemiology of the identified host country. This course requires students to participate in a "Global Studies Clinical" held when the host country is approved.
- NRSAD 30543300                      Nursing Assistant                      3 Credits/Units**  
Prepares students for employment as nursing assistants. Students learn communication skills, basic nursing and personal care skills, clients' rights and care of clients with dementias. A supervised clinical experience with direct client care is a major component of the course. Upon completion, the student is eligible to take the certification for the Wisconsin Nurse Aide Registry.
- Enrollment Requirements: Must be 16+ years old, have completed Background Check, Health Screening and Reading Requirements.
- NRSAD 31543301                      Nursing Fundamentals - Practical Nursing Program                      2 Credits/Units**  
This course focuses on basic nursing concepts that the beginning nurse will need to provide care to diverse patient populations. Current and historical issues impacting nursing will be explored within the scope of nursing practice. The nursing process will be introduced as a framework for organizing the care of patients with alterations in cognition, elimination, comfort, grief/loss, mobility, integument, and fluid/electrolyte balance.
- NRSAD 31543302                      Nursing Skills - Practical Nursing Program                      3 Credits/Units**  
This course focuses on development of clinical skills and physical assessment across the lifespan. Content includes mathematic calculations and conversions related to clinical skills, blood pressure assessment, aseptic technique, wound care, oxygen administration, tracheostomy care, suctioning, management of enteral tubes, basic medication administration, glucose testing, enemas, ostomy care, and catheterization. In addition the course includes techniques related to obtaining a health history and basic physical assessment skills using a body systems approach.
- NRSAD 31543303                      Nursing Pharmacology - Practical Nursing Program                      2 Credits/Units**





This course introduces the principles of pharmacology, including drug classifications and their effects on the body. Emphasis is on the use of the components of the nursing process when administering medications.

**NRSAD 31543304                      Nursing: Intro to Clinical Practice                      2 Credits/Units**

This introductory clinical course emphasizes basic nursing skills and application of the nursing process in meeting the needs of diverse clients. Emphasis is placed on performing basic nursing skills, the formation of nurse-client relationships, communication, data collection, documentation, and medication administration.

**NRSAD 31543305                      Nursing Health Alterations - Practical Nursing Program                      3 Credits/Units**

This course elaborates upon the basic concepts of health and illness as presented in Nursing Fundamentals. It applies theories of nursing in the care of clients through the lifespan, utilizing problems solving and critical thinking. This course will provide an opportunity to study conditions affecting different body systems and apply therapeutic nursing interventions. It will also introduce concepts of leadership, team building, and scope of practice.

**NRSAD 31543306                      Nursing Health Promotion - Practical Nursing Program                      3 Credits/Units**

This course will cover topics related to health promotion in the context of the family. We will cover nursing care of the developing family, which includes reproductive issues, pregnancy, labor and delivery, post-partum, the newborn, and the child. Recognizing the spectrum of healthy families we will discern patterns associated with adaptive and maladaptive behaviors applying mental health principles. An emphasis is placed on teaching and supporting healthy lifestyle choices. Nutrition, exercise, stress management, empowerment, and risk reduction practices are highlighted. Study of the family will cover dynamics, functions, discipline styles, and stages of development.

**NRSAD 31543307                      Nursing: Clinical Care Across the Lifespan                      2 Credits/Units**

This Clinical experience applies nursing concepts and therapeutic interventions to clients across the lifespan. It also provides an introduction to concepts of teaching and learning. Extending care to include the family is emphasized.

**NRSAD 31543308                      Nursing: Intro to Clinical Care Management                      2 Credits/Units**

This clinical experience applies nursing concepts and therapeutic nursing interventions to groups of clients. It also provides an introduction to leadership, management and team building.

**NRSAD 31543356                      Growth and Development                      2 Credits/Units**

Studies growth and development from conception through the older adult, based on Erickson's conceptualization of the developmental process through the entire life cycle. Implications for nursing practice in caring for middle and older age individuals in a variety of settings are explored. Prerequisites: one year each of high school math and science with a grade of C or better in each course, each semester.

**OPTOMET 31516301                      Ophthalmic Pre-Testing                      3 Credits/Units**

Covers the history of optometry, relationships between optometry, ophthalmology and opticianry and various paraprofessional careers in vision care. The course involves the study of and practical experience in patient pre-testing such as case history, visual acuity, color vision, pupil evaluation and depth perception as well as the specialized testing procedures such as keratometry and blood pressure.

**OPTOMET 31516305                      Basic Optical Concepts                      3 Credits/Units**

Covers the properties of light and the function of a lens in vision correction. Included is a review of basic math needed in vision care and the physiological aspects of vision. This course begins the study of the neutralization and verification of spectacle lens powers, to include spherical, cylindrical and prism lenses.

**OPTOMET 31516315                      Ocular Anatomy                      2 Credits/Units**

Familiarizes the optometric technician with the form and function of the human eye. The foundation of the lecture material is the anatomy of the eye, but we will discuss the physiology and function of the eye as much as possible. We will also discuss the actions and uses of diagnostic pharmaceutical agents, as their function is based on interference with normal ocular physiology. This course also covers optometric terminology as well as prescription translation.

**OPTOMET 31516325                      Optical Dispensing 1                      3 Credits/Units**

Covers frame definition, parts and types of frames, measurement of frames and lenses, alignment of frames, inserting and removing lenses, introduction to dispensing of eyewear and frame repairs. This is a hybrid course that meets weekly for 2 hours classroom, 2 hours lab and 1 hour online.

**OPTOMET 31516326                      Optical Dispensing 2                      2 Credits/Units**

This course assists the student in developing a mastery of the alignment and adjustment of eyewear. It also covers the various lens materials, multifocal styles and lens tints.

**OPTOMET 31516327                      Clinical Ophthalmic Procedures                      2 Credits/Units**

This course prepares the technician to assist the doctor in advanced office techniques in the area of ultrasound, in-office surgical procedures, case history, scribing, instrument maintenance and repair and ophthalmic imaging. Students will also study various systemic diseases and their effect on the eye. The performance of the various skills is emphasized in the laboratory sessions.

**OPTOMET 31516330 Contact Lenses 3 Credits/Units**

Gives the student in-depth exposure to the technical aspects of clinical contact lens practice. Lecture and laboratory experiences emphasize lens verification, patient education and evaluation.

**OPTOMET 31516335                      Ophthalmic Specialty Testing                      3 Credits/Units**

Provides the student experience and knowledge in areas of special vision care procedures: subjective refraction, visual field testing, slit lamp, Goldmann and non-contact tonometry, basic concepts of orthoptics and the treatment of eye diseases including instillation of eye medications and eye patching. Patient instruction and assistance are emphasized in laboratory sessions.

Prerequisites: 31-516-301, 31-516-305 and 31-516-315.

**OPTOMET 31516339                      Human Relations - Optometric Technician Program                      1 Credits/Units**



Introduces students to their personal and vocational responsibilities as an optometric technician. The development of communication skills one needs as an optometric technician are introduced. The ethical and legal responsibilities of an optometric technician are defined. Time management techniques will be presented. Basic concepts of stress and how it affects behavior, and stress management are discussed. The course also covers writing a job application letter and resume as well as interview techniques. This is a hybrid course that meets weekly for 1 hour classroom and 1 hour online.

**OPTOMET 31516340 Patient Relations/Pract Manage 2 Credits/Units**  
Provides a study of front office management techniques including telephone and appointment book management, filing, recall systems, bookkeeping and insurance claim processing. This is a hybrid course that meets weekly for 1 hour classroom and 1 hour online.

**OPTOMET 31516345 Preclinical 2 Credits/Units**  
Prepares students for clinical affiliation by having them complete vision screenings on patients from the college. Class discussions are held analyzing the results of the screening as well as the students' performance.

**OPTOMET 31516346 Preclinic A 1 Credits/Units**  
Prepares students for clinical work. Students explore their professional responsibilities of providing quality eye care. Students then participate in class discussions, explore variations of visual screenings and student responsibilities.

**OPTOMET 31516347 Preclinic B 1 Credits/Units**  
Prepares students for clinical work. Students perform screenings on patients and then participate in class discussions. Explore variations of visual screenings and student responsibilities.

**OPTOMET 31516350 Clinical Experience 3 Credits/Units**  
Students participate 40 hours per week for six weeks of assigned clinical experience in an optometric or clinic setting. The student is expected to achieve specific educational objectives determined for this experience.

Prerequisite: satisfactory completion of all first-semester courses plus enrollment in second-semester courses.

**OPTOMET 31516351 Clinical Experience 2 3 Credits/Units**  
Students participate 34 hours per week for eight weeks of assigned clinical experience in an ophthalmic clinic setting. The student is expected to achieve specific educational objectives determined for this experience.

Pre-requisite: satisfactory completion of all courses (first and second semester).

**OTASST 10514171 Introduction to Occupational Therapy 3 Credits/Units**  
Provides an overview of history, philosophy, ethics, and scope of occupational therapy practice. Examines legal responsibilities, professional resources, and organization. Students practice basic skills related to therapeutic relationships and determine their own suitability to a career in occupational therapy.

Pre-requisites: Algebra, Chemistry and Biology.

Co-Requisites: 10-514-172, 10-514-173, 20-806-206

**OTASST 10514172 Medical and Psychosocial Conditions 3 Credits/Units**  
Introduces medical and psychosocial conditions as they relate to occupational therapy practice. Topics include etiology, symptomology, treatment and contraindications.

Pre-requisites: Algebra, Chemistry and Biology. Co-Requisites: 10-514-171, 10-514-173, and 20-806-206

**OTASST 10514173 Activity Analysis and Application 2 Credits/Units**  
Provides instruction in activity analysis with hands on experience in activities across the lifespan. Students apply the teaching/learning process and adhere to safety regulations.

Pre-requisites: Algebra, Chemistry and Biology. Co-Requisites: 10-514-171, 10-514-172, and 20-806-206

**OTASST 10514174 OT Performance Skills 4 Credits/Units**  
Emphasis on the development of skills related to assessment and intervention in the areas of sensory, motor, cognition and communication.

**OTASST 10514175 Psychosocial Practice 3 Credits/Units**  
Examines the role of the OTA in the service delivery to individuals affected by mental health conditions. Provides opportunity for development of skills related to psychosocial assessment and interventions.

Pre-requisites: 10-514-171, 10-514-172, 10-514-173 & 20-806-206. Co-requisites: 10-514-174, 10-514-176, 10-514-178

**OTASST 10514176 OT Theory and Practice 3 Credits/Units**  
Examines the theoretical foundations that guide OT practice. Apply group dynamics and demonstrate leadership skills.

**OTASST 10514177 Assistive Technology and Adaptations 2 Credits/Units**  
Explores technologies that support delivery of OT services. Emphasis on competency related to computer skills, ergonomics, adaptive devices, and environments.

Prerequisites: 10-514-174, 10-514-175, 10-514-176, 10-514-178. Co-requisites: 10-514-179, 10-514-182, 10-514-183, 10-514-184.

**OTASST 10514178 Geriatric Practice 3 Credits/Units**  
Examines the role of the OT in the service delivery to elders in a variety of settings. Includes analysis of the impact of age-related changes and disease processes on the function of the elderly.



Pre-requisites:10-514-171, 10-514-172,10-514-173 & 20-806-206. Co-requisites: 10-514-174, 10-514-175, 10-514-176

**OTASST 10514179                      Community Practice                      2 Credits/Units**  
Explores practice options and interventions for occupation-based community practice. Students articulate the unique role of occupational therapy within the community.

Prerequisites: 10-514-174, 10-514-175, 10-514-176, 10-514-178. Co-requisites: 10-514-177, 10-514-182, 10-514-183, 10-514-184

**OTASST 10514182                      Physical Rehabilitation Practice                      3 Credits/Units**  
Explores interventions relative to major physical disability diagnoses seen in OT practice. Evaluation, treatment interventions, and documentation are emphasized relative to the biomechanical, neurodevelopmental and rehabilitative approaches to practice.

Prerequisites: 10-514-174, 10-514-175, 10-514-176, 10-514-178. Co-requisites: 10-514-177, 10-514-179, 10-514-183, 10-514-184.

**OTASST 10514183                      Pediatric Practice                      3 Credits/Units**  
Explores interventions relative to major pediatric diagnoses seen in OT practice. Evaluation, treatment interventions, and documentation are emphasized within the context of the child's occupations.

Prerequisites: 10-514-174, 10-514-175, 10-514-176, 10-514-178. Co-requisites: 10-514-177, 10-514-179, 10-514-182, 10-514-184.

**OTASST 10514184                      OTA Fieldwork 1                      2 Credits/Units**  
Integrate classroom theory and practice into a Fieldwork Level I experience. Provides experiences to assist in the development of communication, professional and observational skills.

**OTASST 10514185                      OT Practice and Management                      2 Credits/Units**  
Provides opportunities to practice clinical management skills, continuous quality improvement measurement, and administrative concepts and procedures. Students create a professional development plan.

**OTASST 10514186                      OTA Fieldwork IIA                      5 Credits/Units**  
Develop skills and behaviors necessary for entry-level occupational therapy assistant practice. Provides a different clinical practice setting than OTA Fieldwork IIB.

**OTASST 10514187                      OTA Fieldwork IIB                      5 Credits/Units**  
Develop skills and behaviors necessary for entry level occupational therapy assistant practice. Provides a different clinical practice setting than OTA Fieldwork IIA.

**PAINTDEC 50424590                      Tech Paint Sem 1                      2 Credits/Units**  
This course description is unavailable at this time. Please contact the center offering the course for more information.

**PAINTDEC 50424591                      Tech Paint Sem 2                      2 Credits/Units**  
This course description is unavailable at this time. Please contact the center offering the course for more information.

**PAINTDEC 50424592                      Tech Paint Sem 3                      2 Credits/Units**  
This course description is unavailable at this time. Please contact the center offering the course for more information.

**PAINTDEC 50424593                      Tech Paint Sem 4                      2 Credits/Units**  
This course description is unavailable at this time. Please contact the center offering the course for more information.

**PAINTDEC 50424594                      Tech Paint Sem 5                      2 Credits/Units**  
This course description is unavailable at this time. Please contact the center offering the course for more information.

**PAINTDEC 50424595                      Tech Paint Sem 6                      2 Credits/Units**  
This course description is unavailable at this time. Please contact the center offering the course for more information.

**PARALEG 10110101                      Introduction to Paralegalism and Legal Ethics                      3 Credits/Units**  
Provides students with an introduction to the paralegal profession, the American legal system, legal ethics, legal terminology, research, and the common law of torts.

**PARALEG 10110102                      Civil Litigation I                      3 Credits/Units**  
Outlines the initial stages of civil litigation, including initial client contact, investigation, pleadings and motions.

**PARALEG 10110103                      Civil Litigation 2                      3 Credits/Units**  
Covers the civil litigation procedure during discovery, trial, and appeal.

**PARALEG 10110104                      Legal Research                      3 Credits/Units**  
Provides students with an application of legal research techniques, using traditional and computer-assisted resources. Involves extensive hands-on legal research exercises and document preparation exercises.

**PARALEG 10110105                      Legal Writing                      3 Credits/Units**  
Concentrates on the skills required for legal writing and analysis.

**PARALEG 10110106                      Family Law                      3 Credits/Units**  
Family Law covers the basic legal concepts in the area of family relations, particularly divorce.

**PARALEG 10110107                      Legal Aspects of Business Organizations                      3 Credits/Units**  
Acquaints students with legal aspects of the formation, operation, and dissolution of the five principal types of business organizations utilized



in the United States.

**PARALEG 10110108                      E-Discovery and Digital Tools                      2 Credits/Units**

This course provides an introduction to litigation software programs which are being used in law offices, corporations, and government law departments nationwide. Two main types of software are used for instruction: (1) case management software which is used to organize various aspects of a lawsuit including events, parties, witnesses, issues, and research; and (2) E-Discovery software utilized for document review and coding. Hypothetical litigation scenarios will be used to simulate actual pretrial EDiscovery exercises.

**PARALEG 10110110                      Real Estate Law - Paralegal                      3 Credits/Units**

Includes drafting real estate descriptions, listing contracts, offers to purchase, deeds, land contracts, mortgages, foreclosure pleadings, transfer tax returns, and leases.

**PARALEG 10110114                      Administration Of Estates - Paralegal Program                      3 Credits/Units**

Basic legal concepts surrounding powers of attorney, wills, trusts, and intestacy, including probate forms and procedures as well as inheritance tax returns are covered in the Administration of Estates class.

**PARALEG 10110115                      Administrative Law                      3 Credits/Units**

Administrative Law is designed to acquaint students with the process by which government agencies make and administer rules and regulations as well as how agencies adjudicate cases and controversies involving those rules.

**PARALEG 10110122                      Bankruptcy Law                      3 Credits/Units**

Considers pre and post-judgment collection rights, creditor protection devices, State and Federal consumer protection laws, and Federal bankruptcy laws.

**PARALEG 10110141                      Computer Applications - Legal                      3 Credits/Units**

Students develop technology skills using various law office computer applications.

**PARALEG 10110142                      Paralegal Internship                      3 Credits/Units**

Students gain practical experience working in a legal environment under the supervision of an attorney or other qualified professional for a minimum of 140 hours.

**PARALEG 10110160                      Employment Law - Paralegal                      3 Credits/Units**

Employment Law covers the analysis of federal and state laws governing employment relationships, job discrimination, sexual harassment, workplace privacy, labor standards, and human resource management.

**PARALEG 10110168                      Criminal Law 1 - Paralegal                      3 Credits/Units**

Provides an introduction to substantive and procedural criminal law emphasizing the elemental analysis of criminal statutes, the drafting of prosecutorial documents, and the Constitutional rights of defendants.

**PARALEG 10110171                      Law & Contemporary Problems                      3 Credits/Units**

Students explore the following content areas of immigration law: interview techniques and case management; temporary visas for business, pleasure, investing, studying, and employment; family-based permanent residency; employment-based permanent residency; political asylum; refugee status; citizenship; and the appeal process.

**PARALEG 10110173                      Contract Law in a Global Economy                      3 Credits/Units**

This survey course explores the common law of contracts, contracts of sale under Article 2 of the UCC, and the legal issues and risks that affect business transactions in the global marketplace.

**PARALEG 10110175                      Orientation to the Paralegal Profession                      1 Credits/Units**

This course will (i) introduce students to the paralegal profession; (ii) acquaint students with the classes offered in the paralegal program; (iii) provide students with tools for success in the paralegal program and the paralegal career field; (iv) administer the required paralegal program entrance keyboarding test; and (v) advise and enroll students in their fall semester courses.

**PARALEG 10110176                      Career Building Techniques - Paralegal                      2 Credits/Units**

This course will focus on internship and career strategies; effective portfolios, resumes and cover letter; the internship experience; interview techniques; finding an internship site including sites for students interested in receiving the Program's International Certificate; job hunting resources and alternative career paths; strategies for success in the work place; and advancing in your career; and getting your next job.

**PHILOS 10809166                      Intro to Ethics: Theory & App                      3 Credits/Units**

This course provides a basic understanding of the theoretical foundations of ethical thought. Diverse ethical perspectives will be used to analyze and compare relevant issues. Students will critically evaluate individual, social and/or professional standards of behavior, and apply a systematic decision-making process to these situations.

**PHILOS 20809258                      Philosophy Through Film                      3 Credits/Units**

This course is a general introduction to philosophy for students who may or may not be interested in taking any further philosophy classes. It will use the uniquely vivid and compelling medium of film to introduce students to important philosophical questions about such things as personal identity, consciousness, ethics and morality, freewill and determinism, the limits of knowledge, time travel, and the possibility of intelligent machines. Readings that explore the topics introduced through the assigned films will be drawn from a range of authors from both Western and non-Western philosophical traditions. Students' ability to think critically and creatively will be developed through the exploration of proposed answers to various philosophical questions with an emphasis on how to evaluate the reasons given in support of and in opposition to proposed answers.

**PHILOS 20809259                      Classics in Philosophy                      3 Credits/Units**

This course examines influential Ancient Greek classical texts of philosophy (in translation) by such writers as Plato, Aristotle, and the Hellenistic philosophers. Examples of the texts are: Plato's Republic, Aristotle's Nicomachean Ethics, and Marcus Aurelius' Meditations. Learners will be introduced to a range of important ideas, arguments, and theories advanced by these philosophers.







created in this course may be used in final portfolios.

**PHOTO 10203120                      Lighting Technique                      2 Credits/Units**  
Introduction to the laws of light, learning the qualities of natural and artificial light sources. Students will acquire specific skills in these areas: hard and soft light; lighting direction; incident and reflective exposure determination; lighting for shape and texture; lighting glassware; lighting reflective subjects; basic lighting for simple portraiture; and operation of professional lighting equipment in the studio.

**PHOTO 10203121                      Commercial Photography 1                      3 Credits/Units**  
Professional digital photography with an emphasis on the production of photographic illustration of high quality for use in advertising, promotion and print ad. It combines lectures and demonstrations along with practical experience. Students will polish their photographic skills while developing additional skills in commercial photography.

**PHOTO 10203124                      Portrait Photography                      2 Credits/Units**  
Theory and principles of professional digital portrait photography. Studio and environmental portraiture. Emphasis on lighting, posing and character analysis.

**PHOTO 10203125                      Business Of Photography                      1 Credits/Units**  
This course is designed to help students understand the basic principles of creating a photo business. Throughout the semester students will research and create their own business plans. Areas such as sales revenue forecast, marketing, overhead and capital spending plan will be explored.

**PHOTO 10203126                      Advanced Digital Studio Portrait                      2 Credits/Units**  
Develops advanced studio portrait skills utilizing digital capture equipment for photo output. Emphasis on special projects and cooperative shooting situations with other programs using a wide variety of tools, materials and techniques.

**PHOTO 10203130                      Intro Digital Photography                      2 Credits/Units**  
Provides an introduction to the photographic process through the use of digital cameras to produce images for presentations, the World Wide Web, and electronic publication. Covers basic principles of effective composition, light, exposure and control of motion and focus. Basics of portraiture and product photography is studied in a studio environment. Participants provides their own digital camera.

**PHOTO 10203134                      Electronic Imaging                      3 Credits/Units**  
This course explores advanced computer skills, issues and skills unique to electronic image handling, utilization of image enhancement software, operation of desktop scanners as input devices, preparation of image for the World Wide Web, and legal and ethical issues regarding electronic image handling and manipulation.

**PHOTO 10203141                      Color Photography 1                      3 Credits/Units**  
Basic introduction to additive and subtractive color theory using digital color principles. Digital image capture, manipulation and output will be covered, along with basic color management principles and techniques.

**PHOTO 10203142                      Color Photography 2                      3 Credits/Units**  
Uses hands-on exercises and assignments, requiring students to apply basic principles and techniques of digital color workflow to real-world imaging situations. Students will also learn and apply advanced principles and techniques of digital color workflow, and create their first significant digital color print portfolio.

**PHOTO 10203173                      Photojournalism                      2 Credits/Units**  
Photography for publication with the visual image used to relate events, ideas or circumstances. Students are exposed to techniques in which news stories can be communicated through visual images in print.

**PHOTO 10203174                      Photography on Location                      3 Credits/Units**  
From portraits and fashion to architecture and product, working on location presents unique challenges and involves a broad base of knowledge and resources. This class will cover a wide range of information pertaining to working on location. With a heavy focus on lighting techniques, from on camera flash to full strobe set ups and the production side of location photography.

**PHOTO 10203176                      Photographic Communication                      2 Credits/Units**  
Exploratory in nature, with emphasis on personal projects. and the development of an individual style and identity. Students will be required to produce their own web site, self-promotion pieces and a personal project such as a book of photographs.

**PHOTO 10203185                      Portfolio Preparation - Photography Program                      2 Credits/Units**  
This course teaches students how to assemble a professional photographic portfolio, showing prospective employers skills and capabilities learned during coursework in the Photography Program. Learning is enhanced via visits to the class by local photo professionals, who show their work to students and review student work. The Portfolio Show highlights the semester's efforts.

Departmental approval of the finished portfolio is required.

**PHYED 20807210                      Conditioning/Weight Training 1                      Credits/Units**  
This course provides the learner to develop the knowledge skills process and understanding of exercise/resistance training through short lectures and physical activity using the fitness center to enhance muscular conditioning and personal fitness. The course also covers basic information about diet, nutrition, and weight management.

**PHYED 20807213                      Co-Ed Flag Football                      1 Credits/Units**  
This course will cover the skills, rules and strategies of flag football. It emphasizes individual and team offensive, defensive and kicking techniques as well as concepts of team organization and play. Considerable time is spent playing the game. Teams will be divided as equally as possible between gender and skill-level. Course can be held at Truax on the new soccer field. In case of inclement weather, alternate site could be the gymnasium (would require advance schedule planning) or even the fitness center for conditioning work.

**PHYED 20807214                      Pickleball                      1 Credits/Units**



Pickleball, a fun activity for all ages, is played with a paddle and a wiffleball on a badminton sized court with a three-foot-high net. Development of basic skills, ball placement, teamwork, and match play are emphasized during extensive active practice and play.

**PHYED 20807219 Introduction to Kinesiology 2 Credits/Units**  
This course is intended to introduce students to the field of Kinesiology. Introductory material about physical activity and health will be provided, and departmental faculty and invited speakers will discuss their areas of expertise. In addition, career opportunities in Kinesiology will be discussed.

**PHYED 20807223 Beginning Volleyball 1 Credits/Units**  
This is an introductory course in power volleyball. It includes skills basic to the power game as well as rules and strategy for the beginner player. Fitness activities specific to volleyball will be included.

**PHYED 20807229 Swimming for Fitness 1 Credits/Units**  
Swimming for Fitness is designed to help the student achieve and maintain a good fitness level and perfect swimming strokes. Recommendation: Intermed Swim, 20807231 or ability to swim 500 yards continuously and ability to perform front crawl, back crawl and breast stroke in good form.

**PHYED 20807230 Beginning Swimming 1 Credits/Units**  
This course introduces basic aquatic skills including front crawl, backstroke, breast stroke, and sidestroke. It also emphasizes the knowledge and skills necessary in treading water, diving and self rescue.

**PHYED 20807245 Social Dance 1 Credits/Units**  
Social Dance is an introductory class in contemporary ballroom dance styles including the waltz, foxtrot, swing, tango and the chacha.

**PHYED 20807247 Jazz 1 1 Credits/Units**  
This is an introductory course in contemporary jazz dance technique. Emphasizes the development of warm-up sequences, isolations, contractions, jazz walks, progressions, turns, combinations and improvisation

**PHYED 20807248 Ballet 1 Credits/Units**  
Ballet introduces classical ballet technique and emphasizes the acquisition of proper ballet technique, postural alignment and increased flexibility.

**PHYED 20807250 Badminton 1 Credits/Units**  
Badminton is an introductory course in competitive badminton which develops basic skills, strategy and knowledge of the rules of the game.

**PHYED 20807254 Beginning Yoga 1 Credits/Units**  
This course introduces the practice of yoga. It explores the philosophy that underlies yoga as a means of stress management, fitness and conditioning. Designed for beginners, the course teaches gentle movements, yoga poses, breathing techniques and meditations that relax both the mind and the body.

**PHYED 20807255 Prev/Care Athletic Injuries 2 Credits/Units**  
This course is designed to give an introduction to the care and prevention of athletic injuries, including emergency care, taping techniques and treatment/rehabilitation of injuries. It is also useful for students interested in the fields of athletic training, teaching or coaching.

**PHYED 20807258 First Aid and CPR 2 Credits/Units**  
This course provides students with the knowledge, analytical skills and physical skills necessary in an emergency to help sustain life, reduce pain, and minimize the consequences of injury or medical emergency.

**PHYED 20807260 Martial Arts Fundamentals 1 Credits/Units**  
This course will practice footwork, blocks, strikes, kicks and martial art forms. Class will focus on development and improvement of stable mobility, dynamic balance, agility and fluid movement in dynamic postures. Emphasis will be on efficient, articulate and integrated movement fundamental to martial art skill development. Movement and forms will be progressive but also adaptable to a variety of goals and abilities.

**PHYED 20807264 Intermediate Yoga 1 Credits/Units**  
Enhances the practice of yoga. Continues the exploration and the philosophy that underlies yoga as a means of stress management, fitness and conditioning. Designed for intermediate participants, the course covers yoga poses, breathing techniques and meditations that relax both the mind and the body.

**PHYED 20807266 Wellness Today 2 Credits/Units**  
Wellness Today is a contemporary approach to the total wellness concept. It covers fitness and exercise, nutrition and stress management, culminating with personal planning toward lifetime wellness.

**PHYED 20807267 Health & Fitness for Life 1 Credits/Units**  
A contemporary approach to the total wellness concept. It covers fitness, nutrition and stress management, culminating with personal planning toward lifetime wellness.

**PHYED 20807268 Blueprint for Healthy Living 2 Credits/Units**  
Relax and practice manageable steps towards a healthier life during an offsite retreat in this class. Learn to incorporate balanced nutrition, stress management, yoga, meditation and more into your lifestyle. Then, travel to an offsite location and stay for three days and two nights immersed in a positive wellness environment with others.

**PHYED 20807269 Stress Management Foundations 1 Credits/Units**  
Innovative approach to viewing stress as necessary and healthy, this course is designed to help individuals build resilience to stress. Combines interactive exercises, self reflective experiences, foundations of mindfulness based meditations, foundations of mindfulness based movements, guided imagery to improve mental focus, progressive muscle relaxation to aid deep relaxation, and specific breathing techniques to promote healthy self regulation and coping skills.



<b>PHYED 20807271</b>	<b>Bicycle Conditioning</b>	<b>1 Credits/Units</b>
Provides the opportunity for the learner to develop the knowledge skills process and understanding of cardiovascular endurance and fitness through short lectures and physical conditioning on stationary fixed-gear "spinning" bikes with music as a motivator.		
<b>PHYED 20807289</b>	<b>Aerobics/Weight Training</b>	<b>1 Credits/Units</b>
This course provides the opportunity for the learner to develop the knowledge skills process and understanding of exercise through short lectures and a variety of physical activities to enhance personal fitness. The course involves participation in individual and group exercise activities in the fitness center and in the gym. The course also covers basic information about diet, nutrition, and weight.		
<b>PHYSICS 10806139</b>	<b>Survey of Physics</b>	<b>3 Credits/Units</b>
This course emphasizes understanding basic physics concepts through laboratory investigation and applications. Topics include kinematics, dynamics, work, energy, power, temperature, heat, waves, electricity, magnetism, electromagnetic waves, optics, and atomic and nuclear physics.		
<b>PHYSICS 10806143</b>	<b>College Physics 1</b>	<b>3 Credits/Units</b>
This course presents the applications and theory of basic physics principles. This course emphasizes problem solving, laboratory investigation and applications. Topics include laboratory safety, unit conversions and analysis, kinetic, dynamics, work, energy, power, temperature and heat.		
<b>PHYSICS 10806154</b>	<b>General Physics 1</b>	<b>4 Credits/Units</b>
Presents the applications and theory of basic physics principles. This course emphasizes problem-solving, laboratory investigation, and applications. Topics include unit conversion and analysis, vectors, translational and rotational kinematics, translational and rotational dynamics, heat and temperature, and harmonic motion and waves.		
<b>PHYSICS 20806220</b>	<b>Physics of Everyday Life</b>	<b>3 Credits/Units</b>
Have you ever looked at something and said to yourself "I wonder how that works?" If so, this is the course for you. The Physics of Everyday Life will explore basic principles of physics including classical mechanics, fluids, heat, resonance, waves, light and electricity and magnetism through the lens of everyday objects. We will gain insight through studying objects such as bumper cars, roller coasters, light bulbs, musical instruments and microwave ovens.		
<b>PHYSICS 20806221</b>	<b>University Physics 1</b>	<b>5 Credits/Units</b>
University Physics 1 is the first semester of a one-year introductory course. Students develop a conceptual understanding of the basics of physics and are provided with practical hands-on lab experience, which helps to broaden the understanding of physics. This course covers the basic properties of motion, force, energy, momentum, rotation, fluids, heat and relativity. It stresses developing good problem-solving strategies.		
<b>PHYSICS 20806222</b>	<b>University Physics 2</b>	<b>5 Credits/Units</b>
University Physics 2 studies thermodynamics, electricity, magnetism, sound, geometric and physical optics through lecture, demonstrations and laboratory work.		
<b>PHYSICS 20806223</b>	<b>University Physics 1-Calculus-Based</b>	<b>5 Credits/Units</b>
This course is intended for students of science or engineering. The course covers mechanics and heat. It consists of five one-hour lectures and one three-hour laboratory per week and is equivalent to Physics 201 at the University of Wisconsin.		
<b>PHYSICS 20806224</b>	<b>University Physics 2-Calculus Based</b>	<b>5 Credits/Units</b>
This course is intended for students of science or engineering, and is a continuation of 20-806-223. It covers electricity, magnetism, light and sound and is equivalent to Physics 202 at the University of Wisconsin.		
<b>PHYSICS 20806232</b>	<b>Statics</b>	<b>3 Credits/Units</b>
Statics is the study of particle and rigid body equilibrium. The course will give students the tools required to calculate forces transmitted to different parts of a structure, given a set of loads acting on it. Vector mathematics is developed and used to analyze complex physical systems. Distributed loads are analyzed with the theory of centroids and moments of inertia.		
<b>PHYSICS 20806233</b>	<b>Dynamics</b>	<b>3 Credits/Units</b>
Dynamics introduces students to the motion of bodies subjected to forces. The course will give students the tools required to analyze the kinematics of systems of particles and rigid bodies. Students will determine the dynamic response of a system to applied loadings using Newton's Laws, the Principle of Work and Energy, and the Principle of Impulse and Momentum.		
<b>PHYSICS 20806235</b>	<b>Modern Physics</b>	<b>3 Credits/Units</b>
Modern Physics introduces students of science or engineering to special relativity, quantum physics, the Schrodinger equation, atomic structure, statistical physics, band theory of solids, semiconductors, nuclear physics, and special topics.		
<b>PHYSICS 20806290</b>	<b>Renewable Energy for International Development</b>	<b>3 Credits/Units</b>
The 3 credit Renewable Energy for International Development provides an examination of energy and economics in developing countries with special consideration given to renewable energy sources. The course combines 8 weeks of online instruction with 10 days of travel and study abroad in Costa Rica. Students will learn to specify, design, and install renewable energy systems for the developing world. Students will install operational renewable energy systems in the field with current renewable energy equipment. An alternate 1 credit course is also offered for transfer credit as 10-140-112, (Renewable Energy for the Developing World) that does not include the 8 weeks of online instruction.		
<b>PHYSICS 20806291</b>	<b>Introduction to Renewable Energy</b>	<b>3 Credits/Units</b>
This course provides an introduction to renewable energy technology. The course is grounded in the fundamentals of energy, power, and the first and second laws of thermodynamics. A scientific approach is used to examine various energy sources, including fossil fuels, nuclear, biomass, biofuels, solar, hydro, wind, geothermal, and ocean/tidal power. Various types of energy storage technology are also examined. Science and engineering challenges are examined for each energy technology, along with economic and environmental impacts. This course is suitable for any student with an interest in renewable energy, particularly those pursuing studies in scientific, technical, and engineering fields.		





<b>PHYSICS 20806292</b>	<b>Solar Photovoltaic Technology</b>	<b>3 Credits/Units</b>
Examines the scientific principles, engineering design, and economic analysis of solar photovoltaic systems. Complete a site assessment, specify hardware components, and model economic performance for a solar PV system. This course can be applied as an elective for several STEM degree programs at Madison College and four-year universities, particularly those with program emphases in sustainability and renewable energy.		
<b>PHYSICS 20806293</b>	<b>Solar Photovoltaic Installation Lab</b>	<b>1 Credits/Units</b>
In this hands-on course, students will install one or more fully operational full scale solar photovoltaic (PV) systems. The course is taught at the Commercial Avenue Campus Solar Training Lab, which features pitched roof, flat roof, and pole mount solar PV systems. Students will learn safe workplace practices, electrical code compliance, and interconnection commissioning procedures while working with solar panels, racking systems, DC/AC power inverters and other balance of system components. The course is taught as a two-day intensive short course in order to replicate the type of installation practices and working conditions that are common in the solar industry.		
<b>PHYSICS 31806363</b>	<b>Science 1</b>	<b>2 Credits/Units</b>
Science 1 covers basic principles of physics that have frequent and common practical applications for students pursuing vocations in trade and industry. This course relates applications to student vocational fields. Includes measurement, mechanics, machines, properties of matter, fluid principles, heat and electricity. Features lecture, discussion and laboratory.		
<b>PLASTIC 50463501</b>	<b>Industrial Math 1</b>	<b>1 Credits/Units</b>
This course description is unavailable at this time. Please contact the center offering the course for more information.		
<b>PLASTIC 50463502</b>	<b>Industrial Math 2</b>	<b>1 Credits/Units</b>
This course description is unavailable at this time. Please contact the center offering the course for more information.		
<b>PLASTIC 50463713</b>	<b>Schematics for Apprentices</b>	<b>1 Credits/Units</b>
Explore the basics of schematic print reading for the injection mold set up apprentice, and study topics including hydraulics, pneumatics, and electrical schematics. Print types, symbols, technical specifications, and how this information is used by the trade are included.		
<b>PLASTIC 50463714</b>	<b>Introduction to Injection Molding</b>	<b>2 Credits/Units</b>
Build skills and apply reading electrical, hydraulic, and pneumatic schematics to plastic injection molding in this course designed for the injection mold setup apprentice. Study topics such as injection molding, thermosets and thermoplastics, mold set up and start up, and the structure and properties of plastic.		
<b>PLASTIC 50463715</b>	<b>Injection Mold Design</b>	<b>2 Credits/Units</b>
Designed to introduce apprentices to blueprint reading and mold design. Apprentices will be introduced to various aspects of piece part design, mold design, and mold construction as they build skills in interpreting industrial prints. Course competencies include mold teardown and analysis, 3D modeling, and rapid prototyping.		
<b>PLASTIC 50463716</b>	<b>Fundamentals of Plastics Processing</b>	<b>2 Credits/Units</b>
Provides the injection mold setup person with an examination of plastics properties and structures; explores plastics processing and manufacturing; and reviews material selection and testing, material drying, and polymer heating, flow and solidification. Techniques for troubleshooting processes are introduced.		
<b>PLASTIC 50463717</b>	<b>Plastic Processing Design &amp; Troubleshooting</b>	<b>2 Credits/Units</b>
Study various molding processes, including the injection molding process, during this course for the injection mold set up apprentice. This course provides the injection mold setup person with an examination of process optimization, quality, product testing, scientific injection molding principles, and fundamentals of learning manufacturing. Project based activities will help develop problem-solving and troubleshooting skills in the apprentices' final semester of related instruction.		
<b>PLUMBNG 50427550</b>	<b>Trade Plumbing Semester 1</b>	<b>2 Credits/Units</b>
This course description is unavailable at this time. Please contact the center offering the course for more information.		
<b>PLUMBNG 50427551</b>	<b>Trade Plumbing Semester 2</b>	<b>2 Credits/Units</b>
This course description is unavailable at this time. Please contact the center offering the course for more information.		
<b>PLUMBNG 50427552</b>	<b>Trade Plumbing Semester 3</b>	<b>2 Credits/Units</b>
This course description is unavailable at this time. Please contact the center offering the course for more information.		
<b>PLUMBNG 50427553</b>	<b>Trade Plumbing Semester 4</b>	<b>2 Credits/Units</b>
This course description is unavailable at this time. Please contact the center offering the course for more information.		
<b>PLUMBNG 50427554</b>	<b>Trade Plumbing Semester 5</b>	<b>2 Credits/Units</b>
This course description is unavailable at this time. Please contact the center offering the course for more information.		
<b>PLUMBNG 50427555</b>	<b>Trade Plumbing Semester 6</b>	<b>2 Credits/Units</b>
This course description is unavailable at this time. Please contact the center offering the course for more information.		
<b>PLUMBNG 50427556</b>	<b>Trade Plumbing Semester 7</b>	<b>2 Credits/Units</b>
This course description is unavailable at this time. Please contact the center offering the course for more information.		
<b>PLUMBNG 50427557</b>	<b>Trade Plumbing Semester 8</b>	<b>2 Credits/Units</b>
This course description is unavailable at this time. Please contact the center offering the course for more information.		
<b>PLUMBNG 50427751</b>	<b>Sanitary Drains 1</b>	<b>2 Credits/Units</b>
Plumbing related instruction of sanitary drain systems. Course includes a review of codes and trade practices related to sanitary drains, drainage systems, components and applications.		



- PLUMBNG 50427752 Vents and Venting Systems 2 Credits/Units**  
This course is designed to provide the apprentice with the skills to identify and design sanitary vent piping in a plumbing system in accordance with the Wisconsin Plumbing Code. The course focuses on theory, work experience, and the application of plumbing code principles through discussions, drawing exercises, work sheets, and evaluations.
- PLUMBNG 50427753 Water Distribution 1 2 Credits/Units**  
Provides the apprentice with the skills to identify, design, install, and service various applications for water supply systems listed in plumbing codes. Apprentices will use the code language and tables to in various plumbing systems in accordance with the Wisconsin Plumbing Code. Topics will include commercial to single-family and private well pump systems. Focuses on theory, work experience, and the application of plumbing code principles through discussions, drawing exercises, work sheets, and evaluations.
- Plumbing Apprentice students only.
- PLUMBNG 50427754 Water Distribution 2 2 Credits/Units**  
Provides the apprentice with the skills to identify, design, install, and service cross connection controls, water treatment equipment and multi-purpose piping systems in various plumbing systems in accordance with the Wisconsin Plumbing Code. Focuses on theory, work experience, and the application of plumbing code principles through discussions, drawing exercises, work sheets, and evaluations.
- PLUMBNG 50427755 Sanitary Drains 2 2 Credits/Units**  
Provides the apprentice with the skills to identify, design, install, and service various applications for storm water, clear water, and drainage systems. Apprentices will use the code language and tables to in various plumbing systems in accordance with the Wisconsin Plumbing Code. The course focuses on theory, work experience, and the application of plumbing code principles through discussions, drawing exercises, work sheets, and evaluations.
- PLUMBNG 50427756 Private On-Site Wastewater Treatment Systems (POWTS) 2 Credits/Units**  
Provides the apprentice with the skills to identify, design, install, and service various applications for private on-site wastewater treatment systems that are listed in plumbing codes or individual component manuals. Apprentices will use the code language and tables to in various plumbing systems in accordance with the Wisconsin Plumbing Code. Other topics will include pretreatment, soil evaluation, site planning, and new technologies. Focuses on theory, work experience, and the application of plumbing code principles through discussions, drawing exercises, work sheets, and evaluations.
- PLUMBNG 50427757 Green Plumbing Applications 2 Credits/Units**  
Provides Plumbing apprentices with an introduction to green applications and prepares students to take certification exams: Union Programs: UA Green Awareness Certification (geared toward journey workers, not apprenticeship) WTCS Programs: Green Plumbers USA Certification Program Learning materials from both certificate programs have been incorporated.
- PLUMBNG 50427758 Plumbing Advanced Topics/TSA 2 Credits/Units**  
Provides the apprentice with the opportunity to select and complete an applied plumbing project in collaboration with the instructor. Projects will apply the skills required to identify, design, install, and service various plumbing applications that are listed in plumbing codes. Apprentices will use the code language and tables to in various plumbing systems in accordance with the Wisconsin Plumbing Code. The course builds upon the theory, work experience, and the application of plumbing code principles addressed in previous coursework to support completing an applied hands-on project.
- POLISCI 10809122 Intro to Amer Government 3 Credits/Units**  
Introduction to American Government focuses on the structure and functioning of state and local governments within the context of federalism. It emphasizes decision making, structure, theory, behavioral characteristics and citizen participation.
- POLISCI 20809218 Law and Society 3 Credits/Units**  
Law and Society deals with the nature of law and legal processes as instruments of social control. Students are introduced to legal structures and processes, and examine the philosophy of law within political, social and economic frameworks.
- POLISCI 20809220 American Foreign Policy 3 Credits/Units**  
American Foreign Policy addresses conduct of the U.S. as an international actor. It covers problems, challenges and persistent patterns in American policy since the close of World War II. How foreign policy is made is included and attention is given to the interactions of individuals, groups, roles and organizations.
- POLISCI 20809221 American Ntl Govt 3 Credits/Units**  
American National Government utilizes a systems approach to emphasize the relationships between structure and behavior. Political theory and methodology are stressed. Students are encouraged to improve research and analytical skills. The course includes the U.S. Constitution, elections, interest groups, parties, mass media, congress, judiciary, the presidency and bureaucracy.
- POLISCI 20809222 State and Local Government 3 Credits/Units**  
State and Local Government addresses the functioning of state and local governments and relates them and their activities to the federal government. Behavioral characteristics of state and local governments in the total decision-making process are stressed. Discussion covers the importance and functioning of political parties, special interest groups, elections, legislatures, courts and executives.
- POLISCI 20809223 International Relations 3 Credits/Units**  
International Relations covers methods employed by nation-states in interacting with each other and the forces influencing the nature of interaction. Includes institutions that have been erected in nation-states' quest for power, peace and security. It emphasizes nationalism, ideology, regional integration and trade.
- POLISCI 20809227 Political Theory 3 Credits/Units**  
Political Theory is a subcategory within the broader social science discipline of Political Science. This course examines core political thinkers, concepts, and ideologies necessary to study and understand various political phenomena and critical interactions. This course presents fundamental knowledge and basic skill / ability training to research and discuss important political phenomena.



- POLISCI 20809242 Public Policy 3 Credits/Units**  
Public Policy is a subcategory within the discipline of Political Science. This course examines the public policy process in the United States using "project-based learning" methodology. Public policy is what elected officials and citizens do when government intervention is necessary to resolve a public problem. Upon completion of this course, students will be able to do the following: (a) Summarize the public policy-making process; (b) Analyze the costs and benefits of proposed public policy, and (c) Evaluate the success and failure of implemented public policy.
- POLISCI 20809243 Comparative Politics 3 Credits/Units**  
This course teaches students how to use comparative methodology to analyze and evaluate various political institutions. Students enrolled in this course will (a) use "most-similar" and "most-different" approaches to study political phenomena within a global context and (b) develop "core abilities" such as critical thinking abilities and communication skills.
- POLISCI 20809244 Russian Politics 3 Credits/Units**  
This undergraduate course advances student knowledge, understanding, and appreciation of the Russian political system using a multidisciplinary approach. In this course students use "worlds systems theory" and "comparative methodology" to (a) "review" relevant political system history, (b) "summarize" important informal & informal institutions, (c) "analyze" critical political system variables, and (d) "evaluate" political system variables within a globalizing international environment.
- POLISCI 20809245 Latin American Politics 3 Credits/Units**  
This undergraduate course advances student knowledge, understanding, and appreciation of the Latin American political system using a multidisciplinary approach. In this course students use "worlds systems theory" and "comparative methodology" to (a) "review" relevant political system history, (b) "summarize" important informal & informal institutions, (c) "analyze" critical political system variables, and (d) "evaluate" political system variables within a globalizing international environment.
- POLISCI 20809246 African Politics 3 Credits/Units**  
This undergraduate course advances student knowledge, understanding, and appreciation of the African political system using an interdisciplinary approach (i.e., social sciences and humanities). In this course students use worlds systems theory and comparative methodology to (a) review relevant political system history, (b) summarize important informal & information institutions, (c) analyze critical political system variables, and (d) evaluate political system variables within a globalizing international environment.
- POLISCI 20809247 Introduction to East Asian Politics 3 Credits/Units**  
Undergraduate course advances student knowledge, understanding, and appreciation of the Asian political system using an interdisciplinary approach (i.e., social sciences and humanities). In this course students use worlds systems theory and comparative methodology to (a) review relevant political system history, (b) summarize important informal & information institutions, (c) analyze critical political system variables, and (d) evaluate political system variables within a globalizing international environment.
- POLISCI 20809248 Politics of India 3 Credits/Units**  
This course examines the Political system of India by summarizing, analyzing, and evaluating its formal/informal political insitutions. This course provides each student with fundamental knowledge and basic skill/ability training to engage in meaningful Global Studies.
- PSYCH 10809127 Human Development 3 Credits/Units**  
Human Development focuses on human physical, motor, cognitive and social development across the life span. Recognition of and adjustment to normal development stages and typical life problems are emphasized. The roles of parents, peers and environmental factors on development and behavior are highlighted.
- PSYCH 10809188 Developmental Psychology 3 Credits/Units**  
Developmental Psychology is the study of human development throughout the lifespan. This course explores developmental theory and research with an emphasis on the interactive nature of the biological, cognitive, and psychosocial changes that affect the individual from conception to death. Application activities and critical thinking skills will enable students to gain an increased knowledge and understanding of themselves and others.
- PSYCH 10809199 Psychology Of Human Relations 3 Credits/Units**  
This course explores the relationship between general psychological principles and our everyday lives. Students are given the opportunity to achieve a deepened sense of awareness of themselves and others. This understanding is applied to human relations at home and on the job.
- PSYCH 20809201 Human Sexuality 3 Credits/Units**  
Human Sexuality covers how intimate relationships develop, how to maintain warmth and closeness in relationships and how sexuality is expressed throughout the life cycle. Also covers practical information regarding sexually transmitted diseases, contraception and pregnancy.
- PSYCH 20809210 Psychology of Men 3 Credits/Units**  
Psychology of Men examines and analyzes ways biology, culture and society shape identity and life experiences of the American male. Included in the course are historical views, socialization, manliness, competitiveness and sports, violence and war, work and success, sexuality, health, relations with other men, women and children, and alternatives for men.
- PSYCH 20809225 Social Psychology 3 Credits/Units**  
Social Psychology is the study of the individual in the social setting. Topics include interpersonal attraction, aggression, sex roles, attribution, altruism, obedience, conformity, attitude change and others.
- PSYCH 20809231 Intro Psychology 3 Credits/Units**  
Introduction to Psychology is a study of individual and social behavior including its psychological and physiological bases, development, motivation, emotion, perception, learning and behavior disorders. This course is a prerequisite for several college transfer courses in psychology.
- PSYCH 20809233 Developmental Psychology 3 Credits/Units**



Developmental Psychology covers the principles of human growth and behavioral development, from conception to death. Topics include methods of studying human behavior, theoretical approaches, individual differences, patterns and sequences of development, and relationships with peers and others.

<b>PSYCH 20809234</b>	<b>Psychology of Women</b>	<b>3 Credits/Units</b>
Review psychological theories and research on women and gender, focusing on uniquely female experiences throughout the life cycle. We will explore the diversity of women by examining the impact of social factors such as race, ethnicity, class, and sexual orientation as they relate to sexism, gender roles, sex differences, language, emotion, motivation, relationships, sexuality, employment, victimization, parenting, and health.		
<b>PSYCH 20809237</b>	<b>Abnormal Psych</b>	<b>3 Credits/Units</b>
Abnormal Psychology covers the definition of abnormal behavior, assessment techniques, and descriptions of psychological disorders. It examines theoretical perspectives (biological, psychological, sociocultural) and approaches to treating these disorders.		
<b>PSYCH 20809239</b>	<b>Child Human Development</b>	<b>3 Credits/Units</b>
This course covers the biological, cognitive and psychosocial aspects of development from conception through childhood.		
<b>PSYCH 20809249</b>	<b>Educational Psychology</b>	<b>3 Credits/Units</b>
This course provides the opportunity for learners to develop knowledge, skills and understanding of educational psychology. Learners will explore contemporary and historical theories surrounding teaching and learning. We will explore both pedagogical (child) and andragogical (adult) learning theory focusing on research, best practices, motivation, development, individual differences, diversity, technology and areas of controversy and debate.		
<b>PTASST 10524139</b>	<b>PTA Patient Interventions</b>	<b>4 Credits/Units</b>
An introduction to basic skills and physical therapy interventions performed by the physical therapist assistant.		
<b>PTASST 10524140</b>	<b>PTA Professional Issues 1</b>	<b>2 Credits/Units</b>
Introduces the history and development of the physical therapy program; legal and ethical issues; the interdisciplinary health care team; and professional communication skills.		
<b>PTASST 10524142</b>	<b>PTA Therapeutic Exercise</b>	<b>3 Credits/Units</b>
Provides instruction on the implementation of a variety of therapeutic exercise principles. Learners implement, educate, adapt, and assess responses to therapeutic exercises.		
<b>PTASST 10524143</b>	<b>PTA Therapeutic Modalities</b>	<b>4 Credits/Units</b>
Develops the knowledge and technical skills necessary to perform numerous therapeutic modalities likely to be utilized as a PTA.		
<b>PTASST 10524144</b>	<b>PTA Princ of Neuro Rehab</b>	<b>4 Credits/Units</b>
Integrates concepts of neuromuscular pathologies, physical therapy interventions, and data collection in patient treatment.		
<b>PTASST 10524145</b>	<b>PTA Princ of Musculo Rehab</b>	<b>4 Credits/Units</b>
Integrates concepts of musculoskeletal pathologies, physical therapy interventions, and data collection in patient treatment.		
<b>PTASST 10524146</b>	<b>PTA Cardio and Integumentary Management</b>	<b>3 Credits/Units</b>
Integrates concepts of cardiopulmonary and integumentary pathologies, physical therapy interventions, and data collection in patient treatment.		
<b>PTASST 10524147</b>	<b>PTA Clinical Practice 1</b>	<b>2 Credits/Units</b>
Provides a part-time clinical experience to apply foundational elements, knowledge, and technical skills pertinent to physical therapy practice.		
<b>PTASST 10524148</b>	<b>PTA Clinical Practice 2</b>	<b>3 Credits/Units</b>
Provides another part-time clinical experience to apply foundational elements, knowledge, and technical skills required of the entry level physical therapist assistant in various practice settings.		
<b>PTASST 10524149</b>	<b>PTA Rehab Across the Lifespan</b>	<b>2 Credits/Units</b>
A capstone course that integrates concepts of pathology, physical therapy interventions and data collection across the lifespan. In addition the PTA's role in health, wellness and prevention; reintegration, and physical therapy interventions for special patient populations will be addressed.		
Pre-requisites: 10-524-144, 10-524-145, 10-524-146, 10-524-147; Co-requisites: 10-524-148, 10-524-150, 10-524-151.		
<b>PTASST 10524150</b>	<b>PTA Professional Issues 2</b>	<b>2 Credits/Units</b>
Incorporates professional development, advanced legal and ethical issues, healthcare management and administration, and further development of professional communication strategies.		
Pre-requisites: 10-524-144, 10-524-145, 10-524-146, 10-524-147; Corequisites: 10-524-148, 10-524-149, 10-524-151.		
<b>PTASST 10524151</b>	<b>PTA Clinical Practice 3</b>	<b>5 Credits/Units</b>
Provides a full-time clinical experience to apply foundational elements, knowledge, and technical skills required of the entry level physical therapist assistant in various practice settings.		
<b>PTASST 10524156</b>	<b>PTA Applied Kinesiology 1</b>	<b>4 Credits/Units</b>
Introduces basic principles of musculoskeletal anatomy, kinematics, and clinical assessment. Students locate and identify muscles, joints, and other landmarks of the lower quadrant in addition to assessing range of motion and strength.		
<b>PTASST 10524157</b>	<b>PTA Applied Kinesiology 2</b>	<b>3 Credits/Units</b>



Applies basic principles from PTA Kinesiology 1 to the axial skeleton and upper quadrant including location and identification of muscles, joints, and other landmarks. Assess range of motion and strength of the axial skeleton and upper quadrant. Integrate analysis of posture and gait.

**RADTEC 10526149                      Radiographic Procedures 1                      5 Credits/Units**  
Prepares radiography students to perform routine radiologic procedures on various parts of the body including the upper body, hip, pelvis and ankle. Students apply knowledge of human anatomy to position the patient correctly to achieve the desired result.

Corequisites: 10-526-150, 10-526-158, 10-526-159, and 10-526-168.

**RADTEC 10526158                      Introduction to Radiography 3 Credits/Units**  
Introduces students to the role of radiography in health care. Students apply legal and ethical considerations to patient care and pharmacology in the radiologic sciences.

Corequisites: 10-526-149, 10-526-159, 10-526-168.

**RADTEC 10526159                      Radiographic Imaging 1                      3 Credits/Units**  
Introduces radiography students to the process of creating radiographic images. Students determine the factors that affect image quality including contrast, density, and distortion. Students apply OSHA standards for health and safety in the darkroom.

Corequisites: 10-526-149, 10-526-158, and 10-526-168.

**RADTEC 10526168                      Radiography Clinical 1                      2 Credits/Units**  
This beginning level clinical course prepares radiography students to perform radiologic procedures on patients with extensive supervision and direction. Students apply radiation protection and standard precautions in the production of radiographs in a health care setting while adhering to legal and ethical guidelines. An emphasis of the course is the development of communication and critical thinking skills appropriate to the clinical setting.

**RADTEC 10526170                      Radiographic Imaging 2                      3 Credits/Units**  
Prepares radiography students to apply advanced radiographic principles to the production of radiographic images. Students analyze exposure factor considerations, differentiate between film and exposure latitude, and use beam restricting devices.

**RADTEC 10526174                      ARRT Certification Seminar                      2 Credits/Units**  
Radiography prepares individuals for a career in diagnostic radiology (x-ray) as a radiographer. The radiographer is a technologist who produces images of the human body to aid physicians in the diagnosis of injuries and diseases. Grades of the program are eligible to take the entry-level certification examination administered by the American Registry of Radiography Technologists (AART) and may obtain employment in x-ray departments associated with hospitals, medical clinics, veterinary clinics, and private offices. Program curriculum focuses on theoretical and applied radiography and includes a clinical experience in a radiographic department. The program is accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT). Students learn to use x-ray imaging machines to demonstrate body parts on x-ray films for diagnostic purposes, including diagnostic radiology, bedside and trauma procedures, pediatric radiography, and special procedures.

**RADTEC 10526189                      Radiographic Pathology                      1 Credits/Units**  
Prepares radiography students to determine the basic radiographic manifestations of pathological conditions. Students classify trauma related to site, complications, and prognosis and locate the radiographic appearance of pathologies.

**RADTEC 10526190                      Radiography Clinical 5                      2 Credits/Units**  
This fifth-level clinical course prepares radiography students to perform radiologic procedures on patients with some supervision. Students apply radiation protection and standard precautions in the production of radiographs in a health care setting while adhering to legal and ethical guidelines. Students are encouraged to demonstrate independent judgment in the performance of clinical competencies.

**RADTEC 10526191                      Procedures 2                      5 Credits/Units**  
Prepares radiography students to perform routine radiologic procedures on various parts of the body including the skull and spine. Students apply knowledge of human anatomy to position the patient correctly to achieve the desired result.

**RADTEC 10526192                      Radiography Clinical 2                      3 Credits/Units**  
This second level clinical course prepares radiography students to perform radiologic procedures on patients with extensive supervision and direction. Students apply radiation protection and standard precautions in the production of radiographs in a health care setting while adhering to legal and ethical guidelines. An emphasis of the course is the development of communication and critical thinking skills appropriate to the clinical setting.

**RADTEC 10526193                      Radiography Clinical 3                      3 Credits/Units**  
This third level clinical course prepares radiography students to perform radiologic procedures on patients with supervision and direction. Students apply radiation protection and standard precautions in the production of radiographs in a health care setting while adhering to legal and ethical guidelines. An emphasis of the course is the demonstration of communication and critical thinking skills appropriate to the clinical setting.

**RADTEC 10526194                      Imaging Equipment Operation                      3 Credits/Units**  
Introduces radiography students to the principles and application of x-ray technology. Students analyze how x-rays are produced and determine the corrective actions necessary for common equipment malfunctions.

Prerequisite: 10-526-193. Corequisites: 10-526-195, 10-526-196 and 10-526-199

**RADTEC 10526195                      Radiographic Quality Analysis                      2 Credits/Units**  
Prepares radiography students to analyze radiographic images for quality. Students apply quality control tests to determine the causes of image problems including equipment malfunctions and procedural errors.







ACE PREP COURSE - This course is designed to provide the theoretical knowledge and practical skills in preparation for the American Council on Exercise (ACE) Group Fitness Instructor Certification Exam and become effective group fitness instructors. The course uses a two-pronged approach in preparation to become a certified group fitness instructor. Students will have the opportunity for hands on interactive training associated with cuing and class choreography in addition to the theoretical base presented in lectures. By the end of course, individuals should be proficient in presenting class formats such as sculpting, step, kickboxing and hi/lo. Topics include guidelines for instructing safe, effective and purposeful exercises, essentials of the instructor/participant relationship, the principles of motivation to encourage adherence in the group fitness setting, effective instructor-to-participant communication techniques, methods for enhancing group leadership, and the group fitness instructor's professional role. Students are strongly encouraged to take both 10501153 and 20806262 prior to or in conjunction with this course.

**RECMGT 10109175                      Recreation Internship Practicum                      2 Credits/Units**

Students must complete a 220-hours internship with an approved recreation business agency. The on-site practitioner and internship coordinator supervise the student's progress. This internship can be paid or unpaid.

**RECMGT 10109176                      Personal Trainer Development                      3 Credits/Units**

ACE PREP COURSE - This course is designed to give students the knowledge and understanding necessary to prepare for the American Council on Exercise (ACE) Personal Trainer Certification Exam and become effective personal trainers. Through lecture and hands-on learning, this course presents the ACE Integrated Fitness Training (ACE IFT) Model as a comprehensive system for designing individualized programs based on each client's unique health, fitness, and goals. The information covered by this course and the ACE IFT Model will help students learn how to facilitate rapport, adherence, self-efficacy and behavior change in clients, as well as design programs that help clients to improve posture, movement, flexibility, balance, core function, cardio-respiratory fitness, and muscular endurance and strength.

Students are strongly encouraged to take both 10-501-153 and 20-806-262 prior to this course.

**RECMGT 10109189                      Foundations of Worksite Wellness                      3 Credits/Units**

Employers are showing increased commitment to developing wellness programs that help recruit and retain employees, enhance health and sense of well being, improve productivity and enrich quality of life. This course prepares you to help employers shape, implement and evaluate these programs through an understanding of the health promotion concept, management issues, theories of behavior change for motivation and skill building, core programming and emerging trends.

**RECMGT 10109190                      Recreation Seminar                      1 Credits/Units**

Designed to assist the graduating student with job placement. Self-evaluation and job-related skills, interests, attributes and achievements are discussed. The course reviews how to target job possibilities, write resumes, and includes practical interviewing. The concept of job networking is also stressed. Prerequisite: course should be taken in the final semester of the program.

**RECMGT 10109195                      Recreation Industry Budget and Financial Management                      3 Credits/Units**

Financial methods and techniques utilized in the recreation industry. Emphasis on sources and methods of financing, forecasting cost and income, budgeting, pricing, grant seeking, sponsorship, fundraising and fiscal management.

**RECMGT 10109196                      Principles of Outdoor Pursuits                      3 Credits/Units**

This course provides the fundamental knowledge, skills and experience necessary to lead people in outdoor recreational activities. The course includes topics on trip planning, safety procedures, equipment, leadership methods and expedition behavior for a variety of outdoor trip activities. Classroom as well as experiential involvement required.

**RECMGT 10109197                      Challenge Course Programming                      3 Credits/Units**

Learn basic facilitation and technical skills to manage challenge course programs. Topics include philosophy of adventure-based initiatives, belay techniques, safety procedures, rescues, facilitation skills and methods, and team development. This course provides the skills and techniques needed for certification by the Association for Challenge Course Technology (Level 1 or 2). Certification test is included in the course fee.

**RECMGT 10109199                      Adventure Processing and Facilitation                      3 Credits/Units**

Provides the skills necessary to facilitate client groups in a variety of outdoor and experiential settings. Topics include philosophy of experiential learning, adventure-based processing, leading group discussions, debriefing, frontloading, metaphor development, and transfer of client learning. Students will develop and facilitate a program with a client group.

**RENEWELC 10482101                      Introduction to Wind Energy Technology                      3 Credits/Units**

This course prepares the learner to assess the global energy picture; analyze the causes of wind and wind flow properties; explore small, medium, and large wind turbine designs; assess the environmental effects of wind turbines; perform business and site assessments for a wind turbine project, plan your wind turbine project, evaluate operation and maintenance of the turbine system, and analyze the future of wind energy.

**RENEWELC 10482102                      Wind Systems Technician 1                      3 Credits/Units**

Allows participants to develop essential skills and attitudes for employment in the wind industry. Topics include: safety, electrical hazard, confined space, climbing practices, tool use, calibration, documentation and routine wind turbine maintenance operations.

**RENEWELC 10482103                      Photovoltaic Systems and the National Electric Code                      1 Credits/Units**

Students will learn to apply the NEC rules to photovoltaic systems. Topics will include conductor sizing, overcurrent protection, grounding, maximum voltage and current calculations and other applicable rules. Students will be able to apply this knowledge to one or more photovoltaic systems.

**RENEWELC 10482135                      Advanced Photovoltaic Electives                      3 Credits/Units**

Periodically opportunities will arise for unique coursework that is difficult to schedule on a regular basis. Examples of this could include large system decommissioning, foundation work, or even installations that are experimental. Because the size and scope of these courses will vary, they may range in size from 1-3 credits/units. These courses may also have pre or co-requisite classes involved. More details will be listed under the notes area of the section being offered.



<b>RENEWELC 10482137</b>	<b>Photovoltaic Site Assessment</b>	<b>1 Credits/Units</b>
Students will learn how to conduct an assessment of a location for a photovoltaic system. They will learn the qualities of an ideal location, structural concerns, tools to use, proper documentation techniques, load analysis, energy production estimation, and concerns with existing electrical service. Students will also complete a photovoltaic site assessment as part of the course. This class is offered in an online or hybrid format with extensive work assigned outside of class.		
<b>RENEWELC 10482138</b>	<b>Introduction to Photovoltaic Technology</b>	<b>2 Credits/Units</b>
Hybrid and online offering. Students will learn the basic concepts of solar electric photovoltaic systems, including how photovoltaic cells produce electricity, components and types of photovoltaic systems, the process of installing a photovoltaic system and whether and where to install a photovoltaic system. Students will also analyze utility bills, energy production, cost and incentives available for photovoltaic systems.		
<b>RENEWELC 10482139</b>	<b>Grid-Connected Photovoltaic Design and Installation</b>	<b>2 Credits/Units</b>
Students in this course will learn the principles of photovoltaic system design for photovoltaic systems connected to the utility grid. Each student will prepare a model design. Students will learn the components of PV systems, the tools and techniques to install PV systems and the safety concerns specific to photovoltaic work. Students will install one or more fully operational grid-connected PV systems.		
<b>RENEWELC 10482140</b>	<b>Grid Connected Photovoltaic System Design</b>	<b>1 Credits/Units</b>
Students will learn the principles of photovoltaic system design for photovoltaic systems connected to the utility grid. Each student will prepare a model design.		
<b>RENEWELC 10482141</b>	<b>Grid Connected Photovoltaic Systems Installation Lab</b>	<b>1 Credits/Units</b>
Students will install one or more fully operational grid connected photovoltaic systems.		
<b>RENEWELC 10482142</b>	<b>Off Grid Photovoltaic System Design</b>	<b>1 Credits/Units</b>
Students in this course will learn the principles of photovoltaic system design for off grid photovoltaic systems. Each student will prepare a model design.		
<b>RENEWELC 10482143</b>	<b>Off Grid Photo Systems Installation Lab</b>	<b>1 Credits/Units</b>
Students will install one or more fully operational off grid photovoltaic systems.		
<b>RENEWELC 10482149</b>	<b>Photovoltaic Technical Sales</b>	<b>1 Credits/Units</b>
Students will learn the tools and information needed to perform in a sales position for photovoltaic contractors. Students will prepare a sales document as part of the course.		
<b>RENEWELC 10482153</b>	<b>Wind Turbine Installation</b>	<b>1 Credits/Units</b>
This hands-on course covers the fundamentals of installing a wind turbine on a tiltup or self-sustaining tower. The power generated by the turbine will be used to charge batteries, be fed to the electrical grid, or hybrid configuration. Data collection equipment will also be set up on the tower that will provide real-time wind speed, direction, solar isolation and weather conditions.		
Note: when offered for two (2) credits, there is a pre-requisite of 10-482-102, Wind Systems Technician 1.		
<b>RESPC 10515111</b>	<b>Respiratory Survey</b>	<b>3 Credits/Units</b>
Examines the role of the Respiratory Therapist within the healthcare community. Reviews the ethical, legal, and regulatory principles that guide practice across diverse populations. Introductory patient assessment and critical thinking processes used in the development of respiratory care plans are explored.		
Pre-requisites: Acceptance into the Respiratory Therapy program.		
Corequisites: 20-806-206, General Anatomy & Physiology and 10-806-134, General Chemistry.		
<b>RESPC 10515112</b>	<b>Respiratory Airway Management</b>	<b>2 Credits/Units</b>
Focuses on adult respiratory critical care including management of mechanical ventilation and artificial airways.		
<b>RESPC 10515113</b>	<b>Respiratory Life Support</b>	<b>3 Credits/Units</b>
Focuses on adult respiratory critical care including management of mechanical ventilation.		
Prerequisites: 10-515-175, 10-515-112		
Corequisites: 10-515-178 & 10-515-179.		
<b>RESPC 10515171</b>	<b>Respiratory Therapeutics 1</b>	<b>3 Credits/Units</b>
Introduces the topics of medical gas administration and humidity and aerosol therapy. The learner will apply physics, math and patient assessment concepts to oxygen, aerosol and humidity therapy.		
<b>RESPC 10515172</b>	<b>Respiratory Therapeutics 2</b>	<b>3 Credits/Units</b>
Introduces therapeutic procedures including arterial puncture, bronchial hygiene, lung expansion therapy, and pulmonary rehabilitation.		
<b>RESPC 10515173</b>	<b>Respiratory Pharmacology</b>	<b>3 Credits/Units</b>
Examines basic pharmacology principles, drug dosage, and calculations. Medications for inhalation including mucolytics, bronchodilators, and anti-inflammatories. Also includes cardiac drugs, anesthetic drugs, neuromuscular blockers, and antimicrobials.		
<b>RESPC 10515174</b>	<b>Respiratory/Cardiac Physiology</b>	<b>3 Credits/Units</b>
Provides the student with an in-depth knowledge of the structure and function of the respiratory and circulatory systems necessary to function as a competent Respiratory Therapist.		
<b>RESPC 10515175</b>	<b>Respiratory Clinical 1</b>	<b>2 Credits/Units</b>





Introduces respiratory Therapy practice in the hospital setting. Includes the development of skills such as basic therapeutics, patient assessment, medical record review, safety practices, patient interaction, and communication.

**RESPC 10515176                      Respiratory Disease                      3 Credits/Units**  
Exploration of signs, symptoms, causes, progression, and treatment of obstructive, restrictive and infectious diseases or disorders of the body that affect the respiratory system.

Prerequisites: 10-515-175.

Corequisites: 10-515-177, 10-515-178, and 10-515-179

**RESPC 10515178                      Respiratory Clinical 2                      3 Credits/Units**  
Continued development of Respiratory Therapy clinical skills including respiratory therapeutics. Focuses on monitoring, analyzing and interpreting data to make appropriate modifications in patient care. This course includes the complete program competency list. At the completion of this clinical, learners must demonstrate competence in a minimum of 12 (required and/or simulated) competencies. The instructor may identify specific competencies to be addressed during this clinical.

**RESPC 10515179                      Respiratory Clinical 3                      3 Credits/Units**  
Continued development of Respiratory Therapy clinical skills including respiratory therapeutics. Focuses on monitoring, analyzing and interpreting data to make appropriate modifications in patient care. This course includes the complete program competency list. At the completion of this clinical, learners must demonstrate competence in a minimum of 19 (required and/or simulated) competencies. The instructor may identify specific competencies to be addressed during this clinical.

**RESPC 10515180                      Respiratory Neo/Peds Care                      2 Credits/Units**  
Provides a comprehensive orientation to the field of neonatal and pediatric respiratory care to include fetal development, birth, neonatal physiology, pulmonary dynamics, abnormal cardiopulmonary conditions, diseases, noninvasive and invasive therapeutic interventions.

**RESPC 10515181                      Respiratory/Cardio Diagnostics                      3 Credits/Units**  
Advanced invasive and noninvasive diagnostic cardiopulmonary procedures including pulmonary function, hemodynamics and rescue medicine.

**RESPC 10515182                      Respiratory Clinical 4                      3 Credits/Units**  
Continued development of Respiratory Therapy clinical skills including respiratory therapeutics. Focuses on monitoring, analyzing and interpreting data to make appropriate modification in patient care. This course includes the complete program competency list. At the completion of this clinical, learners must demonstrate competence in a minimum of 26 (required and/or simulated) competencies. The instructor may identify specific competencies to be addressed during this clinical.

**RESPC 10515183                      Respiratory Clinical 5                      3 Credits/Units**  
Focuses on the completion of respiratory therapy competencies and transition to employment. This course includes the complete program competency list. At the completion of this clinical learners must demonstrate competence in all of the required and/or simulated competencies. The instructor may identify specific competencies to be addressed during this clinical.

**RESPC 10515184                      Neonatal Pediatric Resuscitation (NRP)                      1 Credits/Units**  
Provides the student with the practice, theory and skills needed to provide advanced ventilation and resuscitation to infants and children.

**RLEST 10194182                      Real Estate Law                      4 Credits/Units**  
Designed to acquaint students with the field of real estate as well as Wisconsin real estate law. This course also meets the educational requirements for the Wisconsin Real Estate Salesperson's examination. It covers topics such as laws of agency, property ownership, real estate contracts, title issues, real estate financing, fair housing laws, landlord/tenant laws, business ethics, and various other subjects related to the real estate profession. It is particularly oriented toward Wisconsin laws.

**RLEST 10194185                      Real Estate Brokerage                      4 Credits/Units**  
Designed to build on the Real Estate Law course, Real Estate Brokerage looks at real estate management including business and financing management, trust accounts, proper use of forms, agency contracts, ethical requirements, office management and transactional concerns. The course is oriented toward real estate brokerage in Wisconsin and fulfills the educational requirement for the Real Estate Broker license in Wisconsin.

**RLEST 10194195                      Real Estate Internship                      3 Credits/Units**  
Requires work experience within an approved organization as well as under the sponsorship of someone at the management level. The real estate intern is required to complete 140 hours of supervised work. The intern will complete a final work report at the completion of the semester while the sponsor will complete a job performance evaluation. Class time concentrates on the internship experience. The intern prepares a resume and develops a job strategy as a means of preparing for full-time work upon graduation.

**SHEETMTL 50432571                      Tech Sheet Metal Semester 1                      4 Credits/Units**  
This course description is unavailable at this time. Please contact the center offering the course for more information.

**SHEETMTL 50432572                      Tech Sheet Metal Semester 2                      4 Credits/Units**  
This course description is unavailable at this time. Please contact the center offering the course for more information.

**SHEETMTL 50432573                      Tech Sheet Metal Semester 3                      4 Credits/Units**  
This course description is unavailable at this time. Please contact the center offering the course for more information.

**SHEETMTL 50432574                      Tech Sheet Metal Semester 4                      4 Credits/Units**  
This course description is unavailable at this time. Please contact the center offering the course for more information.

**SMENG 31461324                      Basic Two- and Four-Cycle Engines                      5 Credits/Units**



This nine-week course covers the principles of small internal combustion engines, including two-cycle and four-cycle. Design, construction, engine testing, and diagnosing are all covered. Students become familiar with the tools, machines and equipment that are used for engine repair work in the power equipment shop.

**SMENG 31461325 Small Engine Rebuilding - Motorcycle, Marine & Outdoor Power Products Technician Program 5 Credits/Units**  
This nine-week course covers disassembly, repairing, re-assembly and engine break-in. Other topics covered include engine tuneup, carburetion and electrical systems as well as snowmobiles, chainsaws, sharpening and balancing of rotating elements are included.

**SMENG 31461326 Electrical and Hydraulic Systems 5 Credits/Units**  
This nine-week course covers electrical systems in great detail. Students study the basic principles of electricity and magnetism. The proper use of meters is covered. Students learn how to service and troubleshoot charging, ignition, starting, safety interlocks and instruments. Basic hydraulic systems also are covered.

**SMENG 31461327 Power Transmissions and Motorcycle, Marine and Outdoor Power Products 5 Credits/Units**  
This nine-week course covers power transmissions of all of the above equipment. Topics include transmissions, clutches, hydro transaxles, wheels, tires, belts, chains and stern drives. ATVs also are studied in detail.

**SMENG 31461328 Small Engine Lab 1 1 Credits/Units**  
Students work on individual projects that have been approved by the instructor, such as building a motorcycle engine stand or developing advanced technical knowledge or skill in any of the motorcycle, marine or small engine service areas.

**SMENG 31461329 Small Engine Lab 2 1 Credits/Units**  
Students continue working on individual projects that have been approved by the instructor, such as building a motorcycle engine stand or developing advanced technical knowledge or skill in any of the motorcycle, marine or small engine service areas.

Pre-reqs:1st semester core.

**SMLBUS 10145102 Small Business Development 3 Credits/Units**  
Provides an introduction to prospective small business owners to the principles involved in planning and operation. Attention is given to small business appraisal and opportunities. Emphasis will be placed on factors that contribute to a successful business operation.

**SMLBUS 10145105 Operations Management 3 Credits/Units**  
Small business management strategies are applied to policies and operations. Included are applications to budgeting, marketing potentials, forecasting, layout, staffing, work flow, scheduling, and general business decisions. E-commerce is also explored.

**SMLBUS 10145106 Small Business Marketing 3 Credits/Units**  
Developing and refining the marketing and promotion plans for a small business. Topics for discussion include merchandise/service resources, budgeting, study of competition, market segmentation, pricing, promotion, non-media ways to get customers to come to your business, and strategic planning.

**SMLBUS 10145108 Field Experience 2 Credits/Units**  
Employment in an approved occupation related to the student's future business plans is a prerequisite. Reports and discussion in class are coordinated with student employment. Employee appraisal, evaluation and harmony on the job will also be topics of discussion. The course requires a minimum of 144 hours of employment.

**SMLBUS 10145117 Introduction to Entrepreneurship 3 Credits/Units**  
Dreaming of starting your own business? This course is designed to inspire and nurture the entrepreneurial spirit. Students will examine the entrepreneurial process and characteristics of successful entrepreneurs, how to identify and evaluate entrepreneurial opportunities, and the critical elements of an effective business plan -- including management, marketing, and financial data. So whether you dream of a new business, or have a plan that needs further development, this course can help you reach your goals.

**SMLBUS 10145185 Customer Service Management 3 Credits/Units**  
This course examines the general state of customer service in organizations for both internal & external customers. Explores how a business can enhance their competitive position by adopting and implementing a variety of service initiatives. Topic areas range from practicing necessary customer service skills, such as communication, listening and conflict management to discussing service strategies used by top companies.

**SMLBUS 10145189 Customer Relations 2 Credits/Units**  
This course examines the general state of customer service in organizations for both internal and external customers. Students will explore how a business can enhance their competitive position by adopting and implementing a variety of service initiatives. Topic areas range from practicing necessary customer service skills, such as communication, listening and conflict management. Students also will create professional cover letters and resumes. Emphasis is given to the fundamentals of grammar, spelling, sentence structure and paragraph development.

**SOC 10809172 Introduction to Diversity Studies 3 Credits/Units**  
Introduces learners to the study of diversity from a local to a global environment using a holistic, interdisciplinary approach. Encourages self-exploration and prepares the learner to work in a diverse environment. In addition to an analysis of majority/minority relations in a multicultural context, the primary topics of race, ethnicity, age, gender, class, sexual orientation, disability, religion are explored.

**SOC 10809197 Contemporary Amer Society 3 Credits/Units**  
This is an interdisciplinary course covering issues that illustrate how our traditional institutions (such as family, education, media, the workplace, the economy and government) are being changed by global political, demographic, multicultural and technological trends. By exploring contemporary issues, students expand their use of critical-thinking skills.

**SOC 20809202 Social Problems 3 Credits/Units**  
This course examines the major issues confronting society: economic and political change, nationalism, racial and ethnic relations, sexism,



socioeconomic class, crime and justice, health and education, and family life. It discusses causes, effects, possible solutions and future trends. This course requires student participation in reading, writing and discussion.

**SOC 20809203** **Intro Sociology** **3 Credits/Units**  
Introduces students to the field of Sociology. Defines and examines the concepts and realities of social structure, culture, socialization, complex organizations, class, inequality, social groups and social change. Special emphasis is given to institutions such as the family, religion, education, politics, economics and the media.

**SOC 20809204** **Marriage and the Family** **3 Credits/Units**  
Examines the changes in the structure, function and definition of family from a social science perspective. The social, historical, cultural and economic sources of these changes are explored along with a critical examination of what these changes have meant for children, women, men, and society as a whole, especially in recent decades. Contemporary issues and debates are explored, with an emphasis on research evidence. The goal of the course is for students to evaluate their assumptions about marriage and family as they become more informed by social science research, and, on a practical level gain knowledge and insight for navigating the challenges of intimate relationships and family life.

**SOC 20809207** **Criminology** **3 Credits/Units**  
Course develops a sociological framework for the study of crime. It starts by building a foundation for exploring crime—what social factors influence our definition of crime, how we measure crime, the trends and changes in crime rates and patterns, and approaches to crime control. Students will examine theories from a range of inter-disciplinary perspectives on the etiology and causes of crime and criminal behavior. Throughout the course there is an emphasis on current research, policies and practices on how we respond the crime problem. The goal of this course is to get students thinking about the nature of crime and justice, the complex sources of crime, and to engage in critical thinking on how we respond to crime. What is working? What is not working? What research can we critically examine? What are the social costs of current practices? How can we do better?

**SOC 20809229** **Social Movements** **3 Credits/Units**  
The Social Movements course examines social movements from a sociological perspective with an emphasis on the United States. It analyzes what constitutes a social movement using a cross cultural as well as a cross political system approach. This course also analyzes the causes of social movements, underscoring the issues of race, class, gender, religion, ethnicity and multiculturalism in regard to legal, political and social equality. Finally, the course will evaluate prospects for social change.

**SOC 20809240** **Introduction to Latin America** **3 Credits/Units**  
Introduction to Latin America provides an interdisciplinary introduction to Latin America. Focuses are on history, politics, economics, society and culture. This course provides a broad and multi-faceted exposure to several themes in particular: historical legacies that shape Latin American life, the experience of revolution and counter-revolution, various economic development strategies, contemporary social change and cultural expression. All of these themes include specific case studies as well as a general overview.

**SOC 20809251** **Sociology of the Middle East and North Africa** **3 Credits/Units**  
In this age of globalization and multiculturalism, this course provides the opportunity for the learner to develop the knowledge skills process and understanding of a sociological analysis of the political, cultural, and social history of the Middle East and North Africa (MENA). It will follow a comparative approach in assessing the patterns and processes of social, political, economic, and cultural developments in various Middle Eastern and North African states and societies. The focus will be on several key issues such as ethnic and religious diversity, colonialism, culture and cultural reform, nationalism, overview of the East/West relations, the role of religion and current areas of conflict. As a sociology course, emphasis will be placed upon the interactions between the structures and institutions of the corresponding societies, their people, and those abroad. No prior background of the region will be assumed or expected. However, students enrolled in this class will be expected to follow the news related to the Middle East on a daily basis.

**SOC 20809252** **Race and Ethnicity in the U.S.** **3 Credits/Units**  
Explores how the social constructions of race and ethnicity shape U.S. society and examines structural inequalities and majority minority group relations. Emphasizes explanations of forms of racism, ethnic and racial prejudice and discrimination; historical background; and forms of cultural resistance and common experiences of African Americans, Indian Americans, Latinos, Asian Americans and other marginalized racial and ethnic groups. Considers employment, housing, political, legal, educational, and familial and health consequences of unequal power. Discusses current policy debates and proposed solutions to inequalities.

**SOC 20809253** **Sociology of Gender** **3 Credits/Units**  
Sociologically examines the importance and power of gender, particularly as it pertains to the status of women and men in society. Students explore the social construction of gender and its impact on identity, roles, relationships, and life experiences. Attention is given to the gender socialization process as well as the ways in which gender impacts romantic and family relationships, division of labor, parenthood, sexuality, crime and violence, media, employment, health, education, religion, political participation, and power. Throughout the course, students reflect upon past, present, and future gender patterns, considering the cultural reinforcement of gender norms as well as the ways in which individuals and institutions challenge them.

**SOC 20809255** **Introduction to LGBTQ+ Studies** **3 Credits/Units**  
Introduction to LGBTQ+ Studies is a sociology course that provides students with the conceptual and analytical tools to understand the LGBTQ+ community. Students will be able to examine historical documents and experiences to comprehend social constructionism, critically unpack the concepts of intersectionality and matrix of domination, understand interactive dynamics within historically oppressed and marginalized groups, dissect positions normalization within social institutions, identify patterns of activism and identity politics, critique contemporary legal and political debates regarding rights and inequalities, analyze the representation of LGBTQ+ within popular culture, and breakdown concerns over assimilation as a concept and a practice. This course will focus mainly on the United States but will include discussions on the global. Academically, the main approach applied in this course will be from Sociology and its subfield of Queer Theory, though work used will be interdisciplinary in nature.

**SOC 20809275** **Sociology of Religion** **3 Credits/Units**  
This course introduces students to the sociological study of religion, including understanding the significance of religion for social structures and culture, the interaction of religion and society, and the religious dimension in secular societies.



<b>SOC 20809277</b>	<b>Couple Relationships</b>	<b>1 Credits/Units</b>
Introduces students to empirical research findings on relationship and marriage success and failure as well as to one of the most nationally recognized skills-based prevention programs for couples. Students will learn to distinguish the patterns that erode as well as protect relationships; students will gain skills and strategies that research has identified for strengthening intimate relationships.		
<b>SOC 20809291</b>	<b>Technology and Society</b>	<b>3 Credits/Units</b>
Introduces students to the field of Science and Technology Studies (STS). Students explore the ways in which science and technology impact our everyday lives from a sociological perspective. Following an initial examination of the history of STS, scientific and technological revolutions, major schools of thought in the field of STS, and the role of science and technology in our everyday lives, students will focus on applied areas of science and technology using the life sciences and social media as case studies. Course work centers on current topics that our society is grappling with such as surveillance, body politics, medical applications, the role of the market in science and technology, and the consequences of the speed and ease of the use of technology in the twentyfirst century. Throughout the semester, students will critically reflect upon personal, community, and societal issues that arise out of science and technology through discussion and debate.		
<b>SOCSCI 20809206</b>	<b>Introduction to Women's Studies</b>	<b>3 Credits/Units</b>
Women's status and roles in contemporary U.S. society are investigated by analyzing various disciplines and institutions such as the family, law, medicine, psychology, education, religion and the media as they impact upon the socialization process and the classification of people by gender.		
<b>SOCSCI 20809230</b>	<b>Statistics for the Social Sciences</b>	<b>4 Credits/Units</b>
This course provides the learner with an introductory understanding of statistics for the social sciences and how statistics are applied to the social world. Learners will build skills in analytical and critical thinking through the application of quantitative knowledge to social questions. Discussion will center on problems of data collection, analysis, interpretation, and reporting. Course components will focus on measuring variables, measures of central tendencies, the utility of descriptive statistics, and introduction to inferential statistics and its predictive nature, the differences between samples and populations, and the increased capacity to read and display statistical information. Learners will develop statistical knowledge and skills through the use of software, SPSS, increasing their technological abilities.		
<b>SOCSCI 20809254</b>	<b>Research Methods for the Social Sciences</b>	<b>3 Credits/Units</b>
Students interested in economics, political science, psychology, and sociology are prepared to critically evaluate scholarly research; design a sound, ethically conducted study; collect data; analyze qualitative and quantitative data; evaluate findings, and improve scientific writing skills. Take as general elective or Social Science Data Analytics Certificate course.		
<b>SOCSCI 20809256</b>	<b>International Perspectives on Gender and Women</b>	<b>3 Credits/Units</b>
Explore diverse experiences of gender and women with an international focus. Interdisciplinary in nature, course topics and themes vary each semester. Opportunities to learn from, network with, and empower women as well as cultivate cultural sensitivity and intercultural communication - valuable skills in a global community and economy. Study abroad option available.		
<b>SOCSCI 20809257</b>	<b>Gender and Women's Studies-Study Abroad Experience</b>	<b>1 Credits/Units</b>
Step outside the United States and explore the realities of gender and women in other countries and cultures. Through a combination of experiential learning, class discussions, and personal reflections, students will gain a deeper appreciation for the complex gender dynamics at work in our global community.		
<b>SOCSCI 20809269</b>	<b>Energy And Society</b>	<b>3 Credits/Units</b>
The American experience is better understood within the context of the history of energy consumption and production. Our nation's future is inextricably connected to our resolution of the challenges we face with respect to energy. Analyses and solutions require an interdisciplinary approach. The course "Energy and Society" considers the technical, economic, political, environmental, ethical and social contexts of the topic of energy.		
<b>SOCSCI 20809294</b>	<b>Data Organization, Visualization, and Management</b>	<b>3 Credits/Units</b>
Students interested in economics, political science, psychology, and sociology learn foundational data organization, visualization, and management skills; build a data collection instrument; create a dataset and modify data within it; generate descriptive statistics; create and present visual displays to academic and business audiences.		
<b>SPANISH 10802102</b>	<b>Introductory Spanish Conversation 1</b>	<b>3 Credits/Units</b>
Introductory Spanish Conversation is a three-credit, non-college transfer class. At the end of the course, students will be able to carry on uncomplicated conversations about concrete, limited topics. To emphasize speaking and listening skills, the course includes substantial practice in understanding and producing the spoken language. Basic grammatical and structural concepts are introduced, and the development of vocabulary skills is highlighted. Cultural topics are also discussed. Introductory Spanish Conversation is intended for (a) students who want an introduction to Spanish for communicative purposes and (b) students who need a one-semester introduction to the language before beginning the more intensive college-transfer Spanish courses.		
<b>SPANISH 20802211</b>	<b>Spanish 1 - Liberal Arts Transfer</b>	<b>4 Credits/Units</b>
Spanish 1 is for students beginning the study of Spanish. This course emphasizes development of basic communicative skills through practice in listening, speaking, reading and writing. Stresses vocabulary and grammar to enhance students' ability to speak and write in Spanish. Study of customs and values provides an increased awareness of the Spanish-speaking cultures. On completion students are able to participate in uncomplicated conversations on everyday topics. Some computer use is required for completing on-line homework assignments.		
<b>SPANISH 20802212</b>	<b>Spanish 2 - Liberal Arts Transfer</b>	<b>4 Credits/Units</b>
Spanish 2 emphasizes continued development of more complex communicative skills through practice in listening, speaking, reading and writing. Vocabulary and grammar are studied to enhance students' abilities to speak and write in Spanish. Upon completion, students possess the listening, speaking, reading and writing skills necessary to handle simple, everyday survival tasks in Hispanic cultures. Some computer use is required for completing on-line homework assignments.		
<b>SPANISH 20802213</b>	<b>Spanish 3 - Liberal Arts Transfer</b>	<b>4 Credits/Units</b>
Spanish 3 enhances complex communicative skills developed during previous semesters of study. Emphasis is placed on speaking and writing in extended contexts, focusing on presentational and interpersonal communication. Everyday situations, including eating out, travel		



and vacations, provide students an opportunity to expand their survival skills in Hispanic cultures. Language and critical thinking skills are expanded and deepened through reading, writing and speaking about health care, the environment, job interviews/resumes and relationships. Readings of cultural and literary significance, as well as a unit on art history, provide vehicles for discussion, presentation and composition. Some computer use is required for completing on-line homework assignments.

<b>SPANISH 20802214</b>	<b>Spanish 4 - Liberal Arts Transfer</b>	<b>4 Credits/Units</b>
This course reviews and expands upon key grammatical structures needed to communicate effectively in Spanish. It focuses on expanding vocabulary, increasing grammatical accuracy and achieving paragraph-length discourse. Using the target language, students read and discuss culturally centered texts, review and broaden grammatical knowledge, complete oral and written exercises, write compositions and make formal class presentations. Some computer use is required for completing on-line homework assignments.		
<b>SPANISH 20802215</b>	<b>Spanish 5</b>	<b>3 Credits/Units</b>
Spanish 5 focuses on developing accuracy in written communication skills. Building on their experience in Spanish 4, students study Spanish grammar at greater breadth and depth than was required in previous courses, with the ultimate objective of improving their ability to write accurately in Spanish. Students read and analyze literary excerpts as the basis for active class discussion, presentation and composition.		
<b>SPANISH 20802216</b>	<b>Spanish Culture &amp; Civilization - Liberal Arts Transfer</b>	<b>4 Credits/Units</b>
A course description is unavailable for this course. Please check with the center office for details.		
<b>SPEECH 10801198</b>	<b>Speech</b>	<b>3 Credits/Units</b>
This course presents the basic techniques of effective public speaking and listening for students in degree or diploma programs. Students improve their oral communication skills through analysis of purposive listening, preparing and presenting informative and persuasive speeches and using the group process to discuss issues and solve problems. It emphasizes audience analysis, audiovisual techniques, speaker evaluation and group work.		
<b>SPEECH 20810202</b>	<b>Theory &amp; Practice of Argumentation and Debate</b>	<b>3 Credits/Units</b>
This course focuses on the theory and practice of argumentation. On the theoretical level, we will seek to conceive the operations of social and personal transformation that can take place during debate. In particular, we will focus on the means by which arguments can turn on established bases of authority. These sites of commonplace meaning will not only be approached as potential supports for claims, but also as sites in which uncertainty can be created. On the practical level, we will interpret, analyze, and counter present-day arguments. We will also construct arguments of our own and test them in live debates. Finally, we will consider the ways in which the contemporary U.S. government and mass media are actually structured, with an eye to developing pragmatic strategies for effective advocacy.		
<b>SPEECH 20810211</b>	<b>Oral Interpretation</b>	<b>3 Credits/Units</b>
Explores the possibilities offered by the full range of the human voice. Students will be challenged to create theatre in the minds of audience members through interpretation techniques. Concepts covered include selected projects in children's literature, prose, poetry, drama, and reader's theatre.		
<b>STEAM 50435530</b>	<b>Sf Rel Sci/Math/Bpr/Drawing</b>	<b>4 Credits/Units</b>
This course description is unavailable at this time. Please contact the center offering the course for more information.		
<b>STEAM 50435531</b>	<b>Sf Refrig/Math Bpr/Drawing</b>	<b>4 Credits/Units</b>
This course description is unavailable at this time. Please contact the center offering the course for more information.		
<b>STEAM 50435532</b>	<b>Hydronic Prin/Math/Bpr/Draw</b>	<b>4 Credits/Units</b>
This course description is unavailable at this time. Please contact the center offering the course for more information.		
<b>STEAM 50435533</b>	<b>Steam Heat Prin/Math/Bpr/Draw</b>	<b>4 Credits/Units</b>
This course description is unavailable at this time. Please contact the center offering the course for more information.		
<b>STEAM 50435534</b>	<b>Sf Digital Cntr Sys/Comptr Apl</b>	<b>2 Credits/Units</b>
This course description is unavailable at this time. Please contact the center offering the course for more information.		
<b>STEELIRN 50437535</b>	<b>Combined Weld for IW</b>	<b>2 Credits/Units</b>
This course description is unavailable at this time. Please contact the center offering the course for more information.		
<b>STEELIRN 50437536</b>	<b>Gmaw/Fcaw Welding</b>	<b>2 Credits/Units</b>
This course description is unavailable at this time. Please contact the center offering the course for more information.		
<b>STEELIRN 50437537</b>	<b>Gtaw (Gas Tungson Arc Welding)</b>	<b>2 Credits/Units</b>
This course description is unavailable at this time. Please contact the center offering the course for more information.		
<b>STEELIRN 50437570</b>	<b>Reinforcing Steel/Post Tensioning/Math</b>	<b>2 Credits/Units</b>
This course description is unavailable at this time. Please contact the center offering the course for more information.		
<b>STEELIRN 50437571</b>	<b>Ornamental</b>	<b>2 Credits/Units</b>
This course description is unavailable at this time. Please contact the center offering the course for more information.		
<b>STEELIRN 50437703</b>	<b>Structural Steel Erection 1</b>	<b>3 Credits/Units</b>
This structural course is designed to provide the Iron Worker student with training in structural steel erection including history, safety, tools and equipment, drawings, handling materials, erecting structural steel members, plumbing and aligning structural steel, bolting up, and making structural connections. This also will provide the Iron Worker student with training in how to safely install metal decking and sheeting. The course will also include overviews of erecting bridges, towers, wind turbines, clear span, and amusement park structures. The student will also learn how to use composite materials in structural erection and how to read structural drawings.		
<b>SUPDEV 10196116</b>	<b>Organizational Behavior</b>	<b>3 Credits/Units</b>





In this course, the learner applies the skills and tools necessary to work effectively with behavior found in organizations. Each learner will explore and demonstrate the application of theories in motivation, perception, organizational culture, employee development and communication. In addition, concepts such as diversity, decision making, conflict management and managing in a global environment will be introduced.

<b>SUPDEV 10196136</b>	<b>Safety in the Workplace</b>	<b>3 Credits/Units</b>
The learner applies the skills and tools necessary to provide a safe and secure work environment. Each learner will demonstrate the application of strategies regarding safety awareness, compliance, investigation and documentation. Other topics include: safety orientation, chemical safety, right-to-know, inspections, risk analysis, workplace violence, substance abuse, first aid, fire and electrical safety, emergency preparedness and liaison with external agencies.		
<b>SUPDEV 10196169</b>	<b>Diversity &amp; Change Management</b>	<b>3 Credits/Units</b>
The learner applies the skills and tools necessary to implement and maintain a diverse work environment that values change. Each learner will demonstrate the application of assessing the current extent of diversity in the workplace, analyze the effect of perceptions, attitudes, biases, and organization culture on diversity, dealing with barriers, change management strategies, process, and reactions, measuring progress and celebrating success.		
<b>SUPDEV 10196189</b>	<b>Team Building &amp; Problem Solving</b>	<b>3 Credits/Units</b>
The learner applies the skills and tools necessary to facilitate problem solving in a team environment. Each learner will demonstrate the application of strategies regarding: the necessary roles for team effectiveness, stages of team development, team problem solving and consensus, systematic processes for problem definition, data acquisition and analysis, generating alternative solutions, choosing solutions, implementation planning and evaluation.		
<b>SUPDEV 10196191</b>	<b>Principles of Supervision</b>	<b>3 Credits/Units</b>
The learner applies the skills and tools necessary to perform the functions of a front line manager. Each learner will demonstrate the application of strategies to make the transition to a contemporary supervisory role including: operations planning and analysis, delegation, staffing, problem solving, motivation, training, leadership and performance assessment.		
<b>SURGT 31512317</b>	<b>Surgical Technologist Functional Microbiology</b>	<b>1 Credits/Units</b>
Introduces general classification, structure and physiology of microorganisms. Students learn the relationship between microorganisms and the human host as well as microbes in the hospital environment. Examines the study of the disease process, transmission of disease and methods of controlling microbial growth. Reserved for Surgical Technologist Pre-Petition students until open registration. Pre/Co requisites: Medical Terminology and General A&P, or A&P 1 and 2. Computer Skills are highly recommended.		
<b>SURGT 31512327</b>	<b>ST: Introduction</b>	<b>4 Credits/Units</b>
Provides the foundational knowledge of infection control and asepsis. Legal and ethical issues encountered in the healthcare environment are explored. Simulated laboratory practice enables the learner to develop beginning technical skills.		
<b>SURGT 31512328</b>	<b>ST: Fundamentals 1</b>	<b>4 Credits/Units</b>
Includes the basic clinical skills needed by the Surgical Technologist in the scrub role. Learners develop skills in identifying basic instrumentation, supplies, drains, catheters, dressings and sponges. Includes practice experience in creating a sterile field, draping, passing instruments and supplies, performing counts and preparing supplies.		
<b>SURGT 31512329</b>	<b>ST: Fundamentals 2</b>	<b>2 Credits/Units</b>
Builds upon and reinforces the role of the Surgical Technologist as a member of the operating room team. Discusses care of the patient before, during and after surgery with emphasis on surgical wounds, wound closure materials, and vital signs. Includes lecture and lab experiences.		
<b>SURGT 31512330</b>	<b>ST: Clinical 1</b>	<b>3 Credits/Units</b>
Apply basic surgical theories, principles, and procedural techniques in the operating room. Students begin to function as team members under the guidance of the instructor and authorized clinical personnel. Surgical rotation case requirements are documented.		
<b>SURGT 31512331</b>	<b>ST: Surgical Procedures</b>	<b>4 Credits/Units</b>
Provides the foundational knowledge of surgical core and specialty procedures. Examines the pathophysiology, diagnostic interventions and surgical interventions for a variety of surgical procedures. Incorporates integration of basic health sciences and technical knowledge to complete a plan of action for a surgical procedure.		
<b>SURGT 31512332</b>	<b>ST: Clinical 2</b>	<b>4 Credits/Units</b>
Further experience in a clinical setting allows the student to continue to improve technical skills while accepting more responsibilities during surgical procedures. Surgical rotation case requirements are documented		
<b>SURGT 31512334</b>	<b>ST: Clinical 3</b>	<b>4 Credits/Units</b>
Enhances the student's technical experience and employee skills. Serves as a transition between student and employee. Application of advanced skills for the entry-level Surgical Technologies in the clinical setting.		
<b>T&amp;D 50439589</b>	<b>Tech T &amp; D Sem 7</b>	<b>2 Credits/Units</b>
This course description is unavailable at this time. Please contact the center offering the course for more information.		
<b>T&amp;D 50439591</b>	<b>Tech T &amp; D Sem 8</b>	<b>2 Credits/Units</b>
This course description is unavailable at this time. Please contact the center offering the course for more information.		
<b>T&amp;D 50439593</b>	<b>Tech T &amp; D Sem 1</b>	<b>2 Credits/Units</b>
This course description is unavailable at this time. Please contact the center offering the course for more information.		
<b>T&amp;D 50439594</b>	<b>Tech T &amp; D Sem 2</b>	<b>2 Credits/Units</b>
This course description is unavailable at this time. Please contact the center offering the course for more information.		



<b>T&amp;D 50439596</b>	<b>Tech T &amp; D Sem 3</b>	<b>2 Credits/Units</b>
This course description is unavailable at this time. Please contact the center offering the course for more information.		
<b>T&amp;D 50439597</b>	<b>Tech T &amp; D Sem 4</b>	<b>2 Credits/Units</b>
This course description is unavailable at this time. Please contact the center offering the course for more information.		
<b>T&amp;D 50439598</b>	<b>Tech T &amp; D Sem 5</b>	<b>2 Credits/Units</b>
This course description is unavailable at this time. Please contact the center offering the course for more information.		
<b>T&amp;D 50439599</b>	<b>Tech T &amp; D Sem 6</b>	<b>2 Credits/Units</b>
This course description is unavailable at this time. Please contact the center offering the course for more information.		
<b>TEL&amp;CBL 50451590</b>	<b>Voice Data Video Install Sem 6</b>	<b>2 Credits/Units</b>
This course description is unavailable at this time. Please contact the center offering the course for more information.		
<b>TEL&amp;CBL 50451591</b>	<b>Voice Data Video Install Sem 1</b>	<b>2 Credits/Units</b>
This course description is unavailable at this time. Please contact the center offering the course for more information.		
<b>TEL&amp;CBL 50451592</b>	<b>Voice Data Video Install Sem 2</b>	<b>2 Credits/Units</b>
This course description is unavailable at this time. Please contact the center offering the course for more information.		
<b>TEL&amp;CBL 50451593</b>	<b>Voice Data Video Install Sem 3</b>	<b>2 Credits/Units</b>
This course description is unavailable at this time. Please contact the center offering the course for more information.		
<b>TEL&amp;CBL 50451594</b>	<b>Voice Data Video Install Sem 4</b>	<b>2 Credits/Units</b>
This course description is unavailable at this time. Please contact the center offering the course for more information.		
<b>TEL&amp;CBL 50451595</b>	<b>Voice Data Video Install Sem 5</b>	<b>2 Credits/Units</b>
This course description is unavailable at this time. Please contact the center offering the course for more information.		
<b>THERMASS 10537136</b>	<b>Musculoskeletal Anatomy for the Massage Therapist</b>	<b>4 Credits/Units</b>
This course introduces students to the anatomy and function of the skeletal and muscular systems of the body. Students learn the names, locations, insertion points, and actions of many of the muscles of the human anatomy. Furthermore, students apply what they learn and develop the essential palpation skills to identify the bones and muscles that comprise the musculoskeletal system. Students also acquire necessary skills for practical range of motion movements.		
<b>THERMASS 10537138</b>	<b>Kinesiology for the Massage Therapist</b>	<b>2 Credits/Units</b>
Building upon foundational knowledge from musculoskeletal anatomy, students deepen their understanding with an emphasis on muscle groups used to perform specific actions. Furthermore, students directly apply this knowledge through the practice of ROM, postural and gait assessments to identify muscles involved in specific injuries. Finally, students learn how to integrate assessment techniques into a treatment plan for a more comprehensive approach to patient care.		
<b>THERMASS 10537139</b>	<b>Pathology and Medical Terminology for the Massage Therapist</b>	<b>3 Credits/Units</b>
In this course, students learn the types of diseases that affect each of the major body systems and more specifically the signs and symptoms of selected pathologies and disorders that could prove to be a contraindication to massage therapy. Students will also learn the benefits of an integrative and palliative approach to manage chronic conditions and how to approach treatment planning with this in mind. Students will also gain a foundational understanding of medical terminology, a basic understanding of pharmacology and the possible interactions between medications and massage.		
<b>THERMASS 31537340</b>	<b>Therapeutic Massage 1</b>	<b>4 Credits/Units</b>
Introduces students to the field of touch therapies and provides students with basic instruction in therapeutic massage theory and technique. Topics covered include: (1) the development of the massage professional; (2) the therapeutic relationship; (3) the history of massage; (4) educational and legal requirements; (5) professional standards and ethics; (6) sanitation and safety procedures; (7) proper draping techniques; (8) proper body mechanics; (9) massage session preparation; (10) Swedish massage techniques; and (11) chair Massage. Many learning activities support students to develop mindfulness skills and increased body awareness.		
<b>THERMASS 31537342</b>	<b>Therapeutic Massage 2</b>	<b>4 Credits/Units</b>
Students continue to build upon conceptual framework as established in Therapeutic Massage 1. Topics covered include: (1) research literacy; (2) wellness concepts and stress reduction methods; (3) benefits and effects for therapeutic massage; (4) indications and contraindications to massage therapy; (5) endangerment sites; (6) consultation and record keeping; (7) the development of the massage professional; (8) full body therapeutic massage techniques; (9) proper draping techniques; and (10) proper body mechanics.		
<b>THERMASS 31537344</b>	<b>Specialized Techniques for Therapeutic Massage</b>	<b>4 Credits/Units</b>
In this course, students acquire more in-depth treatment planning, documentation and time management skills to prepare for their clinical experience. Students also learn how to adapt therapeutic and stress reduction massage techniques to clients with special needs including: pregnant clients, the elderly, oncology patients and individuals with particular health challenges. Students learn clinical approaches to therapeutic massage such as trigger point therapy and sports massage and explore spa therapies such as hydrotherapy, hot stone and aromatherapy massage. Students also gain a foundational understanding of eastern bodywork theory and technique and examine a variety of modalities to emphasize on career exploration.		
<b>THERMASS 31537346</b>	<b>Therapeutic Massage Clinic and Business Practices</b>	<b>4 Credits/Units</b>
This course provides students with opportunities for synthesis and refinement of their massage techniques and treatment planning skills applied to a diverse clientele, within a professional clinic setting. The clinic provides students with valuable hands-on training in the following massage business practices: appointment scheduling, record keeping, customer service and professional communication. Most importantly, students learn to create a restful, relaxing atmosphere for clients. In the business portion of the class, students explore career opportunities, examine Wisconsin's requirements for licensure and prepare for the national and state exams. Students must provide proof of certification		



CPR before beginning clinic.

<b>VETTECH 10091105</b>	<b>Occupational Preparation</b>	<b>1 Credits/Units</b>
This course acquaints new students with general competencies necessary to be employed as a veterinary and laboratory animal technician. Addresses the students' personal safety, health and stress management. Discusses memberships in professional organizations, certification, licensing and internship preparation. Briefly discusses animal loss and bereavement.		
<b>VETTECH 10091107</b>	<b>Animal Disease 1</b>	<b>2 Credits/Units</b>
Covers etiology, symptoms, transmission, diagnosis, prevention and control of diseases that are transmissible from animals to humans as well as animals to animals. Reporting requirements and handling of diagnostic samples involving high-exposure diseases are also discussed.		
<b>VETTECH 10091108</b>	<b>Animal Disease 2</b>	<b>2 Credits/Units</b>
Covers etiology, symptoms, transmission, diagnosis, prevention and control of common diseases in a wide variety of animal species. Toxic plants and other substances, as well as reporting and monitoring of federally regulated diseases will also be discussed.		
<b>VETTECH 10091109</b>	<b>Pharmacology 1 - Animals</b>	<b>2 Credits/Units</b>
Introduction to drugs and other substances used in veterinary medicine. Emphasizes drug usage, client education, measurement, administration, and safe storage of antiparasitics, antiinflammatories, antibiotics and nervous system drugs.		
<b>VETTECH 10091110</b>	<b>Pharmacology 2</b>	<b>2 Credits/Units</b>
Introduction to drugs and other substances used in veterinary medicine. Emphasizes drug usage, client education, measurement, administration, and safe storage of cardiac, respiratory, gastrointestinal, chemotherapy, ophthalmic and other drugs.		
<b>VETTECH 10091120</b>	<b>Veterinary Clinical Pathology 1</b>	<b>3 Credits/Units</b>
Students are introduced to laboratory equipment, elementary laboratory procedures and the principles of microscopy, parasitology, urine analysis, hematology and bacteriology.		
<b>VETTECH 10091121</b>	<b>Veterinary Clinical Pathology 3</b>	<b>3 Credits/Units</b>
Continues to expand upon the principles, procedures and skills learned in Vet. Clinical Pathology 1 and 2, including hematology, parasitology, urine analysis, microbiology, cytology, mycology, virology, serology, immunology and blood chemistries. Will continue to expand upon the use of automated laboratory procedures for hematology and clinical chemistries.		
<b>VETTECH 10091122</b>	<b>Advanced Topics in Veterinary Medicine</b>	<b>1 Credits/Units</b>
Current topics and advanced diagnostic procedures in veterinary medicine.		
<b>VETTECH 10091123</b>	<b>Lab Animal Science 1</b>	<b>2 Credits/Units</b>
This course includes the history of laboratory animal technology and laboratory animal uses. Emphasizes the Animal Welfare Act and other regulations pertaining to the care of laboratory animals. Covers laboratory animal husbandry in depth as students provide care and treatment for a colony of laboratory animals.		
Pre-requisites: 10-806-105, 10-091-170, 10-091-171 or concurrent enrollment in all of the above.		
<b>VETTECH 10091124</b>	<b>Veterinary Clinical Pathology 2</b>	<b>3 Credits/Units</b>
Second in sequence of three courses. Students utilize laboratory equipment, including the microscope and complete selected laboratory procedures, including parasitology, mycology, urine analysis, hematology, serology, bacteriology, cytology and blood chemistries.		
<b>VETTECH 10091127</b>	<b>Surgical Nursing 1</b>	<b>3 Credits/Units</b>
This introductory course to surgical nursing covers surgical instruments, package prep, patient prep, anesthesia, monitoring and post-op care.		
<b>VETTECH 10091128</b>	<b>Animal Nursing 1</b>	<b>2 Credits/Units</b>
Designed to build nursing skills learned in 10-091-172, Animal Care & Management 2, with emphasis on large animal anesthetic techniques, surgical preparation and monitoring.		
<b>VETTECH 10091131</b>	<b>Veterinary Office Procedures 1</b>	<b>1 Credits/Units</b>
Covers the development of appropriate public, client and staff relations; telephone etiquette, making appointments, managing records, client services and education, and personal grooming and attire. Legal requirements of record keeping as well as an introduction to the rules and regulations governing the veterinary and laboratory animal technician will also be discussed.		
<b>VETTECH 10091132</b>	<b>Veterinary Office Procedures 2</b>	<b>1 Credits/Units</b>
A computer based course covering office documents, patient records, billing, estimates, etc., using veterinary office software.		
<b>VETTECH 10091140</b>	<b>Animal Anatomy &amp; Physiology 1</b>	<b>3 Credits/Units</b>
Lectures will emphasize terminology, functions, location, identification and organization of anatomical structures that are parts of body systems. Students dissect and study cadavers and tissue specimens from common domestic species.		
<b>VETTECH 10091152</b>	<b>Surgical Nursing 2</b>	<b>3 Credits/Units</b>
This course focuses on the continuation of basic surgical nursing and anesthesia skills. Also covers basic dental prophylaxis, dental radiography, and cardiopulmonary resuscitation.		
<b>VETTECH 10091153</b>	<b>Diagnostic Imaging</b>	<b>3 Credits/Units</b>
Explores concepts in veterinary radiology, electrocardiography, ultrasound, endoscopy and other special imaging procedures and technologies.		
<b>VETTECH 10091158</b>	<b>Internship - Veterinary Technician Program</b>	<b>4 Credits/Units</b>
Internship (work experience) is a very important phase of practical training for students enrolled in the veterinary program. It generally follows the second semester of classwork in the program. The internship course is offered during the summer term and requires a minimum of eight		





weeks, and completion of a minimum of 288 hours. The student's work is supervised by assigned instructors. Prerequisite: completion of all first-year program courses, or consent of instructors.

**VETTECH 10091170**                      **Veterinary Medical Terminology - Veterinary Technician Program**                      **2 Credits/Units**  
Teaches acceptable veterinary medical terminology for common clinically recognizable diseases, operations, systems and procedures, as well as common medical signs, abbreviations and colloquial vocabulary.

**VETTECH 10091171**                      **Animal Care and Management 1**                      **3 Credits/Units**  
Focuses on handling and husbandry of the animals most commonly seen in veterinary medicine. Includes animal behavior, nutrition, and healthcare.

Prerequisite: 10-091-170 Veterinary Medical Terminology, 10-806-105 Animal Biology, 10-091-105 Occupational Preparation.

**VETTECH 10091172**                      **Animal Care And Management 2**                      **3 Credits/Units**  
Focuses on handling, medical nursing and disease processes of animals most commonly seen in veterinary medicine.

**VICOM 10206109**                      **Intro to Electronic Design**                      **2 Credits/Units**  
Provides students with a working knowledge of the technical part of digital photography workflow, including the basic principles of working with Adobe Photoshop.

**VICOM 10206115**                      **Digital Media for Photographers**                      **3 Credits/Units**  
This course will explore the different kinds of digital media available to provide the photography student with additional tools and skills. The student will learn basic video camera techniques, video editing, sound capturing, DVD preparation and other creative software programs. This course is meant to prepare photo students for potential business applications that integrate sound, images and video.

**VICOM 10206125**                      **Instructional Media Systems**                      **3 Credits/Units**  
This advanced course serves as a continuation of Multimedia Presentation. Media integration and various delivery types are addressed with an emphasis on instructional use. Concepts include identifying a target demographic, learner styles, designing interactivity, and planning non-linear projects.

**VICOM 10206128**                      **Compositing and Special Effects**                      **2 Credits/Units**  
Chroma keying, 3D, expressions, mattes, rotoscoping, motion tracking, particles and advanced camera effects are the main focus of this course. Students will use After Effects and Motion to create movies for various delivery methods, using storyboarding and previsualization techniques prior to development.

**VICOM 10206129**                      **Motion Design**                      **2 Credits/Units**  
The focus of this course is learning the basic tenets of animation and movement for time-based media, with an emphasis on communication design. Learners will use Adobe After Effects to integrate typography, illustration, photography, video, and audio files to create industry relevant projects. Concept development, asset creation, file management, the timeline, character animation, effects, transitions, masking, and rendering for multiple output types will be covered in detail.

**VICOM 10206130**                      **Video Production**                      **3 Credits/Units**  
The student will become familiar with basic video production techniques for studio and fieldwork. Learning the basics of camera techniques, studio and field experiences, live studio recording and video team productions will be covered. In addition, the student will learn digital editing software to produce finished video projects, such as educational, promotional and service videos.

**VICOM 10206131**                      **Sound Production Techniques**                      **3 Credits/Units**  
This is an introductory sound production course in which students will learn to create clean, consistent, and intelligible audio recordings within a project driven curriculum. Students will learn sound principles, critical listening skills, and apply digital recording, editing, and mixing techniques to industry standards.

**VICOM 10206140**                      **Portfolio Preparation - Visual Communication Program**                      **2 Credits/Units**  
Students work to prepare a sample portfolio of their work for prospective employers. Students are supervised and assisted in the choice of samples, number of samples and design of portfolio. Lectures are given on job interviewing and job markets. Departmental approval of a finished portfolio is required for graduation.

**VICOM 10206142**                      **Digital Video Production and Editing**                      **3 Credits/Units**  
Digital Video Production and Editing is an advanced course in documentary, short film and motion graphics production. Building on the skills learned in Video Production 1. This course emphasizes advanced editing and video graphics.

**VICOM 10206143**                      **Digital Story Telling**                      **3 Credits/Units**  
In this course the student will write and produce a quality digital documentary and post it on the Internet. Curriculum includes: different aspects of Social Media as it pertains to digital media, script/story writing, video camera handling, in-the-field video techniques, video capturing, digital video editing and audio enhancement, video exporting and appropriate compressions and uploading compressed video to the internet.

**VICOM 10206147**                      **Introduction to DSLR Video Production**                      **2 Credits/Units**  
The student will become familiar with shooting video on a DSLR camera and how shooting video differs from still photography. During this introductory course, the students will learn to shoot, capture and digitally edit their video to produce a final video project.

**VICOM 10206148**                      **Lighting Techniques for Video Production**                      **2 Credits/Units**  
This course reviews commonly used techniques for video production in the studio or on location. Students will acquire specific skills in these areas: Appropriate use of LED and Tungsten fixtures; dynamics of hard and soft light; lighting terminology; color temperature of light; lighting for shape and texture; managing electrical power for lighting and operation of professional lighting equipment in the studio. Exercises will challenge students to create images in typical production situations including single and multi-person interviews, product shots, dramatic scenes and live events. Students will also learn how the director of photography/lighting works with the video director, art director and production crew to achieve the communication objectives of a given project.



<b>VICOM 10206160</b>	<b>Business and the Visual Arts</b>	<b>2 Credits/Units</b>
An introduction and review to small business practices specific to operation of a small visual arts business. Course will review areas such as business setup, legal organization, pricing, time management, timekeeping, bidding, management of subcontractors and billing. This course will teach best industry practices in all of those areas and how to operate a small freelance business.		
<b>VICOM 10206190</b>	<b>Advanced Interactive Media 2 Credits/Units</b>	
Takes the student through the basics of two-dimensional animation and interactivity for the web. Software applications, such as Macromedia Flash, are used to create interactive webpages. Techniques in 2D animation creation, scripting, design concepts, site organization, file optimization and uploading, and working with sound files are covered.		
<b>WELD 10442126</b>	<b>Metal Repair Techniques</b>	<b>2 Credits/Units</b>
This course covers safety, layout and measurement, grinding, drill press the the lathe operation, filing, threading, properties of metals, oxy-acetylene welding, brazing and cutting, and SMAW, GMAW, GTAW and FCAW.		
<b>WELD 31442312</b>	<b>Oxy Fuel Welding and Thermal Cutting</b>	<b>2 Credits/Units</b>
Perform manual and semi-automatic cutting and gouging using oxy-fuel and plasma arc cutting processes. Also, oxy-fuel and plasma cutting safety and proper handling of cylinders is covered. Applications will be to English and metric dimension.		
<b>WELD 31442314</b>	<b>Arc Welding Theory</b>	<b>2 Credits/Units</b>
Emphasizes welding theory, safe use of welding equipment, hand and power tools, oxy-fuel and plasma arc cutting, AWS joint, weld procedures, and defects and their causes. Electrical applications, effects of welding machine power sources, electrode selection and welding symbols will also be covered.		
<b>WELD 31442315</b>	<b>Basic Arc (SMAW)</b>	<b>2 Credits/Units</b>
Students in this course will develop manipulative skills on all types of joints in the flat position using shielded metal arc welding electrodes on mild steel. Welding techniques used for structural, pipe and maintenance welding will be developed.		
<b>WELD 31442318</b>	<b>Gas Tungsten Arc Welding 1 (GTAW/TIG)</b>	<b>2 Credits/Units</b>
Emphasis is placed on gas tungsten arc welding (TIG) techniques of stainless steel. Development of skills and techniques on all types of joints in flat and horizontal positions. Aluminum and steel techniques may also be covered.		
<b>WELD 31442320</b>	<b>Welding Occupational Development</b>	<b>1 Credits/Units</b>
Applications of welding terminology, use of forms, contracting, professional ethics and employment relations are studied. Specific topics germane to the welding field in decision-making, responsibility and preparation for the welding career are covered.		
<b>WELD 31442321</b>	<b>Arc Welding (SMAW) Vertical</b>	<b>2 Credits/Units</b>
Students develop manipulative skills on all types of joints in the vertical up and down positions, using E7018 & E6010 shielded metal arc welding electrodes on mild steel. Students will also develop welding techniques used for fillet and groove weld competencies to AWS D1.1 structural steel welding code.		
<b>WELD 31442322</b>	<b>Advanced Welding Techniques</b>	<b>2 Credits/Units</b>
Develops manipulative skills on all types of joints in the overhead and/or pipe positions using E7018 & E6010 shielded metal arc welding electrodes on mild steel. Develop welding techniques used for fillet and groove weld competencies to AWS D1.1 structural steel welding code. Course also includes air carbon arc gouging (ACC), repairs, and other advanced welding processes and applications for related trades.		
<b>WELD 31442323</b>	<b>Basic Gas Metal Arc Welding (GMAW/MIG)</b>	<b>2 Credits/Units</b>
Students develop manipulative skills on all types of joints in the flat, horizontal and vertical up and down position using short circuiting transfer. Students will perform gas metal arc welding techniques using 1/8" to 1/2" structural fabricated parts, as per AWS code standards. Emphasis is placed on operating gas metal arc welding equipment in a safe manner and determining machine setup for metal thickness, wire size and speed.		
<b>WELD 31442326</b>	<b>Flux Cored &amp; Advanced Gas Metal Arc Welding (FCAW/GMAW)</b>	<b>2 Credits/Units</b>
Continuation of development of skills and techniques on all types of joints in the flat, horizontal and vertical up and down positions, using short circuiting and spray arc transfer. Students will also learn flux-cored gas shielding and self shielding welding techniques. Mild steel, stainless steel and aluminum (1/16" to 1" thickness) are the metals used in welding joint assemblies, as per AWS code standards.		
<b>WELD 31442328</b>	<b>Gas Tungsten Arc Welding 2 (GTAW/TIG)</b>	<b>2 Credits/Units</b>
Students develop manipulative skills on all types of joints in the flat, horizontal, vertical, over head and pipe positions. Gas tungsten arc welding of stainless, aluminum, and steel welding techniques will be covered using 1/8" to 1/32" (11 ga to 20 ga) structural fabricated parts, pipe, repair welding and for other related trades, as per AWS and ASME welding code standards.		
<b>WELD 31442332</b>	<b>Oxy-Fuel Cutting 1</b>	<b>1 Credits/Units</b>
The Oxy-Fuel Cutting 1 course will introduce the students to manual cutting using a handheld torch. The students will also be introduced to the plasma cutting process. Oxy-fuel and plasma cutting safety with proper handling of cylinders is covered.		
<b>WELD 31442390</b>	<b>Fundamentals of Metallurgy</b>	<b>2 Credits/Units</b>
Introduction to metallurgy with emphasis on applications, selection, identification methods and alloy influences. Properties are studied utilizing testing, micro-structure interpretation and heat treatment processes. Tool steels, weld heat effects, failure analysis as well as machinability variations in cast iron, alloy steels and non-ferrous materials are covered in detail.		
<b>WELD 32442313</b>	<b>Related Welding</b>	<b>1 Credits/Units</b>
A lecture/hands-on course; students learn basic welding processes, equipment operations and safety procedurs. Emphasizes welding procedures and practices commonly used in the machine tool industry.		





