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## Developmental Courses

Blue Ridge Community College provides an opportunity for students to strengthen their basic educational background. Through a series of courses, instruction is provided to help the student overcome educational deficiencies that would likely prevent him/her from succeeding in an associate degree or diploma program. Developmental courses are offered in the areas of reading and vocabulary development, grammar and composition, keyboarding, biology, chemistry, and mathematics.

Incoming students are given a series of pre-enrollment placement tests to determine if any of these courses will be prerequisites to their related coursework. Students should take prerequisites in their first semester of enrollment if possible. Certain programs require that prerequisite courses be completed prior to fall enrollment. In addition, OST 131 may be required if a student has little or no experience with the keyboard and cannot type at least 20 words per minute. For these students OST 131 is considered a developmental course notwithstanding the 100 level designation.

Developmental and prerequisite courses include:

BIO 090	Foundations of Biology
CHM 092	Fundamentals of Chemistry
CIS 070	Fundamentals of Computing
DRE 097	Integrated Reading and Writing II
DRE 098	Integrated Reading and Writing III
DRE 099	Integrated Reading and Writing III
DMA 010	Operations with Integers
DMA 020	Fractions and Decimals
DMA 030	Proportion/Ratios/Rates/Percents
DMA 040	Expressions, Linear Equations, Linear Inequalities
DMA 050	Graphs and Equations of Lines
DMA 060	Polynomials and Quadratic Applications
DMA 070	Rational Expressions and Equations
DMA 080	Radical Expressions and Equations
OST 131	Keyboarding

A student must earn a "P" or a "C" or better to progress to the next class.

## Language Prerequisite Courses

Students desiring to take French or Spanish in their program of study may be required to take one of the prerequisite courses listed below. This requirement is waived if the student has completed one unit of high school French or Spanish.

FRE 110	Introduction to French
SPA 110	Introduction to Spanish

## Electives

The Associate in Arts, Associate in Engineering, Associate in Fine Arts, and Associate in Science elective listings are listed with the program description.

## Associate in Applied Science Humanities Electives

The following listings for Humanities Electives apply to Associate in Applied Science degree-seeking students. These electives should be carefully selected with the faculty advisor to ensure proper credit. Some programs of study have specific courses that meet the humanities elective requirement. ASL, foreign language, and public speaking courses cannot count as the sole humanities course in an associate in applied science program.

ART 111	Art Appreciation
ART 114	Art History Survey I
ART 115	Art History Survey II
DRA 111	Theatre Appreciation
DRA 112	Literature of the Theatre
ENG 231	American Literature I
ENG 232	American Literature II
ENG 233	Major American Writers
ENG 241	British Literature I
ENG 242	British Literature II
ENG 252	Western World Literature
ENG 262	World Literature II
HUM 123	Appalachian Culture
MUS 110	Music Appreciation
PHI 210	History of Philosophy
PHI 230	Introduction to Logic
PHI 240	Introduction to Ethics
REL 110	World Religions
REL 211	Intro to Old Testament
REL 212	Intro to New Testament
REL 221	Religion in America

## Associate in Applied Science Social/Behavioral Science Electives

The following listing for Social/Behavioral Science Electives applies to Associate in Applied Science degree-seeking students. These electives should be carefully selected with the faculty advisor to ensure proper credit. Some programs of study have specific courses that meet the social/behavioral science elective requirement.

ANT 210	General Anthropology
ECO 151	Survey of Economics
ECO 251	Principles of Microeconomics
ECO 252	Principles of Macroeconomics
GEO 111	World Regional Geography
HIS 111	World Civilizations I
HIS 112	World Civilizations II
HIS 131	American History I
HIS 132	American History II
POL 120	American Government
POL 130	State and Local Government
PSY 150	General Psychology
PSY 237	Social Psychology
PSY 241	Developmental Psychology
PSY 281	Abnormal Psychology
SOC 210	Introduction to Sociology
SOC 213	Sociology of the Family
SOC 220	Social Problems

**Accounting (A25100)**  
**Associate in Applied Science Degree**

**Online Option available**

The Accounting curriculum is designed to provide students with the knowledge and the skills necessary for employment and growth in the accounting profession. Using the "language of business," accountants assemble and analyze, process, and communicate essential information about financial operations.

In addition to course work in accounting principles, theories, and practice, students will study business law, finance, management, and economics. Related skills are developed through the study of communications, computer applications, financial analysis, critical thinking skills, and ethics.

Graduates should qualify for entry-level accounting positions in many types of organizations including accounting firms, small businesses, manufacturing firms, banks, hospitals, school systems, and governmental agencies. With work experience and additional education, an individual may advance in the accounting profession. This curriculum complies with the standard approved by the State Board of Community Colleges.

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

		Class	Lab	Clinic	Work	Credit
					Exp.	
<b>Fall Semester</b>						
ACA 115	Success and Study Skills	0	2	0	0	1
ACC 120	Prin of Financial Accounting	3	2	0	0	4
BUS 110	Introduction to Business	3	0	0	0	3
CIS 110	Introduction to Computers	2	2	0	0	3
MAT 152	Statistical Methods I	3	2	0	0	4
	Subtotal					(15)

<b>Spring Semester</b>						
ACC 122	Prin of Financial Acct II	3	0	0	0	3
ACC 140	Payroll Accounting	1	2	0	0	2
BUS 280	REAL Small Business	4	0	0	0	4
ECO 251	Principles of Microeconomics	3	0	0	0	3
	Or					
ECO 252	Principles of Macroeconomics	3	0	0	0	3
ENG 111	Writing and Inquiry	3	0	0	0	3
	Subtotal					(15)

<b>Summer Term</b>						
CTS 130	Spreadsheet	2	2	0	0	3
ENG 114	Prof. Research and Reporting	3	0	0	0	3
	Humanities Elective**					3
	Subtotal					(9)

<b>Fall Semester</b>						
ACC 121	Prin of Managerial Accounting	3	2	0	0	4
ACC 129	Individual Income Taxes	2	2	0	0	3
ACC 220	Intermediate Accounting I	3	2	0	0	4
BUS 115	Business Law I	3	0	0	0	3
	Major Course Elective***					3
	Subtotal					(17)

<b>Spring Semester</b>						
ACC 150	Accounting Software App	1	2	0	0	2
ACC 227	Practices in Accounting	3	0	0	0	3
BUS 225	Business Finance	2	2	0	0	3
WBL 111	Work-Based Learning I	0	0	0	10	1
	Social/Behavioral Science Elective**					3
	Subtotal					(12)

\*\*Humanities Electives and/or Social/Behavioral Science Electives are to be selected from the courses listed on page 46.

\*\*\*Major Course Electives are to be selected from the following:

BAF 110	Principles of Banking	3	0	0	0	3
BUS 116	Business Law II	3	0	0	0	3
BUS 137	Principles of Management	3	0	0	0	3
BUS 139	Entrepreneurship I	3	0	0	0	3
BUS 153	Human Resource Management	3	0	0	0	3
BUS 240	Business Ethics	3	0	0	0	3
DBA 110	Database Concepts	2	3	0	0	3
MKT 120	Principles of Marketing	3	0	0	0	3
OST 136	Word Processing	2	2	0	0	3
RLS 112	Broker Prelicensing	5	0	0	0	5

**Total Semester Credit Hours in Program .....68**

**Basic Accounting – Bookkeeping I (C25100B)**  
**Certificate**  
**Online Option Available**

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

		Class	Lab	Clinic	Work	Credit
					Exp.	
<b>Fall Semester</b>						
ACC 120	Prin of Financial Accounting	3	2	0	0	4
BUS 110	Introduction to Business	3	0	0	0	3
CIS 110	Introduction to Computers	2	2	0	0	3
	Subtotal					(10)

<b>Spring Semester</b>						
ACC 122	Prin of Financial Acct II	3	0	0	0	3
ACC 140	Payroll Accounting	1	2	0	0	2
ACC 150	Accounting Software App	1	2	0	0	2
	Subtotal					(7)

**Total Semester Credit Hours in Program .....17**

**Basic Accounting – Bookkeeping II (C25100C)**  
**Certificate**  
**Online Option Available**

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

		Class	Lab	Clinic	Work	Credit
					Exp.	
<b>Fall Semester</b>						
ACC 121	Prin of Managerial Accounting	3	2	0	0	4
ACC 129	Individual Income Taxes	2	2	0	0	3
ACC 220	Intermediate Accounting I	3	2	0	0	4
	Subtotal					(11)

<b>Spring Semester</b>						
ACC 227	Practices in Accounting	3	0	0	0	3
CTS 130	Spreadsheet	2	2	0	0	3
	Subtotal					(6)

**Total Semester Credit Hours in Program .....17**

## Alternative Transportation Technology\* (D60420) Diploma

Mobile Equipment Maintenance and Repair Pathway Description: Curriculums in the Mobile Equipment Maintenance and Repair pathway prepare individuals for employment as entry-level transportation service technicians. The program provides an introduction to transportation industry careers and increases student awareness of the diverse technologies associated with this dynamic and challenging field.

Course work may include transportation systems theory, braking systems, climate control, design parameters, drive trains, electrical/electronic systems, engine repair, engine performance, environmental regulations, materials, product finish, safety, steering/suspension, transmission/transaxles, and sustainable transportation, depending on the program major area chosen.

Graduates of this pathway should be prepared to take professional licensure exams, which correspond to certain programs of study, and to enter careers as entry-level technicians in the transportation industry.

Alternative Transportation Technology program description: The Alternative Transportation Technology program prepares individuals to apply technical knowledge and skills to the maintenance of alternative fuel vehicles (AFV), hybrid electric vehicles and the conversion of standard vehicles to AFV status. Topics includes instruction in electrical vehicles, hybrid electric vehicles, liquefied petroleum gas (LPG) vehicles, compressed natural gas (CNG) vehicles, hybrid fuel technology, electrical and electronic systems, engine performance, diagnosis and repair, and conversion/installation.

This curriculum complies with the standard approved by the State Board of Community Colleges.

\*This program of study qualifies for a prorated amount of federal and/or state financial aid.

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class	Lab	Clinic	Work	Credit
			Exp.	

### Fall Semester

ACA 115	Success and Study Skills	0	2	0	0	1
ATT 115	Green Trans Safety and Service	1	2	0	0	2
TRN 120	Basic Transport Electricity	4	3	0	0	5
TRN 130	Intro to Sustainable Transport	2	2	0	0	3
TRN 170	PC Skills for Transport	1	2	0	0	2
TRN 180	Basic Welding for Transport	1	4	0	0	3
	Subtotal					(16)

### Spring Semester

ATT 130	Biofuels for Transportation	2	3	0	0	3
ATT 135	Gaseous Fuels for Transport	2	3	0	0	3
ENG 111	Writing and Inquiry	3	0	0	0	3
TRN 140	Transport Climate Control	1	2	0	0	2
TRN 140A	Transport Climate Control Lab*	1	2	0	0	2
	Subtotal					(13)

### Summer Term

ATT 125	Hybrid-Electric Transportation	2	4	0	0	4
ATT 140	Emerging Transport Tech	2	3	0	0	3
MAT 110	Math Measurement & Literacy	2	2	0	0	3
TRN 145	Adv Transportation Electronics	2	3	0	0	3
	Subtotal					(13)

\*Denotes a corequisite, course cannot be taken by itself.

**Total Semester Credit Hours in Program ..... 42**

## Alternative Transportation Technology – Advanced Electric Drive (C60420AE) Certificate

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class	Lab	Clinic	Work	Credit
			Exp.	

### Fall Semester

ATT 140	Emerging Transport Tech	2	3	0	0	3
TRN 120	Basic Transport Electricity	4	3	0	0	5
TRN 170	PC Skills for Transport	1	2	0	0	2
	Subtotal					(10)

### Spring Semester

ATT 125	Hybrid-Electric Transportation	2	4	0	0	4
TRN 145	Adv Transportation Electronics	2	3	0	0	3
	Subtotal					(7)

**Total Semester Credit Hours in Program ..... 17**

## Alternative Transportation Technology – Alternative Fuels (C60420AF) Certificate

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class	Lab	Clinic	Work	Credit
			Exp.	

### Fall Semester

TRN 120	Basic Transport Electricity	4	3	0	0	5
TRN 130	Intro to Sustainable Trans	2	2	0	0	3
	Subtotal					(8)

### Spring Semester

ATT 115	Green Trans Safety and Service	1	1	0	0	2
ATT 135	Gaseous Fuels for Trans	2	3	0	0	3
ATT 140	Emerging Transport Tech	2	3	0	0	3
	Subtotal					(8)

**Total Semester Credit Hours in Program ..... 16**

**Students may earn additional Certificates in the Mobile Equipment Maintenance and Repair Pathway programs. Speak to your faculty advisor for more information.**

## Associate Degree Nursing (A45110)

### Associate in Applied Science Degree

The Associate Degree Nursing curriculum provides knowledge, skills, and strategies to integrate safety and quality into nursing care, to practice in a dynamic environment, and to meet individual needs which impact health, quality of life, and achievement of potential.

Course work includes and builds upon the domains of healthcare, nursing practice, and the holistic individual. Content emphasizes the nurse as a member of the interdisciplinary team providing safe, individualized care while employing evidence-based practice, quality improvement, and informatics.

Graduates of this program are eligible to apply to take the National Council Examination (NCLEX-RN). Employment opportunities are vast within the global health care system and may include positions within acute, chronic, extended, industrial, and community health care facilities.

This curriculum complies with the standard approved by the State Board of Community Colleges.

Special admission procedures for the Associate Degree Nursing program are outlined on page 9.

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

			Class	Lab	Clinic	Work	Credit	
						Exp.		
<b>Fall Semester</b>								
ACA	115	Success and Study Skills	0	2	0	0	1	
BIO	165	Anatomy and Physiology I	3	3	0	0	4	
ENG	111	Writing and Inquiry	3	0	0	0	3	
NUR	111	Intro To Health Concepts	4	6	6	0	8	
		Subtotal						(16)
<b>Spring Semester</b>								
BIO	166	Anatomy and Physiology II	3	3	0	0	4	
NUR	112	Health-Illness Concepts	3	0	6	0	5	
NUR	211	Health Care Concepts	3	0	6	0	5	
PSY	150	General Psychology	3	0	0	0	3	
		Subtotal						(17)
<b>Summer Term</b>								
BIO	175	General Microbiology	2	2	0	0	3	
NUR	114	Holistic Health Concepts	3	0	6	0	5	
PSY	241	Developmental Psychology	3	0	0	0	3	
		Subtotal						(11)
<b>Fall Semester</b>								
ENG	114	Profes Research and Reporting	3	0	0	0	3	
NUR	113	Family Health Concepts	3	0	6	0	5	
NUR	212	Health System Concepts	3	0	6	0	5	
		Humanities Elective**					3	
		Subtotal						(16)
<b>Spring Semester</b>								
NUR	213	Complex Health Concepts	4	3	15	0	10	
		Subtotal						(10)

\*\*Humanities Elective is to be selected from ART-111, ART-114, ART-115, MUS-110, or PHI-240.

**Total Semester Credit Hours in Program ..... 70**

## Automotive Light-Duty Diesel Technology\* (D60430) Diploma

Mobile Equipment Maintenance and Repair Pathway Description: Curriculums in the Mobile Equipment Maintenance and Repair pathway prepare individuals for employment as entry-level transportation service technicians. The program provides an introduction to transportation industry careers and increases student awareness of the diverse technologies associated with this dynamic and challenging field.

Course work may include transportation systems theory, braking systems, climate control, design parameters, drive trains, electrical/electronic systems, engine repair, engine performance, environmental regulations, materials, product finish, safety, steering/suspension, transmission/transaxles, and sustainable transportation, depending on the program major area chosen.

Graduates of this pathway should be prepared to take professional licensure exams, which correspond to certain programs of study, and to enter careers as entry-level technicians in the transportation industry.

Automotive Light-Duty Diesel program description: The Automotive Light-Duty Diesel program prepares individuals to apply technical knowledge and skills to diagnose, adjust, repair, or overhaul light duty diesel vehicles under one ton classification. Topics include instruction in electrical systems, diesel-electric drive, engine performance, engine repair, emission systems, and all types of diesel engines related to the light duty diesel vehicle. Program includes technicians working primarily with automobile diesel engines.

This curriculum complies with the standard approved by the State Board of Community Colleges.

\*This program of study qualifies for a prorated amount of federal and/or state financial aid.

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

	Class	Lab	Clinic	Work	Credit	
				Exp.		
<b>Fall Semester</b>						
ACA	115	Success and Study Skills	0	2	0	1
LDD	112	Intro to Light-Duty Diesel	2	2	0	3
TRN	120	Basic Transport Electricity	4	3	0	5
TRN	170	PC Skills for Transport	1	2	0	2
TRN	180	Basic Welding for Transport	1	4	0	3
		Subtotal				(14)

<b>Spring Semester</b>						
ENG	111	Writing and Inquiry	3	0	0	3
HET	134	Diesel Fuel & Power Systems	2	3	0	3
LDD	181	LDD Fuel Systems	2	6	0	4
LDD	183	Air, Exhaust, Emissions	2	6	0	4
TRN	140	Transport Climate Control	1	2	0	2
TRN	140A	Transport Climate Control Lab*	1	2	0	2
		Subtotal				(18)

<b>Summer Term</b>						
LDD	116	Diesel Electric Drive	2	6	0	4
LDD	284	LDD Test and Diagnosis	2	3	0	3
MAT	110	Math Measurement & Literacy	2	2	0	3
		Subtotal				(10)

\*Denotes a corequisite, course cannot be taken by itself.

**Total Semester Credit Hours in Program ..... 42**

## Automotive Light-Duty Diesel Technology – Light-Duty Diesel Fuel Systems (C60430LF) Certificate

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Learning Center Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

	Class	Lab	Clinic	Work	Credit	
				Exp.		
<b>Fall Semester</b>						
LDD	112	Intro Light-Duty Diesel	2	2	0	3
TRN	120	Basic Transport Electricity	4	3	0	5
TRN	170	PC Skills for Transport	1	2	0	2
		Subtotal				(10)

<b>Spring Semester</b>						
HET	134	Diesel Fuel & Power Systems	2	3	0	3
LDD	181	LDD Fuel Systems	2	6	0	4
		Subtotal				(7)

**Total Semester Credit Hours in Program ..... 17**

## Automotive Light-Duty Diesel Technology – Light-Duty Diesel Performance (C60430LD) Certificate

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Learning Center Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

	Class	Lab	Clinic	Work	Credit	
				Exp.		
<b>Fall Semester</b>						
LDD	112	Intro Light-Duty Diesel	2	2	0	3
TRN	170	PC Skills for Transport	1	2	0	2
TRN	180	Basic Welding for Transport	1	4	0	3
		Subtotal				(8)

<b>Spring Semester</b>						
HET	134	Diesel Fuel & Power Systems	2	3	0	3
LDD	183	Air, Exhaust, Emissions	2	6	0	4
		Subtotal				(7)

<b>Summer Term</b>						
LDD	284	LDD Test and Diagnosis	2	3	0	3
		Subtotal				(3)

**Total Semester Credit Hours in Program ..... 18**

**Students may earn additional Certificates in the Mobile Equipment Maintenance and Repair Pathway programs. Speak to your faculty advisor for more information.**

## Automotive Systems Technology (A60160)

### Associate in Applied Science Degree

Mobile Equipment Maintenance and Repair Pathway Description: Curriculums in the Mobile Equipment Maintenance and Repair pathway prepare individuals for employment as entry-level transportation service technicians. The program provides an introduction to transportation industry careers and increases student awareness of the diverse technologies associated with this dynamic and challenging field.

Course work may include transportation systems theory, braking systems, climate control, design parameters, drive trains, electrical/electronic systems, engine repair, engine performance, environmental regulations, materials, product finish, safety, steering/suspension, transmission/transaxles, and sustainable transportation, depending on the program major area chosen.

Graduates of this pathway should be prepared to take professional licensure exams, which correspond to certain programs of study, and to enter careers as entry-level technicians in the transportation industry.

Automotive Systems Technology program description: The automotive systems program prepares individuals to apply technical knowledge and skills to repair, service, and maintain all types of automobiles. Topics include instruction in brake systems, electrical systems, engine performance, engine repair, suspension and steering, automatic and manual transmissions and drive trains, and heating and air condition systems.

This curriculum complies with the standard approved by the State Board of Community Colleges.

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit  
Exp.

#### Fall Semester

ACA 115	Success and Study Skills	0	2	0	0	1
AUT 151	Brake Systems	2	3	0	0	3
AUT 151A	Brake Systems Lab*	0	3	0	0	1
TRN 111	Chassis Maint/Light Repair	2	6	0	0	4
TRN 120	Basic Transport Electricity	4	3	0	0	5
TRN 170	PC Skills for Transport	1	2	0	0	2
	Subtotal					(16)

#### Spring Semester

AUT 141	Suspension & Steering Sys	2	3	0	0	3
AUT 141A	Suspension & Steering Lab*	0	3	0	0	1
AUT 181	Engine Performance 1	2	3	0	0	3
AUT 181A	Engine Performance 1 Lab*	0	3	0	0	1
ENG 111	Writing and Inquiry	3	0	0	0	3
TRN 180	Basic Welding for Transport	1	4	0	0	3
	Humanities Elective**					3
	Subtotal					(17)

#### Summer Term

AUT 183	Engine Performance 2	2	6	0	0	4
MAT 110	Math Measurement & Literacy	2	2	0	0	3
TRN 140	Transport Climate Control	1	2	0	0	2
TRN 140A	Transport Climate Control Lab*	1	2	0	0	2
	Subtotal					(11)

#### Fall Semester

AUT 116	Engine Repair	2	3	0	0	3
AUT 116A	Engine Repair Lab*	0	3	0	0	1
ENG 114	Prof Research and Reporting	3	0	0	0	3
TRN 112	Powertrain Maint/Light Repair	2	6	0	0	4
TRN 145	Adv Trans Electronics	2	3	0	0	3
	Major Course Elective***					3
	Subtotal					(17)

#### Spring Semester

AUT 221	Auto Transm/Transaxles	2	3	0	0	3
AUT 231	Manual Trans/Axles/Drtrains	2	3	0	0	3
AUT 231A	Manual Trans/Axles/Drtrains Lab*0	3	0	0	0	1
	Social/Behavioral Science Elective**					3
	Major Course Elective***					3
	Subtotal					(13)

\*Denotes a corequisite, course cannot be taken by itself.

\*\*Humanities Electives and/or Social/Behavioral Science Electives are to be selected from the courses listed on page 46.

\*\*\*Major Course Electives are to be selected from the following:

ATT 125	Hybrid-Electric Transportation	2	4	0	0	4
AUT 221A	Auto Transm/Transaxles Lab*	0	3	0	0	1
HET 134	Diesel Fuel & Power Systems	2	3	0	0	3
LDD 112	Intro to Light Duty Diesel	2	2	0	0	3
TRN 120A	Basic Transport Electricity Lab*	0	3	0	0	1
TRN 130	Intro to Sustain Transportation	2	2	0	0	3
TRN 180A	Basic Weld for Transport Lab*	0	3	0	0	1
WBL 111	Work-Based Learning I	0	0	0	10	1
WBL 121	Work-Based Learning II	0	0	0	10	1
WBL 131	Work-Based Learning III	0	0	0	10	1

**Total Semester Credit Hours in Program ..... 74**

### Automotive Systems Technology (D60160) Diploma

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit  
Exp.

**Fall Semester**

ACA 115	Success and Study Skills	0	2	0	0	1
AUT 151	Brake Systems	2	3	0	0	3
AUT 151A	Brake Systems Lab*	0	3	0	0	1
TRN 111	Chassis Maint/Light Repair	2	6	0	0	4
Or						
TRN 112	Powertrain Maint/Light Repair	2	6	0	0	4
TRN 120	Basic Transport Electricity	4	3	0	0	5
TRN 170	PC Skills for Transport	1	2	0	0	2
Subtotal						(16)

**Spring Semester**

AUT 141	Suspension & Steering Sys	2	3	0	0	3
AUT 141A	Suspension & Steering Lab*	0	3	0	0	1
AUT 181	Engine Performance 1	2	3	0	0	3
AUT 181A	Engine Performance 1 Lab*	0	3	0	0	1
ENG 111	Writing and Inquiry	3	0	0	0	3
TRN 180	Basic Welding for Transport	1	4	0	0	3
Major Course Elective***						2
Subtotal						(16)

**Summer Term**

AUT 183	Engine Performance 2	2	6	0	0	4
MAT 110	Math Measurement & Literacy	2	2	0	0	3
TRN 140	Transport Climate Control	1	2	0	0	2
TRN 140A	Transport Climate Control Lab*	1	2	0	0	2
Subtotal						(11)

\*Denotes a corequisite, course cannot be taken by itself.

\*\*\*Major Course Electives are to be selected from the following:

ATT 125	Hybrid-Electric Transportation	2	4	0	0	4
HET 134	Diesel Fuel & Power Systems	2	3	0	0	3
LDD 112	Intro to Light Duty Diesel	2	2	0	0	3
TRN 120A	Basic Transport Electricity Lab*	0	3	0	0	1
TRN 130	Intro to Sustain Transportation	2	2	0	0	3
TRN 145	Adv Transp Electronics	2	3	0	0	3
TRN 180A	Basic Weld for Transport Lab*	0	3	0	0	1
WBL 111	Work-Based Learning I	0	0	0	10	1
WBL 121	Work-Based Learning II	0	0	0	10	1
WBL 131	Work-Based Learning III	0	0	0	10	1

**Total Semester Credit Hours in Program ..... 43**

### Automotive Systems Technology – Mobile Equipment Technician (C60160MT) Certificate

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit  
Exp.

**Required Courses**

TRN 112	Powertrain Maint/Light Repair	2	6	0	0	4
TRN 120	Basic Transport Electricity	4	3	0	0	5
TRN 140	Transport Climate Control	1	2	0	0	2
TRN 140A	Transport Climate Control Lab*	1	2	0	0	2
TRN 170	PC Skills for Transport	1	2	0	0	2
TRN 180	Basic Welding for Transport	1	4	0	0	3

\*Denotes a corequisite, course cannot be taken by itself.

**Total Semester Credit Hours in Program ..... 18**

### Automotive Systems Technology – Chassis Technician (C60160CT) Certificate

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit  
Exp.

**Required Courses**

AUT 141	Suspension & Steering Sys	2	3	0	0	3
AUT 141A	Suspension & Steering Lab*	0	3	0	0	1
AUT 151	Brake Systems	2	3	0	0	3
AUT 151A	Brake Systems Lab*	0	3	0	0	1
TRN 111	Chassis Maint/Light Repair	2	6	0	0	4
TRN 170	PC Skills for Transport	1	2	0	0	2
TRN 180	Basic Welding for Transport	1	4	0	0	3

\*Denotes a corequisite, course cannot be taken by itself.

**Total Semester Credit Hours in Program ..... 17**

**Automotive Systems Technology –  
Electrical/Electronic Technician  
(C60160ET)  
Certificate**

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit  
Exp.

**Required Courses**

ATT	125	Hybrid-Electric Transportation	2	4	0	0	4
TRN	111	Chassis Maint/Light Repair	2	6	0	0	4
TRN	120	Basic Transport Electricity	4	3	0	0	5
TRN	120A	Basic Transp Electrical Lab	0	3	0	0	1
Or							
WBL	111	Work-Based Learning I	0	0	0	10	1
TRN	145	Adv Transp Electronics	2	3	0	0	3

\*Denotes a corequisite, course cannot be taken by itself.

**Total Semester Credit Hours in Program ..... 17**

**Automotive Systems Technology – Engine  
Performance (C60160EN)  
Certificate**

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit  
Exp.

**Required Courses**

AUT	181	Engine Performance 1	2	3	0	0	3
AUT	181A	Engine Performance 1 Lab*	0	3	0	0	1
AUT	183	Engine Performance 2	2	6	0	0	4
TRN	112	Powertrain Maint/Light Repair	2	6	0	0	4
TRN	120	Basic Transport Electricity	4	3	0	0	5

\*Denotes a corequisite, course cannot be taken by itself.

**Total Semester Credit Hours in Program ..... 17**

**Automotive Systems Technology –  
Driveline Performance Certification  
(C60160DR)  
Certificate**

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit  
Exp.

**Required Courses**

AUT	116	Engine Repair	2	3	0	0	3
AUT	116A	Engine Repair Lab*	0	3	0	0	1
AUT	221	Auto Transm/Transaxles	2	3	0	0	3
AUT	221A	Auto Transm/Transaxles Lab*	0	3	0	0	1
AUT	231	Man Trans/Axles/Drtrains	2	3	0	0	3
AUT	231A	Man Trans/Axles/Drtrains Lab*	0	3	0	0	1
TRN	112	Powertrain Maint/Light Repair	2	6	0	0	4
TRN	170	PC Skills for Transport	1	2	0	0	2

\*Denotes a corequisite, course cannot be taken by itself.

**Total Semester Credit Hours in Program ..... 18**

**Students may earn additional Certificates in the  
Mobile Equipment Maintenance and Repair Pathway  
programs. Speak to your faculty advisor for more  
information.**

## Brewing, Distillation and Fermentation – Brewing Equipment, Packaging & Maintenance (A15250)

### Associate in Applied Science Degree

Food Products and Processing Systems Pathway Description: This curriculum is designed to prepare individuals for various careers in the brewing, distillation and fermentation industry. Classroom instruction, practical laboratory applications of brewing, distillation and fermentation principles and practices are included in the program of study.

Course work in brewing, distillation and fermentation includes production, operations, safety and sanitation, and associated process technologies. Related course work is offered in fermentation production, safety and sanitation, applied craft beverage microbiology, agriculture, marketing, management, equipment, packaging, and maintenance.

Graduates should qualify for employment opportunities in the brewing, distillation and fermentation industry. Students may be eligible to sit for the professional Institute of Brewing & Distilling (IBD) certification exams which correspond to the program of study. Brewing, Distillation and Fermentation Pathway Description: A program that prepares individuals to apply technical knowledge and skills to brew, distill and ferment various products, including beverages. Includes instruction in production of fermented products, cultivating, marketing, management, legal issues, inspection, maintenance, service and repair of equipment, facility operations, packaging, sanitation, and welding.

This curriculum complies with the standard approved by the State Board of Community Colleges.

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit  
Exp.

#### Fall Semester

ACA	115	Success and Study Skills	0	2	0	0	1
BDF	111	BDF Safety & Sanitation	1	2	0	0	2
BDF	112	Survey of Fermented Products	3	3	0	0	4
BDF	125	Bev Tech & Calculations	1	3	0	0	2
ELC	131	Circuit Analysis I	3	3	0	0	4
MNT	110	Intro to Maint Procedures	1	3	0	0	2
		Subtotal					(15)

#### Spring Semester

BDF	110	Fermentation Production	2	4	0	0	4
BDF	115	Applied Craft Bev Microbiology	3	2	0	0	4
ENG	111	Writing and Inquiry	3	0	0	0	3
MAT	110	Math Measurement & Literacy	2	2	0	0	3
		Major Course Elective***					3
		Subtotal					(17)

#### Summer Term

BDF	180	Sensory Evaluation	2	2	0	0	3
		Humanities Elective**					3
		Subtotal					(6)

#### Fall Semester

ATR	112	Introduction to Automation	2	3	0	0	3
BDF	114	Craft Beer Brewing	1	3	0	0	2
ELC	128	Introduction to PLC	2	3	0	0	3
ENG	114	Prof Research and Reporting	3	0	0	0	3
HOR	245	Hort Specialty Crops	2	2	0	0	3
HYD	110	Hydraulics/Pneumatics I	2	3	0	0	3
		Subtotal					(17)

#### Spring Semester

BDF	225	Filtration & Finishing	2	2	0	0	3
BDF	236	Brewing/Packaging Maint	2	4	0	0	4
BUS	110	Introduction to Business	3	0	0	0	3
		Social/Behavioral Science Elective**					3
		Major Course Elective***					3
		Subtotal					(16)

\*\*Humanities Electives and/or Social/Behavioral Science Electives are to be selected from the courses listed on page 46.

\*\*\*Major Course Electives are to be selected from the following:

ATR	219	Automation Troubleshooting	1	3	0	0	2
BDF	175	Distillation Operations	2	4	0	0	4
BDF	230	Advanced Brewing	2	2	0	0	3
CHM	131	Introduction to Chemistry	3	0	0	0	3
CHM	131A	Intro to Chemistry Lab*	0	3	0	0	1
EGR	125	Appl Software for Tech	1	2	0	0	2
ELC	117	Motors and Controls	2	6	0	0	4
ELC	228	PLC Applications	2	6	0	0	4
REF	211	Glycol Chiller Systems	2	4	0	0	4
VEN	133	Intro to Winemaking	3	0	0	0	3
VEN	283	Wine Production and Analysis	2	6	0	0	5
WBL	111	Work-Based Learning I	0	0	0	10	1
WBL	112	Work-Based Learning I	0	0	0	20	2
WBL	113	Work-Based Learning I	0	0	0	30	3
WBL	121	Work-Based Learning II	0	0	0	10	1
WBL	122	Work-Based Learning II	0	0	0	20	2
WBL	123	Work-Based Learning II	0	0	0	30	3
WBL	131	Work-Based Learning III	0	0	0	10	1
WBL	132	Work-Based Learning III	0	0	0	20	2
WBL	133	Work-Based Learning III	0	0	0	30	3
WLD	214	Sanitary Welding	2	6	0	0	4

\*Denotes a corequisite, course cannot be taken by itself.

**Total Semester Credit Hours in Program .....71**

### Brewing, Distillation and Fermentation – Brewing Equipment, Packaging & Maintenance (D15250) Diploma

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

			Class	Lab	Clinic	Work	Credit	
						Exp.		
<b>Fall Semester</b>								
ACA	115	Success and Study Skills	0	2	0	0	1	
BDF	112	Survey of Fermented Products	3	3	0	0	4	
ELC	128	Introduction to PLC	2	3	0	0	3	
ELC	131	Circuit Analysis I	3	3	0	0	4	
HOR	245	Hort Specialty Crops	2	2	0	0	3	
MNT	110	Intro to Maint Procedures	1	3	0	0	2	
Subtotal								(17)

<b>Spring Semester</b>								
BDF	110	Fermentation Production	2	4	0	0	4	
BDF	111	BDF Safety & Sanitation	1	2	0	0	2	
BDF	115	Applied Craft Bev Microbiology	3	2	0	0	4	
BUS	110	Introduction to Business	3	0	0	0	3	
MAT	110	Math Measurement & Literacy	2	2	0	0	3	
Subtotal								(16)

<b>Summer Term</b>								
ENG	111	Writing and Inquiry	3	0	0	0	3	
Subtotal								(3)

**Total Semester Credit Hours in Program .....36**

### Brewing, Distillation and Fermentation – Equipment, Packaging & Maintenance\* (C15250EQ) Certificate

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

**\*This program of study does not qualify for federal and/or state financial aid.**

			Class	Lab	Clinic	Work	Credit
						Exp.	
<b>Required Courses</b>							
ATR	112	Introduction to Automation	2	3	0	0	3
BDF	111	BDF Safety & Sanitation	1	2	0	0	2
BDF	236	Brewing/Packaging Maint	2	4	0	0	4
HYD	110	Hydraulics/Pneumatics I	2	3	0	0	3
MNT	110	Intro to Maint Procedures	1	3	0	0	2

**Total Semester Credit Hours in Program ..... 14**

### Brewing, Distillation and Fermentation – Brewing Basics (C15250BR) Certificate

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

			Class	Lab	Clinic	Work	Credit
						Exp.	
<b>Required Courses</b>							
BDF	111	BDF Safety & Sanitation	1	2	0	0	2
BDF	114	Craft Beer Brewing	1	3	0	0	2
BDF	115	Applied Craft Bev Microbiology	3	2	0	0	4
BDF	125	Bev Tech & Calculations	1	3	0	0	2
BDF	180	Sensory Evaluation	2	2	0	0	3
BDF	225	Filtration & Finishing	2	2	0	0	3

**Total Semester Credit Hours in Program ..... 16**

### Brewing, Distillation and Fermentation – Winemaking Basics\* (C15250WN) Certificate

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

**\*This program of study does not qualify for federal and/or state financial aid.**

			Class	Lab	Clinic	Work	Credit
						Exp.	
<b>Required Courses</b>							
BDF	111	BDF Safety & Sanitation	1	2	0	0	2
BDF	115	Applied Craft Bev Microbiology	3	2	0	0	4
VEN	133	Intro to Winemaking	3	0	0	0	3
VEN	283	Wine Production and Analysis	2	6	0	0	5

**Total Semester Credit Hours in Program ..... 14**

### Brewing, Distillation and Fermentation – Distillation (C15250DI) Certificate

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

			Class	Lab	Clinic	Work	Credit
						Exp.	
<b>Required Courses</b>							
BDF	110	Fermentation Production	2	4	0	0	4
BDF	115	Applied Craft Bev Microbiology	3	2	0	0	4
BDF	125	Bev Tech & Calculations	1	3	0	0	2
BDF	175	Distillation Operations	2	4	0	0	4
BDF	225	Filtration & Finishing	2	2	0	0	3

**Total Semester Credit Hours in Program ..... 17**

## Business Administration (A25120)

### Associate in Applied Science Degree

The Business Administration curriculum is designed to introduce students to the various aspects of the free enterprise system. Students will be provided with a fundamental knowledge of business functions, processes, and an understanding of business organizations in today's global economy.

Course work includes business concepts such as accounting, business law, economics, management, and marketing. Skills related to the application of these concepts are developed through the study of computer applications, communication, team building, and decision-making.

Through these skills, students will have a sound business education base for lifelong learning. Graduates are prepared for employment opportunities in government agencies, financial institutions, and large to small business or industry.

This curriculum complies with the standard approved by the State Board of Community Colleges.

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit  
Exp.

## General Business Administration Pathway (A25120BA)

### Associate in Applied Science Degree

#### Online option available

#### Fall Semester

ACA 115	Success and Study Skills	0	2	0	0	1
	Or					
ACA 122	College Transfer Success	0	2	0	0	1
BUS 110	Introduction to Business	3	0	0	0	3
CIS 110	Introduction to Computers	2	2	0	0	3
ENG 111	Writing and Inquiry	3	0	0	0	3
MKT 120	Principles of Marketing	3	0	0	0	3
	Humanities Elective**					3
	Subtotal					(16)

#### Spring Semester

BUS 137	Principles of Management	3	0	0	0	3
BUS 240	Business Ethics	3	0	0	0	3
ENG 112	Writing/Research in the Disc	3	0	0	0	3
MAT 143	Quantitative Literacy	2	2	0	0	3
	Or					
MAT 152	Statistical Methods I	3	2	0	0	4
	Or					
MAT 171	Pre-Calculus algebra	3	2	0	0	4
	Major Course Elective***					3
	Subtotal					(15-16)

#### Summer Term

	Social/Behavioral Science Elective**					3
	Major Course Elective***					3
	Subtotal					(6)

#### Fall Semester

ACC 120	Prin of Financial Accounting	3	2	0	0	4
BUS 115	Business Law I	3	0	0	0	3
ECO 251	Principles of Microeconomics	3	0	0	0	3
WBL 111	Work-Based Learning I	0	0	0	10	1
	Major Course Elective***					3
	Subtotal					(14)

#### Spring Semester

BUS 116	Business Law II	3	0	0	0	3
BUS 225	Business Finance	2	2	0	0	3
BUS 239	Business Applications Seminar	1	2	0	0	2
BUS 280	REAL Small Business	4	0	0	0	4
ECO 252	Principles of Macroeconomics	3	0	0	0	3
	Subtotal					(15)

\*\*Humanities Electives and/or Social/Behavioral Science Electives are to be selected from the courses listed on page 46

\*\*\*Major Course Electives are to be selected from the MAJOR COURSE ELECTIVES LIST FOR ALL PATHWAYS on page 58.

**Total Semester Credit Hours in Program .....66-67**

**Business Administration - Banking and Finance Pathway (A25120BF)**

Associate in Applied Science Degree

Online option available

**Fall Semester**

ACA 115	Success and Study Skills	0	2	0	0	1
Or						
ACA 122	College Transfer Success	0	2	0	0	1
BAF 110	Principles of Banking	3	0	0	0	3
BUS 110	Introduction to Business	3	0	0	0	3
CIS 110	Introduction to Computers	2	2	0	0	3
ENG 111	Writing and Inquiry	3	0	0	0	3
MKT 120	Principles of Marketing	3	0	0	0	3
	Subtotal					(16)

**Spring Semester**

BAF 131	Fund of Bank Lending	3	0	0	0	3
BUS 137	Principles of Management	3	0	0	0	3
ENG 112	Writing/Research in the Disc	3	0	0	0	3
MAT 143	Quantitative Literacy	2	2	0	0	3
Or						
MAT 152	Statistical Methods I	3	2	0	0	4
Or						
MAT 171	Pre-Calculus algebra	3	2	0	0	4
	Major Course Elective***					3
	Subtotal					(15-16)

**Summer Term**

	Social/Behavioral Science Elective**					3
	Major Course Elective***					3
	Subtotal					(6)

**Fall Semester**

ACC 120	Prin of Financial Accounting	3	2	0	0	4
BUS 115	Business Law I	3	0	0	0	3
ECO 251	Principles of Microeconomics	3	0	0	0	3
WBL 111	Work-Based Learning I	0	0	0	10	1
	Humanities Elective**					3
	Subtotal					(14)

**Spring Semester**

BAF 141	Law & Banking: Principles	3	0	0	0	3
BAF 222	Money and Banking	3	0	0	0	3
BUS 225	Business Finance	2	2	0	0	3
ECO 252	Principles of Macroeconomics	3	0	0	0	3
	Major Course Elective***					3
	Subtotal					(15)

\*\*Humanities Electives and/or Social/Behavioral Science Electives are to be selected from the courses listed on page 46

\*\*\*Major Course Electives are to be selected from the MAJOR COURSE ELECTIVES LIST FOR ALL PATHWAYS on page 58.

**Total Semester Credit Hours in Program .....66-67**

**Business Administration - Marketing & Retailing Pathway (A25120MR)**

Associate in Applied Science Degree

Online option available

**Fall Semester**

ACA 115	Success and Study Skills	0	2	0	0	1
Or						
ACA 122	College Transfer Success	0	2	0	0	1
BUS 110	Introduction to Business	3	0	0	0	3
CIS 110	Introduction to Computers	2	2	0	0	3
ENG 111	Writing and Inquiry	3	0	0	0	3
MKT 120	Principles of Marketing	3	0	0	0	3
	Humanities Elective**					3
	Subtotal					(16)

**Spring Semester**

BUS 137	Principles of Management	3	0	0	0	3
BUS 240	Business Ethics	3	0	0	0	3
ENG 112	Writing/Research in the Disc	3	0	0	0	3
MAT 143	Quantitative Literacy	2	2	0	0	3
Or						
MAT 152	Statistical Methods I	3	2	0	0	4
Or						
MAT 171	Pre-Calculus algebra	3	2	0	0	4
MKT 123	Fundamentals of Selling	3	0	0	0	3
Or						
MKT 223	Customer Service	3	0	0	0	3
	Subtotal					(15-16)

**Summer Term**

	Social/Behavioral Science Elective**					3
	Major Course Elective***					3
	Subtotal					(6)

**Fall Semester**

ACC 120	Prin of Financial Accounting	3	2	0	0	4
BUS 115	Business Law I	3	0	0	0	3
ECO 251	Principles of Microeconomics	3	0	0	0	3
MKT 220	Advertizing and Sales Promotion	3	0	0	0	3
WBL 111	Work-Based Learning I	0	0	0	10	1
	Major Course Elective***					3
	Subtotal					(17)

**Spring Semester**

ECO 252	Principles of Macroeconomics	3	0	0	0	3
MKT 225	Marketing Research	3	0	0	0	3
MKT 227	Marketing Applications	3	0	0	0	3
MKT 232	Social Media Marketing	3	2	0	0	4
	Major Course Elective***					3
	Subtotal					(16)

\*\*Humanities Electives and/or Social/Behavioral Science Electives are to be selected from the courses listed on page 46

\*\*\*Major Course Electives are to be selected from the MAJOR COURSE ELECTIVES LIST FOR ALL PATHWAYS on page 58.

**Total Semester Credit Hours in Program .....70-71**

### Business Administration Diplomas and Certificates Marketing & Retailing (D25120)

**Diploma**

Online option available

**Fall Semester**

ACA 115	Success and Study Skills	0	2	0	0	1
BUS 115	Business Law I	3	0	0	0	3
BUS 137	Principles of Management	3	0	0	0	3
CIS 110	Introduction to Computers	2	2	0	0	3
MKT 120	Principles of Marketing	3	0	0	0	3
MKT 220	Advertising and Sales Promo	3	0	0	0	3
	Subtotal					(16)

**Spring Semester**

ACC 120	Prin of Financial Accounting	3	2	0	0	4
ECO 251	Principles of Microeconomics	3	0	0	0	3
MKT 225	Marketing Research	3	0	0	0	3
MKT 227	Marketing Applications	3	0	0	0	3
MKT 232	Social Media Marketing	3	2	0	0	4
	Subtotal					(17)

**Summer Term**

ENG 111	Writing and Inquiry	3	0	0	0	3
MAT 143	Quantitative Literacy	2	2	0	0	3
	Subtotal					(6)

**Total Semester Credit Hours in Program ..... 39**

### Business Administration - Basic\* (C25120BA)

**Certificate**

Online option available

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

**\*This program of study does not qualify for federal and/or state financial aid.**

Class Lab Clinic Work Credit Exp.

**Fall Semester**

BUS 110	Introduction to Business	3	0	0	0	3
MKT 120	Principles of Marketing	3	0	0	0	3
BUS 115	Business Law I	3	0	0	0	3
	Subtotal					(9)

**Spring Semester**

BUS 137	Principles of Management	3	0	0	0	3
CIS 110	Introduction to Computers	2	2	0	0	3
	Subtotal					(6)

**Total Semester Credit Hours in Program ..... 15**

### Entrepreneurship (C25120E)

**Certificate**

Online option available

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit Exp.

**Fall Semester**

BUS 139	Entrepreneurship I	3	0	0	0	3
MKT 120	Principles of Marketing	3	0	0	0	3
	Subtotal					(6)

**Spring Semester**

ACC 120	Prin of Financial Accounting	3	2	0	0	4
BUS 280	REAL Small Business	4	0	0	0	4
WEB 214	Social Media	2	2	0	0	3
	Subtotal					(11)

**Total Semester Credit Hours in Program ..... 17**

**\*\*\*MAJOR COURSE ELECTIVE LIST FOR ALL PATHWAYS**

ACC 121	Principles of Managerial Acct II	3	2	0	0	4
ACC 129	Individual Income Taxes	2	2	0	0	3
ACC 150	Acct Software Appl	1	2	0	0	2
BAF 110	Principles of Banking	3	0	0	0	3
BAF 131	Fundamentals of Bank Lending	3	0	0	0	3
BAF 222	Money and Banking	3	0	0	0	3
BUS 116	Business Law II	3	0	0	0	3
BUS 125	Personal Finance	3	0	0	0	3
BUS 139	Entrepreneurship I	3	0	0	0	3
BUS 228	Business Statistics	2	2	0	0	3
BUS 239	Business Applications Seminar	1	2	0	0	2
BUS 240	Business Ethics	3	0	0	0	3
BUS 270	Professional Development	3	0	0	0	3
BUS 280	REAL Small Business	4	0	0	0	4
CTS 130	Spreadsheet	2	2	0	0	3
DBA 110	Database Concepts	2	3	0	0	3
ECM 210	Introduction to E-Commerce	2	2	0	0	3
MKT 123	Fundamentals of Selling	3	0	0	0	3
MKT 220	Advertising and Sales Promo	3	0	0	0	3
MKT 225	Marketing Research	3	0	0	0	3
MKT 227	Marketing Applications	3	0	0	0	3
MKT 232	Social Media Marketing	3	2	0	0	4
RLS 112	Broker Preclicensing	5	0	0	0	5
WEB 110	Internet/Web Fundamentals	2	2	0	0	3
WEB 214	Social Media	2	2	0	0	3

## Collision Repair and Refinishing Technology (A60130)

### Associate in Applied Science Degree

Mobile Equipment Maintenance and Repair Pathway Description: Curriculums in the Mobile Equipment Maintenance and Repair pathway prepare individuals for employment as entry-level transportation service technicians. The program provides an introduction to transportation industry careers and increases student awareness of the diverse technologies associated with this dynamic and challenging field.

Course work may include transportation systems theory, braking systems, climate control, design parameters, drive trains, electrical/electronic systems, engine repair, engine performance, environmental regulations, materials, product finish, safety, steering/suspension, transmission/transaxles, and sustainable transportation, depending on the program major area chosen.

Graduates of this pathway should be prepared to take professional licensure exams, which correspond to certain programs of study, and to enter careers as entry-level technicians in the transportation industry.

Collision Repair and Refinishing program description: The collision repair and refinishing program prepares individuals to apply technical knowledge and skills to repair, reconstruct and finish automobile bodies, fenders, and external features. Topics include instruction in structure analysis, damage repair, non-structural analysis, mechanical and electrical components, plastics and adhesives, painting and refinishing techniques, and damage analysis and estimating.

This curriculum complies with the standard approved by the State Board of Community Colleges.

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

	Class	Lab	Clinic	Work	Credit	
				Exp.		
<b>Fall Semester</b>						
ACA	115	Success and Study Skills	0	2	0	1
TRN	120	Basic Transport Electricity	4	3	0	5
TRN	170	PC Skills for Transport	1	2	0	2
TRN	180	Basic Welding for Transport	1	4	0	3
TRN	180A	Basic Welding for Trans Lab*	0	3	0	1
		Subtotal				(12)
<b>Spring Semester</b>						
AUB	111	Painting and Refinishing I	2	6	0	4
AUB	121	Non-Structural Damage I	1	4	0	3
ENG	111	Writing and Inquiry	3	0	0	3
TRN	140	Transport Climate Control	1	2	0	2
TRN	140A	Transport Climate Control Lab*	1	2	0	2
		Humanities Elective**	3	0	0	3
		Subtotal				(17)
<b>Summer Term</b>						
AUB	131	Structural Damage I	2	4	0	4
AUB	136	Plastics and Adhesives	1	4	0	3
MAT	110	Math Measurement & Literacy	2	2	0	3
		Subtotal				(10)

### Fall Semester

AUB	114	Special Finishes	1	2	0	0	2
AUB	122	Non-Structural Damage II	2	6	0	0	4
AUB	132	Structural Damage II	2	6	0	0	4
		Social/Behavioral Science Elective**					3
		Subtotal					(13)

### Spring Semester

AUB	112	Painting and Refinishing II	2	6	0	0	4
AUB	162	Autobody Estimating	1	2	0	0	2
AUT	141	Suspension & Steering Sys	2	3	0	0	3
AUT	141A	Suspension & Steering Sys Lab*	0	3	0	0	1
		Or					
WBL	111	Work-Based Learning I	0	0	0	10	1
ENG	114	Prof Research and Reporting	3	0	0	0	3
		Subtotal					(13)

\*Denotes a corequisite, course cannot be taken by itself.

\*\*Humanities Electives and/or Social/Behavioral Science Electives are to be selected from the courses listed on page 46.

**Total Semester Credit Hours in Program .....65**

## Collision Repair and Refinishing Technology (D60130)

### Diploma

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

	Class	Lab	Clinic	Work	Credit	
				Exp.		
<b>Fall Semester</b>						
ACA	115	Success and Study Skills	0	2	0	1
TRN	120	Basic Transport Electricity	4	3	0	5
TRN	170	PC Skills for Transport	1	2	0	2
TRN	180	Basic Welding for Transport	1	4	0	3
TRN	180A	Basic Welding for Trans Lab*	0	3	0	1
		Subtotal				(12)
<b>Spring Semester</b>						
AUB	111	Painting and Refinishing I	2	6	0	4
AUB	121	Non-Structural Damage I	1	4	0	3
AUB	162	Autobody Estimating	1	2	0	2
ENG	111	Writing and Inquiry	3	0	0	3
TRN	140	Transport Climate Control	1	2	0	2
TRN	140A	Transport Climate Control Lab*	1	2	0	2
		Subtotal				(16)
<b>Summer Term</b>						
AUB	131	Structural Damage I	2	4	0	4
AUB	136	Plastics and Adhesives	1	4	0	3
MAT	110	Math Measurement & Literacy	2	2	0	3
		Subtotal				(10)

\*Denotes a corequisite, course cannot be taken by itself.

**Total Semester Credit Hours in Program .....38**

## Collision Repair and Refinishing – Insurance Estimating (C60130IE) Certificate

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit  
Exp.

### Required Courses

AUB	111	Painting and Refinishing I	2	6	0	0	4
AUB	121	Non-Structural Damage I	1	4	0	0	3
AUB	131	Structural Damage I	2	4	0	0	4
AUB	136	Plastics and Adhesives	1	4	0	0	3
AUB	162	Autobody Estimating	1	2	0	0	2
TRN	170	PC Skills for Transport	1	2	0	0	2

**Total Semester Credit Hours in Program ..... 18**

## Collision Repair and Refinishing – Non-Structural (C60130NS) Certificate

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit  
Exp.

### Required Courses

AUB	111	Painting and Refinishing I	2	6	0	0	4
AUB	112	Painting and Refinishing II	2	6	0	0	4
AUB	121	Non-Structural Damage I	1	4	0	0	3
AUB	122	Non-Structural Damage II	2	6	0	0	4
AUB	136	Plastics and Adhesives	1	4	0	0	3

**Total Semester Credit Hours in Program ..... 18**

## Collision Repair and Refinishing – Structural (C60130S) Certificate

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit  
Exp.

### Required Courses

AUB	111	Painting & Refinishing I	2	6	0	0	4
AUB	131	Structural Damage I	2	4	0	0	4
AUB	132	Structural Damage II	2	6	0	0	4
TRN	180	Basic Welding for Transport	1	4	0	0	3
TRN	180A	Basic Welding for Trans Lab*	0	3	0	0	1

\*Denotes a corequisite, course cannot be taken by itself.

**Total Semester Credit Hours in Program ..... 16**

**Students may earn additional Certificates in the Mobile Equipment Maintenance and Repair Pathway programs. Speak to your faculty advisor for more information.**

**Community Spanish Interpreter (A55370)  
Associate in Applied Science Degree**

The Community Spanish Interpreter curriculum prepares individuals to work as entry-level bilingual professionals who will provide communication access in interview and interactive settings. In addition, this curriculum provides educational training for working professionals who want to acquire Spanish language skills.

Course work includes the acquisition of Spanish: grammar, structure, and sociolinguistic properties, cognitive processes associated with interpretation between Spanish and English; the structure and character of the Hispanic community; and acquisition of communication skills.

Graduates should qualify for entry-level jobs as para-professional bilingual employees in educational systems or a variety of community settings. Individuals may choose from part-time, full-time, or self-employment/free-lance positions, or apply language skills to other human service related areas.

This curriculum complies with the standard approved by the State Board of Community Colleges.

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit  
Exp.

**Fall Semester**

ACA 115	Success and Study Skills	0	2	0	0	1
CIS 110	Introduction to Computers	2	2	0	0	3
ENG 111	Writing and Inquiry	3	0	0	0	3
SPA 111	Elementary Spanish I	3	0	0	0	3
SPA 181	Spanish Lab 1*	0	2	0	0	1
SPI 113	Introduction to Spanish Interp.	3	0	0	0	3
	Major Course Elective***					3
	Subtotal					(17)

**Spring Semester**

ENG 114	Prof Research and Reporting	3	0	0	0	3
MAT 143	Quantitative Literacy	2	2	0	0	3
SPA 112	Elementary Spanish II	3	0	0	0	3
SPA 141	Culture and Civilization	3	0	0	0	3
SPA 182	Spanish Lab 2*	0	2	0	0	1
	Subtotal					(13)

**Summer Term**

SPA 211	Intermediate Spanish I	3	0	0	0	3
SPA 281	Spanish Lab 3*	0	2	0	0	1
SPI 213	Review of Grammar	3	0	0	0	3
	Humanities Elective**					3
	Subtotal					(10)

**Fall Semester**

SPA 120	Spanish for the Workplace	3	0	0	0	3
SPA 161	Cultural Immersion	2	3	0	0	3
SPA 212	Intermediate Spanish II	3	0	0	0	3
SPA 282	Spanish Lab 4*	0	2	0	0	1
SPI 114	Analytical Skills for Spanish Int.	3	0	0	0	3
	Social/Behavioral Science Elective**					3
	Subtotal					(16)

**Spring Semester**

SPA 215	Spanish Phonetics/Structure	3	0	0	0	3
SPA 221	Spanish Conversation	3	0	0	0	3
SPA 231	Reading and Composition	3	0	0	0	3
SPI 214	Introduction to Translation	3	0	0	0	3
WBL 111	Work-Based Learning I	0	0	0	10	1
WBL 115	Work-Based Learning Seminar I	1	0	0	0	1
	Major Course Elective***					3
	Subtotal					(17)

\*Denotes a corequisite, course cannot be taken by itself.

\*\*Humanities Electives and/or Social/Behavioral Science Electives are to be selected from the courses listed on page 46.

\*\*\*Major Course Elective hours are to be selected from the following:

BUS 110	Introduction to Business	3	0	0	0	3
BUS 115	Business Law I	3	0	0	0	3
BUS 153	Human Resource Management	3	0	0	0	3
EDU 131	Children, Family, and Comm.	3	0	0	0	3
EDU 144	Child Development I	3	0	0	0	3
EDU 145	Child Development II	3	0	0	0	3
WBL 112	Work-Based Learning I	0	0	0	20	2
WBL 121	Work-Based Learning II	0	0	0	10	1
WBL 132	Work-Based Learning III	0	0	0	20	2

**Total Semester Credit Hours in Program ..... 73**

## Computer-Integrated Machining (A50210)

### Associate in Applied Science Degree

The Computer-Integrated Machining curriculum prepares students with the analytical, creative and innovative skills necessary to take a production idea from an initial concept through design, development and production, resulting in a finished product.

Coursework may include manual machining, computer applications, engineering design, computer-aided drafting (CAD), computer-aided machining (CAM), blueprint interpretation, advanced computerized numeric control (CNC) equipment, basic and advanced machining operations, precision measurement and high-speed multi-axis machining.

Graduates should qualify for employment as machining technicians in high-tech manufacturing, rapid-prototyping and rapid-manufacturing industries, specialty machine shops, fabrication industries, and high-tech or emerging industries such as aerospace, aviation, medical, and renewable energy, and to sit for machining certification examinations.

This curriculum complies with the standard approved by the State Board of Community Colleges.

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit  
Exp.

#### Fall Semester

ACA 115	Success and Study Skills	0	2	0	0	1
BPR 111	Print Reading	1	2	0	0	2
ISC 112	Industrial Safety	2	0	0	0	2
MAC 121	Intro to CNC	2	0	0	0	2
MAC 141	Machining Applications I	2	6	0	0	4
MAC 141A	Machining Appl I Lab	0	6	0	0	2
	Subtotal					(13)

#### Spring Semester

ENG 111	Writing and Inquiry	3	0	0	0	3
MAC 122	CNC Turning	1	3	0	0	2
MAC 124	CNC Milling	1	3	0	0	2
MAC 142	Machining Applications II	2	6	0	0	4
MAC 142A	Machining Appl II Lab	0	6	0	0	2
MAC 151	Machining Calculations	1	2	0	0	2
	Subtotal					(15)

#### Summer Term

CIS 110	Introduction to Computers	2	2	0	0	3
DFT 151	CAD I	2	3	0	0	3
	Major Course Elective***					6
	Subtotal					(12)

#### Fall Semester

MAC 222	Advanced CNC Turning	1	3	0	0	2
MAT 143	Quantitative Literacy	2	2	0	0	3
MEC 110	Intro to CAD/CAM	1	2	0	0	2
	Social/Behavioral Science Elective**					3
	Major Course Elective***					6
	Subtotal					(16)

#### Spring Semester

ENG 114	Prof Research & Reporting	3	0	0	0	3
ISC 132	Mfg Quality Control	2	3	0	0	3
MAC 224	Advanced CNC Milling	1	3	0	0	2
MAC 248	Production Procedures	1	2	0	0	2
	Humanities Elective**					3
	Subtotal					(13)

\*\*Humanities Electives and/or Social/Behavioral Science Electives are to be selected from the courses listed on page 45.

\*\*\*Major Course Electives are to be selected from the following:

ATR 112	Intro to Automation	2	3	0	0	3
ATR 211	Robot Programming	2	3	0	0	3
ATR 219	Automation Troubleshooting	1	3	0	0	2
AUT 116	Engine Repair	2	3	0	0	3
AUT 116A	Engine Repair Lab*	0	3	0	0	1
BUS 110	Introduction to Business	3	0	0	0	3
DFT 154	Intro Solid Modeling	2	3	0	0	3
DFT 170	Engineering Graphics	2	2	0	0	3
EGR 125	Appl Software for Tech	1	2	0	0	2
EGR 150	Intro to Engineering	1	2	0	0	2
ISC 135	Principles of Industrial Mgmt	4	0	0	0	4
MEC 145	Mfg Materials I	2	3	0	0	3
MEC 155	Env Benign Manufacturing	2	2	0	0	3
MEC 180	Engineering Materials	2	3	0	0	3
PLA 110	Introduction to Plastics	2	0	0	0	2
PLA 162	Plastics Manuf Processes	2	3	0	0	3
TDP 110	Intro to 3D Printing	2	3	0	0	3
TDP 140	Precision 3D Printing	2	3	0	0	3
WBL 111	Work-Based Learning I	0	0	0	10	1
WBL 121	Work-Based Learning II	0	0	0	10	1
WBL 122	Work-Based Learning II	0	0	0	20	2
WBL 131	Work-Based Learning III	0	0	0	10	1
WBL 132	Work-Based Learning II	0	0	0	20	2
WLD 112	Basic Welding Processes	1	3	0	0	2

\*Denotes a corequisite, course cannot be taken by itself.

**Total Semester Credit Hours in Program ..... 69**

## Computer-Integrated Machining (D50210)

### Diploma

This curriculum complies with the standard approved by the State Board of Community Colleges.

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit  
Exp.

#### Fall Semester

ACA 115	Success and Study Skills	0	2	0	0	1
BPR 111	Print Reading	1	2	0	0	2
MAC 121	Intro to CNC	2	0	0	0	2
MAC 141	Machining Applications I	2	6	0	0	4
MAC 141A	Machining Appl I Lab	0	6	0	0	2
MAT 143	Quantitative Literacy	2	2	0	0	3
	Subtotal					(14)

#### Spring Semester

BPR 111	Print Reading	1	2	0	0	2
ENG 111	Writing and Inquiry	3	0	0	0	3
MAC 122	CNC Turning	1	3	0	0	2
MAC 124	CNC Milling	1	3	0	0	2
MAC 142	Machining Applications II	2	6	0	0	4
MAC 142A	Machining Appl II Lab	0	6	0	0	2
MAC 151	Machining Calculations	1	2	0	0	2
	Subtotal					(15)

#### Summer Term

CIS 110	Introduction to Computers	2	2	0	0	3
DFT 151	CAD I	2	3	0	0	3
	Major Course Elective***					6
	Subtotal					(12)

\*\*\*Major Course Electives are to be selected from the following:

ATR	112	Intro to Automation	2	3	0	0	3
ATR	211	Robot Programming	2	3	0	0	3
ATR	219	Automation Troubleshooting	1	3	0	0	2
AUT	116	Engine Repair	2	3	0	0	3
AUT	116A	Engine Repair Lab*	0	3	0	0	1
BUS	110	Introduction to Business	3	0	0	0	3
DFT	154	Intro Solid Modeling	2	3	0	0	3
DFT	170	Engineering Graphics	2	2	0	0	3
EGR	125	Appl Software for Tech	1	2	0	0	2
EGR	150	Intro to Engineering	1	2	0	0	2
ISC	135	Principles of Industrial Mgmt	4	0	0	0	4
MEC	145	Mfg Materials I	2	3	0	0	3
MEC	155	Env Benign Manufacturing	2	2	0	0	3
MEC	180	Engineering Materials	2	3	0	0	3
PLA	110	Introduction to Plastics	2	0	0	0	2
PLA	162	Plastics Manuf Processes	2	3	0	0	3
TDP	110	Intro to 3D Printing	2	3	0	0	3
TDP	140	Precision 3D Printing	2	3	0	0	3
WBL	111	Work-Based Learning I	0	0	0	10	1
WBL	121	Work-Based Learning II	0	0	0	10	1
WBL	122	Work-Based Learning II	0	0	0	20	2
WBL	131	Work-Based Learning III	0	0	0	10	1
WBL	132	Work-Based Learning II	0	0	0	20	2
WLD	112	Basic Welding Processes	1	3	0	0	2

\*Denotes a corequisite, course cannot be taken by itself.

**Total Semester Credit Hours in Program .....41**

### Computer-Integrated Machining – CNC Turning Operator (C50210CN) Certificate

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

			Class	Lab	Clinic	Work Credit	
						Exp.	
<b>Required Courses</b>							
BPR	111	Print Reading	1	2	0	0	2
MAC	121	Intro to CNC	2	0	0	0	2
MAC	122	CNC Turning	1	3	0	0	2
MAC	141	Machining Applications I	2	6	0	0	4
MAC	141A	Machining Appl I Lab	0	6	0	0	2
MAC	142	Machining Applications II	2	6	0	0	4
MAC	142A	Machining Appl II Lab	0	6	0	0	2

**Total Semester Credit Hours in Program ..... 18**

### Computer-Integrated Machining – CNC Milling Operator (C50210CM) Certificate

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

			Class	Lab	Clinic	Work Credit	
						Exp.	
<b>Required Courses</b>							
BPR	111	Print Reading	1	2	0	0	2
MAC	121	Intro to CNC	2	0	0	0	2
MAC	124	CNC Milling	1	3	0	0	2
MAC	141	Machining Applications I	2	6	0	0	4
MAC	141A	Machining Appl I Lab	0	6	0	0	2
MAC	142	Machining Applications II	2	6	0	0	4
MAC	142A	Machining Appl II Lab	0	6	0	0	2

**Total Semester Credit Hours in Program .....18**

### Computer-Integrated Machining – Machinist – Entry (C50210ME) Certificate

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

			Class	Lab	Clinic	Work Credit	
						Exp.	
<b>Required Courses</b>							
BPR	111	Print Reading	1	2	0	0	2
ISC	112	Industrial Safety	2	0	0	0	2
MAC	141	Machining Applications I	2	6	0	0	4
MAC	141A	Machining Appl I Lab	0	6	0	0	2
MAC	142	Machining Applications II	2	6	0	0	4
MAC	142A	Machining Appl II Lab	0	6	0	0	2
MAC	151	Machining Calculations	1	2	0	0	2

**Total Semester Credit Hours in Program .....18**

## Computer-Integrated Machining – Engine Machine Shop (C50210MS) Certificate

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit  
Exp.

### Required Courses

AUT	116	Engine Repair	2	3	0	0	3
AUT	116A	Engine Repair Lab*	0	3	0	0	1
MAC	141	Machining Applications I	2	6	0	0	4
MAC	141A	Machining Appl I Lab	0	6	0	0	2
MAC	142	Machining Applications II	2	6	0	0	4
MAC	142A	Machining Appl II Lab	0	6	0	0	2
MAC	151	Machining Calculations	1	2	0	0	2

\*Denotes a corequisite, course cannot be taken by itself.

**Total Semester Credit Hours in Program ..... 18**

## Computer-Integrated Machining – Manufacturing Technician (C50210MT) Certificate

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit  
Exp.

### Required Courses

ATR	112	Intro to Automation	2	3	0	0	3
BPR	111	Print Reading	1	2	0	0	2
EGR	125	Appl Software for Tech	1	2	0	0	2
ISC	112	Industrial Safety	2	0	0	0	2
		Major Course Electives***					8

\*\*\*Major Course Electives are to be selected from the following:

ATR	211	Robot Programming	2	3	0	0	3
ATR	219	Automation Troubleshooting	1	3	0	0	2
MAC	122	CNC Turning	1	3	0	0	2
MAC	124	CNC Milling	1	3	0	0	2
MAC	222	Advanced CNC Turning	1	3	0	0	2
MAC	224	Advanced CNC Milling	1	3	0	0	2
MEC	155	Env Benign Manufacturing	2	2	0	0	3
PLA	110	Introduction to Plastics	2	0	0	0	2
PLA	162	Plastics Manuf Processes	2	3	0	0	3
TDP	110	Intro to 3D Printing	2	3	0	0	3
TDP	140	Precision 3D Printing	2	3	0	0	3

**Total Semester Credit Hours in Program ..... 17**

## Cosmetology (A55140)

### Associate in Applied Science Degree

The Cosmetology curriculum is designed to provide competency-based knowledge, scientific/artistic principles, and hands-on fundamentals associated with the cosmetology industry. The curriculum provides a simulated salon environment that enables students to develop manipulative skills. Course work includes instruction in all phases of professional imaging, hair design, chemical processes, skin care, nail care, multi-cultural practices, business/computer principles, product knowledge, and other selected topics. Graduates should qualify to sit for the State Board of Cosmetic Arts examination. Upon successfully passing the State Board exam, graduates will be issued a license. Employment is available in beauty salons and as skin/nail specialists, platform artists, and related businesses.

This curriculum complies with the standard approved by the State Board of Community Colleges.

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor. The following course sequences are for day students. Night students should work closely with their advisor for adjusted sequence.

**Day students that begin in Fall will follow this course sequence:**

		Class	Lab	Clinic	Work	Credit	
					Exp.		
<b>Fall Semester</b>							
COS 111	Cosmetology Concepts I	4	0	0	0	4	
COS 112	Salon I	0	24	0	0	8	
							(12)

**Spring Semester**

ACA 115	Success and Study Skills	0	2	0	0	1	
COS 113	Cosmetology Concepts II	4	0	0	0	4	
COS 114	Salon II	0	24	0	0	8	
ENG 111	Writing and Inquiry	3	0	0	0	3	
							(16)

**Summer Term**

COS 115	Cosmetology Concepts III	4	0	0	0	4	
COS 116	Salon III	0	12	0	0	4	
ENG 114	Prof Research and Reporting	3	0	0	0	3	
							(11)

**Fall Semester**

COS 117	Cosmetology Concepts IV	2	0	0	0	2	
COS 118	Salon IV	0	21	0	0	7	
COS 240	Contemporary Design	1	3	0	0	2	
COS 250	Computerized Salon Operations	1	0	0	0	1	
MAT 143	Quantitative Literacy	2	2	0	0	3	
							(15)

**Spring Semester**

BUS 280	REAL Small Business	4	0	0	0	4	
CIS 110	Introduction to Computers	2	2	0	0	3	
							3
							3
							3
							(16)

**Day students that begin in Spring will follow this course sequence:**

		Class	Lab	Clinic	Work	Credit	
					Exp.		
<b>Spring Semester</b>							
ACA 115	Success and Study Skills	0	2	0	0	1	
COS 111	Cosmetology Concepts I	4	0	0	0	4	
COS 112	Salon I	0	24	0	0	8	
							(13)

**Summer Term**

COS 113	Cosmetology Concepts II	4	0	0	0	4	
COS 114A	Salon IIA	0	12	0	0	4	
ENG 111	Writing and Inquiry	3	0	0	0	3	
							(11)

**Fall Semester**

COS 114B	Salon IIA	0	12	0	0	4	
COS 250	Computerized Salon Operations	1	0	0	0	1	
ENG 114	Prof Research and Reporting	3	0	0	0	3	
							3
							(11)

**Spring Semester**

BUS 280	REAL Small Business	4	0	0	0	4	
COS 115	Cosmetology Concepts II	4	0	0	0	4	
COS 116	Salon III	0	12	0	0	4	
COS 240	Contemporary Design	1	3	0	0	2	
							(14)

**Summer Term**

COS 117	Cosmetology Concepts IV	2	0	0	0	2	
COS 118A	Salon IVA	0	12	0	0	4	
MAT 143	Quantitative Literacy	2	2	0	0	3	
							(9)

**Fall Semester**

CIS 110	Introduction to Computers	2	2	0	0	3	
COS 118B	Salon IVB	0	9	0	0	3	
							3
							3
							(12)

\*\*Humanities Electives and/or Social/Behavioral Science Electives are to be selected from the courses listed on page 46.

\*\*\*Major Course Electives are to be selected from the following:

BUS 137	Principles of Management	3	0	0	0	3	
BUS 153	Human Resource Management	3	0	0	0	3	
BUS 270	Professional Development	3	0	0	0	3	

**Total Semester Credit Hours in Program ..... 70**

## Cosmetology (D55140)

### Diploma

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor. The following course sequences are for day students. Night students should work closely with their advisor for adjusted sequence.

**Day students that begin in Fall will follow this course sequence:**

		Class	Lab	Clinic	Work	Credit	
					Exp.		
<b>Fall Semester</b>							
COS 111	Cosmetology Concepts I	4	0	0	0	4	
COS 112	Salon I	0	24	0	0	8	
							(12)

**Spring Semester**

ACA 115	Success and Study Skills	0	2	0	0	1	
COS 113	Cosmetology Concepts II	4	0	0	0	4	
COS 114	Salon II	0	24	0	0	8	
ENG 111	Writing and Inquiry	3	0	0	0	3	
							(16)

**Summer Term**

COS 115	Cosmetology Concepts III	4	0	0	0	4
COS 116	Salon III	0	12	0	0	4
ENG 114	Prof Research and Reporting	3	0	0	0	3
	Subtotal					(11)

**Fall Semester**

COS 117	Cosmetology Concepts IV	2	0	0	0	2
COS 118	Salon IV	0	21	0	0	7
	Subtotal					(9)

**Day students that begin in Spring will follow this course sequence:**

Class	Lab	Clinic	Work	Credit
Exp.				

**Spring Semester**

ACA 115	Success and Study Skills	0	2	0	0	1
COS 111	Cosmetology Concepts I	4	0	0	0	4
COS 112	Salon I	0	24	0	0	8
	Subtotal					(13)

**Summer Term**

COS 113	Cosmetology Concepts II	4	0	0	0	4
COS 114A	Salon IIA	0	12	0	0	4
ENG 111	Writing and Inquiry	3	0	0	0	3
	Subtotal					(11)

**Fall Semester**

COS 114B	Salon IIA	0	12	0	0	4
ENG 114	Prof Research and Reporting	3	0	0	0	3
	Subtotal					(7)

**Spring Semester**

COS 115	Cosmetology Concepts II	4	0	0	0	4
COS 116	Salon III	0	12	0	0	4
	Subtotal					(8)

**Summer Term**

COS 117	Cosmetology Concepts IV	2	0	0	0	2
COS 118A	Salon IVA	0	12	0	0	4
	Subtotal					(6)

**Fall Semester**

COS 118B	Salon IVB	0	9	0	0	3
	Subtotal					(3)

**Total Semester Credit Hours in Program ..... 48****Cosmetology (C55140)****Certificate**

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor. The following course sequences are for day students. Night students should work closely with their advisor for adjusted sequence.

**Day students that begin in Fall will follow this course sequence:**

Class	Lab	Clinic	Work	Credit
Exp.				

**Fall Semester**

COS 111	Cosmetology Concepts I	4	0	0	0	4
COS 112	Salon I	0	24	0	0	8
	Subtotal					(12)

**Spring Semester**

COS 113	Cosmetology Concepts II	4	0	0	0	4
COS 114	Salon II	0	24	0	0	8
COS 240	Contemporary Design	1	3	0	0	2
	Subtotal					(14)

**Summer Term**

COS 115	Cosmetology Concepts III	4	0	0	0	4
COS 116	Salon III	0	12	0	0	4
	Subtotal					(8)

**Day students that begin in Spring will follow this course sequence:**

Class	Lab	Clinic	Work	Credit
Exp.				

**Spring Semester**

COS 111	Cosmetology Concepts I	4	0	0	0	4
COS 112	Salon I	0	24	0	0	8
	Subtotal					(12)

**Summer Term**

COS 113	Cosmetology Concepts II	4	0	0	0	4
COS 114A	Salon IIA	0	12	0	0	4
	Subtotal					(8)

**Fall Semester**

COS 114B	Salon IIB	0	12	0	0	4
COS 240	Contemporary Design	1	3	0	0	2
	Subtotal					(6)

**Spring Semester**

COS 115	Cosmetology Concepts III	4	0	0	0	4
COS 116	Salon III	0	12	0	0	4
	Subtotal					(8)

**Total Semester Credit Hours in Program ..... 34****Cosmetology Instructor (C55160)****Certificate**

The Cosmetology Instructor curriculum provides a course of study for learning the skills needed to teach the theory and practice of cosmetology as required by the North Carolina Board of Cosmetic Arts.

Course work includes requirements for becoming an instructor, introduction to teaching theory, methods and aids, practice teaching, and development of evaluation instruments.

Graduates of the program may be employed as cosmetology instructors in public or private education and business.

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class	Lab	Clinic	Work	Credit
Exp.				

**Fall Semester**

COS 271	Instructor Concepts I	5	0	0	0	5
COS 272	Instructor Practicum I	0	21	0	0	7
	Subtotal					(12)

**Spring Semester**

COS 273	Instructor Concepts II	5	0	0	0	5
COS 274	Instructor Practicum II	0	21	0	0	7
	Subtotal					(12)

**Total Semester Credit Hours in Program ..... 24**

**Criminal Justice Technology (A55180)**  
**Associate in Applied Science Degree - Online option available**

The Criminal Justice Technology curriculum is designed to provide knowledge of criminal justice systems and operations. Study will focus on local, state, and federal law enforcement, judicial processes, corrections, and security services. The criminal justice system's role within society will be explored.

Emphasis is on criminal justice systems, criminology, juvenile justice, criminal and constitutional law, investigative principles, ethics, and community relations. Additional study may include issues and concepts of government, counseling, communications, computers, and technology.

Employment opportunities exist in a variety of local, state, and federal law enforcement, corrections, and security fields. Examples include police officer, deputy sheriff, county detention officer, state trooper, intensive probation/parole surveillance officer, correctional officer, and loss prevention specialist.

Students who have successfully completed a Basic Law Enforcement Training course accredited by the North Carolina Criminal Justice Education and Training Standards Commission and the North Carolina Sheriff's Education and Training Standards Commission and passed the Commission's comprehensive certificate examination will receive credit towards the Associate in Applied Science degree in Criminal Justice Technology.

This curriculum complies with the standard approved by the State Board of Community Colleges.

The Criminal Justice program articulates with the following four year universities:

- Norwich University (follow standard program of study below)
- Mars Hill University (see page 131)

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

			Class	Lab	Clinic	Work Credit	
						Exp.	
<b>Fall Semester</b>							
ACA 115	Success and Study Skills		0	2	0	0	1
Or							
ACA 122	College Transfer Success		0	2	0	0	1
CIS 110	Introduction to Computers		2	2	0	0	3
CJC 111	Intro to Criminal Justice		3	0	0	0	3
CJC 121	Law Enforcement Operations		3	0	0	0	3
CJC 231	Constitutional Law		3	0	0	0	3
ENG 111	Writing and Inquiry		3	0	0	0	3
	Subtotal						(16)

			Class	Lab	Clinic	Work Credit	
						Exp.	
<b>Spring Semester</b>							
CJC 112	Criminology		3	0	0	0	3
CJC 131	Criminal Law		3	0	0	0	3
CJC 212	Ethics & Comm Relations		3	0	0	0	3
POL 130	State and Local Government		3	0	0	0	3
	Major Course Elective***						3
	Subtotal						(15)

<b>Summer Term</b>							
ENG 112	Writing/Research in the Disc		3	0	0	0	3
Or							
ENG 114	Prof. Research and Reporting		3	0	0	0	3
MAT 110	Math Measurement & Literacy		2	2	0	0	3
Or							
MAT 143	Quantitative Literacy		2	2	0	0	3
Or							
MAT 152	Statistical Methods I		3	2	0	0	4
	Humanities Elective**						3
	Subtotal						(9 - 10)

<b>Fall Semester</b>							
CJC 113	Juvenile Justice		3	0	0	0	3
CJC 122	Community Policing		3	0	0	0	3
CJC 132	Court Procedure & Evidence		3	0	0	0	3
CJC 221	Investigative Principles		3	2	0	0	4
	Major Course Elective***						3
	Subtotal						(16)

<b>Spring Semester</b>							
BUS 270	Professional Development		3	0	0	0	3
CJC 141	Corrections		3	0	0	0	3
CJC 170	Critical Incident Mgmt Pub Saf		3	0	0	0	3
CJC 255	Issues in Crim Justice App		3	0	0	0	3
	Subtotal						(12)

Students planning to transfer to a 4 year institution should take ACA 122 and either MAT 143 or MAT 152

\*\*Humanities Electives and/or Social/Behavioral Science Electives are to be selected from the courses listed on page 46.

\*\*\*Major Course Electives are to be selected from the following:

ASL 111	Elementary ASL I		3	0	0	0	3
CJC 120	Interviews/Interrogations		1	2	0	0	2
CJC 151	Intro to Loss Prevention		3	0	0	0	3
CJC 213	Substance Abuse		3	0	0	0	3
CJC 215	Organization & Administration		3	0	0	0	3
CJC 222	Criminalistics		3	0	0	0	3
CJC 223	Organized Crime		3	0	0	0	3
CJC 232	Civil Liability		3	0	0	0	3
CJC 241	Community-Based Corrections		3	0	0	0	3
COM 120	Intro Interpersonal Comm		3	0	0	0	3
COM 231	Public Speaking		3	0	0	0	3
PED 110	Fit and Well for Life		1	2	0	0	2
PED 111	Physical Fitness I		0	3	0	0	1
PED 117	Weight Training I		0	3	0	0	1
PED 118	Weight Training II		0	3	0	0	1
PED 119	Circuit Training		0	3	0	0	1
PED 120	Walking for Fitness		0	3	0	0	1
PED 121	Walk, Jog, Run		0	3	0	0	1
POL 120	American Government		3	0	0	0	3
PSY 150	General Psychology		3	0	0	0	3
PSY 231	Forensic Psychology		3	0	0	0	3
PSY 237	Social Psychology		3	0	0	0	3
SOC 210	Introduction to Sociology		3	0	0	0	3
SOC 220	Social Problems		3	0	0	0	3
SPA 120	Spanish for the Workplace		3	0	0	0	3
WBL 111	Work-Based Learning I		0	0	0	10	1
WBL 112	Work-Based Learning I		0	0	0	20	2
WBL 113	Work-Based Learning I		0	0	0	30	3
WBL 114	Work-Based Learning I		0	0	0	40	4
WBL 121	Work-Based Learning II		0	0	0	10	1
WBL 122	Work-Based Learning II		0	0	0	20	2
WBL 123	Work-Based Learning II		0	0	0	30	3
WBL 124	Work-Based Learning II		0	0	0	40	4

**Total Semester Credit Hours in Program .....68-69**

### Criminal Justice Technology (D55180)

Diploma - Online option available

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit Exp.

**Fall Semester**

ACA 115	Success and Study Skills	0	2	0	0	1
CJC 111	Intro to Criminal Justice	3	0	0	0	3
CJC 113	Juvenile Justice	3	0	0	0	3
CJC 121	Law Enforcement Operations	3	0	0	0	3
CJC 132	Court Procedure & Evidence	3	0	0	0	3
CJC 231	Constitutional Law	3	0	0	0	3
	Subtotal					(16)

**Spring Semester**

CIS 110	Introduction to Computer	2	2	0	0	3
CJC 112	Criminology	3	0	0	0	3
CJC 131	Criminal Law	3	0	0	0	3
CJC 141	Corrections	3	0	0	0	3
	Humanities Elective**					3
	Subtotal					(15)

**Summer Term**

ENG 111	Writing and Inquiry	3	0	0	0	3
MAT 110	Math Measurement & Literacy	2	2	0	0	3
	Or					
MAT 143	Quantitative Literacy	2	2	0	0	3
	Or					
MAT 152	Statistical Methods I	3	2	0	0	4
	Subtotal					(6-7)

\*\*Humanities Electives and/or Social/Behavioral Science Electives are to be selected from the courses listed on page 46.

**Total Semester Credit Hours in Program .....37-38**

### Criminal Justice Technology - Criminal Justice I (C55180)

Certificate - Online option available

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit Exp.

**Required Courses**

ACA 115	Success and Study Skills	0	2	0	0	1
CJC 111	Intro to Criminal Justice	3	0	0	0	3
CJC 121	Law Enforcement Operations	3	0	0	0	3
CJC 132	Court Procedure & Evidence	3	0	0	0	3
CJC 141	Corrections	3	0	0	0	3
CJC 231	Constitutional Law	3	0	0	0	3

**Total Semester Credit Hours in Program ..... 16**

### Criminal Justice Technology - Criminal Justice II\* (C55180C)

Certificate - Online option available

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

**\*This program of study does not qualify for federal and/or state financial aid.**

Class Lab Clinic Work Credit Exp.

**Required Courses**

CJC 112	Criminology	3	0	0	0	3
CJC 121	Law Enforcement Operations	3	0	0	0	3
CJC 141	Corrections	3	0	0	0	3
CJC 231	Constitutional Law	3	0	0	0	3

**Total Semester Credit Hours in Program ..... 12**

### Criminal Justice Technology/Latent Evidence (A5518A) – Online Program Associate in Applied Science Degree

Latent Evidence is a concentration under the curriculum of Criminal Justice Technology. This curriculum is designed to provide knowledge of latent evidence systems and operations. Study will focus on local, state, and federal law enforcement, evidence processing and procedures.

Students will learn both theory and hands-on analysis of latent evidence. They will learn fingerprint classification, identification, and chemical development. Students will record, cast, and recognize footwear and tire-tracks; and process crime scenes. Issues and concepts of communications and the use of computers and computer assisted design programs in crime scene technology will be discussed.

Graduates should qualify for employment in a variety of criminal justice organizations especially in local, state, and federal law enforcement, and correctional agencies.

Students who have successfully completed a Basic Law Enforcement Training course accredited by the North Carolina Criminal Justice Education and Training Standards Commission and the North Carolina Sheriff's Education and Training Standards Commission and passed the Commission's comprehensive certificate examination will receive credit towards the Associate in Applied Science degree in Criminal Justice Technology.

This curriculum complies with the standard approved by the State Board of Community Colleges.

The Criminal Justice-Latent Evidence program articulates with the following four year universities:

- Norwich University (follow standard program of study below)
- Mars Hill University (see page 131)0)

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

	Class	Lab	Clinic	Work	Credit	
				Exp.		
<b>Fall Semester</b>						
ACA 115	Success and Study Skills	0	2	0	0	1
Or						
ACA 122	College Transfer Success	0	2	0	0	1
CJC 111	Intro to Criminal Justice	3	0	0	0	3
CJC 113	Juvenile Justice	3	0	0	0	3
CJC 121	Law Enforcement Operations	3	0	0	0	3
CJC 231	Constitutional Law	3	0	0	0	3
ENG 111	Writing and Inquiry	3	0	0	0	3
	Subtotal					(16)

<b>Spring Semester</b>						
CIS 110	Introduction to Computers	2	2	0	0	3
CJC 112	Criminology	3	0	0	0	3
CJC 131	Criminal Law	3	0	0	0	3
CJC 170	Critical Incident Mgmt Pub Saf	3	0	0	0	3
POL 130	State and Local Government	3	0	0	0	3
	Subtotal					(15)

#### Summer Term

ENG 112	Writing/Research in the Disc	3	0	0	0	3
Or						
ENG 114	Prof. Research and Reporting	3	0	0	0	3
MAT 110	Math Measurement & Literacy	2	2	0	0	3
Or						
MAT 143	Quantitative Literacy	2	2	0	0	3
Or						
MAT 152	Statistical Methods I	3	2	0	0	4
	Humanities Elective**					3
	Subtotal					(9-10)

#### Fall Semester

CJC 122	Community Policing	3	0	0	0	3
CJC 132	Court Procedure & Evidence	3	0	0	0	3
CJC 144	Crime Scene Processing	2	3	0	0	3
CJC 146	Trace Evidence	2	3	0	0	3
CJC 221	Investigative Principles	3	2	0	0	4
	Subtotal					(16)

#### Spring Semester

BUS 270	Professional Development	3	0	0	0	3
CJC 212	Ethics and Community Relations	3	0	0	0	3
CJC 245	Friction Ridge Analysis	2	3	0	0	3
CJC 246	Adv Friction Ridge Analysis	2	3	0	0	3
CJC 255	Issues in Crim Justice App	3	0	0	0	3
	Subtotal					(15)

Students planning to transfer to a 4 year institution should take ACA-122 and either MAT-143 or MAT-152.

\*\*Humanities Electives and/or Social/Behavioral Science Electives are to be selected from the courses listed on page 46.

**Total Semester Credit Hours in Program .....71-72**

### Criminal Justice Technology/Latent Evidence - Certificate I\* (C5518AA) Certificate - Online option available

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

**\*This program of study does not qualify for federal and/or state financial aid.**

	Class	Lab	Clinic	Work	Credit	
				Exp.		
<b>Required Courses</b>						
CJC 111	Intro to Criminal Justice	3	0	0	0	3
CJC 131	Criminal Law	3	0	0	0	3
CJC 132	Court Procedure & Evidence	3	0	0	0	3
CJC 221	Investigative Principles	3	2	0	0	4

**Total Semester Credit Hours in Program ..... 13**

## Criminal Justice Technology/Latent Evidence - Certificate II\* (C5518AB)

**Certificate - Online option available**

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

**\*This program of study does not qualify for federal and/or state financial aid.**

Class Lab Clinic Work Credit  
Exp.

### Required Courses

CJC 121	Law Enforcement Operations	3	0	0	0	3
CJC 122	Community Policing	3	0	0	0	3
CJC 144	Crime Scene Processing	2	3	0	0	3
CJC 231	Constitutional Law	3	0	0	0	3

**Total Semester Credit Hours in Program ..... 12**

**Early Childhood Education (A55220)****Associate in Applied Science Degree**

The Early Childhood Associate curriculum prepares individuals to work with children from infancy through middle childhood in diverse learning environments. Students will combine learned theories with practice in actual settings with young children under the supervision of qualified teachers.

Course work includes child growth and development, physical/nutritional needs of children, care and guidance of children, and communication skills with parents and children. Students will foster the cognitive/language, physical/motor, social/emotional and creative development of young children.

Graduates are prepared to plan and implement developmentally appropriate programs in early childhood settings. Employment opportunities include child development and childcare programs, preschools, public and private schools, recreational centers, Head Start Programs, and school-age programs.

Task Stream: Students who graduate from the program must complete an electronic portfolio in Task Stream [www.taskstream.com](http://www.taskstream.com) to show competence in the National Association for the Education of Young Children (NAEYC) Standards. Student will receive additional information about Task Stream when they enroll in the degree program.

This curriculum complies with the standard approved by the State Board of Community Colleges. Please see the list of practicum requirements for the Early Childhood and School-Age programs on page 11.

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation.

If a student plans to transfer to a four-year institution, students must earn acceptable scores on PRAXIS I before enrolling in a bachelor's degree program. Students should work closely with their advisor to make appropriate course choices.

		Class	Lab	Clinic	Work	Credit
					Exp.	
<b>Fall Semester</b>						
ACA	115	Success and Study Skills	0	2	0	1
EDU	119	Intro Early Childhood Education	4	0	0	4
EDU	144	Child Development I	3	0	0	3
EDU	173	Becoming a Prof'l in ECE	3	0	0	3
ENG	111	Writing and Inquiry	3	0	0	3
		Subtotal				(14)

<b>Spring Semester</b>						
EDU	145	Child Development II	3	0	0	3
EDU	151	Creative Activities	3	0	0	3
ENG	112	Writing/Research in the Discipl	3	0	0	3
		Or				
ENG	114	Prof. Research and Reporting	3	0	0	3
		Major Course Elective***				3
		Major Course Elective***				3
		Subtotal				(15)

<b>Summer Term</b>						
		Math Requirement**				3-4
		Or				
		Natural Science Requirement**				4
		Humanities Elective**				3
		Social/Behavioral Science Elective**				3
		Subtotal				(9-10)

**Fall Semester**

EDU	131	Child, Family, & Community	3	0	0	0	3
EDU	146	Child Guidance	3	0	0	0	3
EDU	153	Health, Safety & Nutrition	3	0	0	0	3
EDU	221	Children with Exceptionalities	3	0	0	0	3
EDU	251	Exploration Activities	3	0	0	0	3
		Subtotal					(15)

**Spring Semester**

EDU	234	Infants, Toddlers & Twos	3	0	0	0	3
EDU	271	Educational Technology	2	2	0	0	3
EDU	280	Language & Literacy Exp	3	0	0	0	3
EDU	284	Early Child Capstone Practicum	1	9	0	0	4
		Subtotal					(13)

**\*\*Natural Science or Math requirement is to be selected from the courses listed below (3-4 credit hours required):**

AST	111	Descriptive Astronomy	3	0	0	0	3
AST	111A	Descriptive Astronomy Lab*	0	2	0	0	1
BIO	111	General Biology I	3	3	0	0	4
CHM	151	General Chemistry I	3	3	0	0	4
MAT	143	Quantitative Literacy	2	2	0	0	3
MAT	152	Statistical Methods I	3	2	0	0	4
MAT	171	Pre-Calculus Algebra	3	2	0	0	4
PHY	151	College Physics I	3	2	0	0	4

**\*\*Humanities Electives to be selected from the courses listed below (3 credit hours required):**

ART	111	Art Appreciation	3	0	0	0	3
ART	114	Art History Survey I	3	0	0	0	3
ART	115	Art History Survey II	3	0	0	0	3
ENG	231	America Literature I	3	0	0	0	3
ENG	232	American Literature II	3	0	0	0	3
MUS	110	Music Appreciation	3	0	0	0	3
PHI	240	Introduction to Ethics	3	0	0	0	3

**Social/Behavioral Science Electives to be selected from the courses listed below (3 credit hours required):**

ECO	251	Principles of Microeconomics	3	0	0	0	3
ECO	252	Principles of Macroeconomics	3	0	0	0	3
HIS	111	World Civilization I	3	0	0	0	3
HIS	112	World Civilization II	3	0	0	0	3
HIS	131	American History I	3	0	0	0	3
HIS	132	American History II	3	0	0	0	3
POL	120	American Government	3	0	0	0	3
PSY	150	General Psychology	3	0	0	0	3
SOC	210	Introduction to Sociology	3	0	0	0	3

Several articulation agreements are in place with four-year universities. Students who wish to transfer should work closely with their advisor to choose the appropriate major course, humanities, social/behavior science and math/natural science electives.

\*Denotes a corequisite, course cannot be taken by itself.

\*\*\*Major Course Electives are to be selected from the courses listed below (6 credit hours required):

ASL 111	Elementary ASL I	3	0	0	0	3
CIS 110	Introduction to Computers	2	2	0	0	3
COM 231	Public Speaking	3	0	0	0	3
EDU 157	Active Play	2	2	0	0	3
EDU 163	Classroom Mgt and Instruct	3	0	0	0	3
EDU 184	Early Child Intro Practicum	1	3	0	0	2
EDU 216	Foundations of Education	4	0	0	0	4
EDU 235	School-Age Dev & Program	3	0	0	0	3
EDU 259	Curriculum Planning	3	0	0	0	3
EDU 261	Early Childhood Admin I	3	0	0	0	3
EDU 262	Early Childhood Admin II	3	0	0	0	3
EDU 275	Effective Teacher Training	2	0	0	0	2
EDU 289	Advanced Issues/ School Age	2	0	0	0	2
PED 110	Fit and Well for Life	1	2	0	0	2
SPA 111	Elementary Spanish I	3	0	0	0	3
SPA 181	Spanish Lab 1*	0	2	0	0	1

**Total Semester Credit Hours in Program .....66-67**

## Early Childhood Education

### Associate in Applied Science Degree - Online Option

Class Lab Clinic Work Credit

#### Fall Semester (Odd Years)

ACA 115	Success and Study Skills	0	2	0	0	1
EDU 119	Intro Early Childhood Education	4	0	0	0	4
EDU 144	Child Development I	3	0	0	0	3
EDU 173	Becoming a Prof'l in ECE	3	0	0	0	3
ENG 111	Writing and Inquiry	3	0	0	0	3
Subtotal						(14)

#### Spring Semester (Even Years)

EDU 145	Child Development II	3	0	0	0	3
EDU 131	Child, Family, & Community	3	0	0	0	3
ENG 112	Writing/Research in the Discipl	3	0	0	0	3
Or						
ENG 114	Prof. Research and Reporting	3	0	0	0	3
Major Course Elective***						3
Major Course Elective***						3
Subtotal						(15)

#### Summer Term (Even Years)

Math Requirement**	3 or 4					
Or						
Natural Science Requirement**	4					
Social/Behavioral Science Elective**	3					
Humanities Elective**	3					
Subtotal						(9-10)

#### Fall Semester (Even Years)

EDU 151	Creative Activities	3	0	0	0	3
EDU 146	Child Guidance	3	0	0	0	3
EDU 153	Health, Safety & Nutrition	3	0	0	0	3
EDU 221	Children with Exceptionalities	3	0	0	0	3
EDU 251	Exploration Activities	3	0	0	0	3
Subtotal						(15)

#### Spring Semester (Odd Years)

EDU 234	Infants, Toddlers & Twos	3	0	0	0	3
EDU 271	Educational Technology	2	2	0	0	3
EDU 280	Language & Literacy Exp	3	0	0	0	3
EDU 284	Early Child Capstone Practicum	1	9	0	0	4
Subtotal						(13)

**Total Semester Credit Hours in Program .....66-67**

\*\*\*Major Course Electives are to be selected from the Electives listed above (6 credit hours required)

## Early Childhood Education – Preschool

### (C55220P)

#### Certificate

The Early Childhood Certificate is a concentration under the Early Childhood Associate. The Certificate prepares individuals to work with children birth through middle childhood (age eight) in diverse learning environments. Course work includes child growth and development, physical/nutritional needs of young children, physical/motor skills, social/emotional, and creative development.

Certificate graduates are prepared to plan and implement developmentally appropriate programs for infants and children through age eight. Employment opportunities include childcare programs, preschools, public and private schools, Head Start programs, developmental day programs, and school-age programs. Students who complete this certificate may apply for the National Preschool Child Development Associate (CDA Credential: NC Community College Track).

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Learning Center Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit Exp.

#### Fall Semester

EDU 119	Intro Early Childhood Education	4	0	0	0	4
EDU 146	Child Guidance	3	0	0	0	3
EDU 153	Health, Safety & Nutrition	3	0	0	0	3
Subtotal						(10)

#### Spring Semester

EDU 131	Child, Family and Community	3	0	0	0	3
EDU 145	Child Development II	3	0	0	0	3
EDU 184	Early Child Intro Practicum	1	3	0	0	2
Subtotal						(8)

**Total Semester Credit Hours in Program ..... 18**

### Early Childhood Education – Infant and Toddler (C55290) Certificate

The curriculum prepares individuals to work with children from infancy to three years of age in diverse learning environments. Students will combine learned theories, competency-based knowledge, and practice in actual settings with infants and toddlers.

Course work includes infant/toddler growth and development; physical/nutritional needs of infants and toddlers; safety issues in the care of infants and toddlers; care and guidance; communication skills with families and children; design and implementation of appropriate curriculum; and other related topics.

Graduates should be prepared to plan and implement developmentally appropriate infant/toddler programs in early childhood settings. Employment opportunities include positions in child development and child care programs, early intervention programs, preschools, public and private schools, recreational centers, Early Head Start programs, Nannies, and other infant/toddler programs, including home-childcare.

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Learning Center Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Students who complete this certificate may apply for the National Infant-Toddler Child Development Associate (CDA Credential: NC Community College Track).

Class	Lab	Clinic	Work	Credit
			Exp.	

**Fall Semester**

EDU 119	Intro Early Childhood Education	4	0	0	0	4
EDU 144	Child Development I	3	0	0	0	3
EDU 153	Health, Safety & Nutrition	3	0	0	0	3
	Subtotal					(10)

**Spring Semester**

EDU 131	Child, Family and Community	3	0	0	0	3
EDU 234	Infants, Toddlers, & Twos	3	0	0	0	3
	Subtotal					(6)

**Total Semester Credit Hours in Program ..... 16**

### Early Childhood Education – School-Age (C55220S) Certificate

This curriculum prepares individuals to work with school-age children in diverse learning environments. The curriculum is specifically designed for students planning to work in public or private school-age care environments.

Course work includes child growth/development; physical/nutritional needs of school-age children; care and guidance of school-age children; and communication skills with parents and children. Students will foster the cognitive/language, physical/motor, social/emotional, and creative development of school-age populations. Graduates are prepared to plan and implement developmentally appropriate activities in school-age environments. Employment opportunities include school-age teaching or school-age administration positions in child care/development programs, group leaders, before and after school programs, recreational centers and other programs that work with school-age populations.

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Learning Center Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class	Lab	Clinic	Work	Credit
			Exp.	

**Fall Semester**

EDU 157	Active Play	2	2	0	0	3
EDU 163	Classroom Mgt. and Instruction	3	0	0	0	3
EDU 275	Effective Teacher Training	2	0	0	0	2
	Subtotal					(8)

**Spring Semester**

EDU 131	Child, Family and Community	3	0	0	0	3
EDU 145	Child Development II	3	0	0	0	3
EDU 235	School-Age Dev and Programs	3	0	0	0	3
	Subtotal					(9)

**Total Semester Credit Hours in Program .....(17)**

## Early Childhood Education – Administration (C55220A) Certificate

The Early Childhood Administration Certificate program prepares graduates for positions in child care settings. All courses taken for the Certificate can be transferred into the Associate of Applied Science degree.

Individuals completing this Certificate with a C average or better will be eligible to apply for the North Carolina Division of Child Development Early Childhood Administration Credential.

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Learning Center Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class	Lab	Clinic	Work	Credit
				Exp.

### Summer Term

EDU 119	Intro Early Childhood Education	4	0	0	0	4
	Subtotal					(4)

### Fall Semester

EDU 153	Health, Safety & Nutrition	3	0	0	0	3
EDU 261	Early Childhood Admin I	3	0	0	0	3
	Subtotal					(6)

### Spring Semester

EDU 131	Child, Family & Community	3	0	0	0	3
EDU 262	Early Childhood Admin II	3	0	0	0	3
	Subtotal					(6)

**Total Semester Credit Hours in Program ..... 16**

## Education–School-Age Education (Arts Track)

### Associate in Applied Science

This curriculum prepares individuals to work with children in elementary through middle grades in diverse learning environments. Students will combine learned theories with practice in actual settings with school-age children under the supervision of qualified teachers. Course work includes child growth/development; computer technology in education; physical/nutritional needs of school-age children; care and guidance of school-age children; and communication skills with families and children. Students will foster the cognitive/language, physical/motor, social/emotional, and creative development of school-age populations.

Graduates are prepared to plan and implement developmentally appropriate programs in school-aged environments. Employment opportunities include school-age teachers in child care programs, before/after-school programs, paraprofessional positions in public/private schools, recreational centers, and other programs that work with school-age populations.

This curriculum complies with the standard approved by the State Board of Community Colleges. Please see the list of practicum requirements for the Early Childhood and School-Age programs on page 11.

**Task Stream:** Students who graduate from the program must complete an electronic portfolio in Task Stream [www.taskstream.com](http://www.taskstream.com) to show competence in the National Association for the Education of Young Children (NAEYC) standards. Students will receive additional information about Task Stream when they enroll in the degree program.

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Learning Center Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

To transfer to a four-year institution, students must earn acceptable scores on PRAXIS I before enrolling in a bachelor's degree in Education. Students should work closely with their advisor to make appropriate course choices.

		Class	Lab	Clinic	Work	Credit	Exp.
<b>Fall Semester</b>							
ACA 115	Success and Study Skills	0	2	0	0	1	
	Or						
ACA 122	College Transfer Success	0	2	0	0	1	
EDU 144	Child Development I	3	0	0	0	3	
EDU 163	Classroom Mgt and Instruct	3	0	0	0	3	
EDU 173	Becoming a Prof'l in ECE	3	0	0	0	3	
ENG 111	Writing and Inquiry	3	0	0	0	3	
	Humanities Elective**					3	
	Subtotal					(16)	
<b>Spring Semester</b>							
ENG 112	Writing/Research in the Discipl	3	0	0	0	3	
EDU 131	Child, Family and Community	3	0	0	0	3	
EDU 145	Child Development II	3	0	0	0	3	
	Humanities Elective**					3	
	Social/Behavioral Science Elective**					3	
	Subtotal					(15)	
<b>Summer Term</b>							
	Math Elective**					3-4	
	Humanities Elective**					3	
	Subtotal					(6-7)	

### Fall Semester

EDU 216	Foundations of Education	4	0	0	0	4
EDU 221	Children with Exceptionalities	3	0	0	0	3
	Science Elective**					4
	Social/Behavioral Science Elective**					3
	Subtotal					(14)

### Spring Semester

EDU 271	Educational Technology	2	2	0	0	3
EDU 285	Internship Exp-School-Age	1	9	0	0	4
EDU 289	Adv Issues/School Age	2	0	0	0	2
	Humanities Elective**					3
	Social/Behavioral Science Elective**					3
	Subtotal					(15)

\*\*This program works in conjunction with the general education core. Electives listed in the above program of study must be selected from below. Several articulation agreements are in place with four-year universities. Students who wish to transfer should work closely with their advisor to choose the appropriate courses.

### \*\*Humanities/Fine Arts (12 semester hours required)

(Four courses from at least three different discipline areas must be selected. One literature course and one foreign language course are required)

#### Art

ART 111	Art Appreciation	3	0	0	0	3
ART 114	Art History Survey I	3	0	0	0	3
ART 115	Art History Survey II	3	0	0	0	3

#### Literature

ENG 231	American Literature I	3	0	0	0	3
ENG 232	American Literature II	3	0	0	0	3

#### Music

MUS 110	Music Appreciation	3	0	0	0	3
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#### Philosophy

PHI 240	Introduction to Ethics	3	0	0	0	3
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### International Languages (up to 3 credits allowed)

ASL 111	Elementary ASL I	3	0	0	0	3
FRE 111	Elementary French I	3	0	0	0	3
FRE 181	French Lab 1*	0	2	0	0	1
SPA 111	Elementary Spanish I	3	0	0	0	3
SPA 181	Spanish Lab 1*	0	2	0	0	1
	Subtotal					(12)

### \*\*Social/Behavioral Science

(9 semester hours required. Three courses from three different discipline areas must be selected. Note: History 111 or 112 is required.)

#### Economics

ECO 251	Principles of Microeconomics	3	0	0	0	3
ECO 252	Principles of Macroeconomics	3	0	0	0	3

#### History

HIS 111	World Civilizations I	3	0	0	0	3
HIS 112	World Civilizations II	3	0	0	0	3
HIS 131	American History I	3	0	0	0	3
HIS 132	American History II	3	0	0	0	3

#### Political Science

POL 120	American Government	3	0	0	0	3
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#### Psychology

PSY 150	General Psychology	3	0	0	0	3
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#### Sociology

SOC 210	Introduction to Sociology	3	0	0	0	3
	Subtotal					(9)

**Science (4 semester credit hours required from the following)**

BIO	111	General Biology I	3	3	0	0	4
BIO	112	General Biology II	3	3	0	0	4
BIO	140	Environmental Biology	3	0	0	0	3
BIO	140A	Environmental Biology Lab*	0	3	0	0	1
CHM	131	Introduction to Chemistry	3	0	0	0	3
CHM	131A	Introduction to Chemistry Lab*	0	3	0	0	1
CHM	151	General Chemistry I	3	3	0	0	4
CHM	152	General Chemistry II	3	3	0	0	4
PHY	110	Conceptual Physics	3	0	0	0	3
PHY	110A	Conceptual Physics Lab*	0	2	0	0	1
PHY	151	College Physics I	3	2	0	0	4
PHY	152	College Physics II	3	2	0	0	4
		Subtotal					(4)

**Mathematics (3-4 semester hours required from the following.)**

MAT	143	Quantitative Literacy	2	2	0	0	3
MAT	152	Statistical Methods I	3	2	0	0	4
MAT	171	Pre-calculus Algebra	3	2	0	0	4
		Subtotal					(3-4)

\*Denotes a corequisite, course cannot be taken by itself.

**Total Semester Credit Hours in Program .....66- 68**

## Education–School-Age Education (Science Track)

### Associate in Applied Science Degree

This curriculum prepares individuals to work with children in elementary through middle grades in diverse learning environments. Students will combine learned theories with practice in actual settings with school-age children under the supervision of qualified teachers. Course work includes child growth/development; computer technology in education; physical/nutritional needs of school-age children; care and guidance of school-age children; and communication skills with families and children. Students will foster the cognitive/language, physical/motor, social/emotional, and creative development of school-age populations.

Graduates are prepared to plan and implement developmentally appropriate programs in school-aged environments. Employment opportunities include school-age teachers in child care programs, before/after-school programs, paraprofessional positions in public/private schools, recreational centers, and other programs that work with school-age populations.

This curriculum complies with the standard approved by the State Board of Community Colleges. Please see the list of practicum requirements for the Early Childhood and School-Age programs on page 11.

**Task Stream:** Students who graduate from the program must complete an electronic portfolio in Task Stream [www.taskstream.com](http://www.taskstream.com) to show competence in the National Association for the Education of Young Children (NAEYC) standards. Students will receive additional information about Task Stream when they enroll in the degree program.

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Learning Center Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

To transfer to a four-year institution, students must earn acceptable scores on PRAXIS I before enrolling in a bachelor's degree in Education. Students should work closely with their advisor to make appropriate course choices.

		Class	Lab	Clinic	Work	Credit
					Exp.	

#### Fall Semester

ACA 115	Success and Study Skills	0	2	0	0	1
	Or					
ACA 122	College Transfer Success	0	2	0	0	1
EDU 144	Child Development I	3	0	0	0	3
EDU 163	Classroom Mgt and Instruct	3	0	0	0	3
EDU 173	Becoming a Prof'l in ECE	3	0	0	0	3
ENG 111	Writing and Inquiry	3	0	0	0	3
	Math Elective**					3-4
	Subtotal					(16-17)

#### Spring Semester

ENG 112	Writing/Research in the Discipl	3	0	0	0	3
EDU 131	Child, Family and Community	3	0	0	0	3
EDU 145	Child Development II	3	0	0	0	3
EDU 271	Educational Technology	2	2	0	0	3
	Humanities Elective**					3
	Subtotal					(15)

#### Summer Term

Math Elective**						3-4
Humanities Elective**						3
Social/Behavioral Science Elective**						3
Subtotal						(9-10)

#### Fall Semester

EDU 216	Foundations of Education	4	0	0	0	4
EDU 221	Child with Exceptionalities	3	0	0	0	3
	Humanities Elective**					3
	Natural/Physical Science Elective**					4
	Subtotal					(14)

#### Spring Semester

EDU 285	Internship Exp-School-Age	1	9	0	0	4
EDU 289	Adv Issues/School Age	2	0	0	0	2
	Science Elective**					4
	Social/Behavioral Science Elective**					3
	Subtotal					(13)

\*\*This program works in conjunction with the general education core. Electives listed in the above program of study must be selected from below. Several articulation agreements are in place with four-year universities. Students who wish to transfer should work closely with their advisor to choose the appropriate courses.

#### \*\*Humanities/Fine Arts

(9 semester hours required. Three courses from three different discipline areas are required. One course must be literature.)

##### Art

ART 111	Art Appreciation	3	0	0	0	3
ART 114	Art History Survey I	3	0	0	0	3
ART 115	Art History Survey II	3	0	0	0	3

##### Literature (1 Course required)

ENG 231	American Literature I	3	0	0	0	3
ENG 232	American Literature II	3	0	0	0	3

##### Music

MUS 110	Music Appreciation	3	0	0	0	3
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##### Philosophy

PHI 240	Introduction to Ethics	3	0	0	0	3
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##### International Languages

ASL 111	Elementary ASL I	3	0	0	0	3
FRE 111	Elementary French I	3	0	0	0	3
FRE 181	French Lab 1*	0	2	0	0	1
SPA 111	Elementary Spanish I	3	0	0	0	3
SPA 181	Spanish Lab 1*	0	2	0	0	1
	Subtotal					(9)

#### \*\*Social/Behavioral Sciences

(6 semester hours required.) Two courses must be selected from different discipline areas. Note: HIS 111 or HIS 112 is required.

##### Economics

ECO 251	Principles of Microeconomics	3	0	0	0	3
ECO 252	Principles of Macroeconomics	3	0	0	0	3

##### History (1 course required)

HIS 111	World Civilizations I	3	0	0	0	3
HIS 112	World Civilizations II	3	0	0	0	3

##### Political Science

POL 120	American Government	3	0	0	0	3
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##### Psychology

PSY 150	General Psychology	3	0	0	0	3
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##### Sociology

SOC 210	Introduction to Sociology	3	0	0	0	3
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Subtotal (6)

### Natural /Physical Sciences

(8 semester credit hours required from the following) Select a two-course sequence, including accompanying Laboratory work, from the biological or physical science disciplines.

BIO	111	General Biology I	3	3	0	0	4
BIO	112	General Biology II	3	3	0	0	4
CHM	151	General Chemistry I	3	3	0	0	4
CHM	152	General Chemistry II	3	3	0	0	4
PHY	151	College Physics I	3	2	0	0	4
PHY	152	College Physics II	3	2	0	0	4
		Subtotal					(8)

### Mathematics (2 courses required)

MAT	143	Quantitative Literacy	2	2	0	0	3
MAT	152	Statistical Methods I	3	2	0	0	4
MAT	171	Pre-calculus Algebra	3	2	0	0	4
MAT	172	Pre-calculus Trigonometry	3	2	0	0	4
MAT	271	Calculus I	3	2	0	0	4
		Subtotal					(7-8)

\*Denotes a corequisite, course cannot be taken by itself.

**Total Semester Credit Hours in Program .....68-69**

## Electronics Engineering Technology (A40200)

### Associate in Applied Science Degree

Engineering and Technology Pathway Description: These curriculums are designed to prepare students through the study and application of principles from mathematics, natural sciences, and technology and applied processes based on these subjects.

Course work includes mathematics, natural sciences, engineering sciences and technology.

Graduates should qualify to obtain occupations such as technical service providers, materials and technologies testing services, process improvement technicians, engineering technicians, construction technicians and managers, industrial and technology managers, or research technicians.

Electronics Engineering Technology program description: A course of study that prepares students to apply basic engineering principles and technical skills to become technicians who design, build, install, test, troubleshoot, repair, and modify developmental and production electronic components, equipment, and systems such as industrial/computer controls, manufacturing systems, communication systems, and power electronic systems. Includes instruction in mathematics, basic electricity, solid-state fundamentals, digital concepts, and microprocessors or programmable logic controllers. Graduates should qualify for employment as an electronics engineering technician, field service technician, instrumentation technician, maintenance technician, electronic tester, electronic systems integrator, bench technician, or production control technician.

This curriculum complies with the standard approved by the State Board of Community Colleges.

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit Exp.

#### Fall Semester

ACA 115	Success and Study Skills	0	2	0	0	1
Or						
ACA 122	College Transfer Success	0	2	0	0	1
DFT 170	Engineering Graphics	2	2	0	0	3
EGR 111	Engineer Comp and Careers	2	2	0	0	3
Or						
EGR 150	Introduction to Engineering	1	2	0	0	2
ELC 131	Circuit Analysis I	3	3	0	0	4
ENG 111	Writing and Inquiry	3	0	0	0	3
MAT 121	Algebra/Trigonometry I	2	2	0	0	3
Or						
MAT 171	Pre-calculus Algebra	3	2	0	0	4
	Subtotal					(16-18)

#### Spring Semester

EGR 125	Appl Software for Tech	1	2	0	0	2
ELC 117	Motors and Controls	2	6	0	0	4
ELN 150	CAD for Electronics	1	3	0	0	2
MAT 122	Algebra/ Trigonometry II	2	2	0	0	3
Or						
MAT 172	Precalculus Trigonometry	3	2	0	0	4
	Humanities Elective**					3
	Subtotal					(14-15)

#### Summer Term

ISC 112	Industrial Safety	2	0	0	0	2
ENG 114	Prof Research and Reporting	3	0	0	0	3
	Major Course Elective***					2-4
	Subtotal					(7-9)

#### Fall Semester

ELC 128	Introduction to PLC	2	3	0	0	3
ELN 131	Analog Electronics	3	3	0	0	4
ELN 133	Digital Electronics	3	3	0	0	4
PHY 131	Physics – Mechanics	3	2	0	0	4
	Social/Behavioral Science Elective**					3
	Subtotal					(18)

#### Spring Semester

ELC 228	PLC Applications	2	6	0	0	4
ELN 232	Intro to Microprocessors	3	3	0	0	4
ELN 234	Communication Systems	3	3	0	0	4
MEC 276	Capstone Design Project	0	3	0	0	1
MNT 160	Industrial Fabrication	1	3	0	0	2
	Subtotal					(15)

\*\*Humanities Electives and/or Social/Behavioral Science Electives are to be selected from the courses listed on page 46.

\*\*\*Major Course Electives are to be selected from the following:

CIS 115	Introduction to Prog/Logic	2	3	0	0	3
EGR 285	Design Project	0	4	0	0	2
ELC 213	Instrumentation	3	2	0	0	4
HYD 110	Hydraulics/Pneumatics	2	3	0	0	3
ISC 132	Mfg Quality Control	2	3	0	0	3
MAT 152	Statistical Methods I	3	2	0	0	4
MAT 271	Calculus I	3	2	0	0	4
NOS 110	Operating Systems Concepts	2	3	0	0	3
WBL 111	Work-Based Learning I	0	0	0	10	1
WBL 112	Work-Based Learning I	0	0	0	20	2
WBL 113	Work-Based Learning I	0	0	0	30	3
WBL 114	Work-Based Learning I	0	0	0	40	4
WBL 121	Work-Based Learning II	0	0	0	10	1
WBL 122	Work-Based Learning II	0	0	0	20	2
WBL 123	Work-Based Learning II	0	0	0	30	3
WBL 131	Work-Based Learning III	0	0	0	10	1
WBL 211	Work-Based Learning IV	0	0	0	10	1

Total Semester Credit Hours in Program .....70-75

## Electronics Engineering Technology (D40200) Diploma

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit Exp.

#### Fall Semester

ACA 115	Success and Study Skills	0	2	0	0	1
Or						
ACA 122	College Transfer Success	0	2	0	0	1
ELC 128	Intro to PLC	2	3	0	0	3
ELC 131	Circuit Analysis I	3	3	0	0	4
ELN 131	Analog Electronics	3	3	0	0	4
ELN 133	Digital Electronics	3	3	0	0	4
MAT 121	Algebra/Trigonometry I	2	2	0	0	3
	Subtotal					(18)

**Spring Semester**

EGR 125	Appl Software for Tech	1	2	0	0	2
ELC 117	Motors and Controls	2	6	0	0	4
ELN 150	CAD for Electronics	1	3	0	0	2
MAT 122	Algebra/ Trigonometry II	2	2	0	0	3
PHY 131	Physics – Mechanics	3	2	0	0	4
	Subtotal					(16)

**Summer Term**

ENG 111	Writing and Inquiry	3	0	0	0	3
ISC 112	Industrial Safety	2	0	0	0	2
	Subtotal					(5)

**Total Semester Credit Hours in Program .....39**

**Electronics Engineering Technology –  
Basic Electronics (C40200BE)  
Certificate**

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit  
Exp.

**Required Courses**

ACA 115	Success and Study Skills	0	2	0	0	1
	Or					
ACA 122	College Transfer Success	0	2	0	0	1
EGR 111	Engineer Comp and Careers	2	2	0	0	3
	Or					
EGR 150	Introduction to Engineering	1	2	0	0	2
EGR 125	Appl Software for Tech	1	2	0	0	2
ELC 117	Motors and Controls	2	6	0	0	4
ELC 131	Circuit Analysis I	3	3	0	0	4
MAT 121	Algebra/Trigonometry I	2	2	0	0	3
	Or					
MAT 171	Pre-calculus Algebra	3	2	0	0	4

**Total Semester Credit Hours in Program .....16-18**

**Electronics Engineering Technology –  
Advanced Electronics (C40200AE)  
Certificate**

**Students should take the Basic Electronics  
Certificate prior to the Advanced Electronics  
Certificate**

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit  
Exp.

**Required Courses**

ELN 131	Analog Electronics	3	3	0	0	4
ELN 133	Digital Electronics	3	3	0	0	4
ELN 232	Intro to Microprocessors	3	3	0	0	4
ELN 234	Communication Systems	3	3	0	0	4

**Total Semester Credit Hours in Program ..... 16**

**Electronics Engineering Technology –  
Industrial Electronics (C40200IE)  
Certificate**

**Students should take the Basic Electronics  
Certificate prior to the Industrial Electronics  
Certificate**

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit  
Exp.

**Required Courses**

ELC 128	Introduction to PLC	2	3	0	0	3
ELC 228	PLC Applications	2	6	0	0	4
ELN 234	Communication Systems	3	3	0	0	4
ISC 112	Industrial Safety	2	0	0	0	2
MAT 122	Algebra/ Trigonometry II	2	2	0	0	3
	Or					
MAT 172	Pre-calculus Trigonometry	3	2	0	0	4

**Total Semester Credit Hours in Program .....16-17**

**Students may earn additional Certificates in the  
Engineering Technology Pathway programs. Speak  
to your faculty advisor for more information.**

## Emergency Management (A55460) – Pending State Approval

### Associate in Applied Science Degree

The Emergency Management curriculum is designed to provide students with a foundation of technical and professional knowledge needed for emergency services delivery in local and state government agencies. Study involves both management and technical aspects of law enforcement, fire protection, emergency medical services, and emergency planning.

Course work includes classroom and laboratory exercises to introduce the student to various aspects of emergency preparedness, protection, and enforcement. Students will learn technical and administrative skills such as investigative principles, hazardous materials, codes, standards, emergency agency operations, and finance.

Employment opportunities include ambulance services, fire/rescue agencies, law enforcement agencies, fire marshal offices, industrial firms, educational institutions, emergency management offices, and other government agencies. Employed persons should have opportunities for skilled and supervisory-level positions.. This curriculum complies with the standard approved by the State Board of Community Colleges.

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit Exp.

#### Fall Semester

ACA 115	Success and Study Skills	0	2	0	0	1
ENG 111	Writing and Inquiry	3	0	0	0	3
EPT 150	Incident Management	3	0	0	0	3
EPT 220	Terrorism and Emer. Mgt	3	0	0	0	3
EPT 275	Emergency Ops Center Mgt	3	0	0	0	3
Subtotal						(13)

#### Spring Semester

ENG 114	Prof Research and Reporting	3	0	0	0	3
EPT 120	Sociology of Disaster	3	0	0	0	3
EPT 140	Emergency Management	3	0	0	0	3
FIP 152	Fire Protection Law	3	0	0	0	3
FIP 228	Local Govt Finance	3	0	0	0	3
Subtotal						(15)

#### Summer Term

CIS 110	Introduction to Computers	2	2	0	0	3
MAT 110	Math Measurement & Literacy	2	2	0	0	3
	Humanities/Fine Arts**					3
Subtotal						(9)

#### Fall Semester

EPT 130	Mitigation & Preparedness	3	0	0	0	3
EPT 210	Response & Recovery	3	0	0	0	3
	Major Course Elective***					6-8
Subtotal						(12-14)

#### Spring Semester

PSY 150	General Psychology	3	0	0	0	3
	Major Course Elective***					12-15
Subtotal						(15-18)

\*\*Humanities Electives and/or Social/Behavioral Science Electives are to be selected from the courses listed on page 46.

\*\*\*Major Course Electives are to be selected from the following:

FIP 164	OSHA Standards	3	0	0	0	3
FIP 221	Adv Fire Fighting Strat	3	0	0	0	3
FIP 240	Fire Service Supervision	3	0	0	0	3
FIP 248	Fire Svc Personnel Adm	3	0	0	0	3
FIP 256	Munic Public Relations	3	0	0	0	3
FIP 260	Fire Protect Planning	3	0	0	0	3
FIP 276	Managing Fire Services	3	0	0	0	3
CJC 120	Interviews/Interrogations	1	2	0	0	2
CJC 170	Critical Incident Mgmt Pub Saf	3	0	0	0	3
CJC 215	Organization & Administration	3	3	0	0	3

Total Semester Credit Hours in Program .....64-69

## Emergency Management (D55460) Diploma

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit Exp.

#### Fall Semester

ACA 115	Success and Study Skills	0	2	0	0	1
EPT 130	Mitigation & Preparedness	3	0	0	0	3
EPT 150	Incident Management	3	0	0	0	3
EPT 210	Response & Recovery	3	0	0	0	3
EPT 220	Terrorism and Emer. Mgt	3	0	0	0	3
EPT 275	Emergency Ops Center Mgt	3	0	0	0	3
Subtotal						(16)

#### Spring Semester

EPT 120	Sociology of Disaster	3	0	0	0	3
EPT 140	Emergency Management	3	0	0	0	3
FIP 152	Fire Protection Law	3	0	0	0	3
FIP 228	Local Govt Finance	3	0	0	0	3
	Major Course Elective***					6
Subtotal						(18)

#### Summer Term

CIS 110	Introduction to Computers	2	2	0	0	3
ENG 111	Writing and Inquiry	3	0	0	0	3
Subtotal						(6)

\*\*\*Major Course Electives are to be selected from the following:

FIP 164	OSHA Standards	3	0	0	0	3
FIP 221	Adv Fire Fighting Strat	3	0	0	0	3
FIP 240	Fire Service Supervision	3	0	0	0	3
FIP 248	Fire Svc Personnel Adm	3	0	0	0	3
FIP 256	Munic Public Relations	3	0	0	0	3
FIP 260	Fire Protect Planning	3	0	0	0	3
FIP 276	Managing Fire Services	3	0	0	0	3
CJC 120	Interviews/Interrogations	1	2	0	0	2
CJC 170	Critical Incident Mgmt Pub Saf	3	0	0	0	3
CJC 215	Organization & Administration	3	3	0	0	3

Total Semester Credit Hours in Program .....40

## Emergency Management (C55460) Certificate

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit  
Exp.

### Fall Semester

EPT 220	Terrorism and Emer. Mgt	3	0	0	0	3
EPT 275	Emergency Ops Center Mgt	3	0	0	0	3
EPT 130	Mitigation & Preparedness	3	0	0	0	3
EPT 210	Response & Recovery	3	0	0	0	3
	Subtotal					(12)

### Spring Semester

EPT 120	Sociology of Disaster	3	0	0	0	3
EPT 140	Emergency Management	3	0	0	0	3
	Subtotal					(6)

**Total Semester Credit Hours in Program ..... 18**

## Emergency Medical Science (A45340)

### Associate in Applied Science Degree

The Emergency Medical Science curriculum is designed to prepare graduates to enter the workforce as paramedics. Additionally, the program can provide an Associate Degree for individuals desiring an opportunity for career enhancement. The course of study provides the student an opportunity to acquire basic and advanced life support knowledge and skills by utilizing classroom instruction, practical laboratory sessions, hospital clinical experience, and field internships with emergency medical service agencies.

The Emergency Medical Science Program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP), 1361 Park Street, Clearwater, FL 33756; Phone:727-210-2350; Fax:727-210-2354; www.caahep.org by the recommendation of the Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions (CoAEMSP), Suite 111-312, 8301 Lakeview Parkway, Rowlett, TX 75088; Phone: 214-703-8445; Fax: 214-703-8992; www.coaemsp.org.

Graduates will take the North Carolina Office of Emergency Medical Services (NCOEMS) examination for recognition as a paramedic. Graduates will also be eligible to take the National Registry of Emergency Medical Technicians (NREMT) examination. Employment opportunities include ambulance services, fire and rescue agencies, air medical services, specialty areas of hospitals, industry, physician's offices, educational institutions, and government agencies.

Students should have good physical strength and flexibility; be able to see, hear, and communicate well; and have strong critical thinking skills. Blue Ridge Community College's clinical site partners require criminal background checks, drug testing, and tuberculosis screening along with proof of immunizations.

This curriculum complies with the standard approved by the State Board of Community Colleges.

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

	Class	Lab	Clinic	Work	Credit	
				Exp.		
<b>Fall Semester</b>						
ACA 115	Success and Study Skills	0	2	0	0	1
BIO 163	Basic Anat & Physiology	4	2	0	0	5
EMS 110	EMT	6	6	0	0	8
MED 120	Survey of Med Terminology	2	0	0	0	2
	Subtotal					(16)
<b>Spring Semester</b>						
CIS 110	Introduction to Computers	2	2	0	0	3
EMS 122	EMS Clinical Practicum I	0	0	3	0	1
EMS 130	Pharmacology	3	3	0	0	4
EMS 131	Adv Airway Management	1	2	0	0	2
EMS 160	Cardiology I	1	3	0	0	2
MAT 110	Math Measurement & Literacy	2	2	0	0	3
	Subtotal					(15)
<b>Summer Term</b>						
EMS 220	Cardiology II	2	3	0	0	3
EMS 221	EMS Clinical Practicum II	0	0	6	0	2
EMS 260	Trauma Emergencies	1	3	0	0	2
PSY 150	General Psychology	3	0	0	0	3
	Subtotal					(10)

### Fall Semester

EMS 231	EMS Clinical Practicum III	0	0	9	0	3
EMS 240	Patients w/ Special Challenges	1	2	0	0	2
EMS 250	Medical Emergencies	3	3	0	0	4
EMS 270	Life Span Emergencies	2	3	0	0	3
ENG 111	Writing and Inquiry	3	0	0	0	3
	Subtotal					(15)

### Spring Semester

EMS 115	Defense Tactics for EMS	1	3	0	0	2
	Or					
EMS 235	EMS Management	2	0	0	0	2
EMS 241	EMS Clinical Practicum IV	0	0	12	0	4
EMS 285	EMS Capstone	1	3	0	0	2
ENG 114	Prof Research & Reporting	3	0	0	0	3
	Humanities Elective**					3
	Subtotal					(14)

\*\*Humanities Electives and/or Social/Behavioral Science Electives are to be selected from the courses listed on page 46.

**Total Semester Credit Hours in Program .....70**

## Emergency Medical Science (A45340B) Bridge Program

The Emergency Medical Science bridge program has been established for students that have completed portions of their EMS requirements through a North Carolina community college Continuing Education program. In order to receive curriculum credit for EMS Continuing Education courses students must hold a current North Carolina EMT/PARAMEDIC credential.

Students must also successfully complete a comprehensive EMS entrance examination scoring a grade of "C" or better on the examination. Individuals successfully meeting the EMS entrance requirements will need to take the following classes to complete their EMS Associate of Applied Science Degree with Blue Ridge Community College.

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

	Class	Lab	Clinic	Work	Credit	
				Exp.		
<b>Fall Semester</b>						
ACA 115	Success and Study Skills	0	2	0	0	1
BIO 163	Basic Anatomy & Physiology	4	2	0	0	5
EMS 280	Bridging Course	2	2	0	0	3
ENG 111	Writing and Inquiry	3	0	0	0	3
PSY 150	General Psychology	3	0	0	0	3
	Subtotal					(15)
<b>Spring Semester</b>						
CIS 110	Introduction to Computers	2	2	0	0	3
EMS 235	EMS Management	2	0	0	0	2
EMS 285	EMS Capstone	1	3	0	0	2
ENG 114	Prof Research & Reporting	3	0	0	0	3
MAT 110	Math Measurement & Literacy	2	2	0	0	3
	Humanities Elective**					3
	Subtotal					(16)

\*\*Humanities Electives and/or Social/Behavioral Science Electives are to be selected from the courses listed on page 46.

**Total Semester Credit Hours in Program.....31**

## Emergency Medical Science (D45340)

### Diploma

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit  
Exp.

#### Fall Semester

EMS 110	EMT	6	6	0	0	8
	Subtotal					(8)

#### Spring Semester

ACA 115	Success and Study Skills	0	2	0	0	1
BIO 163	Basic Anatomy & Physiology	4	2	0	0	5
EMS 122	EMS Clinical Practicum I	0	0	3	0	1
EMS 130	Pharmacology	3	3	0	0	4
EMS 160	Cardiology I	1	3	0	0	2
	Subtotal					(13)

#### Summer Term

EMS 220	Cardiology II	2	3	0	0	3
EMS 221	EMS Clinical Practicum II	0	0	6	0	2
EMS 260	Trauma Emergencies	1	3	0	0	2
PSY 150	General Psychology	3	0	0	0	3
	Subtotal					(10)

#### Fall Semester

EMS 231	EMS Clinical Practicum III	0	0	9	0	3
EMS 250	Medical Emergencies	3	3	0	0	4
ENG 111	Writing and Inquiry	3	0	0	0	3
	Subtotal					(10)

#### Spring Semester

EMS 241	EMS Clinical Practicum IV	0	0	12	0	4
EMS 285	EMS Capstone	1	3	0	0	2
	Subtotal					(6)

**Total Semester Credit Hours in Program ..... 47**

## Emergency Medical Science (C45340)

### Certificate

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit  
Exp.

#### Fall Semester

ACA 115	Success and Study Skills	0	2	0	0	1
BIO 163	Basic Anatomy & Physiology	4	2	0	0	5
EMS 110	EMT	6	6	0	0	8
MED 120	Survey of Med Terminology	2	0	0	0	2

**Total Semester Credit Hours in Program ..... 16**

## Environmental Science Technology (A20140)

### Associate in Applied Science Degree

The Environmental Science Technology curriculum is designed to prepare individuals for employment in environmental testing/consulting and related industries.

Major emphasis is placed on biological and chemical evaluation of man's impact on his environment.

Course work includes general education, computer applications, biology, chemistry, industrial safety, and an extensive array of detailed environmentally specific classes.

Graduates should qualify for numerous positions within the industry. Employment opportunities include, but are not limited to, the following: Chemical Analysis, Biological Analysis, Water/Wastewater Treatment, EPA Compliance Inspection, Hazardous Material Handling, Waste Abatement/Removal, and Contaminated Site Assessment/Remediation.

This curriculum complies with the standard approved by the State Board of Community Colleges.

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit Exp.

#### Fall Semester

ACA 115	Success and Study Skills	0	2	0	0	1
BIO 111	General Biology	3	3	0	0	4
EHS 114	OSHA Regulations	4	0	0	0	4
ENG 111	Writing and Inquiry	3	0	0	0	3
MAT 121	Algebra/Trigonometry I	2	2	0	0	3
Subtotal						(15)

#### Spring Semester

BIO 140	Environmental Biology	3	0	0	0	3
BIO 140A	Environmental Biology Lab*	0	3	0	0	1
ENG 112	Writing/Research in the Discipl	3	0	0	0	3
Or						
ENG 114	Prof Research and Reporting	3	0	0	0	3
PHS 130	Earth Science	3	2	0	0	4
Social/Behavioral Science Elective**						3
Subtotal						(14)

#### Summer Term

BIO 145	Ecology	3	3	0	0	4
CIS 110	Introduction to Computers	2	2	0	0	3
Major Course Elective***						3
Subtotal						(10)

#### Fall Semester

BIO 240	Waste Management	3	0	0	0	3
CHM 131	Introduction to chemistry	3	0	0	0	3
And						
CHM 131A	Intro to Chemistry Lab*	0	3	0	0	1
Or						
CHM 151	General Chemistry I	3	3	0	0	4
ENV 218	Environmental Health	3	0	0	0	3
Humanities Elective**						3
Major Course Elective***						3
Subtotal						(16)

#### Spring Semester

BIO 175	General Microbiology	2	2	0	0	3
Or						
CHM 132	Organic and Biochemistry	3	3	0	0	4
ENV 214	Water Quality	3	2	0	0	4
ENV 226	Environmental Law	3	0	0	0	3
ENV 228	Environmental Issues	1	0	0	0	1
Subtotal						(11-12)

\*Denotes a corequisite, course cannot be taken by itself.

\*\*Humanities Electives and/or Social/Behavioral Science Electives are to be selected from the courses listed on page 46.

\*\*\*Major Course Electives are to be selected from the following:

ALT 120	Renewable Energy Tech	2	2	0	0	3
BIO 112	General Biology II	3	3	0	0	4
BIO 120	Introductory Botany	3	3	0	0	4
BIO 130	Introductory Zoology	3	3	0	0	4
BIO 163	Basic Anatomy and Physiology	4	2	0	0	5
BIO 242	Natural Resource Conserv	3	0	0	0	3
EHS 215	Incident Management	3	2	0	0	4
GIS 111	Introduction to GIS	2	2	0	0	3
LID 111	LID Design Principles	2	3	0	0	3
SST 110	Intro to Sustainability	3	0	0	0	3
SST 120	Energy Use Analysis	2	2	0	0	3
SST 140	Green Bldg & Design Concepts	3	0	0	0	0
WAT 110	Basic Wastewater Trmt	2	3	0	0	3
WBL 111	Work-Based Learning I	0	0	0	10	1
WBL 112	Work-Based Learning I	0	0	0	20	2
WBL 113	Work-Based Learning I	0	0	0	30	3

Total Semester Credit Hours in Program .....66-67

## Environmental Science Technology (D20140)

### Diploma

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit Exp.

#### Fall Semester

ACA 115	Success and Study Skills	0	2	0	0	1
BIO 111	General Biology	3	3	0	0	4
CHM 131	Introduction to Chemistry	3	0	0	0	3
CHM 131A	Introduction to Chemistry Lab*	0	3	0	0	1
EHS 114	OSHA Regulations	4	0	0	0	4
MAT 121	Algebra/Trigonometry I	2	2	0	0	3
Subtotal						(16)

#### Spring Semester

BIO 140	Environmental Biology	3	0	0	0	3
BIO 140A	Environmental Biology Lab*	0	3	0	0	1
ENG 111	Writing and Inquiry	3	0	0	0	3
ENV 226	Environmental Law	3	0	0	0	3
PHS 130	Earth Science	3	2	0	0	4
Subtotal						(14)

#### Summer Term

CIS 110	Introduction to Computers	2	2	0	0	3
Major Course Electives***						7
Subtotal						(10)

\*Denotes a corequisite, course cannot be taken by itself.

\*\*\*Major Course Electives are to be selected from the following:

ALT 120	Renewable Energy Tech	2	2	0	0	3
BIO 112	General Biology II	3	3	0	0	4
BIO 120	Introductory Botany	3	3	0	0	4
BIO 130	Introductory Zoology	3	3	0	0	4
BIO 145	Ecology	3	3	0	0	4
BIO 163	Basic Anatomy and Physiology	4	2	0	0	5
BIO 175	General Microbiology	2	2	0	0	3
BIO 240	Waste Management	3	0	0	0	3
CHM 132	Organic/Biochemistry	3	3	0	0	4
EHS 215	Incident Management	3	2	0	0	4
ENV 214	Water Quality	3	2	0	0	4
ENV 218	Environmental Health	3	0	0	0	3
GIS 111	Introduction to GIS	2	2	0	0	3
LID 111	LID Design Principles	2	3	0	0	3
SST 110	Intro to Sustainability	3	0	0	0	3
SST 120	Energy Use Analysis	2	2	0	0	3
SST 140	Green Bldg & Design Concepts	3	0	0	0	3
WAT 110	Basic Wastewater Trmt	2	3	0	0	3
WBL 111	Work-Based Learning I	0	0	0	10	1
WBL 112	Work-Based Learning I	0	0	0	20	2
WBL 113	Work-Based Learning I	0	0	0	30	3

**Total Semester Credit Hours in Program .....40**

## Environmental Science Technology (C20140) Certificate

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit  
Exp.

### Required Courses

BIO 140	Environmental Biology	3	0	0	0	3
BIO 140A	Environmental Biology Lab*	0	3	0	0	1
BIO 240	Waste Management	3	0	0	0	3
EHS 114	OSHA Regulations	4	0	0	0	4
ENV 226	Environmental Law	3	0	0	0	3
	Major Course Electives***					3-4

\*Denotes a corequisite, course cannot be taken by itself.

\*\*\*Major Course Electives are to be selected from the following:

EHS 215	Incident Management	3	2	0	0	4
SST 110	Intro to Sustainability	3	0	0	0	3
SST 120	Energy Use Analysis	2	2	0	0	3
SST 140	Green Bldg & Design Concepts	3	0	0	0	3
WAT 110	Basic Wastewater Trmt	2	3	0	0	3

**Total Semester Credit Hours in Program .....17-18**

## Esthetics Instructor (C55270)

### Certificate

The Esthetics Instructor curriculum provides a course of study covering the skills needed to teach the theory and practices of esthetics as required by the North Carolina State Board of Cosmetology. Course work includes all phases of esthetics theory laboratory instruction. Graduates should be prepared to take the North Carolina Cosmetology State Board Esthetics Instructor Licensing Exam and upon passing be qualified for employment in a cosmetology or esthetics school.

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit  
Exp.

#### Fall Semester

COS 253	Esthetics Instructor Concepts I	6	15	0	0	11
	Subtotal					(11)

#### Spring Semester

COS 254	Esthetics Instructor Concepts II	6	15	0	0	11
	Subtotal					(11)

**Total Semester Credit Hours in Program .....22**

## Esthetics Technology (C55230)

### Certificate

The Esthetics Technology curriculum provides competency-based knowledge, scientific/artistic principles and hands-on fundamentals associated with the art of skin care. The curriculum provides a simulated salon environment which enables students to develop manipulative skills. Course work includes instruction in all phases of professional Esthetics Technology, business/human relations, product knowledge, and other related topics. Graduates should be prepared to take the North Carolina Cosmetology State Board Licensing Exam and upon passing be licensed and qualify for employment in beauty and cosmetic/skin care salons, as a platform artist, and in related businesses.

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit  
Exp.

#### Fall Semester

COS 119	Esthetics Concepts I	2	0	0	0	2
COS 120	Esthetics Salon I	0	18	0	0	6
	Subtotal					(8)

#### Spring Semester

COS 125	Esthetics Concepts II	2	0	0	0	2
COS 126	Esthetics Salon II	0	18	0	0	6
	Subtotal					(8)

**Total Semester Credit Hours in Program ..... 16**

# Film and Video Production Technology (A30140)

## Associate in Applied Science Degree

The Film and Video Production Technology curriculum prepares students in entry-level employment in film, video, and associated media. Instruction provides training in all aspects of film and video production from pre- to post-production, preparing students for careers in the film industry or independent/artistic production. The first year content includes extensive hands-on exposure to the entire production process. In the second year, students design and create independent short films and videos in a range of styles, genres, and formats.

Graduates may find employment as entry-level crew members in feature or short films, commercials, and industrial, educational, and documentary productions. Other opportunities include entry-level employment in pre-production and post-production areas of film and video. Graduates are also encouraged to explore careers as independent filmmakers and film/video artists.

This curriculum complies with the standard approved by the State Board of Community Colleges.

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

	Class	Lab	Clinic	Work	Credit	
				Exp.		
<b>Fall Semester</b>						
ACA 115	Success and Study Skills	2	0	0	0	1
ENG 111	Writing and Inquiry	3	0	0	0	3
FVP 111	Intro to Film and Video	2	3	0	0	3
FVP 114	Camera and Lighting I	2	3	0	0	3
FVP 116	Sound Operations	2	3	0	0	3
MAT 143	Quantitative Literacy	2	2	0	0	3
	Or					
MAT 171	Pre-calculus Algebra	3	2	0	0	4
	Subtotal					(16-17)

<b>Spring Semester</b>						
ENG 112	Writing/Research in the Discipl	3	0	0	0	3
	Or					
ENG 114	Profess Research and Report	3	0	0	0	3
FVP 112	Art Dept. Operations I	1	4	0	0	3
FVP 113	Grip and Electrical I	1	4	0	0	3
FVP 115	Camera and Lighting II	2	3	0	0	3
FVP 220	Editing I	2	3	0	0	3
	Subtotal					(15)

<b>Summer Term</b>						
	Humanities Elective**					3
	Major Course Elective***					1-3
	Social/Behavioral Science Elective**					3
	Subtotal					(7-9)

<b>Fall Semester</b>						
FVP 130	Grip and Electrical II	1	4	0	0	3
FVP 212	Production Techniques I	1	12	0	0	5
FVP 221	Editing II	2	3	0	0	3
FVP 240	Introduction to Screenwriting	3	0	0	0	3
	Major Course Elective***					1-3
	Subtotal					(15-17)

<b>Spring Semester</b>						
FVP 120	Art Dept. Operations II	1	4	0	0	3
FVP 213	Production Techniques II	1	12	0	0	5
FVP 215	Production Management	2	3	0	0	3
FVP 227	Multimedia Production	2	3	0	0	3
	Subtotal					(14)

\*\*Humanities Electives and/or Social/Behavioral Science Electives are to be selected from the courses listed on page 46.

\*\*\*Major Course Electives are to be selected from the following:

ART 131	Drawing I	0	6	0	0	3
ART 132	Drawing II	0	6	0	0	3
ART 135	Figure Drawing I	0	6	0	0	3
ART 171	Computer Art I	0	6	0	0	3
ART 264	Digital Photography I	1	4	0	0	4
ART 265	Digital Photography II	1	4	0	0	3
ART 266	Videography I	0	6	0	0	3
ART 267	Videography II	0	6	0	0	3
ART 271	Computer Art II	0	6	0	0	3
CIS 110	Introduction to Computers	2	2	0	0	3
COM 231	Public Speaking	3	0	0	0	3
DRA 130	Acting I	0	6	0	0	3
DRA 140	Stagecraft I	0	6	0	0	3
DRA 141	Stagecraft II	0	6	0	0	3
DRA 145	Stage Make-up	1	2	0	0	2
DRA 170	Play Production I	0	9	0	0	3
DRA 171	Play Production II	0	9	0	0	3
FVP 223	Postproduction Sound Design	1	4	0	0	3
SGD 111	Introduction to SGD	2	3	0	0	3
SGD 112	SGD Design	2	3	0	0	3
SGD 114	3D Modeling	2	3	0	0	3
SGD 117	Art for Games	2	3	0	0	3
SGD 162	SG 3D Animation	2	3	0	0	3
SGD 214	3D Modeling II	2	3	0	0	3
WBL 111	Work Based Learning I	0	0	0	10	1
WBL 121	Work Based Learning II	0	0	0	20	2
WBL 131	Work Based Learning III	0	0	0	30	3

**Total Hours in the Program .....69-72**

## Film and Video Production Technology (D30140)

### Diploma

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit Exp.

#### Fall Semester

ACA 115	Success and Study Skills	0	2	0	0	1
ENG 111	Writing and Inquiry	3	0	0	0	3
FVP 111	Intro to Film and Video	2	3	0	0	3
FVP 114	Camera and Lighting I	2	3	0	0	3
FVP 116	Sound Operations	2	3	0	0	3
Subtotal						(13)

#### Spring Semester

FVP 112	Art Dept. Operations I	1	4	0	0	3
FVP 113	Grip and Electrical I	1	4	0	0	3
FVP 215	Production Management	2	3	0	0	3
FVP 220	Editing I	2	3	0	0	3
Major Course Elective***						3
Subtotal						(15)

#### Summer Term

MAT 143	Quantitative Literacy	2	2	0	0	3
Or						
MAT 171	Pre-calculus Algebra	3	2	0	0	4
Subtotal						(3-4)

#### Fall Semester

FVP 212	Production Techniques I	1	12	0	0	5
FVP 240	Introduction to Screenwriting	3	0	0	0	3
Subtotal						(8)

\*\*\*Major Course Electives are to be selected from the following:

FVP 115	Camera & Lighting II	2	3	0	0	3
FVP 221	Editing II	2	3	0	0	3
FVP 223	Postproduction Sound Design	1	4	0	0	3

**Total Semester Credit Hours in Program .....39-40**

## Film and Video Production Technology\* (C30140)

### Certificate

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

**\*This program of study does not qualify for federal and/or state financial aid.**

Class Lab Clinic Work Credit Exp.

#### Fall Semester

FVP 111	Intro to Film and Video	2	3	0	0	3
FVP 114	Camera and Lighting I	2	3	0	0	3
FVP 116	Sound Operations	2	3	0	0	3
Subtotal						(9)

#### Spring Semester

FVP 112	Art Dept. Operations I	1	4	0	0	3
Or						
FVP 113	Grip and Electrical I	1	4	0	0	3
FVP 220	Editing I	2	3	0	0	3
Subtotal						(9)

**Total Semester Credit Hours in Program .....15**

## Fire Protection Technology (A55240)

### Associate in Applied Science Degree

The Fire Protection Technology curriculum is designed to provide individuals with technical and professional knowledge to make decisions regarding fire protection for both public and private sectors. It also provides a sound foundation for continuous higher learning in fire protection, administration, and management.

Coursework includes classroom and laboratory exercises to introduce the student to various aspects of fire protection. Students will learn technical and administrative skills such as hydraulics, hazardous materials, arson investigation, fire protection safety, fire suppression management, law, and codes.

Graduates should qualify for employment or advancement in governmental agencies, industrial firms, insurance rating organizations, educational organizations, and municipal fire departments. Employed persons should have opportunities for skilled and supervisory-level positions within their current organizations. This curriculum complies with the standard approved by the State Board of Community Colleges.

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

	Class	Lab	Clinic	Work Exp.	Credit
<b>Fall Semester</b>					
ACA 115	Success and Study Skill	0	2	0	0 1
ENG 111	Writing and Inquiry	3	0	0	0 3
FIP 120	Intro to Fire Protection	3	0	0	0 3
FIP 124	Fire Prevention and Public Ed	3	0	0	0 3
FIP 128	Detection and Investigation	3	0	0	0 3
	Subtotal				(13)

### Spring Semester

ENG 114	Prof Research and Reporting	3	0	0	0 3
FIP 132	Building Construction	3	0	0	0 3
FIP 152	Fire Protection Law	3	0	0	0 3
FIP 220	Fire Fighting Strategies	3	0	0	0 3
FIP 228	Local Government Finance	3	0	0	0 3
	Subtotal				(15)

### Summer Term

CIS 110	Introduction to Computers	2	2	0	0 3
MAT 110	Math Measurement & Literacy	2	2	0	0 3
	Humanities/Fine Arts**				3
	Subtotal				(9)

### Fall Semester

FIP 146	Fire Protection Systems	3	2	0	0 4
FIP 230	Chem of Hazardous Mat I	5	0	0	0 5
FIP 276	Managing Fire Services	3	0	0	0 3
	Major Course Elective***				3-4
	Subtotal				(15-16)

### Spring Semester

FIP 164	OSHA Standards	3	0	0	0 3
FIP 221	Adv Fire Fighting Strategies	3	0	0	0 3
FIP 240	Fire Service Supervision	3	0	0	0 3
PSY 150	General Psychology	3	0	0	0 3
	Major Course Elective***				3-4
	Subtotal				(15-16)

\*\*Humanities Electives and/or Social/Behavioral Science Electives are to be selected from the courses listed on page 46.

\*\*\*Major Course Electives are to be selected from the following:

EPT 120	Sociology of Disaster	3	0	0	0 3
EPT 130	Mitigation & Preparedness	3	0	0	0 3
EPT 140	Emergency Management	3	0	0	0 3
EPT 150	Incident Management	3	0	0	0 3
EPT 210	Response & Recovery	3	0	0	0 3
EPT 220	Terrorism & Emer. Mgt.	3	0	0	0 3
EPT 275	Emergency Ops Center Mgt.	3	0	0	0 3
FIP 136	Inspections and Codes	3	0	0	0 3
FIP 224	Fire Instructor I & II	4	0	0	0 4
FIP 226	Fire Officer I & II	4	0	0	0 4
FIP 232	Hydraulics and Water	2	2	0	0 3
FIP 248	Fire Service Personnel Admin	3	0	0	0 3
FIP 256	Municipal Public Relations	3	0	0	0 3
FIP 260	Fire Protect Planning	3	0	0	0 3
FIP 277	Fire and Social Behavior	3	0	0	0 3

**Total Semester Credit Hours in Program .....67-69**

## Fire Protection Technology (D55240)

### Diploma

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

	Class	Lab	Clinic	Work Exp.	Credit
<b>Fall Semester</b>					
ACA 115	Success and Study Skill	0	2	0	0 1
FIP 120	Intro to Fire Protection	3	0	0	0 3
FIP 124	Fire Prevention and Public Edu	3	0	0	0 3
FIP 128	Detection and Investigation	3	0	0	0 3
FIP 146	Fire Protection Systems	3	2	0	0 4
FIP 276	Managing Fire Services	3	0	0	0 3
	Subtotal				(17)

### Spring Semester

FIP 132	Building Construction	3	0	0	0 3
FIP 152	Fire Protection Law	3	0	0	0 3
FIP 220	Fire Fighting Strategies	3	0	0	0 3
FIP 221	Adv Firefighting Strategies	3	0	0	0 3
FIP 228	Local Government Finance	3	0	0	0 3
FIP 240	Fire Service Supervision	3	0	0	0 3
	Subtotal				(18)

### Summer Term

MAT 110	Math Measurement & Literacy	2	2	0	0 3
ENG 111	Writing and Inquiry	3	0	0	0 3
	Subtotal				(6)

**Total Semester Credit Hours in Program .....41**

## Fire Protection Technology (C55240) Certificate

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit  
Exp.

### Fall Semester

FIP	120	Intro to Fire Protection	3	0	0	0	3
FIP	124	Fire Prevention and Public Edu	3	0	0	0	3
		Subtotal					(6)

### Spring Semester

FIP	132	Building Construction	3	0	0	0	3
FIP	152	Fire Protection Law	3	0	0	0	3
FIP	220	Firefighting Strategies	3	0	0	0	3
FIP	228	Local Government Finance	3	0	0	0	3
		Subtotal					(12)

**Total Semester Credit Hours in Program ..... 18**

## General Education (A10300)

### Associate in General Education

The Associate in General Education curriculum is designed for the academic enrichment of students who wish to broaden their education, with emphasis on personal interest, growth and development.

Course work includes study in the areas of humanities and fine arts, social and behavioral sciences, natural sciences and mathematics, and English composition. Opportunities for the achievement of competence in reading, writing, oral communication, fundamental mathematical skills, and the basic use of computers will be provided. Through these skills, students will have a sound base for lifelong learning. Graduates are prepared for advancement within their field of interest and become better qualified for a wide range of employment opportunities.

This program is designed for students who wish to complete two years of college and are not planning to transfer to four-year institutions. Many of the courses may, however, transfer depending on the senior institution and the degree major on a course-by-course basis.

This curriculum complies with the standard approved by the State Board of Community Colleges.

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

#### Required General Education Courses

	Class	Lab	Clinic	Work Exp.	Credit	
ENG 111	Writing and Inquiry	3	0	0	0	3
ENG 112	Writing/Research in the Discipl	3	0	0	0	3
	Subtotal					(6)

#### Humanities/Fine Arts

(Select 3 semester credit hours from the following)

ART 111	Art Appreciation	3	0	0	0	3
DRA 111	Theater Appreciation	3	0	0	0	3
ENG 231	American Literature I	3	0	0	0	3
ENG 232	American Literature II	3	0	0	0	3
ENG 233	Major American Writers	3	0	0	0	3
ENG 241	British Literature I	3	0	0	0	3
ENG 242	British Literature II	3	0	0	0	3
FRE 111	Elementary French I	3	0	0	0	3
FRE 181	French Lab 1*	0	2	0	0	1
PHI 210	History of Philosophy	3	0	0	0	3
PHI 240	Introduction to Ethics	3	0	0	0	3
REL 110	World Religions	3	0	0	0	3
SPA 111	Elementary Spanish I	3	0	0	0	3
SPA 181	Spanish Lab 1*	0	2	0	0	1
	Subtotal					(3)

#### Social/Behavioral Sciences

(Select 3 semester credit hours from the following)

ECO 251	Principles of Microeconomics	3	0	0	0	3
ECO 252	Principles of Macroeconomics	3	0	0	0	3
GEO 111	World Regional Geography	3	0	0	0	3
GEO 130	World Physical Geography	3	0	0	0	3
HIS 131	American History I	3	0	0	0	3
HIS 132	American History II	3	0	0	0	3
POL 120	American Government	3	0	0	0	3
PSY 150	General Psychology	3	0	0	0	3
SOC 210	Introduction to Sociology	3	0	0	0	3
SOC 220	Social Problems	3	0	0	0	3
	Subtotal					(3)

#### Mathematics/Natural Sciences (Select at least 3 semester credit hours from the following)

BIO 111	General Biology I	3	3	0	0	4
CHM 131	Introduction to Chemistry	3	0	0	0	3
CHM 131A	Introduction to Chemistry Lab I*	0	2	0	0	1
CIS 110	Intro to Computers	2	2	0	0	3
MAT 143	Quantitative Literacy	2	2	0	0	3
MAT 171	Pre-calculus Algebra	3	2	0	0	4
PHY 151	College Physics I	3	2	0	0	4
	Subtotal					(3)

#### Oral Communication

COM 231	Public Speaking	3	0	0	0	3
	Subtotal					(3)

#### Other Required Hours (46-47 semester credit hours)

ACA 115	Success and Study Skills	0	2	0	0	1
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**Note:** ACA 115 - Success and Study Skills is a required course for all degree and Diploma programs at BRCC but is not part of the Comprehensive Articulation Agreement for transferability. Students should take this course their first semester or in the semester required by their particular program. Students who are enrolled as special credit students should take this course before they have completed 12 semester hours.

Other required hours include additional general education and professional courses. Select courses from any associate degree program offered at Blue Ridge Community College. Prerequisites and Corequisites must be met.

A maximum of 7 semester credit hours from the following may be included:

PED 110	Fit and Well for Life	1	2	0	0	2
PED 111	Physical Fitness I	0	3	0	0	1
PED 117	Weight Training I	0	2	0	0	1
PED 118	Weight Training II	0	2	0	0	1
PED 120	Walking for Fitness	0	3	0	0	1
PED 121	Walk, Jog, Run	0	3	0	0	1
PED 143	Volleyball-Beginning	0	2	0	0	1
PED 186	Dancing for Fitness	0	2	0	0	1
PED 217	Pilates I	0	2	0	0	1
PED 218	Pilates II	0	2	0	0	1
	Subtotal					(46-47)

\*Denotes a corequisite, course cannot be taken by itself.

**Total Semester Credit Hours in Program .....64-65**

## General Occupational Technology (A55280)

### Associate in Applied Science Degree

The General Occupational Technology curriculum provides individuals with an opportunity to upgrade skills and to earn an associate degree, Diploma, and/or certificate by taking courses suited for individual occupational interests and or needs.

The curriculum content will be customized for students according to occupational interests and needs. A program of study for each student will be selected from any non-developmental level courses offered by the College.

Graduates will become more effective workers, better qualified for advancements within their field of employment, and become qualified for a wide range of entry-level employment opportunities.

This curriculum complies with the standard approved by the State Board of Community Colleges.

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit  
Exp.

#### Required General Education Courses

ACA	115	Success and Study Skills	0	2	0	0	1
ENG	111	Writing and Inquiry	3	0	0	0	3
ENG	114	Prof Research and Reporting	3	0	0	0	3
		Math Elective*					3-4
		Social/Behavioral Science Elective**					3
		Humanities Elective**					3
		Subtotal					(16-17)

48-49 additional credit hours must be chosen from a combination of major courses for curriculums approved to be offered by the college. Work-based Learning may be included up to a maximum of 8 semester hours of credit.

\*Math Elective may include any Mathematics course (100 level or higher).

\*\*Humanities Electives and/or Social/Behavioral Science Electives are to be selected from the courses listed on page 46.

**Total Semester Credit Hours in Program ..... 65**

## Health Science: Therapeutic and Diagnostic Services

This curriculum is designed to prepare students for careers in the Health Sciences.

Students will complete general education courses that provide a foundation for success in nursing and allied health curricula. Students may select a career pathway that will prepare them for an entry level position in health care. Courses may also provide foundational knowledge needed in the pursuit of advanced health science degrees or programs.

Graduates should qualify for an entry-level job associated with the program major such as Emergency Medical Technician (EMT) or Advanced Emergency Medical Technician (AEMT), Medical Assistant, Nursing Assistant, Pharmacy Technician, Phlebotomist, or Massage Therapist dependent upon the selected program major.

This curriculum complies with the standard approved by the State Board of Community Colleges.

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

### Emergency Medical Science (D45910) Diploma

A program that prepares graduates to enter the workforce as Emergency Medical Technicians or Advanced Emergency Medical Technicians. The course of study provides the student an opportunity to acquire basic life support knowledge and skills by utilizing classroom instruction, practical laboratory sessions, and hospital/field internships. Students progressing through the program may be eligible to apply for both state and national certification exams. Employment opportunities include ambulance services, fire and rescue agencies, air medical services, specialty areas of hospitals, industry, educational institutions, and government agencies.

Class Lab Clinic Work Credit  
Exp.

#### Fall Semester

ACA	115	Success and Study Skills	0	2	0	0	1
BIO	165	Anatomy and Physiology I	3	3	0	0	4
EMS	110	EMT	6	6	0	0	8
HSC	110	Orientation to Health Careers	1	0	0	0	1
MED	120	Survey of Medical Terminology	2	0	0	0	2
		Subtotal					(16)

#### Spring Semester

BIO	166	Anatomy and Physiology II	3	3	0	0	4
EMS	120	Advanced EMT	4	6	0	0	6
EMS	121	AEMT Clinical Practicum I	0	0	6	0	2
ENG	111	Writing and Inquiry	3	0	0	0	3
PSY	150	General Psychology	3	0	0	0	3
		Subtotal					(18)

#### Summer Term

ENG	114	Prof Research and Reporting	3	0	0	0	3
MAT	110	Math Measurement & Literacy	2	2	0	0	3
		Subtotal					(6)

**Total Semester Credit Hours in Program ..... 40**

## High School Programs Career and College Promise

Success in today's global economy may require a two or four year degree, a Certificate, or Diploma. Through Career & College Promise (CCP), qualified high school juniors and seniors in North Carolina have the opportunity to pursue these options, tuition free, while they are in high school, allowing them to get a jumpstart on their workplace and college preparation.

Blue Ridge Community College offers the Career and College Promise options listed below to help advance eligible students' post-high school success:

**College Transfer** – College transfer pathways provide up to 35 hours of tuition-free course credits toward the Associate in Arts (AA) or Associate in Science (AS) degree. All the courses are a part of the Universal General Education Transfer Component (UGETC) of the Comprehensive Articulation Agreement (CAA) between the 16 universities of the UNC system and the Community College System. All universities in the UNC system have agreed to accept these courses as general education courses. A student completing these courses and the additional courses required for an AA or AS, and following the requirements of the CAA, will be able to transfer to one of the UNC schools as a junior. Many private colleges in the state also agree to the CAA. By completing an AA or AS prior to transfer, the student will save considerable time and money in pursuing four-year degrees. To begin one of these pathways, the student must be a high school junior or senior, be "college-ready", and have a weighted high school GPA of 3.0.

**Career Technical Education** – Technical careers programs provide a means for high school students to earn tuition-free course credits at an NC Community College toward a job credential, Certificate or Diploma in a technical career. BRCC offers a number of programs leading to CCP Certificates or Diplomas—as shown below.

### Henderson County Early College High

**School (HCECHS)** – HCECHS allows high school students to begin earning tuition-free college credits in the ninth grade. HCECHS is housed at BRCC on the Henderson County Campus. All offices and classrooms for the high school are located in the Industrial Skills Center. Admittance to HCECHS is through an application and selection process. For additional information, contact HCECHS at 120 Alumni Way, Flat Rock, NC 28731, phone (828) 697-4561, or on the web at [www.hendersoncountypublicschoolsnc.org](http://www.hendersoncountypublicschoolsnc.org).

Special admission procedures for the High School programs are outlined on page 11.

\*Denotes a corequisite, course cannot be taken by itself.

## College Transfer Pathways for High School Students

### Associate in Arts Pathway (P1012C)

This pathway is designed for high school juniors and seniors who wish to begin study toward an Associate in Arts degree and a baccalaureate degree in a non-STEM major.

Class	Lab	Clinic	Work	Credit	Exp.
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#### Required Courses (7 semester hours required)

ACA 122	College Transfer Success	0	2	0	0	1
ENG 111	Writing and Inquiry	3	0	0	0	3
ENG 112	Writing/Research in the Discipl	3	0	0	0	3
Subtotal						(7)

#### Humanities/Fine Arts (9 semester hours required)

Three courses from at least two different discipline areas must be selected. A literature course must be taken.

ART 111	Art Appreciation	3	0	0	0	3
ART 114	Art History Survey I	3	0	0	0	3
ART 115	Art History Survey II	3	0	0	0	3
COM 231	Public Speaking	3	0	0	0	3
ENG 231	American Literature I	3	0	0	0	3
ENG 232	American Literature II	3	0	0	0	3
ENG 241	British Literature I	3	0	0	0	3
ENG 242	British Literature II	3	0	0	0	3
MUS 110	Music Appreciation	3	0	0	0	3
PHI 240	Introduction to Ethics	3	0	0	0	3
Subtotal						(9)

#### Social/Behavioral Science (9 semester hours required)

Three courses from at least two different areas must be selected. HIS 111 or HIS 112 must be taken.

ECO 251	Principles of Microeconomics	3	0	0	0	3
ECO 252	Principles of Macroeconomics	3	0	0	0	3
HIS 111	World Civilizations I	3	0	0	0	3
HIS 112	World Civilizations II	3	0	0	0	3
HIS 131	American History I	3	0	0	0	3
HIS 132	American History II	3	0	0	0	3
POL 120	American Government	3	0	0	0	3
PSY 150	General Psychology	3	0	0	0	3
SOC 210	Introduction to Sociology	3	0	0	0	3
Subtotal						(9)

#### Mathematics (Select one course from the following.)

MAT 143	Quantitative Literacy	2	2	0	0	3
MAT 152	Statistical Methods I	3	2	0	0	4
MAT 171	Pre-Calculus Algebra	3	2	0	0	4
Subtotal						(3-4)

#### Natural Sciences (4 semester credit hours required from the following.)

AST 111	Descriptive Astronomy*	3	0	0	0	3
AST 111A	Descriptive Astronomy Lab*	0	2	0	0	1
BIO 111	General Biology I	3	3	0	0	4
CHM 151	General Chemistry I	3	3	0	0	4
Subtotal						(4)

\*Denotes a corequisite, course cannot be taken by itself.

#### \*OPTIONAL GENERAL EDUCATION HOURS (0-8 SHC)

A student may take up to 8 SHC of foreign language courses and accompanying labs, in a single language, designated as General Education in the CAA as a part of this pathway. These courses are not a part of the Universal General Education Transfer Component. Students who complete these courses with a grade of "C" or better will receive transfer credit. The receiving university will determine whether the courses will count as general education, pre-major, or elective credit.

**Total Semester Credit Hours in Pathway ..... 32-41\***

### Associate in Science Pathway (P1042C)

This pathway is designed for high school juniors and seniors who wish to begin study toward an Associate in Arts degree and a baccalaureate degree in a STEM or technical major.

#### Required Courses (7 semester hours required)

ENG 111	Writing and Inquiry	3	0	0	0	3
ENG 112	Writing/Research in the Discipl	3	0	0	0	3
ACA 122	College Transfer Success	0	2	0	0	1
Subtotal						(7)

#### Humanities/Fine Arts (6 semester hours required)

Two courses from two different discipline areas must be selected. One must be a literature course.

ART 111	Art Appreciation	3	0	0	0	3
ART 114	Art History Survey I	3	0	0	0	3
ART 115	Art History Survey II	3	0	0	0	3
COM 231	Public Speaking	3	0	0	0	3
ENG 231	American Literature I	3	0	0	0	3
ENG 232	American Literature II	3	0	0	0	3
ENG 241	British Literature I	3	0	0	0	3
ENG 242	British Literature II	3	0	0	0	3
MUS 110	Music Appreciation	3	0	0	0	3
PHI 240	Introduction to Ethics	3	0	0	0	3
Subtotal						(6)

#### Social/Behavioral Science (6 semester hours required)

Two courses from two different discipline areas must be selected. HIS 111 or HIS 112 must be taken.

ECO 251	Principles of Microeconomics	3	0	0	0	3
ECO 252	Principles of Macroeconomics	3	0	0	0	3
HIS 111	World Civilizations I	3	0	0	0	3
HIS 112	World Civilizations II	3	0	0	0	3
HIS 131	American History I	3	0	0	0	3
HIS 132	American History II	3	0	0	0	3
POL 120	American Government	3	0	0	0	3
PSY 150	General Psychology	3	0	0	0	3
SOC 210	Introduction to Sociology	3	0	0	0	3
Subtotal						(6)

#### Mathematics (Select two courses from the following.)

MAT 171	Pre-Calculus Algebra	3	2	0	0	4
MAT 172	Pre-Calculus Trigonometry	3	2	0	0	4
MAT 271	Calculus I	3	2	0	0	4
MAT 272	Calculus II	3	2	0	0	4
Subtotal						(8)

#### Natural Sciences (One science sequence must be selected from the following.)

BIO 111	General Biology I	3	3	0	0	4
And						
BIO 112	General Biology II	3	3	0	0	4
Or						
CHM 151	General Chemistry I	3	3	0	0	4
And						
CHM 152	General Chemistry II	3	3	0	0	4
Or						
PHY 151	College Physics I	3	2	0	0	4
And						
PHY 152	College Physics II	3	2	0	0	4
Subtotal						(8)

#### \*OPTIONAL GENERAL EDUCATION HOURS (0-8 SHC)

A student may take up to 8 SHC of foreign language courses and accompanying labs, in a single language, designated as General Education in the CAA as a part of this pathway. These courses are not a part of the Universal General Education Transfer Component. Students who complete these courses with a grade of "C" or better will receive transfer credit. The receiving university will determine whether the courses will count as general education, pre-major, or elective credit.

**Total Semester Credit Hours in Pathway ..... 35-43\***

### Career Technical Education Pathways for High School Students

#### Alternative Transportation Technology Diploma – CCP (D60420P)

			Class	Lab	Clinic	Work	Credit
							Exp.
ACA 115	Success and Study Skills	0	2	0	0	0	1
ATT 115	Green Trans Safety and Service	1	2	0	0	0	2
ATT 125	Hybrid-Electric Transportation	2	4	0	0	0	4
ATT 130	Biofuels for Transportation	2	3	0	0	0	3
ATT 135	Gaseous Fuels for Transport	2	3	0	0	0	3
ATT 140	Emerging Transport Tech	2	3	0	0	0	3
ENG 111	Writing and Inquiry	3	0	0	0	0	3
MAT 110	Math Measurement & Literacy	2	2	0	0	0	3
TRN 120	Basic Transport Electricity	4	3	0	0	0	5
TRN 130	Intro to Sustainable Transport	2	2	0	0	0	3
TRN 140	Transport Climate Control	1	2	0	0	0	2
TRN 140A	Transport Climate Control Lab*	1	2	0	0	0	2
TRN 170	PC Skills for Transport	1	2	0	0	0	2
TRN 180	Basic Welding for Transport	1	4	0	0	0	3

**Total Semester Credit Hours in Program ..... 39**

#### Alternative Transportation Technology – Alternative Fuels Certificate – CCP (C60420FP)

			Class	Lab	Clinic	Work	Credit
							Exp.
ATT 115	Green Trans Safety and Service	1	2	0	0	0	2
ATT 135	Gaseous Fuels for Trans	2	3	0	0	0	3
ATT 140	Emerging Transport Tech	2	3	0	0	0	3
TRN 120	Basic Transport Electricity	4	3	0	0	0	5
TRN 130	Intro to Sustainable Trans	2	2	0	0	0	3

**Total Semester Credit Hours in Program ..... 16**

#### Automotive Light-Duty Diesel Technology Diploma – CCP (D60430P)

			Class	Lab	Clinic	Work	Credit
							Exp.
ACA 115	Success and Study Skills	0	2	0	0	0	1
ATT 130	Biofuels for Transportation	2	3	0	0	0	3
ENG 111	Writing and Inquiry	3	0	0	0	0	3
LDD 112	Intro to Light-Duty Diesel	2	2	0	0	0	3
LDD 116	Diesel Electric Drive	2	6	0	0	0	4
LDD 181	LDD Fuel Systems	2	6	0	0	0	4
LDD 183	Air, Exhaust, Emissions	2	6	0	0	0	4
MAT 110	Math Measurement & Literacy	2	2	0	0	0	3
TRN 120	Basic Transport Electricity	4	3	0	0	0	5
TRN 130	Intro to Sustainable Trans	2	2	0	0	0	3
TRN 140	Transport Climate Control	1	2	0	0	0	2
TRN 140A	Transport Climate Control Lab*	1	2	0	0	0	2
TRN 170	PC Skills for Transport	1	2	0	0	0	2
TRN 180	Basic Welding for Transport	1	4	0	0	0	3

**Total Semester Credit Hours in Program ..... 42**

### Automotive Light-Duty Diesel Technology - Light-Duty Diesel Fuel Systems Certificate – CCP (C60430LP)

	Class	Lab	Clinic	Work Credit Exp.		
LDD 112	Intro Light-Duty Diesel	2	2	0	0	3
LDD 181	LDD Fuel Systems	2	6	0	0	4
LDD 183	Air, Exhaust, Emissions	2	6	0	0	4
TRN 120	Basic Transport Electricity	4	3	0	0	5

**Total Semester Credit Hours in Program ..... 16**

### Automotive Systems Technology Diploma – CCP (D60160P)

	Class	Lab	Clinic	Work Credit Exp.		
ACA 115	Success and Study Skills	0	2	0	0	1
AUT 141	Suspension and Steering Sys	2	3	0	0	3
AUT 141A	Suspension and Steering Lab*	0	3	0	0	1
AUT 151	Brake Systems	2	3	0	0	3
AUT 151A	Brake Systems Lab*	0	3	0	0	1
AUT 181	Engine Performance 1	2	3	0	0	3
AUT 181A	Engine Performance 1 Lab*	0	3	0	0	1
AUT 183	Engine Performance 2	2	6	0	0	4
ENG 111	Writing and Inquiry	3	0	0	0	3
MAT 110	Math Measurement & Literacy	2	2	0	0	3
TRN 111	Chassis Maint/Light Repair	2	6	0	0	4
TRN 112	Powertrain Maint/Light Repair	2	6	0	0	4
TRN 120	Basic Transport Electricity	4	3	0	0	5
TRN 130	Intro to Sustainable Trans	2	2	0	0	3
TRN 140	Transport Climate Control	1	2	0	0	2
TRN 140A	Transport Climate Control Lab*	1	2	0	0	2
TRN 170	PC Skills for Transport	1	2	0	0	2
TRN 180	Basic Welding for Transport	1	4	0	0	3

**Total Semester Credit Hours in Program ..... 48**

### Automotive Systems Technology – Mobile Equipment Technician Certificate – CCP (C60160MP)

	Class	Lab	Clinic	Work Credit Exp.		
TRN 112	Powertrain Maint/Light Repair	2	6	0	0	4
TRN 120	Basic Transport Electricity	4	3	0	0	5
TRN 140	Transport Climate Control	1	2	0	0	2
TRN 140A	Transport Climate Control Lab*	1	2	0	0	2
TRN 170	PC Skills for Transport	1	2	0	0	2
TRN 180	Basic Welding for Transport	1	4	0	0	3

**Total Semester Credit Hours in Program ..... 18**

### Automotive Systems Technology – Chassis Technician Certificate – CCP (C60160CP)

	Class	Lab	Clinic	Work Credit Exp.		
AUT 141	Suspension and Steering	2	3	0	0	3
AUT 141A	Suspension and Steering Lab*	0	3	0	0	1
AUT 151	Brake Systems	2	3	0	0	3
AUT 151A	Brake Systems Lab*	0	3	0	0	1
TRN 111	Chassis Maint/Light Repair	2	6	0	0	4
TRN 170	PC Skills for Transport	1	2	0	0	2
TRN 180	Basic Welding for Transport	1	4	0	0	3

**Total Semester Credit Hours in Program ..... 17**

### Automotive Systems Technology – Auto MAST Level I Certificate – CCP (C60160NP)

	Class	Lab	Clinic	Work Credit Exp.		
AUT 141	Suspension and Steering	2	3	0	0	3
AUT 141A	Suspension and Steering Lab*	0	3	0	0	1
AUT 151	Brake Systems	2	3	0	0	3
AUT 151A	Brake Systems Lab*	0	3	0	0	1
TRN 111	Chassis Maint/Light Repair	2	6	0	0	4
TRN 130	Intro to Sustainable Trans	2	2	0	0	3
TRN 170	PC Skills for Transport	1	2	0	0	2

**Total Semester Credit Hours in Program ..... 17**

### Automotive Systems Technology – Auto MAST Level II Certificate – CCP (C60160EP)

	Class	Lab	Clinic	Work Credit Exp.		
AUT 181	Engine Performance 1	2	3	0	0	3
AUT 181A	Engine Performance 1 Lab*	0	3	0	0	1
TRN 112	Powertrain Maint/Light Repair	2	6	0	0	4
TRN 120	Basic Transport Electricity	4	3	0	0	5
TRN 180	Basic Welding for Transport	1	4	0	0	3

**Total Semester Credit Hours in Program ..... 16**

### Business Administration Certificate – CCP (C25120P)

	Class	Lab	Clinic	Work Credit Exp.		
BUS 110	Introduction to Business	3	0	0	0	3
BUS 115	Business Law I	3	0	0	0	3
BUS 137	Principles of Management	3	0	0	0	3
CIS 110	Introduction to Computers	3	0	0	0	3
MKT 120	Principles of Marketing	3	0	0	0	3

**Total Semester Credit Hours in Program ..... 15**

### Collision Repair and Refinishing Technology Diploma – CCP (D60130P)

	Class	Lab	Clinic	Work Credit Exp.		
ACA 115	Success and Study Skills	0	2	0	0	1
AUB 111	Painting and Refinishing I	2	6	0	0	4
AUB 121	Non-Structural Damage I	1	4	0	0	3
AUB 131	Structural Damage I	2	4	0	0	4
AUB 136	Plastics and Adhesives	1	4	0	0	3
AUB 162	Autobody Estimating	1	2	0	0	2
ENG 111	Writing and Inquiry	3	0	0	0	3
MAT 110	Math Measurement & Literacy	2	2	0	0	3
TRN 120	Basic Transport Electricity	4	3	0	0	5
TRN 140	Transport Climate Control	1	2	0	0	2
TRN 140A	Transport Climate Control Lab*	1	2	0	0	2
TRN 170	PC Skills for Transport	1	2	0	0	2
TRN 180	Basic Welding for Transport	1	4	0	0	3
TRN 180A	Basic Welding for Trans Lab*	0	3	0	0	1

**Total Semester Credit Hours in Program ..... 38**

### Collision Repair and Refinishing – Insurance Estimating Certificate – CCP (C60130IP)

	Class	Lab	Clinic	Work Exp.	Credit
AUB 111	Painting and Refinishing I	2	6	0	0 4
AUB 121	Non-Structural Damage I	1	4	0	0 3
AUB 131	Structural Damage I	2	4	0	0 4
AUB 136	Plastics & Adhesives	1	4	0	0 3
AUB 162	Autobody Estimating	1	2	0	0 2
TRN 170	PC Skills for Transport	1	2	0	0 2

**Total Semester Credit Hours in Program ..... 18**

### Computer-Integrated Machining Diploma – CCP (D50210P)

	Class	Lab	Clinic	Work Exp.	Credit
ACA 115	Success and Study Skills	0	2	0	0 1
BPR 111	Print Reading	1	2	0	0 2
CIS 110	Introduction to Computers	2	2	0	0 3
DFT 151	CAD I	2	3	0	0 3
DFT 154	Intro Solid Modeling	2	3	0	0 3
ENG 111	Writing and Inquiry	3	0	0	0 3
MAC 121	Intro to CNC	2	0	0	0 2
MAC 122	CNC Turning	1	3	0	0 2
MAC 124	CNC Milling	1	3	0	0 2
MAC 141	Machining Applications I	2	6	0	0 4
MAC 141A	Machining Appl I Lab	0	6	0	0 2
MAC 142	Machining Applications II	2	6	0	0 4
MAC 142A	Machining Appl II Lab	0	6	0	0 2
MAC 151	Machining Calculations	1	2	0	0 2
MAT 143	Quantitative Literacy	2	2	0	0 3

**Total Semester Credit Hours in Program ..... 38**

### Computer-Integrated Machining – CNC Turning Operator Certificate – CCP (C50210TP)

	Class	Lab	Clinic	Work Exp.	Credit
BPR 111	Print Reading	1	2	0	0 2
MAC 121	Intro to CNC	2	0	0	0 2
MAC 122	CNC Turning	1	3	0	0 2
MAC 141	Machining Applications I	2	6	0	0 4
MAC 141A	Machining Appl I Lab	0	6	0	0 2
MAC 142	Machining Applications II	2	6	0	0 4
MAC 142A	Machining Appl II Lab	0	6	0	0 2

**Total Semester Credit Hours in Program ..... 18**

### Computer-Integrated Machining – CNC Milling Operator Certificate – CCP (C50210MP)

	Class	Lab	Clinic	Work Exp.	Credit
BPR 111	Print Reading	1	2	0	0 2
MAC 121	Intro to CNC	2	0	0	0 2
MAC 124	CNC Milling	1	3	0	0 2
MAC 141	Machining Applications I	2	6	0	0 4
MAC 141A	Machining Appl I Lab	0	6	0	0 2
MAC 142	Machining Applications II	2	6	0	0 4
MAC 142A	Machining Appl II Lab	0	6	0	0 2

**Total Semester Credit Hours in Program ..... 18**

### Computer-Integrated Machining – Machinist – Entry Certificate – CCP (C50210EP)

	Class	Lab	Clinic	Work Exp.	Credit
BPR 111	Print Reading	1	2	0	0 2
ISC 112	Industrial Safety	2	0	0	0 2
MAC 141	Machining Applications I	2	6	0	0 4
MAC 141A	Machining Appl I Lab	0	6	0	0 2
MAC 142	Machining Applications II	2	6	0	0 4
MAC 142A	Machining Appl II Lab	0	6	0	0 2
MAC 151	Machining Calculations	1	2	0	0 2

**Total Semester Credit Hours in Program ..... 18**

### Computer-Integrated Machining - Engine Machine Shop Certificate – CCP (C50210AP)

	Class	Lab	Clinic	Work Exp.	Credit
AUT 116	Engine Repair	2	3	0	0 3
AUT 116A	Engine Repair Lab*	0	3	0	0 1
MAC 141	Machining Applications I	2	6	0	0 4
MAC 141A	Machining Appl I Lab	0	6	0	0 2
MAC 142	Machining Applications II	2	6	0	0 4
MAC 142A	Machining Appl II Lab	0	6	0	0 2
MAC 151	Machining Calculations	1	2	0	0 2

**Total Semester Credit Hours in Program ..... 18**

### Criminal Justice Technology - Criminal Justice I Certificate – CCP (C55180P)

	Class	Lab	Clinic	Work Exp.	Credit
CJC 111	Intro to Criminal Justice	3	0	0	0 3
CJC 131	Criminal Law	3	0	0	0 3
CJC 212	Ethics & Community Relations	3	0	0	0 3
CJC 221	Investigative Principles	3	2	0	0 4

**Total Semester Credit Hours in Program ..... 13**

### Criminal Justice Technology - Criminal Justice II Certificate – CCP (C55180CP)

	Class	Lab	Clinic	Work Exp.	Credit
CJC 112	Criminology	3	0	0	0 3
CJC 121	Law Enforcement Ops	3	0	0	0 3
CJC 141	Corrections	3	0	0	0 3
CJC 231	Constitutional Law	3	0	0	0 3

**Total Semester Credit Hours in Program ..... 12**

**Criminal Justice Technology - Latent Evidence Diploma – CCP (D5518AP)**

			Class	Lab	Clinic	Work Credit	Exp.
ACA	115	Success and Study Skills	0	2	0	0	1
ART	111	Art Appreciation	3	0	0	0	3
CIS	110	Introduction to Computers	2	2	0	0	3
COM	231	Public Speaking	3	0	0	0	3
CJC	111	Intro to Criminal Justice	3	0	0	0	3
CJC	112	Criminology	3	0	0	0	3
CJC	113	Juvenile Justice	3	0	0	0	3
CJC	121	Law Enforcement Ops	3	0	0	0	3
CJC	122	Community Policing	3	0	0	0	3
CJC	131	Criminal Law	3	0	0	0	3
CJC	144	Crime Scene Processing	2	3	0	0	3
CJC	221	Investigative Principles	3	2	0	0	4
CJC	231	Constitutional Law	3	0	0	0	3

**Total Semester Credit Hours in Program .....38**

**Criminal Justice Technology - Latent Evidence - Latent Evidence I Certificate – CCP (C5518AAP)**

			Class	Lab	Clinic	Work Credit	Exp.
CJC	111	Intro to Criminal Justice	3	0	0	0	3
CJC	131	Criminal Law	3	0	0	0	3
CJC	132	Court Procedure & Evidence	3	0	0	0	3
CJC	221	Investigative Principles	3	2	0	0	4

**Total Semester Credit Hours in Program .....13**

**Criminal Justice Technology - Latent Evidence - Latent Evidence II Certificate – CCP (C5518ABP)**

			Class	Lab	Clinic	Work Credit	Exp.
CJC	144	Crime Scene Processing	2	3	0	0	3
CJC	121	Law Enforcement Ops	3	0	0	0	3
CJC	122	Community Policing	3	0	0	0	3
CJC	231	Constitutional Law	3	0	0	0	3

**Total Semester Credit Hours in Program .....12**

**Education–Infant and Toddler Certificate – CCP (C55290P)**

			Class	Lab	Clinic	Work Credit	Exp.
EDU	119	Intro to Early Child Education	4	0	0	0	4
EDU	131	Child, Family, & Community	3	0	0	0	3
EDU	144	Child Development I	3	0	0	0	3
EDU	153	Health, Safety & Nutrition	3	0	0	0	3
EDU	234	Infants, Toddlers, & Twos	3	0	0	0	3

**Total Semester Credit Hours in Program .....16**

**Education–Preschool Certificate – CCP (C55220PP)**

			Class	Lab	Clinic	Work Credit	Exp.
EDU	119	Intro to Early Child Education	4	0	0	0	4
EDU	131	Child, Family, & Community	3	0	0	0	3
EDU	145	Child Development II	3	0	0	0	3
EDU	146	Child Guidance	3	0	0	0	3
EDU	153	Health, Safety and Nutrition	3	0	0	0	3
EDU	184	Early Childhood Intro Practicum	1	3	0	0	2

**Total Semester Credit Hours in Program .....18**

**Electronics Engineering Technology Diploma – CCP (D40200P)**

			Class	Lab	Clinic	Work Credit	Exp.
ACA	115	Success and Study Skills	0	2	0	0	1
DFT	170	Engineering Graphics	2	2	0	0	3
EGR	125	Appl Software for Tech	1	2	0	0	2
EGR	150	Introduction to Engineering	1	2	0	0	2
ELC	117	Motors and Controls	2	6	0	0	4
ELC	128	Intro to PLC	2	3	0	0	3
ELC	131	Circuit Analysis I	3	3	0	0	4
ELN	131	Analog Electronics	3	3	0	0	4
ELN	133	Digital Electronics	3	3	0	0	4
ENG	111	Writing and Inquiry	3	0	0	0	3
ISC	112	Industrial Safety	2	0	0	0	2
MAT	121	Algebra/Trigonometry I	2	2	0	0	3
MAT	122	Algebra/Trigonometry II	2	2	0	0	3

**Total Semester Credit Hours in Program .....38**

**Electronics Engineering Technology Basic Certificate – CCP (C40200P)**

			Class	Lab	Clinic	Work Credit	Exp.
EGR	150	Introduction to Engineering	1	2	0	0	2
ELC	128	Intro to PLC	2	3	0	0	3
ELC	131	Circuit Analysis I	3	3	0	0	4
ELN	131	Analog Electronics I	3	3	0	0	4
ELN	133	Digital Electronics	3	3	0	0	4

**Total Semester Credit Hours in Program .....17**

**Film and Video Production Technology Certificate – CCP (C30140P)**

			Class	Lab	Clinic	Work Credit	Exp.
FVP	111	Intro to Film and Video	2	3	0	0	3
FVP	112	Art Dept. Operations I	1	4	0	0	3
FVP	114	Camera & lighting I	2	3	0	0	3
FVP	116	Sound Operations	2	3	0	0	3
FVP	220	Editing I	2	3	0	0	3

**Total Semester Credit Hours in Program .....15**

## Fire Protection Technology Diploma – CCP (D55240P)

	Class	Lab	Clinic	Work Exp.	Credit
ACA 115	Success & Study Skills	0	2	0	1
CIS 110	Intro to Computers	3	0	0	3
ENG 111	Writing and Inquiry	3	0	0	3
FIP 120	Intro to Fire Protection	3	0	0	3
FIP 124	Fire Prevention and Public Ed	3	0	0	3
FIP 128	Detection and Investigation	3	0	0	3
FIP 132	Building Construction	3	0	0	3
FIP 146	Fire Protection Systems	3	2	0	4
FIP 152	Fire Protection Law	3	0	0	3
FIP 220	Fire-Fighting Strategies	3	0	0	3
FIP 221	Adv Fire Fighting Strategies	3	0	0	3
FIP 228	Local Govt Finance	3	0	0	3
FIP 240	Fire Service Supervision	3	0	0	3
FIP 276	Managing Fire Services	3	0	0	3

**Total Semester Credit Hours in Program ..... 41**

## Fire Protection Technology Certificate – CCP (C55240P)

	Class	Lab	Clinic	Work Exp.	Credit
FIP 120	Intro to Fire Protection	3	0	0	3
FIP 124	Fire Prevention and Public Ed	3	0	0	3
FIP 132	Building Construction	3	0	0	3
FIP 152	Fire Protection Law	3	0	0	3
FIP 220	Fire Fighting Strategies	3	0	0	3
FIP 228	Local Govt Finance	3	0	0	3

**Total Semester Credit Hours in Program ..... 18**

## Interpreter Education Certificate – CCP (C55300P)

	Class	Lab	Clinic	Work Exp.	Credit
ASL 111	Elementary ASL I	3	0	0	3
ASL 112	Elementary ASL II	3	0	0	3
ASL 181	ASL Lab I	0	2	0	1
ASL 182	ASL Lab 2	0	2	0	1
ASL 211	Intermediate ASL I	3	0	0	3
ASL 212	Intermediate ASL II	3	0	0	3
ASL 281	ASL Lab 3	0	2	0	1
IPP 111	Intro to Interpretation	3	0	0	3

**Total Semester Credit Hours in Program ..... 18**

## Mechanical Engineering Technology Diploma – CCP (D40320P)

	Class	Lab	Clinic	Work Exp.	Credit
ACA 115	Success and Study Skills	0	2	0	1
DFT 154	Intro to Solid Modeling	2	3	0	3
DFT 170	Engineering Graphics	2	2	0	3
EGR 125	Appl Software for Tech	1	2	0	2
EGR 130	Engineering Cost Control	2	2	0	3
EGR 150	Introduction to Engineering	1	2	0	2
ELC 128	Intro to PLC	2	3	0	3
ELC 131	Circuit Analysis I	3	3	0	4
ENG 111	Writing and Inquiry	3	0	0	3
ISC 112	Industrial Safety	2	0	0	2
MAT 121	Algebra/Trigonometry I	2	2	0	3
MAT 122	Algebra/Trigonometry II	2	2	0	3
MEC 145	Mfg Materials I	2	3	0	3
PHY 131	Physics – Mechanics	3	2	0	4

**Total Semester Credit Hours in Program ..... 39**

## Mechanical Engineering Technology Certificate – CCP (C40320P)

	Class	Lab	Clinic	Work Exp.	Credit
DFT 170	Engineering Graphics	2	2	0	3
EGR 150	Introduction to Engineering	1	2	0	2
EGR 250	Statics and Strength of Materials	4	3	0	5
MAT 121	Algebra/Trigonometry I	2	2	0	3
PHY 131	Physics-Mechanics	3	2	0	4

**Total Semester Credit Hours in Program ..... 17**

## Mechatronics Engineering Technology Diploma – CCP (D40350P)

	Class	Lab	Clinic	Work Exp.	Credit
ACA 115	Success and Study Skills	0	2	0	1
ATR 112	Intro to Automation	2	3	0	3
DFT 170	Engineering Graphics	2	2	0	3
EGR 125	Appl Software for Tech	1	2	0	2
EGR 150	Introduction to Engineering	1	2	0	2
ELC 117	Motors and Controls	2	6	0	4
ELC 128	Intro to PLC	2	3	0	3
ELC 131	Circuit Analysis I	3	3	0	4
ELC 213	Instrumentation	3	2	0	4
ENG 111	Writing and Inquiry	3	0	0	3
ISC 112	Industrial Safety	2	0	0	2
MAT 121	Algebra/Trigonometry I	2	2	0	3
MAT 122	Algebra/Trigonometry II	2	2	0	3
PHY 131	Physics – Mechanics	3	2	0	4

**Total Semester Credit Hours in Program ..... 41**

## Mechatronics Engineering Technology – Basic Certificate – CCP (C40350BP)

	Class	Lab	Clinic	Work Exp.	Credit
ATR 112	Intro to Automation	2	3	0	3
DFT 170	Engineering Graphics	2	2	0	3
EGR 125	Appl Software for Tech	1	2	0	2
EGR 150	Introduction to Engineering	1	2	0	2
ELC 128	Intro to PLC	2	3	0	3
ISC 112	Industrial Safety	2	0	0	2

**Total Semester Credit Hours in Program ..... 15**

## Mechatronics Engineering Technology - Maintenance Certificate – CCP (C40350MP)

	Class	Lab	Clinic	Work Exp.	Credit
ATR 112	Intro to Automation	2	3	0	3
EGR 125	Appl Software for Tech	1	2	0	2
ELC 117	Motors and Controls	2	6	0	4
ELC 128	Intro to PLC	2	3	0	3
ELC 131	Circuit Analysis I	3	3	0	4

**Total Semester Credit Hours in Program ..... 16**

## Welding Technology Diploma – CCP (D50420P)

			Class	Lab	Clinic	Work	Credit	
						Exp.		
ACA	115	Success and Study Skills	0	2	0	0	0	1
ENG	111	Writing and Inquiry	3	0	0	0	0	3
MAT	110	Math Measurement & Literacy	2	2	0	0	0	3
WLD	110	Cutting Processes	1	3	0	0	0	2
WLD	112	Basic Welding Processes	1	3	0	0	0	2
WLD	115	SMAW (Stick) Plate	2	9	0	0	0	5
WLD	116	SMAW (stick) Plate/Pipe	1	9	0	0	0	4
WLD	121	GMAW (MIG) FCAW/Plate	2	6	0	0	0	4
WLD	131	GTAW (TIG) Plate	2	6	0	0	0	4
WLD	141	Symbols and Specifications	2	2	0	0	0	3
WLD	151	Fabrication I	2	6	0	0	0	4
WLD	265	Automated Welding/Cutting	2	6	0	0	0	4

**Total Semester Credit Hours in Program ..... 39**

## Welding Technology – Multiple Plate Welding Certificate – CCP (C50420EP)

			Class	Lab	Clinic	Work	Credit	
						Exp.		
WLD	110	Cutting Processes	1	3	0	0	0	2
WLD	115	SMAW (Stick) Plate	2	9	0	0	0	5
WLD	121	GMAW (MIG) FCAW/Plate	2	6	0	0	0	4
WLD	131	GTAW (TIG) Plate	2	6	0	0	0	4
WLD	141	Symbols & Specifications	2	2	0	0	0	3

**Total Semester Credit Hours in Program ..... 18**

## Welding Technology – Industrial Welding Certificate – CCP (C50420IP)

			Class	Lab	Clinic	Work	Credit	
						Exp.		
WLD	115	SMAW (Stick) Plate	2	9	0	0	0	5
WLD	121	GMAW (MIG) FCAW/Plate	2	6	0	0	0	4
WLD	131	GTAW (TIG) Plate	2	6	0	0	0	4
WLD	212	Inert Gas Welding	1	3	0	0	0	2

**Total Semester Credit Hours in Program ..... 15**

## Welding Technology – Industrial Maintenance Certificate – CCP (C50420MP)

			Class	Lab	Clinic	Work	Credit	
						Exp.		
WLD	110	Cutting Processes	1	3	0	0	0	2
WLD	112	Basic Welding Processes	1	3	0	0	0	2
WLD	117	Industrial SMAW	1	4	0	0	0	3
WLD	121	GMAW (MIG) FCAW/Plate	2	6	0	0	0	4
WLD	141	Symbols & Specifications	2	2	0	0	0	3

**Total Semester Credit Hours in Program ..... 14**

## Horticulture Technology (A15240)

### Associate in Applied Science Degree

Plant Systems Pathway Description: These curricula are designed to prepare individuals for various careers in horticulture. Classroom instruction and practical laboratory applications of horticultural principles and practices are included in the program of study.

Course work includes plant identification, pest management, plant science and soil science. Also included are courses in sustainable plant production and management, landscaping, and the operation of horticulture businesses.

Graduates should qualify for employment in a variety of positions associated with nurseries, garden centers, greenhouses, landscape operations, governmental agencies/parks, golf courses, sports complexes, highway vegetation, turf maintenance companies, and private and public gardens. Graduates should also be prepared to take the North Carolina Pesticide Applicator's Examination and/or the North Carolina Certified Plant Professional Examination.

Horticulture Technology program description: A program that focuses on the general production and management of cultivated plants, shrubs, flowers, foliage, trees, groundcovers, and related plant materials; the management of technical and business operations connected with horticultural services; and the basic scientific principles needed to understand plants and their management and care.

This curriculum complies with the standard approved by the State Board of Community Colleges.

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit Exp.

#### Fall Semester

ACA 115	Success and Study Skills	0	2	0	0	1
HOR 112	Landscape Design I	2	3	0	0	3
HOR 124	Nursery Operations	2	3	0	0	3
	Or					
HOR 134	Greenhouse Operations	2	2	0	0	3
HOR 160	Plant Materials I	2	2	0	0	3
HOR 162	Applied Plant Science	2	2	0	0	3
HOR 168	Plant Propagation	2	2	0	0	3
	Subtotal					(16)

#### Spring Semester

ENG 111	Writing and Inquiry	3	0	0	0	3
HOR 161	Plant Materials II	2	2	0	0	3
HOR 166	Soils and Fertilizers	2	2	0	0	3
HOR 235	Greenhouse Production	2	2	0	0	3
	Social/Behavioral Science Elective**					3
	Subtotal					(15)

#### Summer Term

HOR 152	Horticultural Practices	0	3	0	0	1
HOR 164	Horticulture Pest Mgt	2	2	0	0	3
HOR 265	Advanced Plant Materials	1	2	0	0	2
MAT 110	Math Measurement & Literacy	2	2	0	0	3
	Subtotal					(9)

#### Fall Semester

AGR 121	Biological Pest Mgmt	3	0	0	0	3
COM 231	Public Speaking	3	0	0	0	3
	Or					
ENG 114	Prof Research and Reporting	3	0	0	0	3
	Major Course Elective***					9
	Subtotal					(15)

#### Spring Semester

WBL 111	Work-Based Learning I	0	0	0	10	1
	Humanities Elective**					3
	Major Course Elective***					9
	Subtotal					(13)

\*\*Humanities Electives and/or Social/Behavioral Science Electives are to be selected from the courses listed on page 46.

\*\*\*Major Course Electives are to be selected from the following:

AGR 265	Organic Crop Prod: Spring	2	2	0	0	3
AGR 267	Permaculture	2	2	0	0	3
BUS 280	REAL Small Business	4	0	0	0	4
CIS 110	Introduction to Computers	2	2	0	0	3
GCM 220	Golf Course Maint Systems	3	0	0	0	3
HOR 114	Landscape Construction	2	2	0	0	3
HOR 116	Landscape Management I	2	2	0	0	3
HOR 118	Equipment Op & Maint	1	3	0	0	2
HOR 142	Fruit & Vegetable Prod	1	2	0	0	2
HOR 154	Intro to Horticultural Therapy	2	4	0	0	4
HOR 213	Landscape Design II	2	2	0	0	3
HOR 215	Landscape Irrigation	2	2	0	0	3
HOR 225	Nursery Production	2	2	0	0	3
HOR 245	Hort Specialty Crops	2	2	0	0	3
HOR 257	Arboriculture Practices	1	3	0	0	2
HOR 271	Garden Center Mgmt	2	0	0	0	2
TRF 110	Intro Turfgrass Cult & ID	3	2	0	0	4
TRF 260	Adv Turfgrass Mgmt	3	2	0	0	4
VEN 135	Intro to Viticulture	3	2	0	0	4

**Total Hours Required in Program ..... 68**

Students may earn a more focused Associate of Applied Science degree in Horticulture Technology by selecting the Major Course Electives included in the following pathways:

### Ornamental Plant Production Pathway (A15240H)

HOR 118	Equipment Op & Maint	1	3	0	0	2
HOR 124	Nursery Operations	2	3	0	0	3
HOR 134	Greenhouse Operations	2	2	0	0	3
HOR 215	Landscape Irrigation	2	2	0	0	3
HOR 225	Nursery Production	2	2	0	0	3
HOR 245	Hort Specialty Crops	2	2	0	0	3
HOR 257	Arboriculture Practices	1	3	0	0	2

### Landscape Pathway (A15240L)

HOR 114	Landscape Construction	2	2	0	0	3
HOR 116	Landscape Management I	2	2	0	0	3
HOR 118	Equipment Op & Maint	1	3	0	0	2
HOR 213	Landscape Design II	2	2	0	0	3
HOR 215	Landscape Irrigation	2	2	0	0	3
TRF 110	Intro Turfgrass Cult & ID	3	2	0	0	4

### Small Fruits/Specialty Crops Pathway (A15240S)

AGR 265	Organic Crop Prod: Spring	2	2	0	0	3
HOR 118	Equipment Op & Maint	1	3	0	0	2
HOR 142	Fruit & Vegetable Prod	1	2	0	0	2
HOR 225	Nursery Production	2	2	0	0	3
HOR 245	Hort Specialty Crops	2	2	0	0	3
VEN 135	Intro to Viticulture	3	2	0	0	4

### Turfgrass Management Pathway (A15240T)

GCM 220	Golf Course Maint Systems	3	0	0	0	3
HOR 118	Equipment Op & Maint	1	3	0	0	2
HOR 215	Landscape Irrigation	2	2	0	0	3
HOR 257	Arboriculture Practices	1	3	0	0	2
TRF 110	Intro Turfgrass Cult & ID	3	2	0	0	4
TRF 260	Adv Turfgrass Mgmt	3	2	0	0	4

### Horticulture Technology (D15240) Diploma

		Class	Lab	Clinic	Work	Credit		
					Exp.			
<b>Fall Semester</b>								
ACA 115	Success and Study Skills	0	2	0	0	1		
HOR 112	Landscape Design I	2	3	0	0	3		
HOR 124	Nursery Operations	2	3	0	0	3		
Or								
HOR 134	Greenhouse Operations	2	2	0	0	3		
HOR 160	Plant Materials I	2	2	0	0	3		
HOR 162	Applied Plant Science	2	2	0	0	3		
HOR 168	Plant Propagation	2	2	0	0	3		
Subtotal						(16)		
<b>Spring Semester</b>								
ENG 111	Writing and Inquiry	3	0	0	0	3		
HOR 161	Plant Materials II	2	2	0	0	3		
HOR 166	Soils and Fertilizers	2	2	0	0	3		
HOR 235	Greenhouse Production	2	2	0	0	3		
Subtotal						(12)		
<b>Summer Term</b>								
HOR 152	Horticultural Practices	0	3	0	0	1		
HOR 164	Horticulture Pest Mgt	2	2	0	0	3		
HOR 265	Advanced Plant Materials	1	2	0	0	2		
MAT 110	Math Measurement & Literacy	2	2	0	0	3		
Subtotal						(9)		

**Total Semester Credit Hours in Program .....37**

### Horticulture – Landscape (C15240L) Certificate

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

		Class	Lab	Clinic	Work	Credit		
					Exp.			
<b>Required Courses</b>								
HOR 112	Landscape Design I	2	3	0	0	3		
HOR 114	Landscape Construction	2	2	0	0	3		
HOR 116	Landscape Management I	2	2	0	0	3		
HOR 118	Equipment Op & Maint	1	3	0	0	2		
HOR 213	Landscape Design II	2	2	0	0	3		
HOR 215	Landscape Irrigation	2	2	0	0	3		

**Total Semester Credit Hours in Program .....17**

### Horticulture – Turfgrass Management (C15240TM) Certificate

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

		Class	Lab	Clinic	Work	Credit		
					Exp.			
<b>Required Courses</b>								
GCM 220	Golf Course Maint Systems	3	0	0	0	3		
HOR 118	Equipment Op & Maint	1	3	0	0	2		
HOR 215	Landscape Irrigation	2	2	0	0	3		
TRF 110	Intro Turfgrass Cult & ID	3	2	0	0	4		
TRF 260	Adv Turfgrass Mgmt	3	2	0	0	4		

**Total Semester Credit Hours in Program .....16**

### Horticulture – Ornamental Plant Production (C15240H) Certificate

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

		Class	Lab	Clinic	Work	Credit		
					Exp.			
<b>Required Courses</b>								
AGR 121	Biological Pest Mgmt	3	0	0	0	3		
HOR 168	Plant Propagation	2	2	0	0	3		
HOR 225	Nursery Production	2	2	0	0	3		
HOR 235	Greenhouse Production	2	2	0	0	3		
HOR 245	Hort Specialty Crops	2	2	0	0	3		
HOR 257	Arboriculture Practices	1	3	0	0	2		

**Total Semester Credit Hours in Program .....17**

### Horticulture – Small Fruits/Specialty Crops (C15240SF) Certificate

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

		Class	Lab	Clinic	Work	Credit		
					Exp.			
<b>Required Courses</b>								
AGR 121	Biological Pest Mgmt	3	0	0	0	3		
AGR 265	Organic Crop Prod: Spring	2	2	0	0	3		
HOR 142	Fruit & Vegetable Prod	1	2	0	0	2		
HOR 225	Nursery Production	2	2	0	0	3		
HOR 235	Greenhouse Production	2	2	0	0	3		
HOR 245	Hort Specialty Crops	2	2	0	0	3		

**Total Semester Credit Hours in Program .....17**

## Information Technology (A25590)

### Associate in Applied Science Degree

The Information Technology (IT) curriculum prepares graduates for employment in the technology sector as designers, testers, support technicians, system administrators, developers, programmers who use computer software and/or hardware to design, process, implement and manage information systems in specialists such as database services, security, business intelligence, healthcare informatics and others depending in the technical path selected within this curriculum.

Course work includes development on a student's ability to create, store, communicate, exchange, and use information to solve technical issues related to information support and services, interactive media, network systems, programming and software development, information security and other emerging technologies based on the selected area of study.

Graduates should qualify for employment in entry-level positions with business, educational; systems, and governmental agencies which rely on computer systems to design and manage information. The program will incorporate the competencies of industry-recognized certification exams.

This curriculum complies with the standard approved by the State Board of Community Colleges.

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

	Class	Lab	Clinic	Work	Credit	Exp.
<b>Fall Semester</b>						
ACA	115	Success and Study Skills	0	2	0	0 1
CTI	110	Web, Pgm & DB Foundation	2	2	0	0 3
CTI	120	Network & Sec Foundation	2	2	0	0 3
ENG	111	Writing and Inquiry	3	0	0	0 3
		Degree Pathway courses				6
		Subtotal				(16)

#### Spring Semester

CIS	110	Introduction to Computers	2	2	0	0 3
CTS	115	Info Sys Business Concepts	3	0	0	0 3
ENG	114	Writing and Inquiry	3	0	0	0 3
		Degree Pathway courses				6
		Subtotal				(15)

#### Summer Term

CTS	130	Spreadsheet	2	2	0	0 3
		Either				
MAT	143	Quantitative Literacy	2	2	0	0 3
		Or				
MAT	171	Precalculus Algebra	3	2	0	0 4
		Subtotal				(6-7)

#### Fall Semester

CTS	240	Project Management	2	2	0	0 3
		Either				
NOS	120	Linux/UNIX Single User	2	2	0	0 3
		Or				
NOS	125	Linux/Unix Scripting	2	2	0	0 3
NOS	130	Windows Single user	2	2	0	0 3
		Degree Pathway course				3
		Social/Behavioral Science Elective**				3
		Subtotal				(15)

#### Spring Semester

WBL	111	Work-Based Learning I	0	0	0	10 1
		Humanities Elective**				3
		Degree Pathway courses				6
		Major Course Elective****				3
		Subtotal				(13)

\*\*Humanities Electives and/or Social/Behavioral Science Electives are to be selected from the courses listed on page 46.

\*\*\*Major Course Electives are to be selected from the following:

BUS	110	Introduction to Business	3	0	0	0 3
BUS	228	Business Statistics	2	2	0	0 3
BUS	240	Business Ethics	3	0	0	0 3
CIS	115	Intro to Prog & Logic	2	3	0	0 3
CSC	121	Python Programming	2	3	0	0 3
CSC	134	C++ Programming	2	3	0	0 3
CSC	151	JAVA Programming	2	3	0	0 3
CSC	153	C# Programming	2	3	0	0 3
CSC	234	Advanced C++ Programming	2	3	0	0 3
CSC	251	Advanced JAVA Programming	2	3	0	0 3
CTS	120	Hardware/Software Support	2	3	0	0 3
CTS	155	Tech Support Functions	2	2	0	0 3
CTS	220	Adv Hard/Software Support	2	3	0	0 3
CTS	225	Spreadsheet Data Analysis	2	2	0	0 3
NET	125	Introduction to Networks	1	4	0	0 3
NET	126	Routing Basics	1	4	0	0 3
NET	225	Routing & Switching I	1	4	0	0 3
NET	226	Routing and Switching II	1	4	0	0 3
NET	241	Introduction to VOIP	2	3	0	0 3
NOS	125	Linux/Unix Scripting	2	2	0	0 3
NOS	220	Linux/Unix Admin I	2	2	0	0 3
NOS	230	Windows Administration I	2	2	0	0 3
SEC	110	Security Concepts	2	2	0	0 3
SEC	150	Secure Communications	2	2	0	0 3
SEC	160	Security Administration I	2	2	0	0 3
WEB	115	Web Markup and Scripting	2	2	0	0 3
WEB	180	Active Server Pages	2	2	0	0 3
WEB	182	PHP Programming	2	2	0	0 3
WEB	214	Social Media	2	2	0	0 3
WEB	215	Adv Markup and Scripting	2	2	0	0 3
WEB	250	Database Driven Websites	2	2	0	0 3

**Total Semester Credit Hours in Program .....65-66**

**Students should select one of the following Degree Pathways:**

### Computer Programming & Development Pathway (A25590PR)

#### Fall Semester

CIS	115	Intro to Prog & Logic	2	3	0	0 3
CSC	151	JAVA Programming	2	3	0	0 3
CSC	234	Advanced C++ Programming	2	3	0	0 3

#### Spring Semester

CSC	134	C++ Programming	2	3	0	0 3
CSC	153	C# Programming	2	3	0	0 3
CSC	251	Advanced. JAVA Programming	2	3	0	0 3
CSC	289	Programming Capstone Project	1	4	0	0 3

## Network Management Pathway (A25590NE)

### Fall Semester

NET 125	Introduction to Networks	1	4	0	0	3
NET 225	Routing & Switching I	1	4	0	0	3
SEC 160	Security Administration I	2	2	0	0	3

### Spring Semester

NET 126	Routing Basics	1	4	0	0	3
NET 226	Routing and Switching II	1	4	0	0	3
NOS 220	Linux/Unix Admin I	2	2	0	0	3
NOS 230	Windows Administration I	2	2	0	0	3

## Support and Services Pathway (A25590SS)

### Fall Semester

CIS 115	Intro to Prog & Logic	2	3	0	0	3
CTS 120	Hardware/Software Support	2	3	0	0	3
CTS 155	Tech Support Functions	2	2	0	0	3
CTS 250	User Support & Software Eval	2	2	0	0	3

### Spring Semester

CTS 220	Adv Hard/Software Support	2	3	0	0	3
CTS 255	Adv Tech Support Functions	2	2	0	0	3
NOS 230	Windows Administration I	2	2	0	0	3

## Web Administration and Design Pathway (A25590WA)

### Fall Semester

CIS 115	Intro to Prog & Logic	2	3	0	0	3
WEB 115	Web Markup and Scripting	2	2	0	0	3
WEB 182	PHP Programming	2	2	0	0	3

### Spring Semester

WEB 180	Active Server Pages	2	2	0	0	3
WEB 214	Social Media	2	2	0	0	3
WEB 215	Adv Markup and Scripting	2	2	0	0	3
WEB 250	Database Driven Websites	2	2	0	0	3

## Information Technology Diplomas and Certificates Computer Programming (D25590PR)

### Diploma

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit  
Exp.

### Fall Semester

ACA 115	Success and Study Skills	0	2	0	0	1
CIS 115	Intro to Prog & Logic	2	3	0	0	3
CSC 151	JAVA Programming	2	3	0	0	3
CTI 110	Web, Pgm & DB Foundation	2	2	0	0	3
CTI 120	Network & Sec Foundation	2	2	0	0	3
ENG 111	Writing and Inquiry	3	0	0	0	3
Subtotal						(16)

### Spring Semester

CIS 110	Introduction to Computers	2	2	0	0	3
CTS 115	Info Sys Business Concepts	3	0	0	0	3
CSC 134	C++ Programming	2	3	0	0	3
CSC 153	C# Programming	2	3	0	0	3
CSC 251	Adv JAVA Programming	2	3	0	0	3
Subtotal						(15)

### Fall Semester

CSC 234	Adv. C++ Programming	2	3	0	0	3
Either						
MAT 143	Quantitative Literacy	2	2	0	0	3
Or						
MAT 171	Precalculus Algebra	3	2	0	0	4
WEB 115	Web Markup and Scripting	2	2	0	0	3
Subtotal						(9-10)

**Total Semester Credit Hours in Program .....40-41**

## System Support (D25590SS) Diploma

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit  
Exp.

### Fall Semester

ACA 115	Success and Study Skills	0	2	0	0	1
CTI 110	Web, Pgm & DB Foundation	2	2	0	0	3
CTI 120	Network & Sec Foundation	2	2	0	0	3
CTS 120	Hardware/Software Support	2	3	0	0	3
CTS 155	Tech Support Functions	2	2	0	0	3
ENG 111	Writing and Inquiry	3	0	0	0	3
Subtotal						(16)

### Spring Semester

CIS 110	Introduction to Computers	2	2	0	0	3
CTS 115	Info Sys Business Concepts	3	0	0	0	3
CTS 220	Adv Hard/Software Support	2	3	0	0	3
CTS 255	Adv Tech Support Functions	2	2	0	0	3
NOS 230	Windows Administration I	2	2	0	0	3
Subtotal						(15)

### Fall Semester

Either						
NOS 120	Linux/UNIX Single User	2	2	0	0	3
Or						
NOS 125	Linux/Unix Scripting	2	2	0	0	3
NOS 130	Windows Single user	2	2	0	0	3
Either						
MAT 143	Quantitative Literacy	2	2	0	0	3
Or						
MAT 171	Precalculus Algebra	3	2	0	0	4
Subtotal						(9-10)

**Total Semester Credit Hours in Program .....40-41**

### Computer Programming (C25590PR) Certificate

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit  
Exp.

**Fall Semester**

CIS 110	Introduction to Computers	2	2	0	0	3
CIS 115	Intro to Prog & Logic	2	3	0	0	3
CSC 151	JAVA Programming	2	3	0	0	3
	Subtotal					(9)

**Spring Semester**

CSC 134	C++ Programming	2	3	0	0	3
CSC 153	C# Programming	2	3	0	0	3
CTS 130	Spreadsheet	2	2	0	0	3
	Subtotal					(9)

**Total Semester Credit Hours in Program ..... 18**

### Operating System Administration (C25590OS) Certificate

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit  
Exp.

**Fall Semester**

CTI 120	Network & Sec Foundation	2	2	0	0	3
NOS 120	Linux/UNIX Single User	2	2	0	0	3
NOS 130	Windows Single user	2	2	0	0	3
SEC 160	Security Administration I	2	2	0	0	3
	Subtotal					(12)

**Spring Semester**

NOS 220	Linux/Unix Admin I	2	2	0	0	3
NOS 230	Windows Administration I	2	2	0	0	3
	Subtotal					(6)

**Total Semester Credit Hours in Program ..... 18**

### Routing and Switching (C25590RS) Certificate

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit  
Exp.

**Fall Semester**

CTI 120	Network & Sec Foundation	2	2	0	0	3
NET 125	Introduction to Networks	1	4	0	0	3
NET 225	Routing & Switching I	1	4	0	0	3
	Subtotal					(9)

**Spring Semester**

NET 126	Routing Basics	1	4	0	0	3
NET 226	Routing and Switching II	1	4	0	0	3
NET 241	Introduction to VOIP	2	3	0	0	3
	Subtotal					(9)

**Total Semester Credit Hours in Program ..... 18**

### System Security (C25590SE) Certificate

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit  
Exp.

**Fall Semester**

CTI 120	Network & Sec Foundation	2	2	0	0	3
NET 125	Introduction to Networks	1	4	0	0	3
SEC 110	Security Concepts	2	2	0	0	3
SEC 160	Secure Administration I	2	2	0	0	3
	Subtotal					(12)

**Spring Semester**

SEC 150	Secure Communications	2	2	0	0	3
NOS 230	Windows Administration I	2	2	0	0	3
	Subtotal					(6)

**Total Semester Credit Hours in Program ..... 18**

## Interpreter Education (A55300)

### Associate in Applied Science Degree

The Interpreter Education curriculum prepares individuals to work as entry-level Sign Language Interpreters who will provide communication access in interview and interactive settings. In addition, this curriculum provides in-service training for working interpreters who want to upgrade their skills.

Course work includes the acquisition of American Sign Language (ASL); grammar, structure, and sociolinguistic properties; cognitive processes associated with interpretation between ASL and English; the structure and character of the deaf community; and acquisition of consecutive and simultaneous interpreting skills.

Entry-level jobs for para-professional interpreters are available in educational systems or a variety of community settings. Individuals may choose from part-time, full-time, or self-employment/free-lance positions, or apply language skills to other human service related areas.

This curriculum complies with the standard approved by the State Board of Community Colleges.

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

			Class	Lab	Clinic	Work Credit	Exp.
<b>Fall Semester</b>							
ACA	115	Success and Study Skills	0	2	0	0	1
ASL	111	Elementary ASL I	3	0	0	0	3
ASL	112	Elementary ASL II	3	0	0	0	3
ASL	181	ASL Lab I	0	2	0	0	1
ASL	182	ASL Lab 2	0	2	0	0	1
ASL	225	Global Deaf Community	3	0	0	0	3
IPP	111	Introduction to Interpretation	3	0	0	0	3
		Subtotal					(15)
<b>Spring Semester</b>							
ASL	211	Intermediate ASL I	3	0	0	0	3
ASL	250	Linguistics of ASL	3	0	0	0	3
ASL	281	ASL Lab 3	0	2	0	0	1
ENG	111	Writing and Inquiry	3	0	0	0	3
IPP	112	Comparative Cultures	3	0	0	0	3
		Subtotal					(13)
<b>Summer Term</b>							
ASL	212	Intermediate ASL II	3	0	0	0	3
ASL	282	ASL Lab 4	0	2	0	0	1
ENG	112	Writing/Research in the Disciplin	3	0	0	0	3
		Or					
ENG	114	Prof. Research and Reporting	3	0	0	0	3
IPP	152	ASL/English Translation	3	0	0	0	3
		Humanities Elective**					3
		Subtotal					(13)
<b>Fall Semester</b>							
ASL	221	Advanced ASL I	3	0	0	0	3
ASL	222	Advanced ASL II	3	0	0	0	3
IPP	161	Consecutive Interpreting	2	6	0	0	5
MAT	143	Quantitative Literacy	2	2	0	0	3
		Social/Behavioral Science Elective**					3
		Subtotal					(17)

### Spring Semester

IPP	221	Simultaneous Interpreting I	2	6	0	0	5
IPP	240	Ethical Standards & Practices I	3	0	0	0	3
WBL	111	Work-Based Learning I	0	0	0	10	1
WBL	115	Work-Based Learning Seminar	1	0	0	0	1
		Major Course Elective***					3
		Subtotal					(13)

\*\*Humanities Electives and/or Social/Behavioral Science Electives are to be selected from the courses listed on page 46.

\*\*\*Major Course Electives are to be selected from the following:

EDU	119	Intro to Early Childhood Edu	4	0	0	0	4
EDU	131	Child, Family and Community	3	0	0	0	3
EDU	144	Child Development I	3	0	0	0	3
EDU	145	Child Development II	3	0	0	0	3
EDU	146	Child Guidance	3	0	0	0	3
IPP	243	Religious Interpreting	2	2	0	0	3
IPP	245	Educational Interpreting Issues	3	0	0	0	3
OST	141	Med Terms I – Med Office	3	0	0	0	3
WBL	121	Work-Based Learning II	0	0	0	10	1
WBL	122	Work-Based Learning II	0	0	0	20	2
WBL	123	Work-Based Learning II	0	0	0	30	3

**Total Semester Credit Hours in Program .....71**

## Interpreter Education (D55300)

### Diploma

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

			Class	Lab	Clinic	Work Credit	Exp.
<b>Fall Semester</b>							
ACA	115	Success and Study Skills	0	2	0	0	1
ASL	111	Elementary ASL I	3	0	0	0	3
ASL	112	Elementary ASL II	3	0	0	0	3
ASL	181	ASL Lab I	0	2	0	0	1
ASL	182	ASL Lab 2	0	2	0	0	1
ASL	225	Global Deaf Community	3	0	0	0	3
IPP	111	Introduction to Interpretation	3	0	0	0	3
		Subtotal					(15)
<b>Spring Semester</b>							
ASL	211	Intermediate ASL I	3	0	0	0	3
ASL	250	Linguistics of ASL	3	0	0	0	3
ASL	281	ASL Lab 3	0	2	0	0	1
ENG	111	Writing and Inquiry	3	0	0	0	3
IPP	112	Comparative Cultures	3	0	0	0	3
		Subtotal					(13)
<b>Summer Term</b>							
ASL	212	Intermediate ASL II	3	0	0	0	3
ASL	282	ASL Lab 4	0	2	0	0	1
IPP	152	ASL/English Translation	3	0	0	0	3
MAT	143	Quantitative Literacy	2	2	0	0	3
		Subtotal					(13)
<b>Total Semester Credit Hours in Program .....38</b>							

## Interpreter Education (C55300) Certificate

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit  
Exp.

### Fall Semester

ASL 111	Elementary ASL I	3	0	0	0	3
ASL 112	Elementary ASL II	3	0	0	0	3
ASL 181	ASL Lab I	0	2	0	0	1
ASL 182	ASL Lab 2	0	2	0	0	1
IPP 111	Introduction to Interpretation	3	0	0	0	3
	Subtotal					(11)

### Spring Semester

ASL 211	Intermediate ASL I	3	0	0	0	3
	Subtotal					(3)

### Summer Term

ASL 212	Intermediate ASL II	3	0	0	0	3
ASL 281	ASL Lab 3	0	2	0	0	1
	Subtotal					(4)

**Total Semester Credit Hours in Program ..... 18**

# Mechanical Engineering Technology (A40320)

## Associate in Applied Science Degree

Engineering and Technology Pathway Description: These curriculums are designed to prepare students through the study and application of principles from mathematics, natural sciences, and technology and applied processes based on these subjects.

Course work includes mathematics, natural sciences, engineering sciences and technology.

Graduates should qualify to obtain occupations such as technical service providers, materials and technologies testing services, process improvement technicians, engineering technicians, industrial technology managers, or research technicians.

Mechanical Engineering Technology program description: A course of study that prepares the students to use basic engineering principles and technical skills to design, develop, test, and troubleshoot projects involving mechanical systems. Includes instruction in principles of mechanics, applications to specific engineering systems, design testing procedures, prototype and operational testing and inspection procedures, manufacturing system-testing procedures, test equipment operation and maintenance, computer applications, critical thinking, planning and problem solving, and oral and written communications. Graduates of the curriculum will find employment opportunities in the manufacturing or service sectors of engineering technology. Engineering technicians may obtain professional certification by application to organizations such as ASQC, SME, and NICET.

This curriculum complies with the standard approved by the State Board of Community Colleges.

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

	Class	Lab	Clinic	Work	Credit	
				Exp.		
<b>Fall Semester</b>						
ACA	115	Success and Study Skills	0	2	0	1
		Or				
ACA	122	College Transfer Success	0	2	0	1
DFT	170	Engineering Graphics	2	2	0	3
EGR	111	Engineer Comp and Careers	2	2	0	3
		Or				
EGR	150	Introduction to Engineering	1	2	0	2
ELC	131	Circuit Analysis I	3	3	0	4
ENG	111	Writing and Inquiry	3	0	0	3
MAT	121	Algebra/Trigonometry I	2	2	0	3
		Or				
MAT	171	Precalculus Algebra	3	2	0	4
		Subtotal				(16-18)

<b>Spring Semester</b>						
COM	231	Public Speaking	3	0	0	3
DFT	154	Intro Solid Modeling	2	3	0	3
EGR	125	Appl Software for Tech	1	2	0	2
MAT	122	Algebra/Trigonometry II	2	2	0	3
		Or				
MAT	172	Precalculus Trigonometry	3	2	0	4
MEC	145	Mfg. Materials I	2	3	0	3
		Subtotal				(14-15)

### Summer Term

ENG	114	Professional Research/Report	3	0	0	0	3
ISC	112	Industrial Safety	2	0	0	0	2
		Major Course Elective***					2-3
		Subtotal					(7-8)

### Fall Semester

EGR	250	Statics and Strength of Materials	4	3	0	0	5
ELC	128	Intro to PLC	2	3	0	0	3
HYD	110	Hydraulics/Pneumatics	2	3	0	0	3
PHY	131	Physics – Mechanics	3	2	0	0	4
		Or					
PHY	151	College Physics I	3	2	0	0	4
		Major Course Electives***					2-3
		Subtotal					(17-18)

### Spring Semester

EGR	130	Engineering Cost Control	2	2	0	0	3
HYD	121	Hydraulics/Pneumatics II	1	3	0	0	2
MEC	260	Fund of Machine Design	2	3	0	0	3
MEC	276	Capstone Design Project	0	3	0	0	1
		Humanities Elective**					3
		Social/Behavioral Science Elective**					3
		Subtotal					(15)

\*\*Humanities Electives and/or Social/Behavioral Science Electives are to be selected from the courses listed on page 46.

\*\*\*Major Course Electives are to be selected from the following (Minimum 5 credits required):

BUS	110	Introduction to Business	3	0	0	0	3
CHM	151	General Chemistry	3	3	0	0	4
DFT	151	CAD I	2	3	0	0	3
ISC	132	Mfg Quality Control	2	3	0	0	3
LOG	110	Introduction to Logistics	3	0	0	0	3
LOG	125	Transportation Logistics	3	0	0	0	3
LOG	215	Supply Chain Management	3	0	0	0	3
MAC	121	Intro to CNC	2	0	0	0	2
MAC	141	Machining Applications I	2	6	0	0	4
MAT	152	Statistical Methods I	3	2	0	0	4
MAT	271	Calculus I	3	2	0	0	4
MEC	110	Introduction to CAD/CAM	1	2	0	0	2
MEC	111	Machine Processes I	1	4	0	0	3
MEC	155	Environmental Benign Mfg	2	2	0	0	3
PLA	110	Introduction to Plastics	2	0	0	0	2
WBL	111	Work-Based Learning I	0	0	0	10	1
WBL	112	Work-Based Learning I	0	0	0	20	2
WBL	113	Work-Based Learning I	0	0	0	30	3
WBL	114	Work-Based Learning I	0	0	0	40	4
WBL	121	Work-Based Learning II	0	0	0	10	1
WBL	122	Work-Based Learning II	0	0	0	20	2
WBL	131	Work-Based Learning III	0	0	0	10	1
WBL	132	Work-Based Learning III	0	0	0	20	2
WBL	211	Work-Based Learning IV	0	0	0	10	1
WBL	212	Work-Based Learning IV	0	0	0	20	2
WLD	212	Intert Gas Welding	1	3	0	0	2
WLD	262	Inspection and Testing	2	2	0	0	3

**Total Semester Credit Hours in Program .....70-74**

## Mechanical Engineering Technology

### (A40320PR)

#### Associate in Applied Science Degree-Pre Engineering Technology

This program focuses on maximizing transferability to a four year Engineering Technology Program. Students planning to transfer to a four year Engineering Technology Program must contact the admissions office at the receiving institution to determine which courses should be completed prior to transfer.

This curriculum complies with the standard approved by the State Board of Community Colleges.

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Learning Center Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

	Class	Lab	Clinic	Work	Credit	Exp.
<b>Fall Semester</b>						
ACA 115	Success and Study Skills	0	2	0	0	1
Or						
ACA 122	College Transfer Success	0	2	0	0	1
CHM 151	General Chemistry I	3	3	0	0	4
DFT 170	Engineering Graphics	2	2	0	0	3
EGR 111	Engineer Comp and Careers	2	2	0	0	3
MAT 171	Precalculus Algebra	3	2	0	0	4
	Subtotal					(15)
<b>Spring Semester</b>						
COM 231	Public Speaking	3	0	0	0	3
DFT 154	Intro Solid Modeling	2	3	0	0	3
MAT 172	Precalculus Trigonometry	3	2	0	0	4
MEC 145	Mfg. Materials I	2	3	0	0	3
	Subtotal					(13)
<b>Summer Term</b>						
ENG 111	Writing and Inquiry	3	0	0	0	3
	Major Course Elective***					4
	Subtotal					(7)
<b>Fall Semester</b>						
EGR 250	Statics and Strength of Materials	4	3	0	0	5
ENG 114	Professional Research/Report	3	0	0	0	3
HYD 110	Hydraulics/Pneumatics	2	3	0	0	3
PHY 131	Physics – Mechanics	3	2	0	0	4
Or						
PHY 151	College Physics I	3	2	0	0	4
	Subtotal					(15)
<b>Spring Semester</b>						
MAT 271	Calculus I	3	2	0	0	4
MEC 260	Fund of Machine Design	2	3	0	0	3
MEC 276	Capstone Design Project	0	3	0	0	1
	Humanities Elective**					3
	Social/Behavioral Science Elective**					3
	Subtotal					(14)

\*\*\*Humanities Electives and/or Social/Behavioral Science Electives are to be selected from the courses listed on page 46.

\*\*\*Major Course Electives are to be selected from the following:

MAT 152	Statistical Methods I	3	2	0	0	4
WBL 111	Work-Based Learning I	0	0	0	10	1
WBL 112	Work-Based Learning I	0	0	0	20	2
WBL 113	Work-Based Learning I	0	0	0	30	3
WBL 114	Work-Based Learning I	0	0	0	40	4
WBL 121	Work-Based Learning II	0	0	0	10	1
WBL 122	Work-Based Learning II	0	0	0	20	2
WBL 131	Work-Based Learning III	0	0	0	10	1
WBL 132	Work-Based Learning III	0	0	0	20	2
WBL 211	Work-Based Learning IV	0	0	0	10	1
WBL 212	Work-Based Learning IV	0	0	0	20	2

**Total Semester Credit Hours in Program .....64**

## Mechanical Engineering Technology

### (D40320)

#### Diploma

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

	Class	Lab	Clinic	Work	Credit	Exp.
<b>Fall Semester</b>						
ACA 115	Success and Study Skills	0	2	0	0	1
Or						
ACA 122	College Transfer Success	0	2	0	0	1
DFT 170	Engineering Graphics	2	2	0	0	3
EGR 111	Engineer Comp and Careers	2	2	0	0	3
Or						
EGR 150	Introduction to Engineering	1	2	0	0	2
ELC 128	Intro to PLC	2	3	0	0	3
ELC 131	Circuit Analysis I	3	3	0	0	4
MAT 121	Algebra/Trigonometry I	2	2	0	0	3
Or						
MAT 171	Precalculus Algebra	3	2	0	0	4
	Subtotal					(16-18)
<b>Spring Semester</b>						
DFT 154	Intro Solid Modeling	2	3	0	0	3
EGR 130	Engineering Cost Control	2	2	0	0	3
MAT 122	Algebra/Trigonometry II	2	2	0	0	3
Or						
MAT 172	Precalculus Trigonometry	3	2	0	0	4
MEC 145	Mfg. Materials I	2	3	0	0	3
PHY 131	Physics – Mechanics	3	2	0	0	4
Or						
PHY 151	College Physics I	3	2	0	0	4
	Subtotal					(16-17)
<b>Summer Term</b>						
EGR 125	Appl Software for Tech	1	2	0	0	2
ENG 111	Writing and Inquiry	3	0	0	0	3
ISC 112	Industrial Safety	2	0	0	0	2
	Subtotal					(7)

**Total Semester Credit Hours in Program .....39-42**

## Mechanical Engineering Technology – Pre-Engineering\* (C40320PR) Certificate

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

**\*This program of study does not qualify for federal and/or state financial aid.**

			Class	Lab	Clinic	Work	Credit	
						Exp.		
<b>Required Courses</b>								
ACA	115	Success and Study Skills	0	2	0	0	1	
		Or						
ACA	122	College Transfer Success	0	2	0	0	1	
DFT	170	Engineering Graphics	2	2	0	0	3	
EGR	111	Engineer Comp and Careers	2	2	0	0	3	
		Or						
EGR	150	Introduction to Engineering	1	2	0	0	2	
ELC	131	Circuit Analysis I	3	3	0	0	4	
ENG	111	Writing and Inquiry	3	0	0	0	3	
MAT	121	Algebra/Trigonometry I	2	2	0	0	3	
		Or						
MAT	171	Precalculus Algebra	3	2	0	0	4	

**Total Semester Credit Hours in Program .....16-18**

**Students may earn additional Certificates in the Engineering Technology Pathway programs. Speak to your faculty advisor for more information.**

## Mechatronics Engineering Technology (A40350)

### Associate in Applied Science Degree

Engineering and Technology Pathway Description: These curriculums are designed to prepare students through the study and application of principles from mathematics, natural sciences, and technology and applied processes based on these subjects.

Course work includes mathematics, natural sciences, engineering sciences and technology.

Graduates should qualify to obtain occupations such as technical service providers, materials and technologies testing services, process improvement technicians, engineering technicians, industrial technology managers, or research technicians.

Mechatronics Engineering Technology program description: A course of study that prepares the students to use basic engineering principles and technical skills in developing and testing automated, servo mechanical, and other electromechanical systems. Includes instruction in prototype testing, manufacturing and operational testing, systems analysis and maintenance procedures. Graduates should be qualified for employment in industrial maintenance and manufacturing including assembly, testing, startup, troubleshooting, repair, process improvement, and control systems, and should qualify to sit for Packaging Machinery Manufacturers Institute (PMMI) mechatronics or similar industry examinations.

This curriculum complies with the standard approved by the State Board of Community Colleges.

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class	Lab	Clinic	Work	Credit
			Exp.	

#### Fall Semester

ACA 115	Success and Study Skills	0	2	0	0	1
	Or					
ACA 122	College Transfer Success	0	2	0	0	1
DFT 170	Engineering Graphics	2	2	0	0	3
EGR 111	Engineer Comp and Careers	2	2	0	0	3
	Or					
EGR 150	Introduction to Engineering	1	2	0	0	2
ELC 131	Circuit Analysis I	3	3	0	0	4
ENG 111	Writing and Inquiry	3	0	0	0	3
MAT 121	Algebra and Trigonometry I	2	2	0	0	3
	Or					
MAT 171	Pre-calculus Algebra	3	2	0	0	4
	Subtotal					(16-18)

#### Spring Semester

ATR 112	Intro to Automation	2	3	0	0	3
EGR 125	Appl Software for Tech	1	2	0	0	2
ELC 117	Motors and Controls	2	6	0	0	4
MAT 122	Algebra and Trigonometry II	2	2	0	0	3
	Or					
MAT 172	Pre-calculus Trigonometry	3	2	0	0	4
	Humanities Elective**					3
	Subtotal					(15-16)

#### Summer Term

ENG 114	Prof Research and Reporting	3	0	0	0	3
ISC 112	Industrial Safety	2	0	0	0	2
	Major Course Elective***					2-4
	Subtotal					(7-9)

#### Fall Semester

ATR 211	Robot Programming	2	3	0	0	3
EGR 250	Statics and Strength of Materials	4	3	0	0	5
ELC 128	Introduction to PLC	2	3	0	0	3
HYD 110	Hydraulics/Pneumatics I	2	3	0	0	3
PHY 131	Physics – Mechanics	3	2	0	0	4
	Subtotal					(18)

#### Spring Semester

ATR 219	Automation Troubleshooting	1	3	0	0	2
ELC 213	Instrumentation	3	2	0	0	4
MEC 130	Mechanisms	2	2	0	0	3
MEC 276	Capstone Design Project	0	3	0	0	1
	Social/Behavioral Science Elective**					3
	Subtotal					(13)

\*\*Humanities Electives and/or Social/Behavioral Science Electives are to be selected from the courses listed on page 46.

\*\*\*Major Course Electives are to be selected from the following:

ELC 228	PLC Applications	2	6	0	0	4
EGR 130	Engineering Cost Control	2	2	0	0	3
ISC 132	Mfg Quality Control	2	3	0	0	3
LOG 110	Introduction to Logistics	3	0	0	0	3
LOG 125	Transportation Logistics	3	0	0	0	3
LOG 215	Supply Chain Management	3	0	0	0	3
MAC 141	Machining Applications I	2	6	0	0	4
MAT 152	Statistical Methods I	3	2	0	0	4
MAT 271	Calculus I	3	2	0	0	4
MNT 160	Industrial Fabrication	1	3	0	0	2
WBL 111	Work-Based Learning I	0	0	0	10	1
WBL 112	Work-Based Learning I	0	0	0	20	2
WBL 113	Work-Based Learning I	0	0	0	30	3
WBL 114	Work-Based Learning I	0	0	0	40	4
WBL 121	Work-Based Learning II	0	0	0	10	1
WBL 122	Work-Based Learning II	0	0	0	20	2
WBL 123	Work-Based Learning II	0	0	0	30	3
WBL 131	Work-Based Learning III	0	0	0	10	1
WBL 132	Work-Based Learning III	0	0	0	20	2
WBL 211	Work-Based Learning IV	0	0	0	10	1
WBL 212	Work-Based Learning IV	0	0	0	20	2

**Total Semester Credit Hours in Program .....69-74**

## Mechatronics Engineering Technology (D40350)

### Diploma

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class	Lab	Clinic	Work	Credit
			Exp.	

#### Fall Semester

ACA 115	Success and Study Skills	0	2	0	0	1
	Or					
ACA 122	College Transfer Success	0	2	0	0	1
EGR 111	Engineer Comp and Careers	2	2	0	0	3
	Or					
EGR 150	Introduction to Engineering	1	2	0	0	2
ELC 128	Introduction to PLC	2	3	0	0	3
ELC 131	Circuit Analysis I	3	3	0	0	4
MAT 121	Algebra /Trigonometry I	2	2	0	0	3
	Or					
MAT 171	Pre-calculus Algebra	3	2	0	0	4
	Subtotal					(13-15)

**Spring Semester**

ATR 112	Intro to Automation	2	3	0	0	3
ELC 213	Instrumentation	3	2	0	0	4
MAT 122	Algebra/Trigonometry II	2	2	0	0	3
	Or					
MAT 172	Pre-calculus Trigonometry	3	2	0	0	4
MEC 130	Mechanisms	2	2	0	0	3
PHY 131	Physics – Mechanics	3	2	0	0	4
	Subtotal					(17-18)

**Summer Term**

EGR 125	Appl Software for Tech	1	2	0	0	2
ENG 111	Writing and Inquiry	3	0	0	0	3
ISC 112	Industrial Safety	2	0	0	0	2
	Subtotal					(7)

**Total Semester Credit Hours in Program .....37-40**

**Mechatronics Engineering Technology – Basic Technician (C40350BM) Certificate**

Students should take the Mechanical Engineering - Pre-Engineering Certificate prior to the Mechatronics Engineering Technology – Basic Technician Certificate program.

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit Exp.

**Required Courses**

EGR 125	Appl Software for Tech	1	2	0	0	2
ELC 117	Motors and Controls	2	6	0	0	4
ELC 131	Circuit Analysis I	3	3	0	0	4
MAT 122	Algebra and Trigonometry II	2	2	0	0	3
	Or					
MAT 172	Pre-calculus Trigonometry	3	2	0	0	4
PHY 131	Physics – Mechanics	3	2	0	0	4

**Total Semester Credit Hours in Program .....17-18**

**Mechatronics Engineering Technology – Logistics (C40350LG) Certificate**

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit Exp.

**Required Courses**

EGR 125	Appl Software for Tech	1	2	0	0	2
EGR 130	Engineering Cost Control	2	2	0	0	3
ISC 132	Mfg Quality Control	2	3	0	0	3
LOG 110	Introduction to Logistics	3	0	0	0	3
LOG 125	Transportation Logistics	3	0	0	0	3
LOG 215	Supply Chain Management	3	0	0	0	3

**Total Semester Credit Hours in Program .....17**

**Mechatronics Engineering Technology – Maintenance Technician (C40350MM) Certificate**

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit Exp.

**Required Courses**

ATR 112	Intro to Automation	2	3	0	0	3
ELC 117	Motors and Controls	2	6	0	0	4
EGR 111	Engineer Comp and Careers	2	2	0	0	3
	Or					
EGR 150	Introduction to Engineering	1	2	0	0	2
ISC 112	Industrial Safety	2	0	0	0	2
MEC 130	Mechanisms	2	2	0	0	3
MNT 160	Industrial Fabrication	1	3	0	0	2

**Total Semester Credit Hours in Program .....16-17**

**Students may earn additional Certificates in the Engineering Technology Pathway programs. Speak to your faculty advisor for more information.**

## Office Administration (A25370)

### Associate in Applied Science Degree

The Office Administration curriculum prepares individuals for positions in administrative support careers. It equips office professionals to respond to the demands of a dynamic computerized workplace. Students will complete courses designed to develop proficiency in the use of integrated software, oral and written communication, analysis and coordination of office duties and systems, and other support topics. Emphasis is placed on non-technical as well as technical skills. Graduates should qualify for employment in a variety of positions in business, government, and industry. Job classifications range from entry-level to supervisor to middle management. This curriculum complies with the standard approved by the State Board of Community Colleges.

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

	Class	Lab	Clinic	Work	Credit
				Exp.	

#### Fall Semester

ACA 115	Success and Study Skills	0	2	0	0	1
CIS 110	Introduction to Computers	2	2	0	0	3
ENG 111	Writing and Inquiry	3	0	0	0	3
MAT 143	Quantitative Literacy	2	2	0	0	3
OST 136	Word Processing	2	2	0	0	3
	Subtotal					(13)

#### Spring Semester

ACC 120	Prin of Financial Accounting	3	2	0	0	4
CTS 125	Presentation Graphics	2	2	0	0	3
ENG 114	Prof. Research and Reporting	3	0	0	0	3
OST 134	Text Entry & Formatting	2	2	0	0	3
OST 236	Adv Word/Information Proc	2	2	0	0	3
	Subtotal					(16)

#### Summer Term

OST 233	Office Publications Design	2	2	0	0	3
OST 284	Emerging Technologies	1	2	0	0	2
	Humanities Elective**					3
	Social/Behavioral Science Elective**					3
	Major Course Elective***					3
	Subtotal					(14)

#### Fall Semester

BUS 125	Personal Finance	3	0	0	0	3
CTS 130	Spreadsheet	2	2	0	0	3
OST 164	Text Editing Applications	3	0	0	0	3
OST 184	Records Management	2	2	0	0	3
	Major Course Elective***					3
	Subtotal					(15)

#### Spring Semester

ACC 140	Payroll Accounting	1	2	0	0	2
BUS 270	Professional Development	3	0	0	0	3
MKT 223	Customer Service	3	0	0	0	3
OST 137	Office Software Applications	2	2	0	0	3
OST 289	Administrative Office Mgt	2	2	0	0	3
WBL 111	Work-Based Learning I	0	0	0	10	1
	Subtotal					(15)

\*\*Humanities Electives and/or Social/Behavioral Science Electives are to be selected from the courses listed on page 46.

\*\*\*Major Course Electives are to be selected from the following:

ACC 150	Acct Software Application	1	2	0	0	2
BUS 110	Introduction to Business	3	0	0	0	3
BUS 137	Principles of Management	3	0	0	0	3

BUS 153	Human Resource Management	3	0	0	0	3
BUS 228	Business Statistics	2	2	0	0	3
BUS 240	Business Ethics	3	0	0	0	3
BUS 280	REAL Small Business	4	0	0	0	4
ECM 210	Introduction to E-Commerce	2	2	0	0	3
MKT 120	Principles of Marketing	3	0	0	0	3
MKT 123	Fundamentals of Selling	3	0	0	0	3
MKT 220	Advertising and Sales Promotion	3	0	0	0	3
MKT 225	Marketing Research	3	0	0	0	3
MKT 227	Marketing Applications	3	0	0	0	3
MKT 232	Social Media Marketing	3	2	0	0	4
OST 131	Keyboarding	1	2	0	0	2
OST 141	Med Terms I—Med Office	3	0	0	0	3
OST 148	Med Coding Billing and Insu	3	0	0	0	3
OST 149	Medical Legal Issues	3	0	0	0	3
OST 153	Office Finance Solutions	1	2	0	0	2
OST 243	Med Office Simulation	2	2	0	0	3
WBL 113	Work-Based Learning I	0	0	0	30	3
WBL 121	Work-Based Learning II	0	0	0	10	1
WBL 122	Work-Based Learning II	0	0	0	20	2
WBL 123	Work-Based Learning II	0	0	0	30	3
WBL 131	Work-Based Learning III	0	0	0	10	1
WBL 132	Work-Based Learning III	0	0	0	20	2
WEB 110	Internet/Web Fundamentals	2	2	0	0	3
WEB 214	Social Media	2	2	0	0	3

**Total Semester Credit Hours in Program .....73**

## Office Administration (D25370)

### Diploma

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

	Class	Lab	Clinic	Work	Credit
				Exp.	

#### Fall Semester

ACA 115	Success and Study Skills	0	2	0	0	1
CIS 110	Introduction to Computers	2	2	0	0	3
OST 136	Word Processing	2	2	0	0	3
OST 164	Text Editing Applications	3	0	0	0	3
OST 184	Records Management	2	2	0	0	3
	Humanities Elective**					3

Or

	Social/Behavioral Science Elective**					3
	Subtotal					(16)

#### Spring Semester

BUS 270	Professional Development	3	0	0	0	3
OST 134	Text Entry & Formatting	2	2	0	0	3
OST 137	Office Software Applications	2	2	0	0	3
OST 236	Adv Word/Information Proc	2	2	0	0	3
OST 289	Administrative Office Mgt.	2	2	0	0	3
WBL 111	Work-Based Learning I	0	0	0	10	1
	Subtotal					(16)

#### Summer Term

CTS 125	Presentation Graphics	2	2	0	0	3
CTS 130	Spreadsheet	2	2	0	0	3
ENG 111	Writing and Inquiry	3	0	0	0	3
OST 284	Emerging Technologies	1	2	0	0	2
	Subtotal					(11)

\*\*Humanities Electives and/or Social/Behavioral Science Electives are to be selected from the courses listed on page 46.

**Total Semester Credit Hours in Program .....43**

## Office Administration – Medical Office (D25370M)

### Diploma

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

		Class	Lab	Clinic	Work Credit	Exp.
<b>Fall Semester</b>						
ACA 115	Success and Study Skills	0	2	0	0	1
OST 131	Keyboarding	1	2	0	0	2
OST 136	Word Processing	2	2	0	0	3
OST 141	Medical Terms I–Med Office	3	0	0	0	3
OST 164	Text Editing Applications	3	0	0	0	3
OST 184	Records Management	2	2	0	0	3
	Subtotal					(15)

### Spring Semester

BUS 270	Professional Development	3	0	0	0	3
OST 137	Office Software Applications	2	2	0	0	3
OST 148	Med Coding Billing and Ins	3	0	0	0	3
OST 289	Administrative Office Mgt	2	2	0	0	3
WBL 111	Work-Based Learning I	0	0	0	10	1
	Humanities Elective**					3
Or						
	Social/Behavioral Science Elective**					3
	Subtotal					(16)

### Summer Term

CTS 130	Spreadsheet	2	2	0	0	3
ENG 111	Writing and Inquiry	3	0	0	0	3
OST 149	Medical Legal Issues	3	0	0	0	3
OST 243	Medical Office Simulation	2	2	0	0	3
	Subtotal					(12)

\*\*Humanities Electives and/or Social/Behavioral Science Electives are to be selected from the courses listed on page 46.

**Total Semester Credit Hours in Program ..... 43**

## Office Administration – Basic Office (C25370)

### Certificate

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

		Class	Lab	Clinic	Work Credit	Exp.
<b>Fall Semester</b>						
CIS 110	Introduction to Computers	2	2	0	0	3
OST 131	Keyboarding	1	2	0	0	2
OST 164	Text Editing Applications	3	0	0	0	3
OST 184	Records Management	2	2	0	0	3
	Subtotal					(11)

### Spring Semester

OST 134	Text Entry & Formatting	2	2	0	0	3
OST 136	Word Processing	2	2	0	0	3
WBL 111	Work-Based Learning I	0	0	0	10	1
	Subtotal					(7)

**Total Semester Credit Hours in Program ..... 18**

## Office Administration – Medical Office (C25370M)

### Certificate

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

		Class	Lab	Clinic	Work Credit	Exp.
<b>Fall Semester</b>						
OST 141	Medical Terms I - Med Office	3	0	0	0	3
OST 153	Office Finance Solutions	1	2	0	0	2
OST 164	Text Editing Applications	3	0	0	0	3
OST 184	Records Management	2	2	0	0	3
	Subtotal					(11)

### Spring Semester

OST 136	Word Processing	2	2	0	0	3
OST 148	Med Coding Billing and Insu	3	0	0	0	3
WBL 111	Work-Based Learning I	0	0	0	10	1
	Subtotal					(7)

**Total Semester Credit Hours in Program ..... 18**

## Office Administration – Basic Office Bookkeeping (C25370B)

### Certificate

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

		Class	Lab	Clinic	Work Credit	Exp.
<b>Fall Semester</b>						
CIS 110	Introduction to Computers	2	2	0	0	3
OST 153	Office Finance Solutions	1	2	0	0	2
OST 164	Text Editing Applications	3	0	0	0	3
OST 184	Records Management	2	2	0	0	3
	Subtotal					(11)

### Spring Semester

OST 134	Text Entry & Formatting	2	2	0	0	3
OST 136	Word Processing	2	2	0	0	3
WBL 111	Work-Based Learning I	0	0	0	10	1
	Subtotal					(7)

**Total Semester Credit Hours in Program ..... 18**

## Office Administration/Virtual Office Assistance (A2537B)

### Associate in Applied Science Degree

Virtual Office Assistance is a concentration under the curriculum title of Office Administration. The curriculum is designed to prepare individuals to become independent contractors who possess the ability to offer administrative support services via e-mail, courier, fax, and telephone.

Students will acquire office skills required in today's business environment including utilization of word processing, spreadsheets, desktop publishing, and presentation graphics software. Coursework includes an introduction to the implementation of electronic commerce via the Internet and an introduction to telecommunications. Graduates are prepared to pass examinations for Microsoft Office Specialist Certification and are able to become self-employed contractors or work for an established virtual office service. Some graduates will prefer to gain experience working in a traditional office environment.

This curriculum complies with the standard approved by the State Board of Community Colleges.

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit Exp.

#### Fall Semester

ACA 115	Success and Study Skills	0	2	0	0	1
CIS 110	Introduction to Computers	2	2	0	0	3
OST 136	Word Processing	2	2	0	0	3
OST 164	Text Editing and Applications	3	0	0	0	3
OST 171	Intro to Virtual Office	2	2	0	0	3
	Subtotal					(13)

#### Spring Semester

CTS 130	Spreadsheet	2	2	0	0	3
ENG 111	Writing and Inquiry	3	0	0	0	3
MAT 143	Quantitative Literacy	2	2	0	0	3
OST 134	Text Entry and Formatting	2	2	0	0	3
OST 236	Adv Word/Information Proc	2	2	0	0	3
	Subtotal					(15)

#### Summer Term

CTS 125	Presentation Graphics	2	2	0	0	3
ECM 210	Introduction to E-Commerce	2	2	0	0	3
ENG 114	Prof Research and Reporting	3	0	0	0	3
OST 233	Office Publications Design	2	2	0	0	3
	Subtotal					(12)

#### Fall Semester

OST 153	Office Finance Solutions	1	2	0	0	2
OST 184	Records Management	2	2	0	0	3
	Humanities Elective**					3
	Social/Behavioral Science Elective**					3
	Major Course Elective***					3
	Subtotal					(14)

#### Spring Semester

MKT 223	Customer Service	3	0	0	0	3
OST 271	Office Web Technologies	2	2	0	0	3
OST 272	Virtual Office Capstone	1	2	0	0	2
OST 289	Administrative Office Mgt	2	2	0	0	3
WEB 214	Social Media	2	2	0	0	3
WBL 111	Work-Based Learning I	0	0	0	10	1
	Subtotal					(15)

\*\*Humanities Electives and/or Social/Behavioral Science Electives are to be selected from the courses listed on page 46.

\*\*\*Major Course Electives are to be selected from the following:

ACC 120	Prin of Financial Accounting	3	2	0	0	4
ACC 150	Acct Software Application	1	2	0	0	2
BUS 110	Introduction to Business	3	0	0	0	3
BUS 125	Business Finance	2	2	0	0	3
BUS 153	Human Resource Management	3	0	0	0	3
BUS 228	Business Statistics	2	2	0	0	3
BUS 240	Business Ethics	3	0	0	0	3
BUS 270	Professional Development	3	0	0	0	3
BUS 280	REAL Small Business	4	0	0	0	4
MKT 123	Fundamentals of Selling	3	0	0	0	3
MKT 220	Advertising and Sales Promotion	3	0	0	0	3
MKT 227	Marketing Applications	3	0	0	0	3
MKT 232	Social Media Marketing	3	2	0	0	4
OST 141	Med Terms I-Med Office	3	0	0	0	3
OST 148	Med Coding Bill and Insurance	3	0	0	0	3
OST 149	Med Legal Issues	3	0	0	0	3

**Total Semester Credit Hours in Program ..... 69**

## Office Administration/Virtual Office Assistance (D2537B)

### Diploma

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit Exp.

#### Fall Semester

ACA 115	Success and Study Skills	0	2	0	0	1
OST 136	Word Processing	2	2	0	0	3
OST 153	Office Finance Solutions	1	2	0	0	2
OST 164	Text Editing and Applications	3	0	0	0	3
OST 171	Intro to Virtual Office	2	2	0	0	3
OST 184	Records Management	2	2	0	0	3
	Subtotal					(15)

#### Spring Semester

CIS 110	Introduction to Computers	2	2	0	0	3
MKT 223	Customer Service	3	0	0	0	3
OST 271	Office Web Technologies	2	2	0	0	3
OST 272	Virtual Office Capstone	1	2	0	0	2
OST 289	Administrative Office Mgt	2	2	0	0	3
WBL 111	Work-Based Learning I	0	0	0	10	1
	Subtotal					(15)

**Summer Term**

CTS 125	Presentation graphics	2	2	0	0	3
CTS 130	Spreadsheet	2	2	0	0	3
ECM 210	Introduction to E-Commerce	2	2	0	0	3
ENG 111	Writing and Inquiry	3	0	0	0	3
	Humanities Elective**					3
Or						
	Social/Behavioral Science Elective**					3
	Subtotal					(15)

\*\*Humanities Electives and/or Social/Behavioral Science Electives are to be selected from the courses listed on page 46.

**Total Semester Credit Hours in Program .....45**

**Office Administration/ Virtual Office Assistance (C2537B) Certificate**

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit  
Exp.

**Fall Semester**

CIS 110	Introduction to Computers	2	2	0	0	3
OST 136	Word Processing	2	2	0	0	3
OST 164	Text Editing Applications	3	0	0	0	3
OST 171	Intro to Virtual Office	2	2	0	0	3
	Subtotal					(12)

**Spring Semester**

CTS 130	Spreadsheet	2	2	0	0	3
OST 272	Virtual Office Capstone	1	2	0	0	2
WBL 111	Work-Based Learning I	0	0	0	10	1
	Subtotal					(6)

**Total Semester Credit Hours in Program .....18**

# Simulation and Game Development (A25450)

## Associate in Applied Science Degree

The Simulation and Game Development curriculum provides a broad background in simulation and game development with practical applications in creative arts, visual arts, audio/video technology, creative writing, modeling, design, programming and management. Students will receive hands-on training in design, 3D modeling, software engineering, database administration and programming for the purpose of creating simulations and games.

Graduates should qualify for employment as designers, artists, animators, programmers, database administrators, testers, quality assurance analysts, engineers and administrators in the entertainment industry, the health care industry, engineering, forensics, education, NASA and government agencies. This curriculum complies with the standard approved by the State Board of Community Colleges.

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

	Class	Lab	Clinic	Work	Credit	Exp.
<b>Fall Semester</b>						
ACA 115	Success and Study Skills	0	2	0	0	1
ART 131	Drawing I	0	6	0	0	3
ENG 111	Writing and Inquiry	3	0	0	0	3
SGD 111	Introduction to SGD	2	3	0	0	3
SGD 114	3D Modeling	2	3	0	0	3
	Major Course Elective***					3
	Subtotal					(16)
<b>Spring Semester</b>						
ART 171	Computer Art	0	6	0	0	3
ENG 114	Prof. Research and Reporting	3	0	0	0	3
SGD 112	SGD Design	2	3	0	0	3
SGD 113	SGD Programming	2	3	0	0	3
SGD 214	3D Modeling II	2	3	0	0	3
	Subtotal					(15)
<b>Summer Term</b>						
SGD 237	Rigging 3D Models	2	3	0	0	3
SGD 244	3D Modeling III	2	3	0	0	3
	Social/Behavioral Science Elective**					3
	Subtotal					(9)
<b>Fall Semester</b>						
SGD 117	Art for Games	2	3	0	0	3
SGD 162	SG 3D Animation	2	3	0	0	3
SGD 174	SG Level Design	2	3	0	0	3
SGD 212	SGD Design II	2	3	0	0	3
SGD 213	SGD Programming II	2	3	0	0	3
	Subtotal					(15)
<b>Spring Semester</b>						
MAT 143	Quantitative Literacy	2	2	0	0	3
SGD 135	Serious Games	3	0	0	0	3
SGD 274	SG Level Design II	2	3	0	0	3
SGD 289	SGD Project	2	3	0	0	3
	Humanities Elective*					3
	Subtotal					(15)

\* Humanities Electives are to be selected from the courses listed on page 46. ART 114 or ART 115 is strongly recommended.

\*\* Social/Behavioral Science Electives are to be selected from the courses listed on page 46.

\*\*\*Major Course Electives are to be selected from the following:

ART 120	3D Printing for the Artist	2	3	0	0	3
ART 121	Two Dimensional Design	0	6	0	0	3
ART 135	Figure Drawing I	0	6	0	0	3
BUS 110	Introduction to Business	3	0	0	0	3
CSC 134	C++ Programming	2	3	0	0	3
CSC 151	Java Programming	2	3	0	0	3
CSC 153	C# Programming	2	3	0	0	3
SGD 165	SG Character Development	2	3	0	0	3
SGD 172	Virtual SG Environments	2	3	0	0	3
TDP 110	Intro to 3D Printing	2	3	0	0	3
TDP 140	Precision 3D Printing	2	3	0	0	3
TDP 289	3D Printing Project	2	3	0	0	3

**Total Semester Credit Hours in Program ..... 70**

# Simulation and Game Development (D25450)

## Diploma

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

	Class	Lab	Clinic	Work	Credit	Exp.
<b>Fall Semester</b>						
ACA 115	Success and Study Skills	0	2	0	0	1
ART 131	Drawing I	0	6	0	0	3
ENG 111	Writing and Inquiry	3	0	0	0	3
SGD 111	Introduction to SGD	2	3	0	0	3
SGD 114	3D Modeling	2	3	0	0	3
	Subtotal					(13)
<b>Spring Semester</b>						
ART 171	Computer Art	0	6	0	0	3
ENG 114	Prof. Research and Reporting	3	0	0	0	3
SGD 112	SGD Design	2	3	0	0	3
SGD 113	SGD Programming	2	3	0	0	3
	Subtotal					(12)
<b>Fall Semester</b>						
SGD 117	Art for Games	2	3	0	0	3
SGD 162	SG 3D Animation	2	3	0	0	3
SGD 174	SG Level Design	2	3	0	0	3
SGD 212	SGD Design II	2	3	0	0	3
	Subtotal					(12)
<b>Total Semester Credit Hours in Program ..... 37</b>						

## Simulation and Game Development - Game Design (C25450) Certificate

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

		Class	Lab	Clinic	Work	Credit		
					Exp.			
<b>Fall Semester</b>								
SGD	111	Introduction to SGD	2	3	0	0	3	
		Subtotal					(3)	
<b>Spring Semester</b>								
SGD	112	SGD Design	2	3	0	0	3	
SGD	113	SGD Programming	2	3	0	0	3	
		Subtotal					(6)	
<b>Fall Semester</b>								
SGD	117	Art for Games	2	3	0	0	3	
SGD	174	SG Level Design	2	3	0	0	3	
SGD	212	SGD Design II	2	3	0	0	3	
		Subtotal					(9)	

**Total Semester Credit Hours in Program ..... 18**

## Simulation and Game Development – Game Art\* (C25450A) Certificate

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

**\*This program of study does not qualify for federal and/or state financial aid.**

		Class	Lab	Clinic	Work	Credit		
					Exp.			
<b>Fall Semester</b>								
ART	131	Drawing I	0	6	0	0	3	
SGD	111	Introduction to SGD	2	3	0	0	3	
SGD	114	3D Modeling I	2	3	0	0	3	
		Subtotal					(9)	
<b>Spring Semester</b>								
ART	171	Computer Art I	0	6	0	0	3	
		Subtotal					(3)	
<b>Fall Semester</b>								
SGD	117	Art for Games	2	3	0	0	3	
		Subtotal					(3)	

**Total Semester Credit Hours in Program ..... 15**

## Simulation and Game Development – Game Programming\* (C25450B) Certificate

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

**\*This program of study does not qualify for federal and/or state financial aid.**

		Class	Lab	Clinic	Work	Credit		
					Exp.			
<b>Fall Semester</b>								
SGD	111	Introduction to SGD	2	3	0	0	3	
		Subtotal					(3)	
<b>Spring Semester</b>								
CSC	153	C# Programming	2	3	0	0	3	
SGD	113	SGD Programming	2	3	0	0	3	
		Subtotal					(6)	
<b>Fall Semester</b>								
SGD	174	SG Level Design	2	3	0	0	3	
SGD	213	SGD Programming II	2	3	0	0	3	
		Subtotal					(6)	

**Total Semester Credit Hours in Program ..... 15**

## Simulation and Game Development – Modeling\* (C25450M) Certificate

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

**\*This program of study does not qualify for federal and/or state financial aid.**

		Class	Lab	Clinic	Work	Credit		
					Exp.			
<b>Fall Semester</b>								
ART	131	Drawing I	0	6	0	0	3	
SGD	114	3D Modeling I	2	3	0	0	3	
		Subtotal					(6)	
<b>Spring Semester</b>								
ART	171	Computer Art I	0	6	0	0	3	
SGD	214	3D Modeling II	2	3	0	0	3	
		Subtotal					(6)	
<b>Summer Term</b>								
SGD	244	3D Modeling III	2	3	0	0	3	
		Subtotal					(3)	

**Total Semester Credit Hours in Program ..... 15**

## Simulation and Game Development – Character Design\* (C25450C)

### Certificate

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

**\*This program of study does not qualify for federal and/or state financial aid.**

Class	Lab	Clinic	Work	Credit	
					Exp.

#### Fall Semester

ART 131	Drawing I	0	6	0	0	3
SGD 114	3D Modeling I	2	3	0	0	3
Subtotal						(6)

#### Spring Semester

ART 135	Figure Drawing	0	6	0	0	3
ART 171	Computer Art I	0	6	0	0	3
Subtotal						(6)

#### Fall Semester

SGD 165	SG Character Development	2	3	0	0	3
Subtotal						(3)

**Total Semester Credit Hours in Program ..... 15**

## Simulation and Game Development – Three-Dimensional Printing\* (C25450T)

### Certificate

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

**\*This program of study does not qualify for federal and/or state financial aid.**

Class	Lab	Clinic	Work	Credit	
					Exp.

#### Fall Semester

SGD 111	Introduction to SGD	2	3	0	0	3
TDP 110	Intro to 3D Printing	2	3	0	0	3
Subtotal						(6)

#### Spring Semester

ART 120	3D Printing for the Artist	2	3	0	0	3
TDP 140	Precision 3D Printing	2	3	0	0	3
Subtotal						(6)

#### Fall Semester

TDP 289	3D Printing Project	2	3	0	0	3
Subtotal						(3)

**Total Semester Credit Hours in Program ..... 15**

**Surgical Technology (A45740)**  
**Associate in Applied Science Degree**

The Surgical Technology curriculum prepares individuals to assist in the care of the surgical patient in the operating room and to function as a member of the surgical team.

Students will apply theoretical knowledge to the care of patients undergoing surgery and develop skills necessary to prepare supplies, equipment, and instruments; maintain aseptic conditions; prepare patients for surgery; and assist surgeons during operations. The Surgical Technology Program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP), 25400 US Hwy 19 North, Suite 158, Clearwater, FL 33763; Phone: 727-210-2350; Fax: 727-210-2354; www.caahep.org by the recommendation of the Accreditation Review Council on Education in Surgical Technology and Surgical Assisting (ARC/STSA), 6 West Dry Creek Circle, Suite 110, Littleton, CO 80120; Phone: 303-694-9262; Fax: 303-741-3655; www.arcstsa.org.

Graduates will take the National Certification Examination administered by the National Board of Surgical Technology and Surgical Assisting (NBSTSA) within thirty (30) days of completion. Employment opportunities include labor/delivery/emergency departments, inpatient/outpatient surgery centers, dialysis units/facilities, physician offices, and central supply processing units. This curriculum complies with the standard approved by the State Board of Community Colleges. Special admission procedures apply to this program. See page 12 for details.

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

		Class	Lab	Clinic	Work	Credit
					Exp.	
<b>Fall Semester</b>						
ACA	115	Success and Study Skills	0	2	0	1
BIO	163	Basic Anatomy/Physiology	4	2	0	5
ENG	111	Writing and Inquiry	3	0	0	3
SUR	110	Introduction to Surgical Tech	3	0	0	3
SUR	111	Periop Patient Care	5	6	0	7
		Subtotal				(19)

<b>Spring Semester</b>						
BIO	175	General Microbiology	2	2	0	3
SUR	122	Surgical Procedures I	5	3	0	6
SUR	123	SUR Clinical Practice I	0	0	21	7
		Subtotal				(16)

<b>Summer Term</b>						
PSY	150	General Psychology	3	0	0	3
SUR	134	Surgical Procedures II	5	0	0	5
SUR	135	SUR Clinical Practice II	0	0	12	4
SUR	137	Prof Success Prep	1	0	0	1
		Subtotal				(13)

<b>Fall Semester</b>						
CIS	110	Introduction to Computers	2	2	0	3
ENG	114	Prof Research and Reporting	3	0	0	3
SUR	212	SUR Clinical Supplement*	0	0	12	4*
		Humanities Elective**				3
		Social /Behavioral Science Elective**				3
		Subtotal				(12 or 16)

**Spring Semester**

BUS	137	Principles of Management	3	0	0	3
SUR	210	Advanced SUR Clinical Practice	0	0	6	2
SUR	211	Advanced Theoretical Concepts	2	0	0	2
		Subtotal				(7)

**\*SUR 212 (SUR Clinical Supplement) is required for students who have completed the Surgical Technology Diploma Program and wish to continue with advanced placement in the Surgical Technology Associate in Applied Science degree program. This course may be waived with documentation of having worked 500 hours or primarily scrubbed 125 surgical cases.**

\*\*Humanities Electives and/or Social/Behavioral Science Electives are to be selected from the courses listed on page 46.

**Total Semester Credit Hours in Program ..... 67 or 71**

**Surgical Technology (D45740)**  
**Diploma**

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

			Class	Lab	Clinic	Work	Credit
						Exp.	
<b>Fall Semester</b>							
ACA	115	Success and Study Skills	0	2	0	0	1
BIO	163	Basic Anatomy/Physiology	4	2	0	0	5
ENG	111	Writing and Inquiry	3	0	0	0	3
SUR	110	Introduction to Surgical Tech	3	0	0	0	3
SUR	111	Periop Patient Care	5	6	0	0	7
		Subtotal					(19)

<b>Spring Semester</b>							
BIO	175	General Microbiology	2	2	0	0	3
SUR	122	Surgical Procedures I	5	3	0	0	6
SUR	123	SUR Clinical Practice I	0	0	21	0	7
		Subtotal					(16)

<b>Summer Term</b>							
PSY	150	General Psychology	3	0	0	0	3
SUR	134	Surgical Procedures II	5	0	0	0	5
SUR	135	SUR Clinical Practice II	0	0	12	0	4
SUR	137	Profess Success Preparation	1	0	0	0	1
		Subtotal					(13)

**Total Semester Credit Hours in Program .....48**

## Transfer Program Associate in Arts (A10100)

The Associate in Arts degree shall be granted for a planned program of study consisting of a minimum of 60 semester hours of credit (SHC) of college transfer courses. Within the degree program, the student will have opportunities for the achievement of competence in reading, writing, oral communication, fundamental mathematical skills, and basic computer use. The program is divided into a 31-32 SHC Universal General Education Transfer Component (UGETC) and a 28-29 SHC Degree Completion Component. Courses selected should be chosen carefully to match the requirements of the university or college where the student plans to transfer. Other than course sequences governed by pre-requisites, the two components may be completed in any order.

Courses are approved for transfer through the Comprehensive Articulation Agreement (CAA). The CAA enables North Carolina community college graduates of two-year associate in arts programs who are admitted to constituent institutions of The University of North Carolina to transfer with junior status.

Community college graduates must obtain a grade of "C" or better in each course and an overall GPA of at least 2.0 on a 4.0 scale in order to transfer with a junior status. Courses may also transfer through bilateral agreements between institutions. Course substitutions may invalidate the protections afforded under the Comprehensive Articulation Agreement.

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor. Prerequisites for International Languages may include FRE 110 or SPA 110.

Universal General Education Transfer Component (UGETC)

	Class	Lab	Clinic	Work	Credit	
				Exp.		

### English Composition (6 semester hours required)

ENG 111	Writing and Inquiry	3	0	0	0	3
ENG 112	Writing/Research in the Discipl	3	0	0	0	3
	Subtotal					(6)

### Humanities/Fine Arts (9 semester hours required) (Three courses from at least two different discipline areas must be selected.)

#### Art

ART 111	Art Appreciation	3	0	0	0	3
ART 114	Art History Survey I	3	0	0	0	3
ART 115	Art History Survey II	3	0	0	0	3

#### Communications

COM 231	Public Speaking	3	0	0	0	3
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#### Literature

ENG 231	American Literature I	3	0	0	0	3
ENG 232	American Literature II	3	0	0	0	3
ENG 241	British Literature I	3	0	0	0	3
ENG 242	British Literature II	3	0	0	0	3

#### Music

MUS 110	Music Appreciation	3	0	0	0	3
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#### Philosophy

PHI 240	Introduction to Ethics	3	0	0	0	3
	Subtotal					(9)

### Social/Behavioral Science (9 semester hours required. Three courses from at least two different areas must be selected.)

#### Economics

ECO 251	Principles of Microeconomics	3	0	0	0	3
ECO 252	Principles of Macroeconomics	3	0	0	0	3

#### History

HIS 111	World Civilizations I	3	0	0	0	3
HIS 112	World Civilizations II	3	0	0	0	3
HIS 131	American History I	3	0	0	0	3
HIS 132	American History II	3	0	0	0	3

#### Political Science

POL 120	American Government	3	0	0	0	3
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#### Psychology

PSY 150	General Psychology	3	0	0	0	3
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#### Sociology

SOC 210	Introduction to Sociology	3	0	0	0	3
	Subtotal					(9)

### Natural Sciences (4 semester credit hours required from the following. AST 111 and AST 111A must be taken together.)

AST 111	Descriptive Astronomy	3	0	0	0	3
AST 111A	Descriptive Astronomy Lab	0	2	0	0	1
BIO 111	General Biology I	3	3	0	0	4
CHM 151	General Chemistry I	3	3	0	0	4
	Subtotal					(4)

### Mathematics (Select one course from the following.)

MAT 143	Quantitative Literacy	2	2	0	0	3
MAT 152	Statistical Methods I	3	2	0	0	4
MAT 171	Pre-Calculus Algebra	3	2	0	0	4
	Subtotal					(3-4)

## Degree Completion Component

### Required Courses

All AA students are required to take the following course. Course should preferably be taken the first semester, but no later than the second semester.

ACA 122	College Transfer Success	0	2	0	0	1
	Subtotal					(1)

## General Education Courses

Students must select 13-14 SHC of additional general education courses from the Universal General Education Transfer Component above and/or the following General Education Courses. A minimum of 45 SHC of UGETC and General Education Courses must be taken. These courses should be carefully selected in consultation with advisors at the University where the student plans to transfer. Students must meet the receiving university's foreign language and/or health and physical education requirements, if applicable, prior to or after transfer to the senior institution Courses marked with an asterisk (\*) have a corresponding lab which must be taken at the same time.

ANT 210	General Anthropology	3	0	0	0	3
ASL 111	Elementary ASL I	3	0	0	0	3
ASL 112	Elementary ASL II	3	0	0	0	3
ASL 211	Intermediate ASL I	3	0	0	0	3
ASL 212	Intermediate ASL II	3	0	0	0	3
BIO 112	General Biology II	3	3	0	0	4
BIO 120	Introductory Botany	3	3	0	0	4
BIO 130	Introductory Zoology	3	3	0	0	4
BIO 140	Environmental Biology*	3	0	0	0	3
BIO 140A	Environmental Biology Lab	0	3	0	0	1
CHM 131	Introduction to Chemistry*	3	0	0	0	3
CHM 131A	Intro. to Chemistry Lab	0	3	0	0	1
CHM 132	Organic and Biochemistry	3	3	0	0	4
CHM 152	General Chemistry II	3	3	0	0	4
CIS 110	Introduction to Computers	2	2	0	0	3
CIS 115	Intro to Prog & Logic	2	3	0	0	3
COM 120	Intro Interpersonal Com	3	0	0	0	3
COM 140	Intro Intercultural Com	3	0	0	0	3
DRA 111	Theatre Appreciation	3	0	0	0	3

DRA 112	Literature of the Theatre	3	0	0	0	3
DRA 211	Theatre History I	3	0	0	0	3
DRA 212	Theatre History II	3	0	0	0	3
ECO 151	Survey of Economics	3	0	0	0	3
ENG 113	Literature-Based Research	3	0	0	0	3
ENG 114	Prof Research & Reporting	3	0	0	0	3
ENG 233	Major American Writers	3	0	0	0	3
ENG 241	British Literature I	3	0	0	0	3
ENG 242	British Literature II	3	0	0	0	3
ENG 252	Western World Literature	3	0	0	0	3
ENG 262	World Literature II	3	0	0	0	3
FRE 111	Elementary French I*	3	0	0	0	3
FRE 112	Elementary French II*	3	0	0	0	3
FRE 211	Intermediate French I*	3	0	0	0	3
FRE 212	Intermediate French II*	3	0	0	0	3
GEO 111	World Regional Geography	3	0	0	0	3
HUM 110	Technology and Society	3	0	0	0	3
HUM 160	Introduction to Film	3	0	0	0	3
MAT 172	Precalculus Trigonometry	3	2	0	0	4
MAT 271	Calculus I	3	2	0	0	4
MAT 272	Calculus II	3	2	0	0	4
MAT 273	Calculus III	3	2	0	0	4
PHI 210	History of Philosophy	3	0	0	0	3
PHI 230	Introduction to Logic	3	0	0	0	3
PHY 151	College Physics I	3	2	0	0	4
PHY 152	College Physics II	3	2	0	0	4
PHY 251	General Physics I	3	3	0	0	4
PHY 252	General Physics II	3	3	0	0	4
PSY 237	Social Psychology	3	0	0	0	3
PSY 241	Developmental Psychology	3	0	0	0	3
PSY 281	Abnormal Psychology	3	0	0	0	3
REL 110	World Religions	3	0	0	0	3
REL 211	Intro to Old Testament	3	0	0	0	3
REL 212	Intro to New Testament	3	0	0	0	3
REL 221	Religion in America	3	0	0	0	3
SOC 213	Sociology of the Family	3	0	0	0	3
SOC 220	Social Problems	3	0	0	0	3
SPA 111	Elementary Spanish I*	3	0	0	0	3
SPA 112	Elementary Spanish II*	3	0	0	0	3
SPA 211	Intermediate Spanish I*	3	0	0	0	3
SPA 212	Intermediate Spanish II*	3	0	0	0	3
	Subtotal					(13-14)

**Electives**

Select 14-15 SHC from the above courses and/or the Electives listed below. In choosing elective courses: 2 semester hours are recommended for Health and PE. CIS 110, listed under the General Education Courses above, is also recommended. Students must meet the receiving university's foreign language and/or health and physical education requirements, if applicable, prior to or after transfer to the senior institution.

ACC 120	Principles of Financial Acc	3	2	0	0	4
ACC 121	Principles of Managerial Acc	3	2	0	0	4
ART 121	Two-Dimensional Design	0	6	0	0	3
ART 122	Three-Dimensional Design	0	6	0	0	3
ART 131	Drawing I	0	6	0	0	3
ART 132	Drawing II	0	6	0	0	3
ART 171	Computer Art I	0	4	0	0	3
ART 231	Printmaking I	0	6	0	0	3
ART 232	Printmaking II	0	6	0	0	3
ART 240	Painting I	0	6	0	0	3
ART 241	Painting II	0	6	0	0	3
ART 264	Digital Photography I	1	4	0	0	3
ART 265	Digital Photography II	1	4	0	0	3
ART 266	Videography I	0	6	0	0	3
ART 267	Videography II	0	6	0	0	3
ART 271	Computer Art II	0	6	0	0	3
ART 281	Sculpture I	0	6	0	0	3
ART 282	Sculpture II	0	6	0	0	3
ART 283	Ceramics I	0	6	0	0	3
ART 284	Ceramics II	0	6	0	0	3
BIO 163	Basic Anat & Physiology	4	2	0	0	5
BIO 165	Anatomy and Physiology I	3	3	0	0	4
BIO 166	Anatomy and Physiology II	3	3	0	0	4
BIO 175	General Microbiology	2	2	0	0	3
BIO 242	Natural Resource Conservation	3	0	0	0	3
BUS 110	Introduction to Business	3	0	0	0	3
BUS 115	Business Law I	3	0	0	0	3
BUS 137	Principles of Management	3	0	0	0	3
BUS 228	Business Statistics	2	2	0	0	3

CHM 251	Organic Chemistry I	3	3	0	0	4
CHM 252	Organic Chemistry II	3	3	0	0	4
CJC 111	Intro to Criminal Justice	3	0	0	0	3
CJC 121	Law Enforcement Operations	3	0	0	0	3
CJC 141	Corrections	3	0	0	0	3
COM 160	Small Group Communication	3	0	0	0	3
CSC 134	C++ Programming	2	3	0	0	3
CSC 151	JAVA Programming	2	3	0	0	3
CTS 115	Info Sys Business Concepts	3	0	0	0	3
DFT 170	Engineering Graphics	2	2	0	0	3
DRA 120	Voice for Performance	3	0	0	0	3
DRA 124	Readers Theatre	3	0	0	0	3
DRA 130	Acting I	0	6	0	0	3
DRA 131	Acting II	0	6	0	0	3
DRA 140	Stagecraft I	0	6	0	0	3
DRA 141	Stagecraft II	0	6	0	0	3
DRA 145	Stage Make-up	1	2	0	0	2
DRA 170	Play Production I	0	9	0	0	3
DRA 171	Play Production II	0	9	0	0	3
DRA 211	Theatre History I	3	0	0	0	3
DRA 212	Theatre History II	3	0	0	0	3
DRA 240	Lighting for the Theatre	2	2	0	0	3
DRA 260	Directing	0	6	0	0	3
DRA 270	Play Production III	0	9	0	0	3
DRA 271	Play Production IV	0	9	0	0	3
EGR 150	Intro to Engineering	1	2	0	0	2
ENG 125	Creative Writing I	3	0	0	0	3
ENG 272	Southern Literature	3	0	0	0	3
FRE 141	Culture and Civilization	3	0	0	0	3
FRE 151	Francophone Literature	3	0	0	0	3
FRE 181	French Lab 1*	0	2	0	0	1
FRE 182	French Lab 2*	0	2	0	0	1
FRE 281	French Lab 3*	0	2	0	0	1
FRE 282	French Lab 4*	0	2	0	0	1
GIS 111	Introduction to GIS	2	2	0	0	3
HIS 231	Recent American History	3	0	0	0	3
HIS 236	North Carolina History	3	0	0	0	3
HUM 123	Appalachian Culture	3	0	0	0	3
MAT 285	Differential Equations	2	2	0	0	3
MUS 121	Music Theory I	3	2	0	0	4
MUS 122	Music Theory II	3	2	0	0	4
MUS 151	Class Music I	0	2	0	0	1
MUS 152	Class Music II	0	2	0	0	1
MUS 251	Class Music III	0	2	0	0	1
MUS 252	Class Music IV	0	2	0	0	1
PED 110	Fit and Well for Life	1	2	0	0	2
PED 111	Physical Fitness I	0	3	0	0	1
PED 117	Weight Training I	0	3	0	0	1
PED 118	Weight Training II	0	3	0	0	1
PED 119	Circuit Training	0	3	0	0	1
PED 120	Walking for Fitness	0	3	0	0	1
PED 121	Walk, Jog, Run	0	3	0	0	1
PED 122	Yoga I	0	2	0	0	1
PED 123	Yoga II	0	2	0	0	1
PED 137	Badminton	0	2	0	0	1
PED 139	Bowling-Beginning	0	2	0	0	1
PED 143	Volleyball-Beginning	0	2	0	0	1
PED 186	Dancing for Fitness	0	2	0	0	1
PED 217	Pilates I	0	2	0	0	1
PED 218	Pilates II	0	2	0	0	1
PHS 130	Earth Science	3	2	0	0	4
POL 130	State and Local Government	3	0	0	0	3
PSY 231	Forensic Psychology	3	0	0	0	3
PSY 271	Sports Psychology	3	0	0	0	3
SPA 141	Culture and Civilization	3	0	0	0	3
SPA 161	Cultural Immersion	2	3	0	0	3
SPA 181	Spanish Lab 1*	0	2	0	0	1
SPA 182	Spanish Lab 2*	0	2	0	0	1
SPA 221	Spanish Conversation	3	0	0	0	3
SPA 231	Reading and Composition	3	0	0	0	3
SPA 281	Spanish Lab 3*	0	2	0	0	1
SPA 282	Spanish Lab 4*	0	2	0	0	1
	Subtotal					(14-15)

\*Denotes a corequisite, course cannot be taken by itself.

**Total Semester Credit Hours in Program .....60**

## Transfer Program Associate in Engineering (A10500)

The Associate in Engineering (AE) degree shall be granted for a planned program of study consisting of a minimum of 60 semester hours of credit (SHC) of courses. Within the degree program, the institution shall include opportunities for the achievement of competence in reading, writing, oral communication, fundamental mathematical skills, and basic computer use.

The degree plan includes required general education and prerequisite courses that are acceptable to all state funded Bachelor of Engineering programs. Students who follow the degree progression plan will meet the entrance requirements at all of the North Carolina public Bachelor of Science Engineering programs. Associate in Engineering graduates may then apply to any of these programs without taking additional and sometimes duplicative courses. Admission to Engineering programs is highly competitive and admission is not guaranteed.

To be eligible for the transfer of credits under the AE to the Bachelor of Science in Engineering Articulation Agreement, community college graduates must obtain a grade of "C" or better in each course and an overall GPA of at least 2.0 on a 4.0 scale.

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor. Prerequisites for International Languages may include FRE 110 or SPA 110.

Universal General Education Transfer Component (UGETC)

Class	Lab	Clinic	Work	Credit
			Exp.	

### English Composition (6 semester hours required)

ENG 111	Writing and Inquiry	3	0	0	0	3
ENG 112	Writing/Research in the Discipl	3	0	0	0	3
	Subtotal					(6)

### Humanities/Fine Arts and Communications (6 semester hours required)

Select 1 course from the Humanities category and 1 course from the Fine Arts/Communications category

#### Humanities (3 Semester hours required)

ENG 231	American Literature I	3	0	0	0	3
ENG 232	American Literature II	3	0	0	0	3
PHI 240	Introduction to Ethics	3	0	0	0	3
REL 110*	World Religions	3	0	0	0	3

\*REL 110 will transfer for equivalency credit to the engineering programs of all five UNC institutions that offer undergraduate engineering programs. It may not transfer with equivalency to other programs.

#### Fine Arts/Communications (3 Semester hours required)

ART 111	Art Appreciation	3	0	0	0	3
ART 114	Art History Survey I	3	0	0	0	3
ART 115	Art History Survey II	3	0	0	0	3
COM 231	Public Speaking	3	0	0	0	3
MUS 110	Music Appreciation	3	0	0	0	3
	Subtotal					(6)

### Social/Behavioral Science (6 semester hours required. ECO 251 is required. Select a second course)

#### Required:

ECO 251	Principles of Microeconomics	3	0	0	0	3
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#### Choose One:

HIS 111	World Civilizations I	3	0	0	0	3
HIS 112	World Civilizations II	3	0	0	0	3
HIS 131	American History I	3	0	0	0	3
HIS 132	American History II	3	0	0	0	3
POL 120	American Government	3	0	0	0	3
PSY 150	General Psychology	3	0	0	0	3
SOC 210	Introduction to Sociology	3	0	0	0	3
	Subtotal					(6)

### Mathematics (12 semester hours required\*)

MAT 271	Calculus I	3	2	0	0	4
MAT 272	Calculus II	3	2	0	0	4
MAT 273	Calculus III	3	2	0	0	4
	Subtotal					(12)

\*Calculus I is the lowest level math course that will be accepted by the engineering programs for transfer as a math credit. Students who are not calculus-ready will need to take additional math courses.

### Natural Sciences (12 semester hours required)

CHM 151	General Chemistry I	3	3	0	0	4
PHY 251	General Physics I	3	2	0	0	4
PHY 252	General Physics II	3	2	0	0	4
	Subtotal					(12)

### Degree Completion Requirements (18 semester hours required)

#### Other Required Courses (3 semester hours required)

ACA 122*	College Transfer Success	0	2	0	0	1
EGR 150	Introduction to Engineering	1	2	0	0	2
	Subtotal					(3)

\*Students must complete ACA 122 within the first 30 hours of enrollment

### General Education and Pre-major Electives Courses (15 semester hours required)

Select 15 SHC of courses from the following courses classified as pre-major, elective, or general education courses within the Comprehensive Articulation Agreement. (Students must meet the receiving university's foreign language and/or health and physical education requirements, if applicable, prior to or after transfer to the senior institution.)

BIO 111	General Biology I	3	2	0	0	4
CHM 152	General Chemistry II	3	3	0	0	4
CSC 134	C++ Programming	2	3	0	0	3
CSC 151	JAVA Programming	2	3	0	0	3
DFT 170	Engineering Graphics	2	2	0	0	3
ECO 252	Principles of Macroeconomics	3	0	0	0	3
EGR 220	Engineering Statics	3	0	0	0	3
HUM 110	Technology and Society	3	0	0	0	3
MAT 285	Differential Equations	2	2	0	0	3
PED 110	Fit and Well for Life	1	2	0	0	2
	Subtotal					(15)

**Total Semester Credit Hours in Program ..... 60**

## Transfer Program Associate in Fine Arts – Art (A10200AR)

The Associate in Fine Arts (Art) degree program is designed for students who plan to transfer to a four-year institution where they will major in the area of performing or teaching fine arts. The program provides general education courses as well as those courses designed for the area of specialization.

This curriculum complies with the standard approved by the State Board of Community Colleges.

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit  
Exp.

### English Composition (6 semester hours required)

ENG 111	Writing and Inquiry	3	0	0	0	3
ENG 112	Writing/Research in the Discipl	3	0	0	0	3
Subtotal						(6)

### Literature (3 semester hours required)

ENG 231	American Literature I	3	0	0	0	3
ENG 232	American Literature II	3	0	0	0	3
ENG 233	Major American Writers	3	0	0	0	3
ENG 241	British Literature I	3	0	0	0	3
ENG 242	British Literature II	3	0	0	0	3
ENG 252	Western World Literature II	3	0	0	0	3
ENG 262	World Literature II	3	0	0	0	3
Subtotal						(3)

### Humanities/Fine Arts (3 semester hours required)

ART 111	Art Appreciation	3	0	0	0	3
ASL 111	Elementary ASL I	3	0	0	0	3
COM 231	Public Speaking	3	0	0	0	3
DRA 111	Theatre Appreciation	3	0	0	0	3
DRA 112	Literature of the Theatre	3	0	0	0	3
DRA 211	Theatre History I	3	0	0	0	3
DRA 212	Theatre History II	3	0	0	0	3
FRE 111	Elementary French I	3	0	0	0	3
HUM 110	Technology and Society	3	0	0	0	3
HUM 160	Introduction to Film	3	0	0	0	3
MUS 110	Music Appreciation	3	0	0	0	3
PHI 210	History of Philosophy	3	0	0	0	3
PHI 230	Introduction to Logic	3	0	0	0	3
PHI 240	Introduction to Ethics	3	0	0	0	3
REL 110	World Religions	3	0	0	0	3
REL 211	Intro to Old Testament	3	0	0	0	3
REL 212	Intro to New Testament	3	0	0	0	3
REL 221	Religion in America	3	0	0	0	3
SPA 111	Elementary Spanish I	3	0	0	0	3
Subtotal						(3)

### Social/Behavioral Science (9 semester hours required. Select three courses from three different discipline areas. HIS 111 or 112 is required.)

ANT 210	General Anthropology	3	0	0	0	3
ECO 151	Survey of Economics	3	0	0	0	3
ECO 251	Prin. of Microeconomics	3	0	0	0	3
ECO 252	Prin of Microeconomics	3	0	0	0	3
GEO 111	World Regional Geography	3	0	0	0	3
HIS 111	World Civilizations I	3	0	0	0	3
HIS 112	World Civilizations II	3	0	0	0	3
HIS 131	American History I	3	0	0	0	3
HIS 132	American History II	3	0	0	0	3
POL 120	American Government	3	0	0	0	3

PSY 150	General Psychology	3	0	0	0	3
PSY 237	Social Psychology	3	0	0	0	3
PSY 241	Developmental Psych	3	0	0	0	3
PSY 281	Abnormal Psychology	3	0	0	0	3
SOC 210	Introduction to Sociology	3	0	0	0	3
SOC 213	Sociology of the Family	3	0	0	0	3
SOC 220	Social Problems	3	0	0	0	3
Subtotal						(9)

### Mathematics (Select one course from the following)

MAT 143	Quantitative Literacy	2	2	0	0	3
MAT 152	Statistical Methods I	3	2	0	0	4
MAT 171	Pre-Calculus Algebra	3	2	0	0	4
Subtotal						(3-4)

### Sciences (4 semester hours required. CHM 131 and CHM 131A must be taken together.)

BIO 111	General Biology I	3	3	0	0	4
CHM 131	Introduction to Chemistry	3	0	0	0	3
CHM 131A	Introduction to Chemistry Lab	0	3	0	0	1
CHM 151	General Chemistry I	3	3	0	0	4
PHY 151	College Physics I	3	2	0	0	4
Subtotal						(4)

### Other Required Hours

ACA 115	Success and Study Skills	0	2	0	0	1
Or						
ACA 122	College Transfer Success	0	2	0	0	1
Subtotal						(1)

### Required Art Courses (15 semester hours required)

ART 114	Art History Survey I	3	0	0	0	3
ART 115	Art History Survey II	3	0	0	0	3
ART 121	Two-Dimensional Design	0	6	0	0	3
ART 122	Three-Dimensional Design	0	6	0	0	3
ART 131	Drawing I	0	6	0	0	3
Subtotal						(15)

### Electives (20 semester hours required)

ART 132	Drawing II	0	6	0	0	3
ART 135	Figure Drawing I	0	6	0	0	3
ART 171	Computer Art I	0	6	0	0	3
ART 214	Portfolio and Resume	0	2	0	0	1
ART 231	Printmaking I	0	6	0	0	3
ART 232	Printmaking II	0	6	0	0	3
ART 235	Figure Drawing II	0	6	0	0	3
ART 240	Painting I	0	6	0	0	3
ART 241	Painting II	0	6	0	0	3
ART 264	Digital Photography I	1	4	0	0	3
ART 265	Digital Photography II	1	4	0	0	3
ART 271	Computer Art II	0	6	0	0	3
ART 281	Sculpture I	0	6	0	0	3
ART 282	Sculpture II	0	6	0	0	3
ART 283	Ceramics I	0	6	0	0	3
ART 284	Ceramics II	0	6	0	0	3
FRE 181	French Lab 1	0	2	0	0	1
SPA 181	Spanish Lab 1	0	2	0	0	1
Subtotal						(20)

**Total Semester Credit Hours in Program .....65**

## Transfer Program Associate in Fine Arts – Drama (A1020C)

The Associate in Fine Arts (Drama) degree program is designed for students who plan to transfer to a four-year institution where they will major in the area of performing or teaching fine arts. The program provides general education courses as well as those courses designed for the area of specialization.

This curriculum complies with the standard approved by the State Board of Community Colleges.

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit  
Exp.

### English Composition (6 semester hours required)

ENG 111	Writing and Inquiry	3	0	0	0	3
ENG 112	Writing/Research in the Discipl	3	0	0	0	3
Or						
ENG 114	Prof Research and Reporting	3	0	0	0	3
Subtotal						(6)

### History (3 semester hours required)

HIS 111	World Civilizations I	3	0	0	0	3
HIS 112	World Civilizations II	3	0	0	0	3
Subtotal						(3)

### Literature (3 semester hours required)

ENG 231	American Literature I	3	0	0	0	3
ENG 232	American Literature II	3	0	0	0	3
ENG 233	Major American Writers	3	0	0	0	3
ENG 241	British Literature I	3	0	0	0	3
ENG 242	British Literature II	3	0	0	0	3
ENG 252	Western World Literature II	3	0	0	0	3
ENG 262	World Literature II	3	0	0	0	3
Subtotal						(3)

### Humanities/Fine Arts (3 semester hours required)

ART 111	Art Appreciation	3	0	0	0	3
ART 114	Art History Survey I	3	0	0	0	3
ART 115	Art History Survey II	3	0	0	0	3
ASL 111	Elementary ASL I	3	0	0	0	3
COM 231	Public Speaking	3	0	0	0	3
DRA 111	Theatre Appreciation	3	0	0	0	3
FRE 111	Elementary French I	3	0	0	0	3
HUM 110	Technology and Society	3	0	0	0	3
HUM 160	Introduction to Film	2	2	0	0	3
MUS 110	Music Appreciation	3	0	0	0	3
PHI 210	History of Philosophy	3	0	0	0	3
PHI 230	Introduction to Logic	3	0	0	0	3
PHI 240	Introduction to Ethics	3	0	0	0	3
REL 110	World Religions	3	0	0	0	3
REL 211	Intor to Old Testament	3	0	0	0	3
REL 212	Intro to New Testament	3	0	0	0	3
REL 221	Religion in America	3	0	0	0	3
SPA 111	Elementary Spanish I	3	0	0	0	3
Subtotal						(3)

### Social/Behavioral Science (6 semester hours required. Select two courses from two different discipline areas.)

ANT 210	General Anthropology	3	0	0	0	3
ECO 151	Survey of Economics	3	0	0	0	3
ECO 251	Prin. of Microeconomics	3	0	0	0	3
ECO 252	Prin. of Macroeconomics	3	0	0	0	3
GEO 111	World Regional Geography	3	0	0	0	3

HIS 111	World Civilizations I	3	0	0	0	3
HIS 112	World Civilizations II	3	0	0	0	3
HIS 131	American History I	3	0	0	0	3
HIS 132	American History II	3	0	0	0	3
POL 120	American Government	3	0	0	0	3
PSY 150	General Psychology	3	0	0	0	3
PSY 237	Social Psychology	3	0	0	0	3
PSY 241	Developmental Psych	3	0	0	0	3
PSY 281	Abnormal Psychology	3	0	0	0	3
SOC 210	Introduction to Sociology	3	0	0	0	3
SOC 213	Sociology of the Family	3	0	0	0	3
SOC 220	Social Problems	3	0	0	0	3
Subtotal						(6)

### Mathematics (Select one course from the following)

MAT 143	Quantitative Literacy	2	2	0	0	3
MAT 152	Statistical Methods I	3	2	0	0	4
MAT 171	Pre-Calculus Algebra	3	2	0	0	4
Subtotal						(3-4)

### Sciences (4 semester hours required. BIO 140 and 140A must be taken together. CHM 131 and CHM 131A must be taken together.)

BIO 111	General Biology I	3	3	0	0	4
BIO 140	Environmental Biology	3	0	0	0	3
BIO 140A	Environmental Biology Lab*	0	3	0	0	1
CHM 131	Introduction to Chemistry	3	0	0	0	3
CHM 131A	Introduction to Chemistry Lab*	0	3	0	0	1
CHM 151	General Chemistry I	3	3	0	0	4
Subtotal						(4)

### Other Required Hours

ACA 115	Success and Study Skills	0	2	0	0	1
Or						
ACA 122	College Transfer Success	0	2	0	0	1
Subtotal						(1)

### Required Drama Courses (20 semester hours required)

DRA 120	Voice for Performance	3	0	0	0	3
DRA 130	Acting I	0	6	0	0	3
DRA 131	Acting II	0	6	0	0	3
DRA 140	Stagecraft I	0	6	0	0	3
DRA 145	Stage Make-up	1	2	0	0	2
DRA 170	Play Production I	0	9	0	0	3
DRA 211	Theatre History I	3	0	0	0	3
Or						
DRA 212	Theatre History II	3	0	0	0	3
Subtotal						(20)

### Drama Electives (9 semester hours required)

DRA 112	Literature of the Theatre	3	0	0	0	3
DRA 122	Oral Interpretation	3	0	0	0	3
DRA 128	Children's Theatre	3	0	0	0	3
DRA 141	Stagecraft II	0	6	0	0	3
DRA 171	Play Production II	0	9	0	0	3
DRA 240	Lighting for the Theatre	2	2	0	0	3
DRA 260	Directing	0	6	0	0	3
DRA 270	Play Production III	0	9	0	0	3
DRA 271	Play Production IV	0	9	0	0	3
Subtotal						(9)

Program Electives (6 semester hours required. Take 6 semester credit hours from courses in the BRCC catalog which satisfy the Comprehensive Articulation Agreement as a general education core requirement or as a pre-major and/or elective course requirement.)

Total Semester Credit Hours in Program .....64-65

## Transfer Program

### Associate in Fine Arts – Music (A10200MU)

The Associate in Fine Arts (Music) degree program is designed for students who plan to transfer to a four-year institution where they will major in the area of performing or teaching fine arts. The program provides general education courses as well as those courses designed for the area of specialization.

This curriculum complies with the standard approved by the State Board of Community Colleges.

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit  
Exp.

#### English Composition (6 semester hours required)

ENG 111	Writing and Inquiry	3	0	0	0	3
ENG 112	Writing/Research in the Discipl	3	0	0	0	3
Subtotal						(6)

#### Humanities/Fine Arts (6 semester hours required. Select 6 semester credit hours, one course from each of the following groups.)

##### Literature

ENG 231	American Literature I	3	0	0	0	3
ENG 232	American Literature II	3	0	0	0	3
ENG 233	Major American Writers	3	0	0	0	3
ENG 241	British Literature I	3	0	0	0	3
ENG 242	British Literature II	3	0	0	0	3
ENG 252	Western World Literature II	3	0	0	0	3
ENG 262	World Literature II	3	0	0	0	3

##### Humanities/Fine Arts

ART 111	Art Appreciation	3	0	0	0	3
ART 114	Art History Survey I	3	0	0	0	3
ART 115	Art History Survey II	3	0	0	0	3
ASL 111	Elementary ASL I	3	0	0	0	3
COM 231	Public Speaking	3	0	0	0	3
DRA 111	Theatre Appreciation	3	0	0	0	3
DRA 112	Literature of the Theatre	3	0	0	0	3
DRA 211	Theatre History I	3	0	0	0	3
DRA 212	Theatre History II	3	0	0	0	3
FRE 111	Elementary French I	3	0	0	0	3
FRE 181	French Lab 1*	0	2	0	0	1
HUM 110	Technology and Society	3	0	0	0	3
HUM 160	Introduction to Film	3	0	0	0	3
PHI 210	History of Philosophy	3	0	0	0	3
PHI 230	Introduction to Logic	3	0	0	0	3
PHI 240	Introduction to Ethics	3	0	0	0	3
REL 110	World Religions	3	0	0	0	3
REL 211	Intro to Old Testament	3	0	0	0	3
REL 212	Intro to New Testament	3	0	0	0	3
REL 221	Religion in America	3	0	0	0	3
SPA 111	Elementary Spanish I	3	0	0	0	3
SPA 181	Spanish Lab I*	0	2	0	0	1
Subtotal						(6)

#### Social/Behavioral Sciences (9 semester hours required. Select 9 semester credit hours from three of the following discipline areas. Note: History 111 or 112 is required.)

##### Anthropology

ANT 210	General Anthropology	3	0	0	0	3
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##### Economics

ECO 151	Survey of Economics	3	0	0	0	3
ECO 251	Prin. of Microeconomics	3	0	0	0	3
ECO 252	Prin. of Macroeconomics	3	0	0	0	3

##### Geography

GEO 111	World Regional Geography	3	0	0	0	3
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##### History

HIS 111	World Civilizations I	3	0	0	0	3
HIS 112	World Civilizations II	3	0	0	0	3
HIS 131	American History I	3	0	0	0	3
HIS 132	American History II	3	0	0	0	3

##### Political Science

POL 120	American Government	3	0	0	0	3
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##### Psychology

PSY 150	General Psychology	3	0	0	0	3
PSY 237	Social Psychology	3	0	0	0	3
PSY 241	Developmental Psych	3	0	0	0	3
PSY 281	Abnormal Psychology	3	0	0	0	3

##### Sociology

SOC 210	Introduction to Sociology	3	0	0	0	3
SOC 213	Sociology of the Family	3	0	0	0	3
SOC 220	Social Problems	3	0	0	0	3
Subtotal						(9)

#### Mathematics (Select one course from the following)

MAT 143	Quantitative Literacy	2	2	0	0	3
MAT 152	Statistical Methods I	3	2	0	0	4
MAT 171	Pre-Calculus Algebra	3	2	0	0	4
Subtotal						(3-4)

#### Sciences (4 semester hours required)

BIO 111	General Biology I	3	3	0	0	4
CHM 131	Introduction to Chemistry	3	0	0	0	3
CHM 131A	Introduction to Chemistry Lab*	0	3	0	0	1
CHM 151	General Chemistry I	3	3	0	0	4
PHY 151	College Physics I	3	2	0	0	4
Subtotal						(4)

#### Other Required Hours

ACA 115	Success and Study Skills	0	2	0	0	1
Or						
ACA 122	College Transfer Success	0	2	0	0	1
Subtotal						(1)

#### Required Music Courses (30 semester hours required)

MUS 121	Music Theory I	3	2	0	0	4
MUS 122	Music Theory II	3	2	0	0	4
MUS 141	Ensemble I	0	2	0	0	1
MUS 142	Ensemble II	0	2	0	0	1
MUS 151	Class Music I	0	2	0	0	1
MUS 152	Class Music II	0	2	0	0	1
MUS 161	Applied Music I	1	2	0	0	2
MUS 162	Applied Music II	1	2	0	0	2
MUS 221	Music Theory III	3	2	0	0	4
MUS 222	Music Theory IV	3	2	0	0	4
MUS 241	Ensemble III	0	2	0	0	1
MUS 242	Ensemble IV	0	2	0	0	1
MUS 261	Applied Music III	1	2	0	0	2
MUS 262	Applied Music IV	1	2	0	0	2
Subtotal						(30)

#### Electives (5 semester hours required. Select from the above courses and the electives listed below.)

MUS 110	Music Appreciation	3	0	0	0	3
MUS 251	Class Music III	0	2	0	0	1
MUS 252	Class Music IV	0	2	0	0	1
MUS 271	Music History I	3	0	0	0	3
MUS 272	Music History II	3	0	0	0	3
Subtotal						(5)

Total Semester Credit Hours in Program .....64-65

## Transfer Program Associate in Science (A10400)

The Associate in Science degree shall be granted for a planned program of study consisting of a minimum of 60 semester hours of credit (SHC) of college transfer courses. Within the degree program, the student will have opportunities for the achievement of competence in reading, writing, oral communication, fundamental mathematical skills, and basic computer use. The program is divided into a 34 SHC Universal General Education Transfer Component (UGETC) and a 26 SHC Degree Completion Component. Courses selected should be chosen carefully to match the requirements of the university or college where the student plans to transfer. Other than course sequences governed by pre-requisites, the two components may be completed in any order.

Courses are approved for transfer through the Comprehensive Articulation Agreement (CAA). The CAA enables North Carolina community college graduates of two-year associate in science programs who are admitted to constituent institutions of The University of North Carolina to transfer with junior status. Community college graduates must obtain a grade of "C" or better in each course and an overall GPA of at least 2.0 on a 4.0 scale in order to transfer with a junior status. Courses may also transfer through bilateral agreements between institutions. Course substitutions may invalidate the protections afforded under the Comprehensive Articulation Agreement.

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor. Prerequisites for International Languages may include FRE 110 or SPA 110.

Universal General Education Transfer Component (UGETC)

Class Lab Clinic Work Credit  
Exp.

### English Composition (6 semester hours required)

ENG 111	Writing and Inquiry	3	0	0	0	3
ENG 112	Writing/Research in the Discipl	3	0	0	0	3
	Subtotal					(6)

### Humanities/Fine Arts (6 semester hours required) (Two courses from two different discipline areas must be selected.)

#### Art

ART 111	Art Appreciation	3	0	0	0	3
ART 114	Art History Survey I	3	0	0	0	3
ART 115	Art History Survey II	3	0	0	0	3

#### Communications

COM 231	Public Speaking	3	0	0	0	3
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#### Literature

ENG 231	American Literature I	3	0	0	0	3
ENG 232	American Literature II	3	0	0	0	3
ENG 241	British Literature I	3	0	0	0	3
ENG 242	British Literature II	3	0	0	0	3

#### Music

MUS 110	Music Appreciation	3	0	0	0	3
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#### Philosophy

PHI 240	Introduction to Ethics	3	0	0	0	3
	Subtotal					(6)

### Social/Behavioral Science (6 semester hours required. Two courses from two different areas must be selected.)

#### Economics

ECO 251	Principles of Microeconomics	3	0	0	0	3
ECO 252	Principles of Macroeconomics	3	0	0	0	3

#### History

HIS 111	World Civilizations I	3	0	0	0	3
HIS 112	World Civilizations II	3	0	0	0	3
HIS 131	American History I	3	0	0	0	3
HIS 132	American History II	3	0	0	0	3

#### Political Science

POL 120	American Government	3	0	0	0	3
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#### Psychology

PSY 150	General Psychology	3	0	0	0	3
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#### Sociology

SOC 210	Introduction to Sociology	3	0	0	0	3
	Subtotal					(6)

### Natural Sciences (One course sequence of 8 SHC required from the following.)

BIO 111	General Biology I	3	3	0	0	4
BIO 112	General Biology II	3	3	0	0	4
CHM 151	General Chemistry I	3	3	0	0	4
CHM 152	General Chemistry II	3	3	0	0	4
PHY 151	College Physics I	3	2	0	0	4
PHY 152	College Physics II	3	2	0	0	4
PHY 251	General Physics I	3	3	0	0	4
PHY 252	General Physics II	3	3	0	0	4
	Subtotal					(8)

### Mathematics (Select two courses from the following.)

MAT 171	Pre-Calculus Algebra	3	2	0	0	4
MAT 172	Pre-Calculus Trigonometry	3	2	0	0	4
MAT 271	Calculus I	3	2	0	0	4
	Subtotal					(8)

### Degree Completion Component Required Courses

All AS students are required to take the following course. Course should preferably be taken the first semester, but no later than the second semester.

ACA 122	College Transfer Success	0	2	0	0	1
	Subtotal					(1)

### General Education Courses

Students must select 11 SHC of additional general education courses from the Universal General Education Transfer Component above and/or the following General Education Courses. A minimum of 45 SHC of UGETC and General Education Courses must be taken. These courses should be carefully selected in consultation with advisors at the University where the student plans to transfer. Courses marked with an asterisk (\*) have a corresponding lab which must be taken at the same time.

ANT 210	General Anthropology	3	0	0	0	3
ASL 111	Elementary ASL I	3	0	0	0	3
ASL 112	Elementary ASL II	3	0	0	0	3
ASL 211	Intermediate ASL I	3	0	0	0	3
ASL 212	Intermediate ASL II	3	0	0	0	3
AST 111	Descriptive Astronomy	3	0	0	0	3
AST 111A	Descriptive Astronomy Lab	0	2	0	0	1
BIO 120	Introductory Botany	3	3	0	0	4
BIO 130	Introductory Zoology	3	3	0	0	4
BIO 140	Environmental Biology*	3	0	0	0	3
BIO 140A	Environmental Biology Lab	0	3	0	0	1
CHM 131	Introduction to Chemistry*	3	0	0	0	3
CHM 131A	Intro. to Chemistry Lab	0	3	0	0	1
CHM 132	Organic and Biochemistry	3	3	0	0	4
CIS 110	Introduction to Computers	2	2	0	0	3
CIS 115	Intro to Prog & Logic	2	3	0	0	3

COM 120	Intro Interpersonal Com	3	0	0	0	3
COM 140	Intro Intercultural Com	3	0	0	0	3
DRA 111	Theatre Appreciation	3	0	0	0	3
DRA 112	Literature of the Theatre	3	0	0	0	3
DRA 211	Theatre History I	3	0	0	0	3
DRA 212	Theatre History II	3	0	0	0	3
ECO 151	Survey of Economics	3	0	0	0	3
ENG 233	Major American Writers	3	0	0	0	3
ENG 241	British Literature I	3	0	0	0	3
ENG 242	British Literature II	3	0	0	0	3
ENG 252	Western World Literature	3	0	0	0	3
ENG 262	World Literature II	3	0	0	0	3
FRE 111	Elementary French I*	3	0	0	0	3
FRE 112	Elementary French II*	3	0	0	0	3
FRE 211	Intermediate French I*	3	0	0	0	3
FRE 212	Intermediate French II*	3	0	0	0	3
GEO 111	World Regional Geography	3	0	0	0	3
HUM 110	Technology and Society	3	0	0	0	3
HUM 160	Introduction to Film	3	0	0	0	3
MAT 143	Quantitative Literacy	2	2	0	0	3
MAT 152	Statistical Methods I	3	2	0	0	4
MAT 272	Calculus II	3	2	0	0	4
MAT 273	Calculus III	3	2	0	0	4
PHI 210	History of Philosophy	3	0	0	0	3
PHI 230	Introduction to Logic	3	0	0	0	3
PSY 237	Social Psychology	3	0	0	0	3
PSY 241	Developmental Psychology	3	0	0	0	3
PSY 281	Abnormal Psychology	3	0	0	0	3
REL 110	World Religions	3	0	0	0	3
REL 211	Intro to Old Testament	3	0	0	0	3
REL 212	Intro to New Testament	3	0	0	0	3
REL 221	Religion in America	3	0	0	0	3
SOC 213	Sociology of the Family	3	0	0	0	3
SOC 220	Social Problems	3	0	0	0	3
SPA 111	Elementary Spanish I*	3	0	0	0	3
SPA 112	Elementary Spanish II*	3	0	0	0	3
SPA 211	Intermediate Spanish I*	3	0	0	0	3
SPA 212	Intermediate Spanish II*	3	0	0	0	3
Subtotal						(11)

**Electives**

Select 14 SHC from the above courses and/or the Electives listed below. In choosing elective courses: 2 semester hours are recommended for Health and PE. CIS 110, listed under the General Education Courses above, is also recommended. Students must meet the receiving university's foreign language and/or health and physical education requirements, if applicable, prior to or after transfer to the senior institution

ACC 120	Principles of Financial Acc	3	2	0	0	4
ACC 121	Principles of Managerial Acc	3	2	0	0	4
ART 121	Two-Dimensional Design	0	6	0	0	3
ART 122	Three-Dimensional Design	0	6	0	0	3
ART 131	Drawing I	0	6	0	0	3
ART 132	Drawing II	0	6	0	0	3
ART 171	Computer Art I	0	6	0	0	3
ART 231	Printmaking I	0	6	0	0	3
ART 232	Printmaking II	0	6	0	0	3
ART 240	Painting I	0	6	0	0	3
ART 241	Painting II	0	6	0	0	3
ART 264	Digital Photography I	1	4	0	0	3
ART 265	Digital Photography II	1	4	0	0	3
ART 266	Videography I	0	6	0	0	3
ART 267	Videography II	0	6	0	0	3
ART 271	Computer Art II	0	6	0	0	3
ART 281	Sculpture I	0	6	0	0	3
ART 282	Sculpture II	0	6	0	0	3
ART 283	Ceramics I	0	6	0	0	3
ART 284	Ceramics II	0	6	0	0	3
BIO 145	Ecology	3	3	0	0	4
BIO 163	Basic Anat & Physiology	4	2	0	0	5
BIO 165	Anatomy and Physiology I	3	3	0	0	4
BIO 166	Anatomy and Physiology II	3	3	0	0	4
BIO 175	General Microbiology	2	2	0	0	3
BIO 242	Natural Resource Conservation	3	0	0	0	3
BUS 110	Introduction to Business	3	0	0	0	3
BUS 115	Business Law I	3	0	0	0	3

BUS 137	Principles of Management	3	0	0	0	3
BUS 228	Business Statistics	2	2	0	0	3
CHM 251	Organic Chemistry I	3	3	0	0	4
CHM 252	Organic Chemistry II	3	3	0	0	4
CJC 111	Intro to Criminal Justice	3	0	0	0	3
CJC 121	Law Enforcement Operations	3	0	0	0	3
CJC 141	Corrections	3	0	0	0	3
COM 160	Small Group Communication	3	0	0	0	3
CSC 134	C++ Programming	2	3	0	0	3
CSC 151	JAVA Programming	2	3	0	0	3
CTS 115	Info Sys Business Concepts	3	0	0	0	3
DFT 170	Engineering Graphics	2	2	0	0	3
DRA 120	Voice for Performance	3	0	0	0	3
DRA 124	Readers Theatre	3	0	0	0	3
DRA 130	Acting I	0	6	0	0	3
DRA 131	Acting II	0	6	0	0	3
DRA 140	Stagecraft I	0	6	0	0	3
DRA 141	Stagecraft II	0	6	0	0	3
DRA 145	Stage Make-up	1	2	0	0	2
DRA 170	Play Production I	0	9	0	0	3
DRA 171	Play Production II	0	9	0	0	3
DRA 270	Play Production III	0	9	0	0	3
DRA 271	Play Production IV	0	9	0	0	3
EGR 150	Intro to Engineering	1	2	0	0	2
ENG 125	Creative Writing I	3	0	0	0	3
ENG 272	Southern Literature	3	0	0	0	3
FRE 141	Culture and Civilization	3	0	0	0	3
FRE 151	Francophone Literature	3	0	0	0	3
FRE 181	French Lab 1*	0	2	0	0	1
FRE 182	French Lab 2*	0	2	0	0	1
FRE 281	French Lab 3*	0	2	0	0	1
FRE 282	French Lab 4*	0	2	0	0	1
GIS 111	Introduction to GIS	2	2	0	0	3
HIS 231	Recent American History	3	0	0	0	3
HIS 236	North Carolina History	3	0	0	0	3
HUM 123	Appalachian Culture	3	0	0	0	3
MAT 285	Differential Equations	2	2	0	0	3
MUS 121	Music Theory I	3	2	0	0	4
MUS 122	Music Theory II	3	2	0	0	4
MUS 151	Class Music I	0	2	0	0	1
MUS 152	Class Music II	0	2	0	0	1
MUS 251	Class Music III	0	2	0	0	1
MUS 252	Class Music IV	0	2	0	0	1
PED 110	Fit and Well for Life	1	2	0	0	2
PED 111	Physical Fitness I	0	3	0	0	1
PED 117	Weight Training I	0	3	0	0	1
PED 118	Weight Training II	0	3	0	0	1
PED 119	Circuit Training	0	3	0	0	1
PED 120	Walking for Fitness	0	3	0	0	1
PED 121	Walk, Jog, Run	0	3	0	0	1
PED 122	Yoga I	0	2	0	0	1
PED 123	Yoga II	0	2	0	0	1
PED 137	Badminton	0	2	0	0	1
PED 139	Bowling-Beginning	0	2	0	0	1
PED 143	Volleyball-Beginning	0	2	0	0	1
PED 186	Dancing for Fitness	0	2	0	0	1
PED 217	Pilates I	0	2	0	0	1
PED 218	Pilates II	0	2	0	0	1
PHS 130	Earth Science	3	2	0	0	4
POL 130	State and Local Government	3	0	0	0	3
PSY 231	Forensic Psychology	3	0	0	0	3
PSY 271	Sports Psychology	3	0	0	0	3
SPA 141	Culture and Civilization	3	0	0	0	3
SPA 161	Cultural Immersion	2	3	0	0	3
SPA 181	Spanish Lab 1*	0	2	0	0	1
SPA 182	Spanish Lab 2*	0	2	0	0	1
SPA 221	Spanish Conversation	3	0	0	0	3
SPA 231	Reading and Composition	3	0	0	0	3
SPA 281	Spanish Lab 3*	0	2	0	0	1
SPA 282	Spanish Lab 4*	0	2	0	0	1
Subtotal						(14)

\*Denotes a corequisite, course cannot be taken by itself.

**Total Semester Credit Hours in Program .....60**

## Articulated Transfer Program – Accounting Program (A25100WC) Pathway to Western Carolina University

This program is an articulated program with Western Carolina University. Students who plan to attend the accounting program at Western Carolina University should be enrolled in the Accounting Associates Degree program at Blue Ridge Community College (see page 47). Students must complete each course within the Accounting Degree with a grade of “C” or better for the course to transfer.

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit  
Exp.

### Fall Semester

ACA 115	Success and Study Skills	0	2	0	0	1
ACC 120	Prin of Financial Accounting	3	2	0	0	4
BUS 110	Introduction to Business	3	0	0	0	3
CIS 110	Introduction to Computers	2	2	0	0	3
MAT 152	Statistical Methods I	3	2	0	0	4
	Subtotal					(15)

### Spring Semester

ACC 122	Prin of Financial Acct II	3	0	0	0	3
ACC 140	Payroll Accounting	1	2	0	0	2
BUS 280	REAL Small Business	4	0	0	0	4
ECO 251	Principles of Microeconomics	3	0	0	0	3
ENG 111	Writing & Inquiry	3	0	0	0	3
	Subtotal					(15)

### Summer Term

CTS 130	Spreadsheet	2	2	0	0	3
ENG 114	Prof. Research and Reporting	3	0	0	0	3
	Humanities Elective**					3
	Subtotal					(9)

### Fall Semester

ACC 121	Prin of Managerial Accounting	3	2	0	0	4
ACC 129	Individual Income Taxes	2	2	0	0	3
ACC 220	Intermediate Accounting I	3	2	0	0	4
BUS 115	Business Law I	3	0	0	0	3
MKT 120	Principles of Marketing	3	0	0	0	3
	Subtotal					(17)

### Spring Semester

ACC 150	Accounting Software Applications <sup>1</sup>	2	0	0	0	2
ACC 227	Practices in Accounting	3	0	0	0	3
BUS 225	Business Finance	2	2	0	0	3
WBL 111	Work-Based Learning I	0	0	0	10	1
ECO 252	Principles of Macroeconomics	3	0	0	0	3
	Subtotal					(12)

\*\*Humanities Elective must satisfy WCU's P3, P4, P5, or P6 requirement. These can be found at [wcu.edu/24847.asp](http://wcu.edu/24847.asp)

**Total Semester Credit Hours in Program .....68**

**Articulated Transfer Program  
Criminal Justice Program (A55180MH)  
Pathway to Mars Hill  
Bachelor of Science**

This articulation agreement between Blue Ridge Community College (BRCC) Criminal Justice Technology Program and Criminal Justice and Mars Hill University (MHU) provides for transfer from the Criminal Justice program at BRCC to the B.S. in Criminal Justice at MHU. As per the guidelines established by the Independent Comprehensive Articulation Agreement (ICAA) between signatory institutions of the North Carolina Independent Colleges and Universities (NCICU), if students at BRCC complete the established 44-hour general education core or graduate with an AA or AS degree, and have a GPA of at least 2.00 on a 4.00 scale, they will transfer into MHU having met all general education requirements. Students not completing the general education core at BRCC must complete those requirements at MHU as outlined in the 2013 fall catalog. If 28 or more hours are transferred to MHU the first semester, First Year Seminar I is not required at MHU. Students must take a minimum of 60 hours at a senior college and a minimum of 32 hours at Mars Hill.

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

\*\*Humanities Electives: choose from ART 111 or DRA 111

\*\*Social Behavior Science Electives: choose from HIS 111, 112, 131, 132

\*\*Foreign Language Elective: choose from FRE 111 & 181 or SPA 111 & 181

\* Course Elective credits should be selected from the ASL, BIO, BUS, CCT, CET, CIS, CJC, COM, CSC, CTS, DBA, ECO, EDU, EPT, HEA, HIS, NET, OST, PED, POL, PSY, or SOC

Class Lab Clinic Work Credit  
Exp.

**Fall Semester-YEAR 1**

ACA 115	Success & Study Skills	0	2	0	0	1
CIS 110	Intro to Computers	2	2	0	0	3
CJC 111	Intro to Criminal Justice	3	0	0	0	3
CJC 231	Constitutional Law	3	0	0	0	3
ENG 111	Writing and Inquiry	3	0	0	0	3
	Subtotal					(13)

**Spring Semester-YEAR 1**

CJC 112	Criminology	3	0	0	0	3
CJC 131	Criminal Law	3	0	0	0	3
ENG 112	Writing/Research in the Discipl	3	0	0	0	3
	Or					
ENG 114	Prof Research & Reporting	3	0	0	0	3
MAT 143	Quantitative Literacy	3	0	0	0	3
	Course Elective*					3
	Subtotal					(15)

**Summer Term-YEAR 1**

PSY 150	General Psychology	3	0	0	0	3
	Humanities Elective**					3
	Social Behavior Science **					3
	Subtotal					(9)

**Fall Semester-YEAR 2**

CJC 113	Juvenile Justice	3	0	0	0	3
CJC 132	Court Procedure & Evidence	3	0	0	0	3
CJC 221	Investigative Principles	3	2	0	0	4
GEO 111	World Regional Geography	3	0	0	0	3
	Foreign Language Elective **					4
	Subtotal					(17)

**Spring Semester-YEAR 2**

CJC 121	Law Enforcement Operations	3	0	0	0	3
CJC 141	Corrections	3	0	0	0	3
CJC 212	Ethics & Comm. Relations	3	0	0	0	3
BIO 140	Environmental Biology	3	0	0	0	3
BIO 140A	Environmental Biology Lab	0	3	0	0	1
	Subtotal					(13)

## Articulated Transfer Program – School-Age Education (Arts Track)

### Articulation agreement with Mars Hill University Teacher Education Programs

This program is an articulated program with Mars Hill University. Students must complete each course within the program with a grade of "C" or better for the course to transfer. Students who graduate from the program must complete an electronic portfolio in TaskStream [www.taskstream.com](http://www.taskstream.com) to show competence in the National Association for the Education of Young Children (NAEYC) standards. Students transferring from BRCC must notify Dr. Susan Stigall at [sstigall@mhu.edu](mailto:sstigall@mhu.edu) for TaskStream training, in order to complete their Teacher Education Portfolio. Students must earn acceptable scores on PRAXIS I before enrolling in Mars Hill Teacher Education Programs. Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Learning Center Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit  
Exp.

#### Fall Semester

ACA 115	Success and Study Skills	0	2	0	0	1
	Or					
ACA 122	College Transfer Success	0	2	0	0	1
EDU 144	Child Development I	3	0	0	0	3
EDU 163	Classroom Mgt and Instruct	3	0	0	0	3
EDU 173	Becoming a Prof'l in ECE	3	0	0	0	3
ENG 111	Writing and Inquiry	3	0	0	0	3
	Foreign Language (either ASL, FRE, SPA)					3
	Subtotal					(16)

#### Spring Semester

ENG 112	Writing/Research in the Discipl	3	0	0	0	3
EDU 131	Child, Family and Community	3	0	0	0	3
EDU 145	Child Development II	3	0	0	0	3
PSY 150	General Psychology	3	0	0	0	3
	Foreign Language (either ASL, FRE, SPA)					3
	Subtotal					(18)

#### Summer Term

MAT 143	Quantitative Literacy	2	2	0	0	3
	Select one from:					
	ART 111, PHI 240, MUS 110					3
	Subtotal					(6)

#### Fall Semester

EDU 216	Foundations of Education	4	0	0	0	4
EDU 221	Children with Exceptionalities	3	0	0	0	3
CIS 110	Introduction to Computers	2	2	0	0	3
	Science Elective**					4
	Select one from:					
	HIS 111, HIS 112					3
	Subtotal					(17)

#### Spring Semester

EDU 271	Educational Technology	3	0	0	0	3
EDU 285	Internship Exp-School-Age	1	9	0	0	4
EDU 289	Adv Issues/School Age	2	0	0	0	2
ENG 241	British Literature I	3	0	0	0	3
	Social/Behavioral Science Elective**					3
	Subtotal					(15)

#### \*\* Choose from the courses below

##### Social/Behavior Sciences Note: HIS 111 or HIS 112 is required.

GEO 111	World Regional Geography	3	0	0	0	3
	(Middle Grades Social Studies concentration)					
HIS 111	World Civilizations I	3	0	0	0	3
	(Middle Grades Social Studies concentration)					
HIS 112	World Civilizations II	3	0	0	0	3
	(Middle Grades Social Studies concentration)					
HIS 131	American History I	3	0	0	0	3
	(Middle Grades Social Studies concentration)					
HIS 132	American History II	3	0	0	0	3
	(Middle Grades Social Studies concentration)					
POL 120	American Government	3	0	0	0	3
	(Middle Grades Social Studies concentration)					
SOC 210	Introduction to Sociology	3	0	0	0	3
	(Middle Grades Social Studies concentration)					

##### Natural/ Physical Science

Select one course, including accompanying laboratory work, from the biological or physical science disciplines.

BIO 111	General Biology I	3	3	0	0	4
BIO 112	General Biology II	3	3	0	0	4
BIO 140	Environmental Biology	3	0	0	0	4
	(Middle Grades Science concentration)					
BIO 140A	Environmental Biology Lab*	0	3	0	0	4
	(Middle Grades Science concentration)					
CHM 151	General Chemistry I	3	3	0	0	4
	(Middle Grades Science concentration)					
CHM 152	General Chemistry II	3	3	0	0	4
PHY 151	College Physics I	3	2	0	0	4
	(Middle Grades Science concentration)					
PHY 152	College Physics II	3	2	0	0	4

##### Bridge Course for Elementary Education, Special Education, and Integrated Education Concentration

EDU 151	Creative Activities	3	0	0	0	3
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##### Bridge Courses for Middle Grades Concentration

HIS 236	North Carolina History	3	0	0	0	3
MAT 152	Statistical Methods	3	2	0	0	4
	(Math concentration)					
MAT 271	Calculus I	3	2	0	0	4
POL 130	State and Local Government	3	0	0	0	3
	(Social Studies concentration)					

##### Bridge Courses for ESL Concentration

One more semester of the same Foreign Language-Choose from:

ASL 111/181
ASL 112/182
ASL 211/281
FRE 111/181
FRE 112/182
SPA 111/181
SPA 112/182
SPA 211
SPA 212

## Articulated Transfer Program – School-Age Education (Science track) Articulation agreement with Mars Hill College Teacher Education Programs:

This program is an articulated program with Mars Hill University. Students must complete each course within the program with a grade of “C” or better for the course to transfer. Students who graduate from the program must complete an electronic portfolio in TaskStream [www.taskstream.com](http://www.taskstream.com) to show competence in the National Association for the Education of Young Children (NAEYC) standards. Students transferring from BRCC must notify Dr. Susan Stigall at [ssigall@mhu.edu](mailto:ssigall@mhu.edu) for TaskStream training, in order to complete their Teacher Education Portfolio. Students must earn acceptable scores on PRAXIS I before enrolling in Mars Hill Teacher Education Programs. Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Learning Center Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class	Lab	Clinic	Work	Credit	Exp.
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### Fall Semester

ACA 115	Success and Study Skills	0	2	0	0	1
Or						
ACA 122	College Transfer Success	0	2	0	0	1
EDU 144	Child Development I	3	0	0	0	3
EDU 173	Becoming a Prof'l in ECE	3	0	0	0	3
ENG 111	Writing and Inquiry	3	0	0	0	3
	Foreign Language (either ASL, FRE, SPA)					3
	Math Elective**					3
	Subtotal					(17)

### Spring Semester

ENG 112	Writing/Research in the Discipl	3	0	0	0	3
EDU 131	Child, Family and Community	3	0	0	0	3
EDU 145	Child Development II	3	0	0	0	3
EDU 271	Educational Technology	3	0	0	0	3
	Foreign Language (either ASL, FRE, SPA)					3
	Subtotal					(15)

### Summer Term

Math Elective**	3-4
Or	
Select one from:	
ART 111, DRA 111, HUM 211, MUS 110	3
Social/Behavioral Science Elective**	3
Subtotal	(9-10)

### Fall Semester

EDU 163	Classroom Mgt and Instruct	3	0	0	0	3
EDU 216	Foundations of Education	4	0	0	0	4
EDU 221	Child with Exceptionalities	3	0	0	0	3
	Natural/Physical Science Elective**					4
	Subtotal					(14)

### Spring Semester

EDU 285	Internship Exp-School-Age	1	9	0	0	4
EDU 289	Adv Issues/School Age	2	0	0	0	2
	Social/Behavioral Science Elective**					3
	Science Elective**					4
	Subtotal					(13)

## \*\* Choose from the courses below

### Social/Behavior Sciences Note: HIS 111 or HIS 112 is required

GEO 111	World Regional Geography	3	0	0	0	3
	(Middle Grades Social Studies concentration)					
HIS 111	World Civilizations I	3	0	0	0	3
	(Middle Grades Social Studies concentration)					
HIS 112	World Civilizations II	3	0	0	0	3
	(Middle Grades Social Studies concentration)					
HIS 131	American History I	3	0	0	0	3
	(Middle Grades Social Studies concentration)					
HIS 132	American History II	3	0	0	0	3
	(Middle Grades Social Studies concentration)					
POL 120	American Government	3	0	0	0	3
SOC 210	Introduction to Sociology	3	0	0	0	3
	(Middle Grades Social Studies concentration)					

### Math

MAT 143	Quantitative Literacy	2	2	0	0	3
	(Middle Grades Math concentration)					
MAT 152	Statistical Methods I	3	2	0	0	4
	(Middle Grades Math concentration)					
MAT 171	Precalculus Algebra	3	2	0	0	4
MAT 172	Precalculus Trigonometry	3	2	0	0	4
MAT 271	Calculus I	3	2	0	0	4
	(Middle Grades Math concentration)					

### Natural/ Physical Science

Select a two-course sequence, including accompanying Laboratory work, from the biological or physical science disciplines.

BIO 111	General Biology I	3	3	0	0	4
BIO 112	General Biology II	3	3	0	0	4
BIO 140	Environmental Biology	3	0	0	0	4
BIO 140A	Environmental Biology Lab*	0	3	0	0	4
CHM 151	General Chemistry I	3	3	0	0	4
CHM 152	General Chemistry II	3	3	0	0	4
PHY 151	College Physics I	3	2	0	0	4
PHY 152	College Physics II	3	2	0	0	4

### Bridge Course for Elementary Education, Special Education, and Integrated Education Concentration

EDU 151	Creative Activities	3	0	0	0	3
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### Bridge Courses for Middle Grades Concentration

HIS 236	North Carolina History	3	0	0	0	3
POL 130	State and Local Government	3	0	0	0	

### 3 (Social Studies concentration)

PSY 150	General Psychology	3	0	0	0	3
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### Bridge Courses for ESL Concentration

One more semester of the same Foreign Language-Choose from:

ASL 111/181
ASL 112/182
ASL 211/281
FRE 111/181
FRE 112/182
SPA 111/181
SPA 112/182
SPA 211
SPA 212

## Articulated Transfer Program – Fermentation Science (A10400AFS) Associate in Science Pathway to Appalachian State University Fermentation Science

Appalachian State University (ASU) and Blue Ridge Community College (BRCC) have agreed to partner in an effort to outline a specific pathway for students to obtain an Associate in Science Degree that also meets the first two years of coursework requirements for the BS degree in Fermentation Science from Appalachian State University. Students must complete the Associate in Science degree from BRCC, apply to graduate, and have the Associate in Science degree posted on their official transcript. ASU will guarantee space availability for two BRCC students until March 1st prior to Fall Semester enrollment. After that time, spaces will be released to the general student population. The Dean of Arts and Sciences at BRCC will make student recommendations to the Director of the Office of Transfer Articulation and the Program Coordinator of Fermentation Science. BRCC students must apply for admission and be admitted to Appalachian State University to articulate appropriate course credit. Students are recommended to have a complete application for admission to the university by December 1st prior to the start of the intended fall term. Upon acceptance to ASU, the recommended BRCC students can complete a major declaration for the Fermentation Sciences program. The ASU Fermentation Science course sequencing begins Fall Semester of each academic year.

The courses listed are required in order to be considered for one of the two BRCC positions. The courses listed will satisfy Blue Ridge Community College requirements for the Associate in Science degree. Other courses may be used to complete the Associate in Science degree but may not meet the requirements for application to the Fermentation Science program at ASU.

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

For more detailed information about the Fermentation Science pathway, contact the Dean for Arts and Sciences, the College Transfer Coordinator in the Student Services Department, or on the Web at [northcarolina.edu/aa/articulation/index.htm](http://northcarolina.edu/aa/articulation/index.htm).

Class Lab Clinic Work Credit  
Exp.

### Required Courses

ACA	122	College Transfer Success	0	2	0	0	1
ACC	120	Prin. of Financial Acct.	3	2	0	0	4
BIO	111	General Biology I	3	3	0	0	4
BIO	112	General Biology II	3	3	0	0	4
BUS	110	Introduction to Business	3	0	0	0	3
COM	231	Public Speaking	3	0	0	0	3
CHM	151	General Chemistry I	3	3	0	0	4
CHM	152	General Chemistry II	3	3	0	0	4
ECO	251	Principles of Microeconomics	3	0	0	0	3
ENG	111	Writing and Inquiry	3	0	0	0	3
ENG	112	Writing/Research in the Discipl	3	0	0	0	3
HIS	112	World Civilizations II	3	0	0	0	3
MAT	152	Statistical Methods I	3	2	0	0	4
MAT	171	Pre-Calculus Algebra	3	2	0	0	4
MAT	172	Pre-Calculus Trigonometry	3	2	0	0	4
MAT	271	Calculus I	3	2	0	0	4
		Literature*					3
		Additional Electives					3

\* Literature options – ENG 231, 232,

**Total Semester Credit Hours in Program .....61**

**Regionally Increasing Baccalaureate Nurses (RIBN) Program Cooperative Program with Western Carolina University**

**Associate in Applied Science Degree (BRCC) – Bachelor of Science in Nursing Degree (WCU)**

The RIBN curriculum comprises four years in nursing studies. Students graduate with both an Associate in Applied Science Degree in Nursing from Blue Ridge Community College and a bachelor's degree in Nursing from Western Carolina University. Students enroll in both WCU and BRCC for the first three years of the program, and at WCU for the final year. Students are eligible to apply to take the National Council Examination (NCLEX-RN) after three years at BRCC.

This curriculum complies with the standard approved by the State Board of Community Colleges.

Special admission procedures for the RIBN program are outlined on page 10. Contact Student Services on either campus for additional information.

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

Class Lab Clinic Work Credit Exp.

**Fall Semester – Year 1**

ACA 115	Success and Study Skills	0	2	0	0	1
BIO 165	Anatomy and Physiology I	3	3	0	0	4
CHM 151	General Chemistry I	3	3	0	0	4
MAT 171	Precalculus Algebra	3	2	0	0	4
	Liberal Arts (WCU)					3
	Subtotal					(16)

**Spring Semester – Year 1**

BIO 166	Anatomy and Physiology II	3	3	0	0	4
CHM 132	Organic and Biochemistry	3	3	0	0	4
CIS 110	Introduction to Computers	2	2	0	0	3
ENG 111	Writing and Inquiry	3	0	0	0	3
	Liberal Arts (WCU)					3
	Subtotal					(17)

**Fall Semester – Year 2**

NUR 111	Intro to Health Concepts	4	6	6	0	8
PED 110	Fit and Well for Life	1	2	0	0	2
PSY 241	Developmental Psychology	3	0	0	0	3
	Liberal Arts (WCU)					3
	Subtotal					(16)

**Spring Semester – Year 2**

BIO 175	General Microbiology	2	2	0	0	3
NUR 112	Health Illness Concepts	3	0	6	0	5
NUR 211	Health Care Concepts	3	0	6	0	5
	Liberal Arts (WCU)					3
	Subtotal					(16)

**Summer Term – Year 2**

NSG 346	(WCU)					3
NUR 114	Holistic Health Concepts	3	0	6	0	5
	Subtotal					(8)

**Fall Semester – Year 3**

ENG 114	Profes Research and Reporting	3	0	0	0	3
NUR 113	Family Health Concepts	3	0	6	0	5
NUR 212	Health System Concepts	3	0	6	0	5
	Liberal Arts (WCU)					3
	Subtotal					(16)

**Spring Semester – Year 3**

COM 231	Public Speaking	3	0	0	0	3
NUR 213	Complex Health Concepts	4	3	15	0	10
	Liberal Arts (WCU)					3
	Subtotal					(16)

Remainder of credit hours will be completed at Western Carolina University (Online and at Biltmore Park campus)

**Total Semester Credit Hours in Program ..... 129**

## Articulated Transfer Program – Pharmacy (A10400WP)

### Associate in Science Pathway to Wingate University School of Pharmacy

The Wingate University School of Pharmacy and Blue Ridge Community College have agreed to partner in an effort to outline a specific pathway for students to obtain an Associate in Science Degree that also meets the prerequisite coursework requirements for application to the Wingate University School of Pharmacy. Completion of the Associate in Science degree or the listed courses does not guarantee admission to Wingate University School of Pharmacy. Acceptance into Wingate University School of Pharmacy is competitive based grades from individual courses listed below, the pharmacy school assessment test (PCAT) scores, and a personal interview.

The Wingate School of Pharmacy recognizes online courses as long as labs are completed in a seated classroom section. COM 231 may not be taken online.

The courses listed are required in order to apply for admission to Wingate University School of Pharmacy. The courses listed will satisfy Blue Ridge Community College requirements for the Associate in Science degree. Other courses may be used to complete the Associate in Science degree but may not meet the requirements for application to Wingate University School of Pharmacy. All pharmacy prerequisites must be completed by the end of Spring Semester of the year in which pharmacy school enrollment is requested. Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

For more detailed information about the Pharmacy pathway, contact the Dean for Arts and Sciences, the College Transfer Coordinator in the Student Services Department, or on the Web at [northcarolina.edu/aa/articulation/index.htm](http://northcarolina.edu/aa/articulation/index.htm)

Class Lab Clinic Work Credit  
Exp.

#### Required Courses

Course	Class	Lab	Clinic	Work	Credit
ACA 122	College Transfer success	1	0	0	1
BIO 111	General Biology I	3	3	0	4
BIO 163	Basic Anat and Phys	4	2	0	5
Or					
BIO 165	Anatomy and Physiology I	3	3	0	4
And					
BIO 166	Anatomy and Physiology II	3	3	0	4
BIO 175	General Microbiology	2	2	0	3
CHM 151	General Chemistry I	3	3	0	4
CHM 152	General Chemistry II	3	3	0	4
CHM 251	Organic Chemistry I	3	3	0	4
CHM 252	Organic Chemistry II	3	3	0	4
COM 231	Public Speaking	3	0	0	3
ENG 111	Writing and Inquiry	3	0	0	3
ENG 112	Writing/Research in the Discipl	3	0	0	3
HIS 112	World Civilizations II	3	0	0	3
MAT 152	Statistical Methods I	3	2	0	4
MAT 171	Pre-Calculus Algebra	3	2	0	4
MAT 172	Pre-Calculus Trigonometry	3	2	0	4
MAT 271	Calculus I	3	2	0	4
PHY 151	College Physics I	3	2	0	4
Or					
PHY 251	General Physics I	3	3	0	4
	Literature**				3
	Social/Behavioral Sciences**				3

\*\* Literature options – ENG 231, 232,

\*\*Social/Behavioral Sciences options –SOC 210, ECO 251, ECO 252

**Total Semester Credit Hours to be taken at BRCC.....67-70**

## Welding Technology (A50420) Associate in Applied Science Degree

The Welding Technology curriculum provides students with a sound understanding of the science, technology, and applications essential for successful employment in the welding and metalworking industry. Instruction includes consumable and non-consumable electrode welding and cutting processes. Courses may include math, print reading, metallurgy, welding inspection, and destructive and non-destructive testing providing the student with industry-standard skills developed through classroom training and practical application. Graduate of the Welding Technology curriculum may be employed as entry-level technicians in welding and metalworking industries. Career opportunities also exist in construction, manufacturing, fabrication, sales, quality control, supervision, and welding-related self-employment.

This curriculum complies with the standard approved by the State Board of Community Colleges.

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

			Class	Lab	Clinic	Work	Credit	
						Exp.		

### Fall Semester

ACA 115	Success and Study Skills	0	2	0	0	1	
WLD 110	Cutting Processes	1	3	0	0	2	
WLD 112	Basic Welding Processes	1	3	0	0	2	
WLD 115	SMAW (Stick) Plate	2	9	0	0	5	
WLD 141	Symbols and Specifications	2	2	0	0	3	
	Subtotal						(13)

### Spring Semester

ENG 111	Writing and Inquiry	3	0	0	0	3	
WLD 116	SMAW (stick) Plate/Pipe	1	9	0	0	4	
WLD 121	GMAW (MIG) FCAW/Plate	2	6	0	0	4	
WLD 131	GTAW (TIG) Plate	2	6	0	0	4	
	Humanities Elective**					3	
	Subtotal						(18)

### Summer Term

MAT 110	Math Measurement & Literacy	2	2	0	0	3	
WLD 265	Automated Welding/Cutting	2	6	0	0	4	
	Major Course Elective***					3	
	Subtotal						(10)

### Fall Semester

ENG 114	Prof Research and Reporting	3	0	0	0	3	
WLD 117	Industrial SMAW	1	4	0	0	3	
WLD 132	GTAW (TIG) Plate/Pipe	1	6	0	0	3	
WLD 212	Inert Gas Welding	1	3	0	0	2	
WLD 215	SMAW (Stick) Pipe	1	9	0	0	4	
	Subtotal						(15)

### Spring Semester

WLD 231	GTAW (TIG) Pipe	1	6	0	0	3	
WLD 261	Certification Practices	1	3	0	0	2	
WLD 262	Inspection & Testing	2	2	0	0	3	
	Major Course Elective***					3	
	Social Science Elective**					3	
	Subtotal						(14)

\*\*Humanities Electives and/or Social/Behavioral Science Electives are to be selected from the courses listed on page 46.

\*\*\*Major Course Electives are to be selected from the following:

DFT 151	CAD I	2	3	0	0	3	
MAC 141	Machining Applications I	2	6	0	0	4	
WBL 111	Work-Based Learning I	0	0	0	10	1	
WBL 121	Work-Based Learning II	0	0	0	10	1	
WLD 151	Fabrication I	2	6	0	0	4	
WLD 214	Sanitary Welding	2	6	0	0	4	
WLD 251	Fabrication II	1	6	0	0	3	

**Total Semester Credit Hours in Program .....70**

## Welding Technology (D50420) Diploma

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

			Class	Lab	Clinic	Work	Credit	
						Exp.		

### Fall Semester

ACA 115	Success and Study Skills	0	2	0	0	1	
MAC 141	Machining Applications I	2	6	0	0	4	
WLD 110	Cutting Processes	1	3	0	0	2	
WLD 112	Basic Welding Processes	1	3	0	0	2	
WLD 115	SMAW (Stick) Plate	2	9	0	0	5	
WLD 141	Symbols and Specifications	2	2	0	0	3	
	Subtotal						(17)

### Spring Semester

ENG 111	Writing and Inquiry	3	0	0	0	3	
WLD 116	SMAW (stick) Plate/Pipe	1	9	0	0	4	
WLD 121	GMAW (MIG) FCAW/Plate	2	6	0	0	4	
WLD 131	GTAW (TIG) Plate	2	6	0	0	4	
	Subtotal						(15)

### Summer Term

MAT 110	Math Measurement & Literacy	2	2	0	0	3	
WLD 265	Automated Welding/Cutting	2	6	0	0	4	
	Subtotal						(7)

**Total Semester Credit Hours in Program .....39**

## Welding Technology – Industrial Plate Welding (C50420IW) Certificate

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

			Class	Lab	Clinic	Work	Credit	
						Exp.		

### Fall Semester

WLD 110	Cutting Processes	1	3	0	0	2	
WLD 115	SMAW (Stick) Plate	2	9	0	0	5	
WLD 141	Symbols and Specifications	2	2	0	0	3	
	Subtotal						(10)

### Spring Semester

WLD 121	GMAW (MIG) FCAW/Plate	2	6	0	0	4	
WLD 131	GTAW (TIG) Plate	2	6	0	0	4	
	Subtotal						(8)

**Total Semester Credit Hours in Program .....18**

### Welding Technology – Industrial Plate/Pipe Welding (C50420AW) Certificate

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

	Class	Lab	Clinic	Work	Credit	Exp.
<b>Fall Semester</b>						
MAC 141	Machining Applications I	2	6	0	0	4
WLD 215	SMAW (Stick) Pipe	1	9	0	0	4
	<b>Subtotal</b>					<b>(8)</b>

<b>Spring Semester</b>						
WLD 214	Sanitary Welding	2	6	0	0	4
WLD 231	GTAW (TIG) Pipe	1	6	0	0	3
WLD 261	Certification Practices	1	3	0	0	2
	<b>Subtotal</b>					<b>(9)</b>

**Total Semester Credit Hours in Program ..... 17**

### Welding Technology – Industrial Pipe Welding (C50420PW) Certificate

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

	Class	Lab	Clinic	Work	Credit	Exp.
<b>Fall Semester</b>						
MAC 141	Machining Applications I	2	6	0	0	4
WLD 215	SMAW (Stick) Pipe	1	9	0	0	4
	<b>Subtotal</b>					<b>(8)</b>

<b>Spring Semester</b>						
WLD 214	Sanitary Welding	2	6	0	0	4
WLD 231	GTAW (TIG) Pipe	1	6	0	0	3
WLD 261	Certification Practices	1	3	0	0	2
	<b>Subtotal</b>					<b>(9)</b>

**Total Semester Credit Hours in Program ..... 17**

### Welding Technology – Manufacturer Welding (C50420MW) Certificate

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

	Class	Lab	Clinic	Work	Credit	Exp.
<b>Fall Semester</b>						
WLD 112	Basic Welding Processes	1	3	0	0	2
WLD 117	Industrial SMAW	1	4	0	0	3
WLD 141	Symbols and Specifications	2	2	0	0	3
WLD 151	Fabrication I	2	6	0	0	4
	<b>Subtotal</b>					<b>(12)</b>

<b>Spring Semester</b>						
DFT 151	CAD I	2	3	0	0	3
WLD 212	Inert Gas Welding	1	3	0	0	2
	<b>Subtotal</b>					<b>(5)</b>

**Total Semester Credit Hours in Program ..... 17**

### Welding Technology – Fabrication (C50420WF) Certificate

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

	Class	Lab	Clinic	Work	Credit	Exp.
<b>Fall Semester</b>						
MAC 141	Machining Applications I	2	6	0	0	4
WLD 110	Cutting Processes	1	3	0	0	2
WLD 117	Industrial SMAW	1	4	0	0	3
WLD 151	Fabrication I	2	6	0	0	4
	<b>Subtotal</b>					<b>(13)</b>

<b>Spring Semester</b>						
WLD 212	Inert Gas Welding	1	3	0	0	2
WLD 251	Fabrication II	1	6	0	0	3
	<b>Subtotal</b>					<b>(5)</b>

**Total Semester Credit Hours in Program ..... 18**

### Welding Technology – Industrial Maintenance Welding\* (C50420IM) Certificate

Students may be required to take one or more developmental courses as a result of pre-enrollment placement tests; therefore, the student may need more than the minimum number of semester hours listed for graduation. Developmental courses for this program may include Readiness Level Reading, English, and/or Math and other courses in developmental Reading, English, Math, Biology and Chemistry. For more information on developmental courses, see page 46 or speak to your program advisor.

\*This program of study does not qualify for federal and/or state financial aid

	Class	Lab	Clinic	Work	Credit	Exp.
<b>Fall Semester</b>						
WLD 110	Cutting Processes	1	3	0	0	2
WLD 112	Basic Welding Processes	1	3	0	0	2
WLD 117	Industrial SMAW	1	4	0	0	3
WLD 141	Symbols and Specifications	2	2	0	0	3
	<b>Subtotal</b>					<b>(10)</b>

<b>Spring Semester</b>						
WLD 121	GMAW (MIG) FCAW/Plate	2	6	0	0	4
	<b>Subtotal</b>					<b>(4)</b>

**Total Semester Credit Hours in Program ..... 14**

**Students may earn additional Certificates in the Production Pathway program. Speak to your faculty advisor for more information.**