

**2021-2022**



# **ACADEMIC CATALOG**



**Mountain Empire  
Community College**



## Message from the President

On behalf of the staff and faculty of Mountain Empire Community College, it is my pleasure to welcome you to our campus. Our goal at MECC is to prepare you for meaningful employment or for successful transfer to a four-year college or university upon graduation. We are glad you have chosen MECC to pursue your educational goals. Our faculty and staff are dedicated to ensuring we provide an array of academic programs and training opportunities to create a better career and future for you and your family.

This handbook will serve as a guide to our College's policies and procedures. MECC staff are available to assist you with any questions or concerns you may have. Please consider taking advantage of the many student support services offered at our College designed to assist you in attaining your educational goals. Most importantly, get involved in a club, organization, or activity on campus. We believe your experience at MECC will be academically and personally rewarding.

I wish you the very best in your future endeavors!

Kristen Westover, Ed.D.  
President, Mountain Empire Community College

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The information, procedures, regulations, rules, and policies listed in this catalog are subject to change by the College, the College Board, the Virginia Community College System or the State Board for community Colleges. This catalog is for informational purposes only. It is not intended to establish contractual agreements between students and the College.

## Nondiscrimination Policy

Mountain Empire Community College (MECC) is an open entry institution. Its mission is to provide quality higher education and workforce training programs and services that are financially and geographically accessible and meet individual, business, and community needs. The following pathways exist:

Allied Health	College Transfer	Engineering	Manufacturing
Arts & Music	Construction	Environmental	Public Safety
Business	Education	Health Sciences	Technology

MECC is committed to a policy of nondiscrimination in employment and education opportunity. No person shall be discriminated against in the terms and conditions of employment, personnel practices, or access to and participation in, programs, services, and activities with regard to race, sex, color, creed, religion, age, national origin, disability, marital status, status with regard to public assistance, sexual orientation, or membership or activity in a local commission as defined by law.

Harassment of an individual or group on the basis of race, sex, color, creed, religion, age, national origin, disability, marital status, status with regard to public assistance, sexual orientation, or membership or activity in a local commission has no place in a learning or work environment and is prohibited. Sexual violence has no place in a learning or work environment. Further, MECC shall work to eliminate violence in all its forms. Physical contact by designated system, college, and university staff members may be appropriate if necessary to avoid physical harm to persons or property.

Lack of English skills will not be a barrier to admission or participation. In order to eliminate barriers, we take appropriate measures to assess each student's ability to participate and benefit through placement testing and counseling. Based on the assessment and counseling, students are then provided with campus services or a referral to community services to be better prepared for successful participation.

### Nondiscrimination Coordinators:

- Title IX Coordinator – Ron Vicars, Room 136, Godwin Hall, 276.523.7478
- Title IX Coordinator (Students) – Lelia Bradshaw, Room 133, Holton Hall, 276.523.9107
- Title IX Coordinator (Employees) – Val Lee, Room 138, Godwin Hall, 276.523.9079
- Disabilities Coordinator – Dale Lee, Room 131, Holton Hall, 276.523.9108

This document is available in alternative formats to individuals with disabilities. Consumers with hearing or speech disabilities may contact us via their preferred Telecommunications Relay Service.

### Content Disclaimer

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Links or references to other materials and websites provided in the above-referenced sources are also for information purposes only and do not constitute the college's endorsement of products or services referenced.

# Table of Contents

<b>Welcome from the President</b> .....	<b>1</b>
<b>Content Disclaimer</b> .....	<b>2</b>
<b>Nondiscrimination Statement</b> .....	<b>2</b>
<b>Table of Contents</b> .....	<b>3</b>
<b>Academic Calendar</b> .....	<b>7</b>
<b>MECC Bookstore Deadlines</b> .....	<b>11</b>
<b>Who Can Answer My Question?</b> .....	<b>12</b>
<b>Glossary</b> .....	<b>14</b>
<b>General Information</b> .....	<b>16</b>
History of the College.....	16
Mission.....	16
Vision.....	16
Values.....	17
Accreditation and Program Approvals.....	17
Mountain Empire Community College Foundation.....	18
Virginia Community College System.....	18
College Map.....	19
Hours of Operation.....	19
Inclement Weather.....	19
Schedule of Classes when operating on a Snow Schedule:.....	19
<b>Step 1: Apply for Admission</b> .....	<b>20</b>
Admission Requirements.....	20
Dual Enrollment Student Admissions.....	20
Transfer Students.....	21
Senior Citizens Higher Education Act of 1974.....	22
International Applicants.....	23
Out-of-State Applicants.....	23
Sex Offender and Crimes Against Minors Admission Policy.....	23
<b>Step 2: Apply for Financial Aid</b> .....	<b>24</b>
Deadlines to Apply for Financial Aid.....	24
Financial Aid.....	24
Eligibility Requirements for Federal, State, and VCCS Programs.....	24
Enrollment Requirements.....	24
Aid Programs Available.....	24
Veterans Information.....	25
<b>Step 3: Determine Course Placement &amp; Meet with an Advisor</b> .....	<b>27</b>
Course Placement.....	27
Transcripts.....	28
Meet with an Advisor.....	28
<b>Step 4: Register for Classes</b> .....	<b>29</b>
Normal Academic Load.....	29
Adding a Course.....	29
Withdrawing from Class.....	29
Administrative Withdrawal.....	29
Repeating a Course.....	29
Auditing a Course.....	29
<b>Step 5: Pay for College</b> .....	<b>30</b>
Tuition.....	30
Appeals Process for Applicants Denied In-State Tuition.....	30
Tuition Payment Plan.....	30
Tuition and Fees Refunds.....	31
Refunds, Credits, Reinstatement as a Result of Military Service.....	33
Suspension of Students for Non-Payment.....	33
Books and Materials.....	33
<b>Important Information You Need to Know</b> .....	<b>34</b>
Admission Categories.....	34
Academic Standing.....	34
Admission to Programs/Courses.....	35
Waiver of Course Requirements.....	36
Changing Program of Study.....	39

Quarter to Semester Conversion .....	39
Grade Point Average .....	39
Academic Renewal Policy .....	39
Grading .....	39
Developmental Studies .....	40
Grade Report .....	40
Transcripts .....	40
Grade Changes .....	41
Grade Appeals .....	41
Fees & Fines .....	41
Residence Requirements .....	41
Student Email, Canvas and Student Information System Access .....	42
General Student Information .....	42
Get Help When You Need It .....	42
<b>Graduation .....</b>	<b>44</b>
<b>Workforce Solutions .....</b>	<b>45</b>
Customized Training .....	45
Job Skills Assessment Tools .....	45
Continuing Education/Lifelong Learning .....	45
On-going Training and Institutes .....	45
<b>Academic Programs and Requirements .....</b>	<b>47</b>
Programs of Study .....	47
Understanding Program Options & Curriculum Requirements .....	49
Degrees & Certificates .....	49
Terminology .....	49
General Education Core Competencies .....	50
VCCS/MECC General Education Goals and Student Learning Outcomes .....	50
License Requirements .....	53
College Transfer Electives .....	54
How to Use Curriculum Guides for Academic Planning .....	57
<b>Pathways .....</b>	<b>58</b>
<b>Transfer .....</b>	<b>59</b>
Business Administration .....	59
General Education Certificate .....	61
General Studies .....	63
General Studies – Software Engineering Specialization .....	65
Pre-Teacher Education .....	67
Science .....	69
Science-Engineering Specialization .....	71
<b>Allied Health .....</b>	<b>73</b>
Administrative Support Technology – Medical Office Specialist .....	73
Clinical Research Coordinator .....	75
Health Information Management .....	76
Medical Office Coding and Procedures .....	79
Medical Receptionist .....	81
Medical Records Technician .....	82
Pharmacy Technician .....	83
Sports Medicine Assistant .....	85
<b>Art &amp; Music .....</b>	<b>87</b>
Old Time Music .....	87
<b>Business .....</b>	<b>88</b>
Administrative Support Technology .....	88
Clerical Assistant .....	90
Help Desk Support .....	91
Legal Office Assisting .....	92
Management .....	93
Paralegal Studies .....	95
Real Estate .....	97
Small Business Management .....	98
Supervisor Training and Development .....	99
<b>Construction .....</b>	<b>100</b>
Air Conditioning and Refrigeration Certificate .....	100

Air Conditioning and Refrigeration Career Studies Certificate .....	102
Building Construction – Electrical .....	103
Construction .....	104
Electricity .....	105
Energy Technology .....	106
Energy Technology - Electrical Specialization .....	108
o Electrical Emphasis .....	110
o HVAC Emphasis .....	111
Welding Technical Studies AAS .....	112
Welding Certificate .....	114
Welding Operator I .....	116
Welding Operator II .....	117
<b>Education .....</b>	<b>118</b>
Early Child Development .....	118
Child Development – Infant & Toddler Option .....	119
<b>Engineering .....</b>	<b>120</b>
3-D Design .....	120
Computer-Aided Drafting and Design Technology .....	121
Geographic Information Systems .....	123
<b>Environmental .....</b>	<b>124</b>
Environmental Science .....	124
Environmental Science Water/Wastewater Specialization .....	126
Forest Science .....	128
Geographic Information Systems .....	130
Wastewater Plant Operator .....	131
Water Plant Operator .....	132
<b>Health Sciences (Clinical) .....</b>	<b>133</b>
Computed Tomography (SWCC) .....	133
Dental Assistant .....	135
Emergency Medical Services Technology .....	137
Emergency Medical Technician Basic .....	141
Emergency Medical Technician Basic Plus .....	143
Emergency Medical Technician Advanced .....	145
Emergency Medical Technician Intermediate to Paramedic Bridge .....	148
Health Sciences .....	151
Mammography (SWCC) .....	152
Medical Laboratory Technology (WCC) .....	154
Nursing Assistant (CNA) .....	157
Occupational Therapy Assistant (SWCC) .....	158
Phlebotomy .....	161
Physical Therapy Assistant (WCC) .....	163
Practical Nursing Leading to LPN .....	168
Radiography Technology (SWCC) .....	175
Registered Nursing (RN) .....	178
o Track 1: Two-Year .....	178
o Track 2: Advanced Placement Option for LPN to RN Transition .....	186
o Track 3: Part-Time Evening/Weekend .....	194
o Track 4: Part-Time Evening/Weekend Advance Placement Option for LPN Transition .....	202
Respiratory Therapy .....	210
<b>Manufacturing .....</b>	<b>213</b>
3-D Design .....	213
Chemical Process Operator .....	214
Computer-Aided Drafting and Design Technology .....	215
Computerized Manufacturing Technology .....	217
o Electromechanical Technology Specialization .....	219
Industrial Maintenance .....	221
Machinery Maintenance .....	223
Mechatronics Technology .....	224
Welding Technical Studies AAS .....	225
Welding Certificate .....	227
Welding Operator I .....	229
Welding Operator II .....	230

<b>Public Safety</b> .....	<b>231</b>
Administration of Justice - Corrections Option .....	231
Administration of Justice - Law Enforcement Option .....	232
Correctional Services.....	233
Corrections Management and Supervision.....	235
Law Enforcement Management and Supervision.....	236
Police Science.....	237
<b>Technology</b> .....	<b>239</b>
Computer Networking Technology .....	239
Computer Software Specialist .....	241
o Mobile Application Development .....	243
Cybersecurity.....	244
Help Desk Support.....	245
Information Technology Readiness .....	246
Smart Farming I.....	247
Smart Farming II .....	249
Software Development I .....	251
Software Development II .....	252
aUAS .....	253
<b>Course Descriptions</b> .....	<b>255</b>
<b>Table E: Student English Course Placement</b> .....	<b>256</b>
<b>Table M: Student Math Course Placement</b> .....	<b>276</b>
<b>Personnel</b> .....	<b>285</b>
Administrative Faculty .....	285
President Emeritus.....	285
Faculty .....	286
Professor Emeriti .....	288
Staff.....	288
Staff Emeriti .....	291
Southwest Virginia Paramedic Program Faculty .....	291
Respiratory Therapy Adjunct Clinical Staff .....	291
<b>Governance</b> .....	<b>292</b>
<b>Advisory Committees for College Programs</b> .....	<b>293</b>



# Academic Calendar 2021-2022

## Summer 2021

### LONG SESSION

<b>April</b>	1	Thu	Early enrollment/advisement begins
<b>May</b>	26-27	Wed-Thu	New Student Seminar/SDV 100
	31	Mon	College closed - Memorial Day holiday
<b>June</b>	1	Tue	Tuition due for early enrollment
	<b>1</b>	<b>Tue</b>	<b>FIRST DAY OF CLASSES</b>
	4	Fri	Last day to add classes without faculty permission
	10	Thu	Last day to change from audit to credit, change from credit to audit, drop with a refund, or change class sections
	18	Fri	College closed - Juneteenth holiday
<b>July</b>	5	Mon	College closed - Independence Day holiday
	9	Fri	Last day to make-up incomplete grades for spring 2021
	9	Fri	Last day to withdraw from classes without grade penalty .....
<b>August</b>	<b>2</b>	<b>Mon</b>	<b>LAST DAY OF CLASSES</b>
	3-4	Tue-Wed	FINAL EXAMS
	5	Thu	Grades due at 12:00 p.m.

### FIRST SHORT SESSION

<b>April</b>	1	Thu	Early enrollment/advisement begins
<b>May</b>	31	Mon	College closed - Memorial Day holiday
<b>June</b>	1	Tue	Tuition due for early enrollment
	<b>1</b>	<b>Tue</b>	<b>FIRST DAY OF CLASSES</b>
	1	Tue	Last day to add classes without faculty permission
	7	Mon	Last day to change from audit to credit, change from credit to audit, drop with a refund, or change class sections
	18	Fri	Last day to withdraw from classes without grade penalty
	<b>29</b>	<b>Tue</b>	<b>LAST DAY OF CLASSES</b>
	30	Wed	FINAL EXAMS
<b>July</b>	1	Thu	Grades due at 12:00 p.m.
	5	Mon	College closed - Independence Day holiday
	9	Fri	Last day to make-up incomplete grades for spring 2021

### SECOND SHORT SESSION

<b>April</b>	1	Wed	Early enrollment/advisement begins
<b>July</b>	5	Mon	College closed - Independence Day holiday
	6	Tue	Tuition due for early enrollment
	<b>6</b>	<b>Tue</b>	<b>FIRST DAY OF CLASSES</b>
	6	Tue	Last day to add classes without faculty permission
	9	Fri	Last day to make-up incomplete grades for spring 2021
	12	Mon	Last day to change from audit to credit, change from credit to audit, drop with a refund, or change class sections
	23	Fri	Last day to withdraw from classes without grade penalty
<b>August</b>	<b>3</b>	<b>Tue</b>	<b>LAST DAY OF CLASSES</b>
	4	Wed	FINAL EXAMS
	5	Thu	Grades due at 12:00 p.m.

### 3W1 (THREE WEEK FIRST) SESSION

<b>June 1</b>	<b>Tue</b>	<b>FIRST DAY OF CLASSES</b>
1	Mon	Last day to add classes without faculty permission
3	Thu	Last day to change from audit to credit, change from credit to audit, drop with a refund, or change class sections
14	Mon	Last day to withdraw from classes without grade penalty
<b>18</b>	<b>Fri</b>	<b>LAST DAY OF CLASSES</b>

### 3W2 (THREE WEEK SECOND) SESSION

<b>June 21</b>	<b>Mon</b>	<b>FIRST DAY OF CLASSES</b>
21	Mon	Last day to add classes without faculty permission
23	Wed	Last day to change from audit to credit, change from credit to audit, drop with a refund, or change class sections
<b>July 6</b>	<b>Tue</b>	Last day to withdraw from classes without grade penalty
<b>12</b>	<b>Mon</b>	<b>LAST DAY OF CLASSES</b>

### 3W3 (THREE WEEK THIRD) SESSION

<b>July 13</b>	<b>Tue</b>	<b>FIRST DAY OF CLASSES</b>
13	Tue	Last day to add classes without faculty permission
15	Thu	Last day to change from audit to credit, change from credit to audit, drop with a refund, or change class sections
26	Mon	Last day to withdraw from classes without grade penalty
<b>Aug. 2</b>	<b>Mon</b>	<b>LAST DAY OF CLASSES</b>



## Fall 2021

<b>August</b>	16-17	Mon-Tue	Faculty/staff in-service days
	18-19	Wed-Thu	New Student Seminar/SDV 100
	18-20	Wed-Fri	Enrollment/advisement days
	23	Mon	Tuition due for early enrollment
	<b>23</b>	<b>Mon</b>	<b>FIRST DAY OF CLASSES</b>
	29	Sun	Last day to add classes without faculty permission
<b>September</b>	6	Mon	College closed - Labor Day holiday
	8	Wed	Last day to change from audit to credit, change from credit to audit, drop with a refund, or change class sections
<b>October</b>	15	Fri	Faculty/staff in-service day - No day or evening classes
	25	Mon	Spring early enrollment begins
<b>November</b>	1	Mon	Last day to withdraw from classes without grade penalty
	1	Mon	Application deadline for fall graduation
	19	Fri	Last day to make up incomplete grades from summer 2021
	24	Wed	College closes at 12:00 p.m. - No day or evening classes
	25-26	Thu-Fri	College closed - Thanksgiving holiday
<b>December</b>	<b>10</b>	<b>Fri</b>	<b>LAST DAY OF CLASSES</b>
	13-16	Mon-Thu	FINAL EXAMS
	17	Fri	Faculty/staff in-service day - Grades due at 4:30 p.m.
	20-23	Mon-Thu	Professional development days
	24	Fri	College closed - Christmas holiday
	27-31	Mon-Fri	College closed - Christmas holiday

### 8W1 (EIGHT WEEK FIRST) SESSION

<b>Aug.</b>	<b>23</b>	<b>Mon</b>	<b>FIRST DAY OF CLASSES</b>
	25	Wed	Last day to add classes without faculty permission
	30	Mon	Last day to change from audit to credit, change from credit to audit, drop with a refund, or change class sections
<b>Sep.</b>	22	Thu	Last day to withdraw from classes without grade penalty
<b>Oct.</b>	<b>15</b>	<b>Fri</b>	<b>LAST DAY OF CLASSES</b>

### 8W2 (EIGHT WEEK SECOND) SESSION

<b>Oct.</b>	<b>18</b>	<b>Mon</b>	<b>FIRST DAY OF CLASSES</b>
	20	Wed	Last day to add classes without faculty permission
	25	Mon	Last day to change from audit to credit, change from credit to audit, drop with a refund, or change class sections
<b>Nov.</b>	18	Thu	Last day to withdraw from classes without grade penalty
<b>Dec.</b>	<b>10</b>	<b>Fri</b>	<b>LAST DAY OF CLASSES</b>

### 5W1 (FIVE WEEK FIRST) SESSION

<b>Aug.</b>	<b>23</b>	<b>Mon</b>	<b>FIRST DAY OF CLASSES</b>
	23	Mon	Last day to add classes without faculty permission
	27	Fri	Last day to change from audit to credit, change from credit to audit, drop with a refund, or change class sections
<b>Sep.</b>	13	Mon	Last day to withdraw from classes without grade penalty
	<b>27</b>	<b>Mon</b>	<b>LAST DAY OF CLASSES</b>

### 5W3 (FIVE WEEK THIRD) SESSION

<b>Nov.</b>	<b>2</b>	<b>Tue</b>	<b>FIRST DAY OF CLASSES</b>
	2	Tue	Last day to add classes without faculty permission
	8	Mon	Last day to change from audit to credit, change from credit to audit, drop with a refund, or change class sections
	24	Wed	Last day to withdraw from classes without grade penalty
<b>Dec.</b>	<b>9</b>	<b>Thu</b>	<b>LAST DAY OF CLASSES</b>

### 5W2 (FIVE WEEK SECOND) SESSION

<b>Sep.</b>	<b>28</b>	<b>Tue</b>	<b>FIRST DAY OF CLASSES</b>
	28	Tue	Last day to add classes without faculty permission
<b>Oct.</b>	4	Mon	Last day to change from audit to credit, change from credit to audit, drop with a refund, or change class sections
	18	Mon	Last day to withdraw from classes without grade penalty
<b>Nov.</b>	<b>1</b>	<b>Mon</b>	<b>LAST DAY OF CLASSES</b>

## Spring 2022

<b>January</b>	3	Mon	College closed – New Year’s Day holiday
	4-11	Tue-Tue	Enrollment/advisement days
	5-6	Wed-Thu	Faculty/staff in-service days
	12	Wed	Tuition due
	<b>12</b>	<b>Wed</b>	<b>FIRST DAY OF CLASSES</b>
	18	Tue	Last day to add classes without faculty permission
	31	Mon	Last day to change from audit to credit, change from credit to audit, drop with a refund, or change class sections
<b>February</b>	25	Fri	Application deadline for spring and summer graduation
<b>March</b>	7-8	Mon-Tue	Professional development days - No day or evening classes
	9-11	Wed-Fri	Spring Break - No day or evening classes (Note: May be reduced/eliminated if necessary to make up class time.)
<b>April</b>	1	Fri	Last day to withdraw from classes without grade penalty
	1	Fri	Summer and fall early enrollment begins
	8	Fri	Last day to make up incomplete grades from fall 2021
	15	Fri	College closed
	29	Fri	Faculty/staff in-service day - Graduate assessment at 9:00 a.m. Graduation practice, Goodloe Center, 11:00 a.m. (no day or evening classes)
<b>May</b>	<b>5</b>	<b>Thu</b>	<b>LAST DAY OF CLASSES</b>
	6	Fri	Faculty/staff in-service - Celebration of People
	9-12	Mon-Thu	FINAL EXAMS
	13	Fri	GRADUATION – Faculty/staff in-service - Grades due at 4:30 p.m.

<b>8W1 (EIGHT WEEK FIRST) SESSION</b>				<b>8W2 (EIGHT WEEK SECOND) SESSION</b>			
<b>Jan.</b>	<b>12</b>	<b>Wed</b>	<b>FIRST DAY OF CLASSES</b>	<b>Mar.</b>	<b>14</b>	<b>Mon</b>	<b>FIRST DAY OF CLASSES</b>
	14	Fri	Last day to add classes without faculty permission		16	Wed	Last day to add classes without faculty permission
	19	Wed	Last day to change from audit to credit, change from credit to audit, drop with a refund, or change class sections		21	Mon	Last day to change from audit to credit, change from credit to audit, drop with a refund, or change class sections
<b>Feb.</b>	14	Mon	Last day to withdraw from classes without grade penalty	<b>Apr.</b>	14	Thu	Last day to withdraw from classes without grade penalty
<b>Mar.</b>	<b>4</b>	<b>Fri</b>	<b>LAST DAY OF CLASSES</b>	<b>May</b>	<b>6</b>	<b>Fri</b>	<b>LAST DAY OF CLASSES</b>

<b>5W1 (FIVE WEEK FIRST) SESSION</b>				<b>5W3 (FIVE WEEK THIRD) SESSION</b>			
<b>Jan.</b>	<b>12</b>	<b>Wed</b>	<b>FIRST DAY OF CLASSES</b>	<b>Apr.</b>	<b>4</b>	<b>Mon</b>	<b>FIRST DAY OF CLASSES</b>
	12	Wed	Last day to add classes without faculty permission		4	Mon	Last day to add classes without faculty permission
	17	Mon	Last day to change from audit to credit, change from credit to audit, drop with a refund, or change class sections		8	Fri	Last day to change from audit to credit, change from credit to audit, drop with a refund, or change class sections
<b>Feb.</b>	2	Wed	Last day to withdraw from classes without grade penalty		22	Tue	Last day to withdraw from classes without grade penalty
	<b>17</b>	<b>Thu</b>	<b>LAST DAY OF CLASSES</b>	<b>May</b>	<b>5</b>	<b>Thu</b>	<b>LAST DAY OF CLASSES</b>
<b>5W2 (FIVE WEEK SECOND) SESSION</b>							
<b>Feb.</b>	<b>21</b>	<b>Mon</b>	<b>FIRST DAY OF CLASSES</b>				
	21	Mon	Last day to add classes without faculty permission				
	28	Mon	Last day to change from audit to credit, change from credit to audit, drop with a refund, or change class sections				
<b>Mar.</b>	15	Tue	Last day to withdraw from classes without grade penalty				
	<b>31</b>	<b>Thu</b>	<b>LAST DAY OF CLASSES</b>				

# EXAM SCHEDULE

## Fall 2021 Semester

### **Mon., Dec. 13**

Mon/Wed

Mon/Wed

Mon/Wed

If your class meets:

8:15 am-9:30 am

11:05 am-12:20 pm

2:15 pm-3:30 pm

Wednesday evening exams will be held from 6:00-8:00 pm

Your exam will be:

8:15 am-10:15 pm

11:05 am-1:05 pm

2:15 pm-4:15 pm

### **Tue., Dec. 14**

Tues/Thur

Tues/Thur

Tues/Thur

If your class meets:

8:15 am-9:30 am

11:05 am-12:20 pm

2:15 pm-3:30 pm

Thursday evening exams will be held from 6:00-8:00 pm

Your exam will be:

8:15 am-10:15 pm

11:05 am-1:05 pm

2:15 pm-4:15 pm

### **Wed., Dec. 15**

Mon/Wed

Mon/Wed

Mon/Wed

If your class meets:

9:40 am-10:55 am

12:50 pm-2:05 pm

3:40 pm-4:55 pm

Monday evening exams will be held from 6:00-8:00 pm

Your exam will be:

9:40 am-11:40 am

12:50 pm-2:50 pm

3:40 pm-5:40 pm

### **Thu., Dec. 16**

Tues/Thur

Tues/Thur

Tues/Thur

If your class meets:

9:40 am-10:55 am

12:50 pm-2:05 pm

3:40 pm-4:55 pm

Tuesday evening exams will be held from 6:00-8:00 pm

Your exam will be:

9:40 am-11:40 am

12:50 pm-2:50 pm

3:40 pm-5:40 pm

## Spring 2022 Semester

### **Mon., May 9**

Tues/Thur

Tues/Thur

Tues/Thur

If your class meets:

8:15 am-9:30 am

11:05 am-12:20 pm

2:15 pm-3:30 pm

Tuesday evening exams will be held from 6:00-8:00 pm

Your exam will be:

8:15 am-10:15 pm

11:05 am-1:05 pm

2:15 pm-4:15 pm

### **Tue., May 10**

Mon/Wed

Mon/Wed

Mon/Wed

If your class meets:

8:15 am-9:30 am

11:05 am-12:20 pm

2:15 pm-3:30 pm

Monday evening exams will be held from 6:00-8:00 pm

Your exam will be:

8:15 am-10:15 pm

11:05 am-1:05 pm

2:15 pm-4:15 pm

### **Wed., May 11**

Tues/Thur

Tues/Thur

Tues/Thur

If your class meets:

9:40 am-10:55 am

12:50 pm-2:05 pm

3:40 pm-4:55 pm

Thursday evening exams will be held from 6:00-8:00 pm

Your exam will be:

9:40 am-11:40 am

12:50 pm-2:50 pm

3:40 pm-5:40 pm

### **Thu., May 12**

Mon/Wed

Mon/Wed

Mon/Wed

If your class meets:

9:40 am-10:55 am

12:50 pm-2:05 pm

3:40 pm-4:55 pm

Wednesday evening exams will be held from 6:00-8:00 pm

Your exam will be:

9:40 am-11:40 am

12:50 pm-2:50 pm

3:40 pm-5:40 pm



# DEADLINES

## Summer 2021:

May 24	Students can begin charging to their financial aid accounts in the Bookstore
May 31	Bookstore closed for Memorial Day
June 10	Last day for students to return textbooks for a refund in the Bookstore
June 24 - 30	Bookstore closed for Inventory
July 5	Bookstore closed for Independence Day
July 9	Last day for students to charge to their financial aid accounts for the summer semester
August 5	Rentals due back to the Bookstore

## Fall 2021:

August 18	Students can begin charging to their financial aid accounts in the Bookstore
September 6	Bookstore closed for Labor Day
September 8	Last day for students to return textbooks for a refund in the Bookstore
September 8	Last day for students to charge to their financial aid accounts for the fall semester
November 24	Bookstore will close at noon.
November 25 and 26	Bookstore closed for Thanksgiving
December 10 -13 and 16	Textbook Buyback (9-4)
December 16	Rentals due back to the Bookstore
December 24 - Jan 2	Bookstore closed for Holidays

## Spring 2022:

January 7	Students can begin charging to their financial aid accounts in the Bookstore
January 31	Last day for students to return textbooks for a refund in the Bookstore
February 4	Last day for students to charge to their financial aid accounts for the spring semester
March 9 through 11	Spring Break
March 31	Cap and Gown orders due in Bookstore
April 15	Bookstore closed for Good Friday
April 29	Cap and Gown orders available for pickup at Grad Practice
May 5-6 and 9-12	Textbook Buyback (9-4)
May 12	Rentals due back to the Bookstore

### \*\*\*Note\*\*\*

Dates are subject to change due to schedule or financial aid adjustments.

# Who Can Answer My Question?

Issue	Who to Call	Contact
Academic – General Studies	Dean, Arts & Sciences	276.523.7460
Academic – Applied Science & Technology	Dean, Applied Science & Technology	276.523.7465
Academic – Business & Information Technology	Dean, Applied Science & Technology	276.523.7465
Academic – Health Sciences	Dean, Health Sciences	276.523.7456
Adding or dropping a course	Your Advisor	276.523.2400
Advanced placement	Dean, Arts & Sciences	276.523.7460
Canvas	Instructional Technology	276.523.7488
Career planning	Career Services Center	276.523.9106
Change of address	Enrollment Services/Admissions	276.523.7474
Class schedule conflicts	Your Advisor	276.523.2400
Courses, electives & curriculum changes	Your Advisor	276.523.2400
Evaluation of credits	Enrollment Services/Admissions	276.523.7474
Fees, tuition & refunds	Business Office	276.523.7475
Financial aid	Enrollment Services/Financial Aid	276.523.7470
Graduation applications	Enrollment Services/Admissions	276.523.7474
ID Cards	Bookstore	276.523.7461
Lost and found	Student Services Office	276.523.7472
Parking permits and fines	Bookstore	276.523.7461

Publicity and publications	Community Relations Office	276.523.7480
Scholarships	Enrollment Services/Financial Aid	276.523.7470
Intramurals and student activities	Student Services Office	276.523.7472
Student records	Enrollment Services/Admissions	276.523.7474
Testing	Student Services Office	276.523.7488
Tuition Payment Plan	Business Office	276.523.7475
Transcripts	Enrollment Services/Admissions	276.523.7474
Transfer information	Student Services Office	276.523.9106
Tutoring	Learning Center	276.523.9125
Veterans affairs	Enrollment Services/Veteran's Affairs	276.523.9028
Withdrawal from class or college	Your Advisor	276.523.2400
Work-study	Enrollment Services/Financial Aid	276.523.9076

For all other inquiries, please call 276.523.2400 or email [info@mecc.edu](mailto:info@mecc.edu)

# Glossary

**Administrative Withdrawal:** An administrative withdrawal occurs when an instructor or staff member has a student withdrawn from a course because of excessive absences, undue academic difficulty, or a serious non-academic issue.

**Apply for Admission:** The process of applying for entrance to the college in order to take courses. Admission applications are not required for non-credit programs.

**Canvas:** Canvas is a Web-based learning management system (LMS) designed to support online courses and provide a space to supplement a face-to-face course. Canvas provides many types of tools and features for enriching the learning experience.

**Career Studies Certificate (CSC) Program:** A program of study that consists of between 9 and 29 semester credit hours.

**Catalog:** The Catalog includes information about admission to the College, enrollment, degrees and certificates, and academic policies.

**Certificate Program:** A program of study less than two years in length that consists of between 30 and 59 semester credit hours or a short-term, non-credit program through the MECC Workforce Development Center.

**Class Schedule:** The class schedule lists all the courses available for each academic semester including class times, location, course information and instructor information.

**Concurrent Enrollment:** When a high school or home school student enrolls in college-credit bearing courses at the College.

**Co-requisite:** Co-requisites are courses that must be taken at the same time. A student is also permitted to complete the co-requisite course prior to the other course. For example, MTH 163 is a co-requisite for EGR 120. A student may take MTH 163 before enrolling in EGR 120, or he/she may take the courses at the same time.

**Credit/credit hour:** Each semester hour of credit given for a course is based on the "academic hour," which is 50 minutes of formalized, structured instructional time in a particular course weekly for fifteen weeks. Courses may include lecture (instruction, discussion), laboratory (including clinical training, studio, or internship), out-of-class study/activities or a combination thereof depending on the discipline.

**Curricular student:** A student who has satisfied all college admission requirements and has been placed in a degree or certificate program.

**Declaring a Major (Curriculum/program placement):** A major represents a degree-seeking student's primary field of study. A student must formally commit to a major, and

successfully complete the courses prescribed in order to earn that certificate or degree.

**Degree Program:** A degree program is two years in length and consists of a minimum of 60 semester credit hours.

**Developmental Courses:** Developmental courses assist students in developing basic skills necessary to succeed in college transfer courses and career/technical courses.

**Drop:** Students may drop classes and receive a full tuition refund through the first 15 percent of the semester or term. There are no academic consequences from this action, but there may be financial aid repercussions for this drop if the student no longer meets financial aid qualifications. The course will show on the student's registration history as dropped but will not post on any unofficial or official transcripts and does not count as attempted credit.

**Dual Enrollment:** Provides high school students the opportunity to take college-credit bearing courses taught by college-approved high school teachers.

**Enroll:** Officially register as a participant/student in one or more courses.

**Faculty Advisor:** A faculty advisor provides academic advising and support to students within their discipline by helping them understand options, locate resources and, when necessary, identify alternatives. Once a student declares their major they are assigned a faculty advisor.

**FAFSA:** Free Application for Federal Student Aid.

**FERPA:** The Family Educational Rights and Privacy Act.

FERPA protects the privacy of student education records. All educational institutions that receive federal funding must comply with FERPA.

**Full-time student:** A student enrolled in courses totaling 12 or more credit hours in a semester.

**Hybrid Course:** Hybrid classes are seated courses that meet for approximately half of the time of a traditional class. The other half of the instructional time is replaced with out-of-class activities, which may include use of technology. Hybrid courses are recognizable in the course schedule by the "R" designation in front of the course number.

**myMECC:** A web portal that allows students to access Canvas, the Student Information System, student e-mail, library services, and the Virginia Education Wizard from one location, using one login.

**Non-credit:** Short-term professional and personal development courses offered through the Workforce Solutions department. All classes offer Continuing Education Units (CEUs) and Continuing Professional Education (CPE). The number of CEUs awarded depends upon successful

course completion and varies according to course length. For each hour of actual instruction, 0.1 CEU is awarded. For CPEs, students simply need to request them from the Workforce Solutions before class.

**Non-curricular student:** A student who is not formally placed into one of the College's majors but who is classified according to one of the following student goals or conditions: • updating employment skills for present job • developing skills for new job • career exploration • personal satisfaction and general knowledge • transient student • non-degree transfer student • high school student (with college approval only) • general or curricular requirements pending (with college approval only) • restricted enrollment (with college approval; auditing a course)

**Online Course:** In this mode of instruction, all coursework and interactions with the instructor and classmates are completed online. Online courses are recognizable in the course schedule by the "W" designation in front of the course number.

**Online SSDL Course:** The College also offers online courses through Shared Services Distance Learning (SSDL). SSDL courses are offered in partnership with Northern Virginia Community College (NVCC). These courses allow students to earn MECC credit while taking an online course with a NVCC instructor, as well as use the MECC Testing Centers to take proctored assessments. SSDL courses have access to all MECC services, as well as services provided by NVCC. Students enrolled in SSDL courses will receive a letter from NVCC and an invitation to participate in an online orientation, and a MECC liaison provides support during the semester. SSDL courses follow the NVCC academic calendar. Please review course notes for start and end dates. All SSDL courses have a section number that begins with the letters "E."

**Part-time student:** A student enrolled in courses totaling less than 12 credit hours in a semester.

**Pre-requisite:** A pre-requisite indicates the knowledge and skills that a student must possess before taking the present course. For example, ENG 111 is a pre-requisite to ENG 112 and must be successfully completed prior to beginning ENG 112.

**Seated Course:** Traditional, in-person classes that provide a face-to-face learning experience. Seated classes meet at a regularly scheduled time. Seated courses do not have any special designation in the course schedule. Specialization: A specialization is an area of concentration within an approved major, varying from the parent major by 9-15 credit hours.

**Student E-mail:** After a student has applied for admission to the college, a college email address is assigned to them. Students must use their college e-mail account for correspondence with faculty and staff. It is accessed through myMECC.

**Student Information System (SIS):** The Student Information System allows students to complete tasks such as registering

for classes, paying tuition/fees, accessing personal information, viewing financial aid, viewing final grades, viewing/printing unofficial transcripts, and so much more.

**Syllabus:** A syllabus is an outline of course topics and a summary of course policies. It is a contract between instructors and their students, designed to answer students' questions about a course and the instructor's expectations.

**Transient Student:** A student who is enrolled in another college or university, but takes a course at Mountain Empire Community College.

**Videoconference Course:** This is a method of holding meetings that allows students who are in different cities, countries, etc., to hear each other and see each other on computer or television screens. Class meetings are scheduled just like traditional on-campus classes, but the instructor is connected to the class by a video network. Additional instruction may be in Canvas or other sources.

**Virginia Placement Test (VPT):** The VPT may be used to determine whether a student may benefit from developmental coursework prior to enrolling in college-level classes. Placement tests in English (writing and reading) and mathematics are generally required for all entering students seeking admission to degree and certificate programs, as well as some career studies certificate programs.

**Withdrawal:** An academic withdrawal from a course occurs when a student removes themselves from a course after the drop period has passed but before the first 60 percent of the semester or term. There may be financial/financial aid repercussions for this withdrawal. The academic consequences from this action include receiving the grade of "W" for the course, which will appear on any unofficial or official transcripts. A grade of "W" will not impact your GPA, and does not count as completed credit toward your degree.





# General Information

Mountain Empire Community College (MECC) is a two-year public institution of higher education established as part of a statewide system of community colleges. Mountain Empire Community Colleges serves primarily the residents of Wise, Lee, Scott, and Dickenson Counties and the city of Norton.

MECC operates under policies established by the State Board for Community Colleges and the College Board. It is financed by student tuition and state funds, supplemented by contributions from localities and the college's Foundation.

## History of the College

In 1966, the Virginia Assembly enacted historic legislation establishing a statewide system of comprehensive community colleges. This legislation brought most post high school education below the bachelor's level into one system, and broadened the base of higher education in the state to such an extent that Virginia, for the first time in the twentieth century, took a major step toward democratizing higher education. As comprehensive institutions, the community colleges endeavor to serve all segments of society.

In southwest Virginia, a committee comprised of local business, civic, industrial and political leaders was appointed by the local governing bodies of Lee, Scott, Wise, and Dickenson Counties and the City of Norton for the purpose of establishing a comprehensive community college. In April of 1970, the College Board had its first meeting at which Judge William C. Fugate was elected chair. Funds for construction were allocated by the State Board for Community Colleges and construction began in early 1971.

- In August 1971, Dr. George B. Vaughan was named president of Mountain Empire Community College and groundbreaking ceremonies were held in October of that same year.
- The first classes were offered in the fall of 1972. In January 1978, Dr. Victor B. Ficker assumed his responsibilities as the second president of Mountain Empire.
- The third president, Dr. Ruth Mercedes Smith, served from June 1988 to June 1991.
- Dr. Robert H. Sandel served as the fourth president from January 1992 to July 2001.
- Dr. Terrance Suarez served as the fifth president from January 2002 to June 2010.
- Dr. Scott Hamilton became the sixth president in July 2010.
- Dr. Kristen Westover became the seventh president in July 2017.

## Mission

Mountain Empire Community College's mission is to provide our region with accessible, quality higher education, workforce training, and community programs to ensure an educated population and globally competitive workforce.

Mountain Empire Community College's mission is fulfilled through the following avenues:

- General Education: General Education, a component of academic programs, includes the following competencies:

- Communication, Critical Thinking, Cultural and Social Understanding, Information Literacy, Personal Development, Quantitative Reasoning, and Scientific Reasoning.
- Career -Technical Education: The career and technical education programs meet the increasing demand for technicians, professionals, and a skilled workforce.
- Transfer Education: The transfer education program, which includes freshman and sophomore courses in arts and sciences and pre-professional education, allows students to transfer into baccalaureate degree programs at four-year colleges and universities.
- Developmental Studies: Developmental courses are offered to correct deficiencies in basic areas, such as English, reading, and mathematics, and to prepare students who have not had the required course prerequisites for admission to specific programs.
- Dual Enrollment: Dual enrollment courses allow high-achieving students to meet the requirements for high school graduation while simultaneously earning college credit.
- Distance Education: Distance education courses and programs offer accessibility through a number of delivery modes, to include the internet, video, and off-campus locations.
- Student Services: The College provides programs, services, and resources that facilitate college access, enhance student success, develop career readiness, promote student leadership, and provide opportunities for student engagement.
- Workforce Development: Workforce development encompasses credit and non-credit training to meet workforce needs and promote economic development through programs, customized training, and on-going workshops.
- Community Services: College facilities and personnel support the cultural and educational needs of the region through cultural events, workshops, meetings, lectures, conferences, seminars, community projects, and service learning.

## Vision

Mountain Empire Community College's vision is to be recognized by our community as the leader in preparing our region's educated workforce.

Mountain Empire Community College will pursue its vision by acquiring the following traits:

- Teaching will be characterized by the use of the best practices for knowledge and skills to be developed, including the involvement of businesses, the use of hands-on interactive mediums, and opportunities for real-life applications of knowledge and skills.
- Instructional delivery will employ non-traditional methods with emphasis on the use of technology. Faculty members will be facilitators of learning, mentors, and role models, exhibiting to students the importance of knowledge, competence, and a thirst for learning.
- The College will be the major provider of workforce training and a leader in community development, partnering with businesses, educational institutions, non-profits, and government to strengthen the competitiveness of the region for attracting and retaining jobs.
- The College will be an exemplary model of service and involvement to our students and the community, promoting economic development, appreciation of culture, and the quality of living in rural, southwest Virginia.

## Values

Mountain Empire Community College is committed to these values:

- Community and Cultural Preservation
- Creativity and Innovation
- Diversity, Inclusion and Equity
- Honesty, Integrity and Trust
- Leadership and Service
- Learning
- Student Success
- Teamwork and Communication

## Accreditation and Program Approvals

Mountain Empire Community College is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award the associate degree. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of Mountain Empire Community College. Normal inquiries about the institution, such as admission requirements, financial aid, educational programs, etc., should be addressed directly to the institution and not to the Commission's office. Degree programs are approved by the State Council of Higher Education for Virginia, and are also approved for listing in the U.S. Office of Education directories for participation in various federally-sponsored programs of student aid and educational assistance. This institution is approved to offer GI Bill® educational benefits by the Virginia State Approving Agency and is approved by the Department of Health and Human Services for students who receive Social Security and Vocational Rehabilitation benefits. The Health Information Management program is accredited by CAHIIM (Commission on Accreditation for Health Informatics and Health Information Management). The Respiratory Therapy program is accredited by the Commission on Accreditation for Respiratory Care. The Associate Degree Nursing program is approved by the Virginia Board of Nursing, (Perimeter Center, 9960 Mayland Drive, Suite 300, Henrico, VA 23233-1463, (804) 367-4515, website: [www.dhp.virginia.gov/Boards/Nursing](http://www.dhp.virginia.gov/Boards/Nursing)) and accredited by the Accreditation Commission for Education in Nursing (3343 Peachtree Road NE, Suite 850, Atlanta, GA 30326, 404-975-5000, website: [www.acenursing.org](http://www.acenursing.org)).

Year of Graduation	VATNP Program Completion	VATNP NCLEX-RN Pass Rate*	National NCLEX-RN Pass Rate all US Graduates*
2015 (N=128)	73%	93.0%	82%
2016 (N=129)	71%	90.7%	81.68%
2017 (N=136)	72%	89.7%	84.24%
2018 (N=190)	77%	90.53%	85.11%
2019 (N=180)	73%	87.7%	88.18%
2020 (N=197)	81%	72.54%	82.5%

\*NCLEX National Statistics from [www.NCSBN.org](http://www.NCSBN.org)

The Practical Nursing and Nursing Assistant programs are approved by the Virginia State Board of Nursing. The Emergency Medical Services Technology program is accredited by the Commission on Accreditation of Allied Health Education Programs. The Phlebotomy program is approved by the National Phlebotomy Association. The Dental Assistant program is recognized by the Dental Assisting National Board, Inc. (DANB). The Computer Aided Drafting & Design Technology, Technical Studies- Welding, Computer Manufacturing Technology - Electromechanical Technology, and Computer Manufacturing Technology -Industrial Electronics are accredited by the Association of Technology, Management, and Applied Engineering (ATMAE).

## Licensure Reciprocity

	Licensure	Meets state educational requirements for licensure	Does not meet the state educational requirements for licensure	MECC has not made a determination on licensure reciprocity
Emergency Medical Services	NREMT	AL, AK, AZ, AR, CA, CO, CT, DC, DE, FL, GA, HI, ID, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY	IL, MT	
Nursing	RN	AL, AZ, AR, CO, DE, FL, GA, ID, IN, IA, KS, KY, LA, ME, MD, MS, MO, NE, NH, NM, NC, ND, OK, RI, SC, SD, TN, TX, UT, VA, WV, WI, WY	AK, CA, CT, HI, IL, MN, NV, NY, DC, OR, WA	MA, MI, NJ, OH, PA, RI, VT
Practical Nursing	LPN	AL, AZ, AR, CO, DE, FL, GA, ID, IN, IA, KS, KY, LA, ME, MD, MS, MO, NE, NH, NM, NC, ND, OK, RI, SC, SD, TN, TX, UT, VA, WV, WI, WY	AK, CA, CT, HI, IL, MN, NV, NY, DC, OR, WA	MA, MI, NJ, OH, PA, RI, VT
Respiratory Therapy	RRT CRT	AL, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY		AK – Currently do not have a state licensure for RT

Sources cited:

- The Uniform Licensing Requirements (ULRs) are found at: [https://www.ncsbn.org/NLC\\_ULRs.pdf](https://www.ncsbn.org/NLC_ULRs.pdf)
- States currently in the NLC are found at: <https://www.ncsbn.org/nlcmemberstates.pdf>
- A list of all state requirements is found at: <https://www.ncsbn.org/14730.htm>
- Further information regarding EMS certifications may be found at: <https://nasemso.org/>
- Further information regarding RT state licensure requirements may be found at: <https://www.aarc.org/advocacy/state-society-resources/state-licensure-contacts/>

**Statement for Emergency Medical Services (EMS):**

Pursuant to United States Department of Education (US DOE) regulation 34 CFR 668.43 (a) (5) (v), the Mountain Empire Community College Associate Degree in Emergency Medical Services Technology program provides the following information for all prospective and current students:

The National Assoc. of EMS Officials (NASEMSO) has ruled EMS provider licensure and certification to be synonymous and National Registry certification is recognized for reciprocity in 48 of our 50 states.

**Statement for Nursing program (ADN):**

Pursuant to United States Department of Education (US DOE) regulation 34 CFR 668.43 (a) (5) (v), the Mountain Empire Community College Associate Degree in Nursing (ADN) program provides the following information for all prospective and current students:

The Mountain Empire Community College ADN program meets all Virginia Board of Nursing requirements for pre-licensure nursing education programs in the Commonwealth of Virginia. In addition, the Mountain Empire Community College ADN program meets all requirements for nationally recognized accreditation by the Accrediting Commission for Education in Nursing.

The Commonwealth of Virginia participates with multiple (see table) other states in the National Council of State Boards of Nursing (NCSBN) National Licensing Compact (NLC) to allow nurses licensed in one state to provide nursing care across state lines in other compact states. Information listed is current per NCSBN as of July 1, 2020.

**Statement for Practical Nursing program (LPN):**

Pursuant to United States Department of Education (US DOE) regulation 34 CFR 668.43 (a) (5) (v), the Mountain Empire Community College Certificate in Practical Nursing (LPN) program provides the following information for all prospective and current students:

The Mountain Empire Community College LPN program meets all Virginia Board of Nursing requirements for pre-licensure nursing education programs in the Commonwealth of Virginia.

The Commonwealth of Virginia participates with multiple (see table) other states in the National Council of State Boards of Nursing (NCSBN) National Licensing Compact (NLC) to allow nurses licensed in one state to provide nursing care across state lines in other compact states. Information listed is current per NCSBN as of July 1, 2020.

**Statement for the Respiratory Therapy program (RT):**

Pursuant to United States Department of Education (US DOE) regulation 34 CFR 668.43 (a) (5) (v), the Mountain Empire Community College Associates Degree in Respiratory Therapy (RT) program provides the following information for all prospective and current students:

The Mountain Empire Community College RT program meets all the requirements of the Commission on Accreditation for Respiratory Care (CoARC) and remains in good standing with this national accrediting body. All students upon successful graduation from the program are eligible to sit for their national boards through the National Board for Respiratory Care (NBRC). This program accreditation and national board credentialing will allow graduates to obtain licensure in 49 of the 50 states plus the District of Columbia. Alaska currently does not have a state licensure mandate for RT. But the graduate would still be able to obtain employment in Alaska upon completion of this program.

Licensure endorsement is available in 49 of the 50 states plus the District of Columbia.

Mountain Empire Community College is regionally accredited by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC).

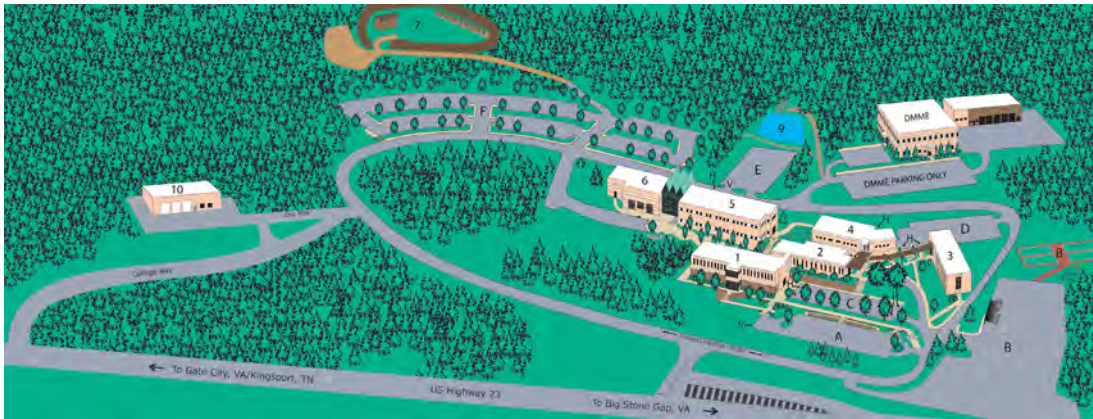
### Mountain Empire Community College Foundation

The MECC Foundation, Inc. is a non-profit organization that supports the mission of Mountain Empire Community College. Foundation projects include scholarships, faculty and staff development and recognition programs, cultural programs and events, campus improvements, educational programs, and other projects. The Foundation awards scholarships to qualified persons for the purpose of attending Mountain Empire Community College. These awards are based on criteria such as financial need and scholastic promise, and are available to persons who are enrolled or intend to enroll in specific programs. Scholarship recipients are selected by the MECC Office of Financial Aid. For more information, visit [www.meccfoundation.org](http://www.meccfoundation.org).

### Virginia Community College System

Mountain Empire Community College is one of 23 two-year colleges that make up the Virginia Community College System (VCCS). The VCCS was established in 1966 with a mission that complements the missions of the secondary schools and the senior colleges and universities in the Commonwealth of Virginia. The VCCS mission states: "We give everyone the opportunity to learn and develop the right skills so lives and communities are strengthened." For more information, visit [www.vccs.edu](http://www.vccs.edu).

# College Map



1. Godwin Hall
2. Holton Hall
3. Dalton-Cantrell Hall
4. Robb Hall
5. Phillips-Taylor Hall
6. Goodloe Center
7. Firing Range
8. Tennis Courts
9. Environmental Pond
10. Maintenance Building

## Parking Lots:

A, B, D, E, & F – Student Parking  
 C – Faculty/Staff Parking

H – Handicapped Parking  
 V – Visitor Parking

## Hours of Operation

MECC campus offices are open Monday through Friday, 8 a.m. to 4:30 p.m. Offices may experience schedule changes during peak periods and summer.

## Student Services Hours

Monday through Thursday, 8 a.m. to 6 p.m.  
 Friday 8 a.m. to 4:30 p.m.

## Wampler Library Hours

Fall, Spring, and Summer Semesters:

Monday - Thursday: 8 a.m.- 7:30 p.m.

Friday: 8 a.m.- 4:30 p.m.

Saturday: 10 a.m.- 2 p.m.

Intersession:

Monday – Friday: 8 a.m. – 4:30 p.m.

## Inclement Weather

When it is necessary to change the College schedule due to inclement weather or other unforeseen circumstances, the announcement will be made on the College’s website at [www.mecc.edu](http://www.mecc.edu), via text message, email, and radio and television stations. The following radio and television stations will announce the schedule change:

- WCYB-TV (Channel 5)
- WJHL-TV (Channel 11)
- WQUT-FM 101.5
- WAXM-FM 93.5
- WDIC-FM 92.1
- WJNV-FM 99.1
- WXBQ-FM 96.9

Students may register at [www.mecc.edu/textalerts](http://www.mecc.edu/textalerts) to receive announcements of schedule changes by text message and email.

## Understanding Announcements:

**Snow Schedule:** Online classes will be held as normal with no schedule changes. In-person classes begin at 10 a.m. Employees report at 9:30 a.m. if working on campus. Employees teleworking will work as scheduled.

**College Closed:** Online classes will be held as normal with no schedule changes. In-person day and evening classes and all services are cancelled. Employees teleworking will work as scheduled.

**Day and/or Evening Classes are canceled:** Online classes will be held as normal with no schedule changes. In-person classes will be cancelled. Employees teleworking will work as scheduled. College is open for all other services by non-teleworking employees.

## Schedule of Classes when operating on a Snow Schedule:

### Normal Schedule

- 8:15 a.m. - 9:30 a.m.
- 9:40 a.m. - 10:55 a.m.
- 11:05 a.m. - 12:20 p.m.
- 12:20 p.m. - 12:50 p.m.
- 12:50 p.m. - 2:05 p.m.
- 2:15 p.m. - 3:30 p.m.
- 3:40 p.m. - 4:55 p.m.
- 5:00 p.m.

### Snow Schedule

- 10:00 a.m. - 11:00 a.m.
- 11:05 a.m. - 12:05 p.m.
- 12:10 p.m. - 1:10 p.m.
- 1:10 p.m. - 1:40 p.m.
- 1:45 p.m. - 2:45 p.m.
- 2:50 p.m. - 3:50 p.m.
- 3:55 p.m. - 4:55 p.m.
- Classes meet as normal

## Schedule of In-Person exams when operating on a Snow Schedule:

- Exams scheduled at 8:15 a.m. will begin at 10 a.m.
- Exams scheduled at 11:05 a.m. will begin at 12:10 p.m.
- Exams scheduled at 2:15 p.m. will begin at 2:50 p.m.
- Evening exams will be held as regularly scheduled

# STEP 1: APPLY FOR ADMISSION

To apply to attend MECC, you must complete the Virginia Community College System (VCCS) online application, located at [www.mecc.edu/apply](http://www.mecc.edu/apply). After completing and submitting your application, you will receive a student ID number and username on your confirmation page. Print this page or write down this information for your records. For non-credit class enrollment, visit the Workforce Solutions web page at [www.mecc.edu/workforce](http://www.mecc.edu/workforce).

## Admission Requirements

Individuals are eligible for admission to the community college if they are high school graduates or the equivalent, or if they are eighteen years of age or older and able to benefit academically from study at the community college, as demonstrated by assessment in reading, writing, and mathematics. Minimum scores are noted in the chart below:

	VPT	Compass	Asset
Reading	ENF 1	62	35
Writing	ENF 1	32	35
Math	MTE 1	25	33

Exceptions to this policy may be made by the college president only for documented reasons. Students who do not meet the minimum score requirements are referred to the Dean of Student Services.

MECC reserves the right to evaluate and document special cases and to refuse or revoke admission if the college determines that the applicant or student poses a threat, is a potential danger, is significantly disruptive to the college community, or if such refusal or revocation is considered to be in the best interest of the college. MECC also reserves the right to refuse admission for applicants that have been expelled or suspended from, or determined to be a threat, potential danger or significantly disruptive, by another college. Students whose admission is revoked after enrollment must be given due process.

Individuals may be admitted to MECC as curricular or non-curricular students.

For all curricular students, the following items are required:

- A completed official application for admission with social security number requested.
- Unless otherwise specified by the College, official transcripts from all high schools, colleges, and universities attended. Graduates who complete secondary school in a home school setting must provide a graduation date and may be required to provide documentation of coursework. The VCCS Student Information System academic records will be sufficient for colleges within the Virginia Community College System.
- Additional information as stated by the college for admission to specific programs or curricula.

For all non-curricular students, a completed official application for admission is required with social security number requested.

The VCCS shall promote and maintain equal employment and educational opportunities without regard to race, color, religion, disability, sex, sexual orientation, gender identity, ethnicity, marital status, pregnancy, childbirth or related medical conditions including lactation, age (except when age is a bona fide occupational qualification), status as a veteran, national origin, or other non-merit factors.

## Special Admission Procedures

### Dual Enrollment Student Admissions

The major purpose of community colleges is to serve students who have graduated from high school or are beyond the compulsory age limit of the public school and have left public school. However, a qualified high school student may enroll at a community college subject to the following conditions:

### Dual Enrollment Partnerships

Dual enrollment partnerships are governed by an annually renewable contractual agreement between the school or district and the community college to allow academically qualified high school juniors and seniors to enroll in college courses that are applicable to degree, diploma, certificate, or career studies certificate programs offered at the college. Students from school divisions with whom the college has a current dual enrollment contractual agreement may enroll in college classes at the community college for dual enrollment credit. Courses taken for dual enrollment credit shall be transcribed on both the student's college and high school transcripts.

### High School Based Dual Enrollment Programs and Courses

Colleges and school divisions may develop contractual agreements to offer dual enrollment program pathways, academies, and courses at the high school. Such offerings may be taught by approved high school teachers who meet Virginia Community College System faculty credential requirements and are qualified by the college to teach course(s) in the program of study. College faculty and administrators are responsible for identifying high school dual enrollment offerings; selecting and qualifying high school faculty to teach college courses; professional development of dual enrollment faculty; and oversight and evaluation of program standards, including assessment of student learning outcomes, program learning outcomes and instructional effectiveness.

### Early College, Dual Enrollment Programs and Academies

Colleges and school divisions may develop contractual agreements to offer dual enrollment program pathways and academies on the college campus. Such courses are taught by full-time or adjunct community college faculty.

## Independent Dual Enrollment

Independent dual enrollment allows individual high school students to enroll in courses at the community college. A qualified high school junior or senior may be admitted to any college-level credit-bearing course, with permission of the high school principal or designee and the parent. Participation in independent dual enrollment does not require a contractual agreement between the college and the school division. However, a high school student must meet dual enrollment admissions standards. Courses taken as independent dual enrollment shall be transcribed on the student's college transcript.

Although high school and home school students are not normally qualified for general admission, colleges may offer admission to those students who meet additional criteria. Dual enrollment is restricted to high school juniors and seniors and home school students studying at the high school junior or senior levels. Home school students must also provide a copy of a home school agreement approved by the school

district or a letter from the local school board or a copy of the letter filed by the parent or legal guardian declaring home school. Documentation of parental permission is required for all dual enrollment students.

Because admitting freshmen and sophomores is considered exceptional, the college ready status of each prospective freshman and sophomore student will be treated on a case-by-case basis. Formal approval by the college president is required for admitting freshmen or sophomores.

All students admitted under this section must demonstrate readiness for college by meeting the criteria below.

### Placement of Dual Enrollment Students

Students enrolling in a dual enrollment course must meet all course pre-requisites. MECC does not enroll public or private high school students or homeschooled students in developmental courses.

### Dual Enrollment Admission Criteria for Transfer Course

	Virginia Placement Test (VPT)	Compass	Asset	PSAT	SAT	ACT	SOL
English/ Writing	ENG 111	76	43	N/A	N/A	18	N/A
Reading	ENG 111	81	42	N/A	N/A	18	N/A
Writing/Reading	ENG 111	N/A	N/A	390	480	N/A	N/A
Mathematics	MTE 1	25	33	500	530	22	Algebra I - Pass

### Dual Enrollment Admission Criteria for CTE Courses

	Virginia Placement Test (VPT)	Compass	Asset	PSAT	SAT	ACT	SOL
English/ Writing	ENF 1	32	35	N/A	N/A	18	N/A
Reading	ENF 1	62	35	N/A	N/A	18	N/A
Writing/Reading	ENF 1	N/A	N/A	390	480	N/A	N/A
Mathematics	MTE 1	25	33	500	530	22	Algebra I - Pass

## Transfer Students

Normally, transfer students who are eligible for reentrance at the last college of attendance are also eligible for admission to Mountain Empire Community College.

Transfer students who are ineligible to return to a particular curriculum in a previous college generally may not be allowed to enroll in the same curriculum in the community college until one semester elapses or until an approved preparatory program at the College is completed. Upon appeal from an ineligible student, the Student Affairs Committee of the College will decide on each case and can impose special conditions for the admittance of transfer students. If a transcript is received after class enrollment has begun, which indicates that the student is ineligible to return to the previous college, the student may be withdrawn from classes and offered the opportunity to appeal to the Student Affairs Committee.

It is the role of the community college to help each student succeed in a program from which he/she can benefit. Early application and submission of all transcripts will facilitate this effort. The document required for acceptance of transfer credit from other institutions is an official transcript of all postsecondary credits previously earned.

Each student transferring from another college should consult Enrollment Services/Registrar at MECC for an assessment of credits. Generally, no credit will be given for subjects with a grade lower than "C." A transfer student may be advised to repeat courses if it is clearly advantageous to their curriculum advancement. The College will provide transfer students an evaluation of credits that will transfer from other institutions prior to enrollment when possible, but at least no later than the end of the first academic term of enrollment. When the course contains similar or like content and credit, the course will transfer as the equivalent of this institution's course. When the content is unlike any course offered at MECC, elec-

tive credit may be granted. Credit from non-regionally accredited colleges and universities is evaluated based upon recommendations in Transfer Credit Practices of Designated Educational Institutions published by the American Association of Collegiate Registrars and Admissions Officers. Any VCCS course in which a student received a grade of "C" or better (excluding general usage courses) will transfer as the same course at any other college in the VCCS.

The academic division dean in which the student is enrolled will determine how the evaluated transfer credit may be applied toward the student's program of study.

### **Senior Citizens – Citizens 60 Years of Age or Older**

Senior citizens are encouraged to take advantage of free tuition provided for by the Senior Citizens Higher Education Act of 1974, As Amended 1976, 1977, 1982, 1988, 1999, 2003 and 2015.

Subject to SCHEV regulations and any legislative revisions, the Act gives senior citizens certain rights.

- a. "Senior citizen" shall mean any person who, before the beginning of any semester in which such person claims entitlement to senior citizen benefits, (1) has reached sixty years of age, and (2) has had legal domicile in Virginia for one year.
- b. A senior citizen shall be entitled:
  1. To register for and enroll in courses as a full-time or part-time student for academic credit if such senior citizen had a taxable individual income not exceeding \$23,850 for Virginia income tax purposes for the year preceding the year in which enrollment is sought;
  2. To register for and audit courses offered for academic credit regardless of income level; and
  3. To register for and enroll in courses not offered for academic credit regardless of income level.
- c. Such senior citizen shall pay no tuition or fees for courses offered for academic credit or for courses not offered for academic credit, except fees established for the purpose of paying for course materials, such as laboratory fees, subject to determination by the institution of its ability to offer the course or courses for which the senior citizen registers. The Council of Higher Education shall establish procedures to ensure that tuition-paying students are accommodated in courses before senior citizens participating in this program are enrolled. However, the state institutions of higher education may make individual exceptions to these procedures when the senior citizen has completed seventy-five percent of the requirements for a degree.

For more information, visit the Office of Enrollment Services or [www.mecc.edu/senior-citizens](http://www.mecc.edu/senior-citizens).

### **International Applicants for Admission**

Mountain Empire Community College is authorized under federal law to enroll international students. The College welcomes applications from international students who meet the qualifications set forth in these guidelines. All stated requirements are subject to change based upon federal regula-

tions or a determination by the College that a policy change is in the best interests of the student and/or the College community.

International applicants will be admitted only if they fulfill all general and special requirements for admission. International students are considered out-of-state residents for purposes of determining tuition rates and admission to programs with limited enrollment. Students who acquired a student visa through acceptance by another school or college will not be considered until they have secured a written release from the original institution. International students who are exclusively taking classes through distance learning without entry into the United States will be evaluated on an individual basis. All documentation must be received by June 1 for fall admission or October 1 for spring admission.

### **Financial Responsibility of International Students**

No financial aid is available for international students. The College will not certify applications for an international student to obtain a work permit until they have successfully completed 30 semester hours of coursework at the College with a 3.0 GPA, or resided in the U.S. for at least twelve consecutive months, whichever is the longest period of time.

All international applicants must submit an International Student Data Form provided by the College, that they have personal or family financial resources sufficient to pay college and living expenses prior to being issued a I20. The statement must include the amount of income the student will receive while attending college, the source of income, and the manner in which living expenses will be met. In addition, applicants must submit documentation evidence (notarized bank statement in US dollars) of financial support in the amount indicated on the International Student Data form.

If the applicant is under eighteen, the parent or legal guardian must submit the notarized statement of financial support. All international students must have a local sponsor who will assume financial responsibility for the student.

### **English Proficiency of International Students**

International students must document proficiency in the English language by submitting a TOEFL (Test of English as a Foreign Language) score. Official copies of the TOEFL scores must be submitted to Enrollment Services/Admission. The TOEFL test is required of all applicants. A minimum international TOEFL score of 61 iBT is required, although achieving that score is no guarantee of admission. The applicant is responsible for making early arrangements for taking the TOEFL. The website is <https://www.ets.org>. On the application for the test, the student should specify that the scores be sent to Enrollment Services/ Admission at MECC. The official results of the TOEFL must be received at MECC by the application deadline.

Applicants who are in the United States and who have not taken the TOEFL or achieved the minimum cut score, may petition the College to evaluate them for admission during a visit to the campus. Transfer applicants who have complet-

ed two semesters or terms of a non-ESL English composition course with above-average grades at an American college or university are not required to submit TOEFL scores.

### **Academic Transcripts of International Students**

Non-English transcripts and documents must be submitted in their original form, accompanied by a certified English translation. Unofficial documents and documents without accompanying English translations are not acceptable.

International transfer students must submit a syllabus of university study. This description of each course or subject studied must be submitted in English or accompanied by a certified English translation of the syllabus. Applications without this information cannot be considered. It is recommended that transfer students seeking admission from international educational systems have a professional evaluation service review their transcripts and other educational credentials. Students currently enrolled in a U.S. system must still have their international transcripts evaluated.

### **International Applicant Contact**

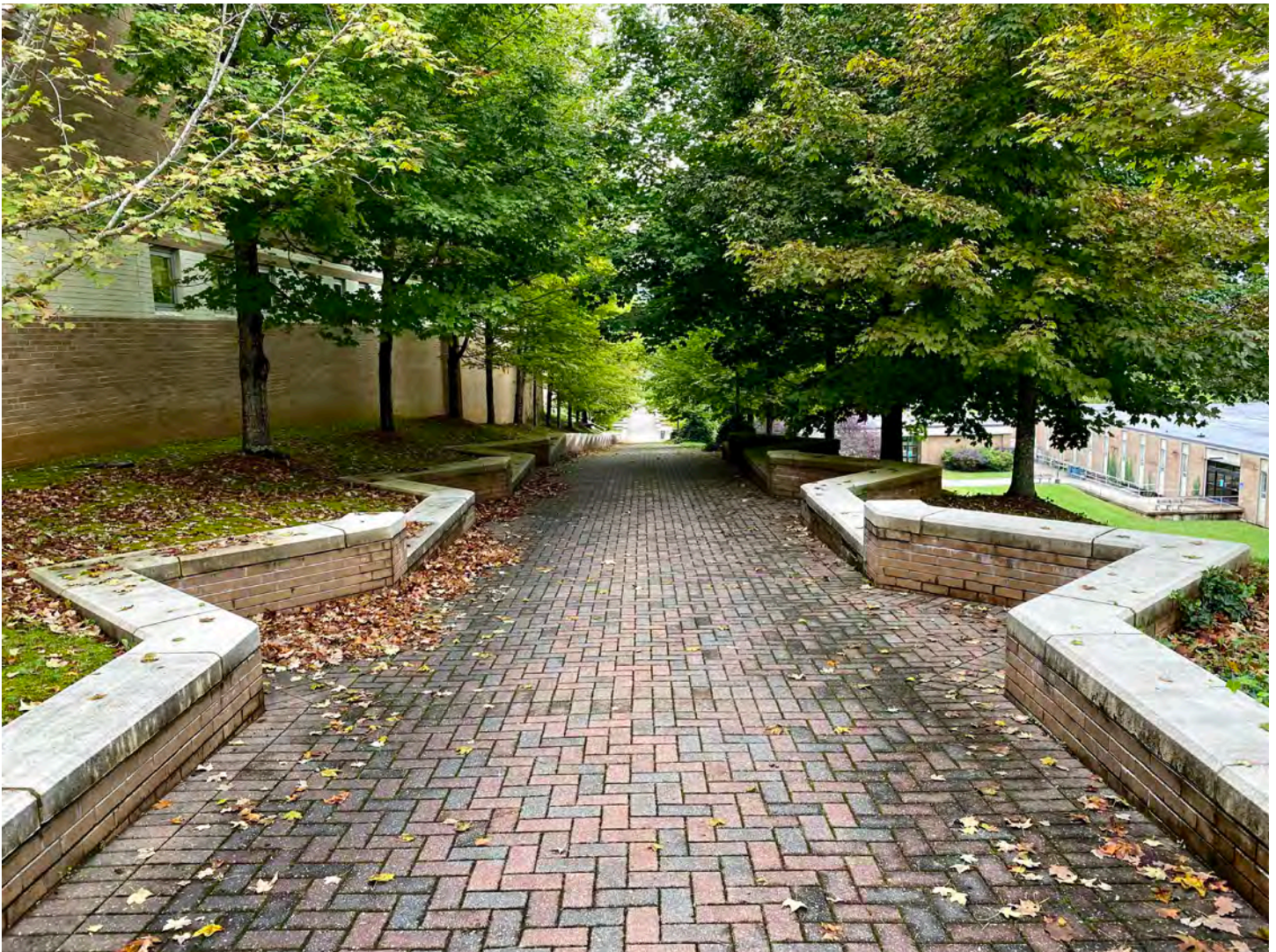
For additional information about the process for international applicants please contact the Enrollment Services Office at 276.523.2400.

### **Out-of-State Students**

Students who do not reside in the state of Virginia should contact the Office of Enrollment Services for information regarding admission as an out-of-state student.

### **Sex Offender and Crimes Against Minors Admission Policy**

Section 23.1-407 of the Code of Virginia requires that the VCCS send enrollment information to the Virginia State Police concerning applicants to institutions of higher education. This information is transmitted electronically and compared against the Virginia Criminal Information Network and National Crime Information Center Convicted Sex Offender and Crimes Against Minors Registry.





## STEP 2: APPLY FOR FINANCIAL AID

MECC encourages all eligible degree and [certificate seeking](#) students to apply for financial aid at <https://studentaid.gov>. Financial aid may come in the form of grants, scholarships, loans and work-study positions. MECC's school code to include on the FAFSA form is 009629.

### Deadlines to Apply for Financial Aid

Although you can file the online FAFSA anytime, it is best to complete the FAFSA prior to May 1 of the year that you plan to attend MECC. Please review MECC's financial aid webpage at [www.mecc.edu/paying-for-college](http://www.mecc.edu/paying-for-college) for deadlines and more details about financial aid. You can also research available scholarships at [www.mecc.edu/scholarships](http://www.mecc.edu/scholarships).

### Financial Aid

All Student Financial Aid Programs are administered by the Department of Enrollment Services and Financial Aid and include grants, scholarships, and employment. Necessary forms and information are available from Enrollment Services/Financial Aid in Fox Central located in Holton Hall. Application for most aid programs is possible by completing the Free Application for Federal Student Aid at [www.studentaid.gov](http://www.studentaid.gov) and the MECC Foundation Scholarship Application at [www.mecc.edu/scholarships](http://www.mecc.edu/scholarships).

The philosophy of the College is that, "No student should be denied the opportunity for a postsecondary education due solely to a lack of financial resources." To be eligible for financial aid the student must be enrolled in an academic plan leading toward a certificate, diploma, or degree. Course selection should follow a planned program of study.

### Eligibility Requirements for Federal, State and VCCS Programs

Eligibility for federal, state, and VCCS programs is based on financial need and several other factors. The Free Application for Federal Student Aid (FAFSA) must be filed at <https://studentaid.gov>. Many financial aid programs are awarded on a first-come, first-serve, basis so it is important to apply early. The financial aid administrator at the College will determine eligibility. Basic eligibility requirements require that students:

- Demonstrate financial need
- Have a valid high school diploma or a General Education Development (GED) certificate or complete a high school education in a home school setting that is treated as such under state law (Note: Ability-to-Benefit (ATB) alternatives may qualify students without a valid high school diploma or its equivalent. Alternatives include passing an ability-to-benefit test approved by the U.S. Department of Education, meeting other standards the state establishes that the Department approves, or satisfactorily completing six credit hours or the equivalent course work toward a degree or certificate. For more information, contact Financial Aid at 276.523.7470.
- Be enrolled or accepted for enrollment as a regular student working toward a degree or certificate in an eligible program

- Be a U.S. citizen or eligible noncitizen
- Have a valid Social Security Number
- Register with the Selective Service (if male and if required)
- Maintain satisfactory academic progress
- Certify that they are not in default on a federal student loan and do not owe money on a federal student grant
- Certify that they will use financial aid only for educational purposes
- Only receive aid for courses required to complete program

### Financial Aid for Home School Graduates

Home school graduates of a secondary school curriculum may receive federal financial aid.

### Enrollment Requirements

To receive financial aid a student must be enrolled in a program leading to a certificate or degree. Most aid awards are adjusted based on the number of credits. Students registered for 12 or more credits generally receive 100% of aid awarded; 9-11 credits yield 75%; 6-8 credits yield 50%. Students registered for less than 6 credits may also be considered for PELL and PTAP (for in-state students).

### Aid Programs Available

MECC does not participate in the Federal Family Education Loan Programs. However, the College does participate in the following grant, work, and scholarship programs.

### Federal Programs

**Federal Pell Grant:** Federal Pell Grants are awarded to eligible undergraduate students who have not earned a bachelor's or a professional degree. Eligibility is primarily based on the Expected Family Contribution (EFC) from the Student Aid Report (SAR), but is also affected by enrollment status. The EFC must be 5846 or less.

The maximum award for the 2021-2022 academic year is \$6,495, with a minimum of \$672. A minimum of 12 credit hours each semester is required to receive full eligibility, with pro-rated awards going to students with less than 12 credit hours. Eligible students will be awarded once the Free Application for Federal Student Aid (FAFSA) and any required documentation have been received.

### FSEOG (Federal Educational Supplemental Opportunity Grant)

FSEOG is for undergraduate Federal Pell Grant recipients with exceptional financial need (i.e., students with the lowest EFCs). FSEOG awards generally are for \$400. Eligible students will be awarded once the FAFSA and any required documentation have been received on a first-come, first-served basis until funds have been exhausted.

**Federal Work Study:** Federal Work-Study (FWS) provides part-time jobs for undergraduate students with financial need, allowing them to earn money to help pay education expenses. The program encourages community service work

and work related to the recipient's course of study. Students are paid by the hour usually twice per month. Wages for the program must equal at least the current federal minimum wage but might be higher, depending on the type of work and the skills required. The amount earned cannot exceed the total FWS award. When assigning work hours, consideration will be given to the student's award amount, class schedule, and academic progress. Eligible students who have already been awarded other aid and wish to be considered for FWS are advised to contact the College.

### State Programs

Priority for state programs is given to students who do not already possess a bachelor's or professional degree and have met the College's priority date for applying for financial aid. Eligible students will be awarded once the FAFSA and any required documentation have been received on a first-come, first-served basis until funds have been exhausted.

**COMA (Commonwealth Grant):** Students receiving COMA must be domiciled in Virginia, show financial need by means of needs analysis and be enrolled on at least a half-time basis (at least six credits). Funding is provided solely by the Commonwealth of Virginia. Individual awards vary dependent upon need and funding level. Awards Range from \$1,000 to \$2,100 and can be used for tuition, fees, and books.

**VGAP (Virginia Guaranteed Assistance Program):** Students receiving VGAP must meet requirements similar to COMA recipients. However, students must have achieved a 2.5 GPA in high school, have exceptional financial need and maintain full-time enrollment as a dependent student. Awards vary from \$1,100 to \$2,200 for tuition, fees and books. Renewal students must maintain a 2.0 G.P.A. and continuous full-time enrollment (summer terms are excluded).

**Part-Time Tuition Assistance Program (PTAP):** This VCCS-funded grant provides tuition assistance only (no fees) to students in a degree or certificate program who enroll for at least 1 but less than 8 credits. Students must show need.

### MECC Programs

**Presidential Honor Scholarships:** Awarded by the President and Local Advisory Board of MECC to enrolled students who are valedictorians and salutatorians of public or private high schools in MECC's service region. Public high schools must be accredited by the State Department of Education and private high schools must be accredited by an accreditation association approved by the Virginia Council for Private Education. The student must enroll during the fall semester following high school graduation to receive this scholarship. Awards are for full tuition and fees, and are renewable for the second year based on the student's GPA.

**Mary Marshall Nursing Scholarship:** Established by the General Assembly for Virginia residents who show financial need. The deadline for applications from new nursing students is June 21. Completed applications must be returned to the Financial Aid Office by June 15. Awards vary. Application is available online at <http://www.vdh.virginia.gov/OMHHE/>

[primarycare/incentives/nursing/index.htm](http://www.mecc.edu/primarycare/incentives/nursing/index.htm).

**AIMS Scholarship:** Graduating high school seniors are eligible for this scholarship, which guarantees that the student pays no tuition and/or fees at MECC for up to three years (or 72 credit hours), if they meet the qualifications. For specific information please visit [www.mecc.edu/aims](http://www.mecc.edu/aims).

### Restricted Scholarships

There are also restricted scholarships provided by industries and organizations. Students should apply directly to each organization for consideration. Enrollment Services/Financial Aid encourages students to apply early, particularly while still in high school.

### MECC Foundation, Inc.

The MECC Foundation, Inc. has been established to assist the College in providing student aid. The Foundation is a charitable, nonprofit corporation which provides an appropriate means for individuals, organizations, business and industry to contribute to the College. To learn more about the MECC Foundation, visit [www.meccfoundation.org](http://www.meccfoundation.org).

### VCCS Programs

**VCCS Grant:** The VCCS Grant provides assistance to Virginia residents at Virginia's Community Colleges who demonstrate financial need. Award amounts cannot exceed tuition, fees, and books per academic year. This grant will not be awarded as part of the initial aid package. It may be awarded during the repackaging process that takes place after the end of the add/drop period where aid is based on actual enrollment.

**Great Expectations Program:** The Great Expectations Program provides tuition and fees at any Virginia community college for high school graduates or general education development (GED) completers in foster care, in the custody of a social services agency, or considered a special needs adoption. More information is available at [www.mecc.edu/great-expectations/](http://www.mecc.edu/great-expectations/).

### Veterans Information

Enrollment Services/Veterans Affairs provides services to veterans and dependents enrolled at the College. Assistance is primarily provided with receipt of veteran's educational benefits. Enrollment Services/Veterans Affairs is located in Robb Hall, Room 106. Enrollment Services/Veterans Affairs is not a part of the Veterans Administration Regional Office.

The following individuals shall be charged the in-state rate, or otherwise considered a resident, for tuition purposes:

- A Veteran using educational assistance under either chapter 30 (Montgomery G.I. Bill – Active Duty Program) or chapter 33 (Post-9/11 G.I. Bill), of title 38, United States Code, who lives in the Commonwealth of Virginia while attending a school located in the Commonwealth of Virginia (regardless of his/her formal State of resident) and enrolls in the school within three years of discharge from a period of active duty service of 90 days or more.
- Anyone using transferred Post-9/11 G.I. Bill benefits (38

U.S.C. § 3319) who lives in the Commonwealth of Virginia while attending a school located in the Commonwealth of Virginia (regardless of his/her formal State of resident) and enrolls in the school within three years of the transferor's discharge from a period of active duty service of 90 days or more.

- A spouse or child using benefits under the Marine Gunner Sergeant John David Fry Scholarship (38 U.S.C. § 3311(b)(9)) who lives in the Commonwealth of Virginia while attending a school located in the Commonwealth of Virginia (regardless of his/her formal State of resident) and enrolls in the school within three years of the Service member's death in the line of duty following a period of active duty service of 90 days or more.
- An individual using educational assistance under chapter 31, Vocational Rehabilitation and Employment (VR&E) who lives in the Commonwealth of Virginia while attending a school located in the Commonwealth of Virginia (regardless of his/her formal State of resident) effective for courses, semesters, or terms beginning after March 1, 2019.
- Anyone described above while he or she remains continuously enrolled (other than during regularly scheduled breaks between courses, semesters, or terms) at the same institution. The person so described must have enrolled in the institution prior to the expiration of the three-year period following discharge or release as described above and must be using educational benefits under either chapter 30, chapter 33, or chapter 31 of title 38, United States Code.

### **Application Procedure**

The veteran may apply for educational benefits on-line at [www.gibill.va.gov](http://www.gibill.va.gov) or by completing VA Form 22-1990, at Enrollment Services/Veterans Affairs. Copies of discharge papers (DD Form 214, Member 4) should accompany the application. (If you do not have your DD214, Enrollment Services/Veterans Affairs will assist you in obtaining a copy or any other information you may need from your military records).

The spouse or dependent of a veteran may apply for educational benefits online at [www.gibill.va.gov](http://www.gibill.va.gov) or by completing VA Form 22-5490, at Enrollment Services/Veterans Affairs.

If you are transferring to MECC from another place of training, or you have not been enrolled at MECC for a least one year, a Request for Change of Program or Place of Training will be required.

To ensure smooth processing of VA claims, it is important to apply early. Applicants should receive notification from the Department of Veterans Affairs in approximately 30 to 60 days after an application is submitted. A copy of the Certificate of Eligibility must be submitted to Enrollment Services/Veterans Affairs.

### **Certificate of Understanding**

All VA recipients are required to submit a signed MECC Certificate of Understanding (COU) prior to receiving any VA Education Benefits based on enrollment through MECC.

### **Enrollment Certification**

VA recipients must be enrolled in an approved program of study. In order to receive full-time monthly stipends/BAH, the VA recipient must be enrolled full-time. Post 9/11 G.I. Bill recipients must be enrolled in at least 51% of a full course load in order to receive a monthly housing allowance. The College will certify enrollment as full-time at 12 credit hours and above; three-quarter time at nine to eleven credit hours; half-time at six to eight credit hours; less than six hours for cost of tuition and fees only. Certifications listed above are based on continuous enrollment for the entire 15-week semester. Please contact Enrollment Services/Veterans Affairs for certification information for short or special sessions.

Upon completion of enrollment, submit the MECC Certification Request for VA Educational Benefits form to Enrollment Services/Veterans Affairs. It is extremely important to enroll early and submit paperwork prior to the first day of class. VA recipients will receive a Certification email each semester indicating the rate of pursuit that has been certified.

VA recipients should notify Enrollment Services/Veterans Affairs immediately of any changes in enrollment that occur after benefits have been certified to the Department of Veterans Affairs.

### **Military Survivors and Dependents Education Program**

The Virginia Military Survivors and Dependents Education Program (VMSDEP) provides education benefits to spouses and children of military service members killed, missing in action, taken prisoner, or who became at least 90% disabled as a result of military service in an armed conflict. More information, eligibility requirements, and instructions for applying are available at <https://www.dvs.virginia.gov/education-employment/virginia-military-survivors-and-dependents-education-program-2-2-2>.

# STEP 3: DETERMINE COURSE PLACEMENT AND MEET WITH AN ADVISOR

## Course Placement

In determining new students' readiness for college-level English and math courses, MECC will use the following means and measures:

- Any student who has earned an associate degree or higher or who has earned a 'C' or better in college-level courses in math and/or English at a regionally accredited institution will be exempt from placement testing provided they meet the pre-requisites for the respective courses in their chosen program of study.
- Any student who has successfully completed developmental courses at a VCCS institution will be exempt from placement testing in those areas.
- Any student who has successfully completed developmental courses at a non-VCCS institution will have their coursework evaluated for placement.
- A student may submit a high school/home school transcript or an approved test score for placement evaluation. Placement will be based on the tables found in 6.4.0.2.2 and 6.4.0.2.3. Seniors who have not yet graduated may submit a transcript as of the completion of the first semester of the senior year to determine readiness for placement into college-level courses for the purpose of early admission.
- Any student who is not placed by the above criteria will take the Virginia Placement Test, or ESL-specific test, as appropriate. Students have the option to take the Virginia Placement Test in order to improve their placement standing after other measures are considered. Such placement test scores will not be used to place a student in a lower English or math course than indicated by other criteria, unless the student desires a lower placement.

\*This policy does not apply to current dual enrollment students.

## Math Placement

Math placement will be determined using one of the following measures:

Math Placement Measures	HSGPA or Score Range	Placement Results
HSGPA Less than 2.0	<2.0	MDE 10
HSGPA 2.0 – 2.99 without HS Algebra II	2.0 to 2.99	MTH 111 MTH 132 MTH 133 MTH 154 + MDE 54 MTH 155 + MDE 55 MDE 60
HSGPA 2.0 – 2.99 with HS Algebra II	2.0 to 2.99	MTH 111 MTH 132 MTH 133 MTH 154 + MDE 54 MTH 155 + MDE 55 MTH 161 + MDE 61
HSGPA 3.0 + without HS Algebra II	2.0 to 2.99	MTH 111 MTH 132 MTH 133 MTH 154 MTH 155 MDE 60
HSGPA 3.0 + with HS Algebra II	2.0 to 2.99	MTH 111 MTH 132 MTH 133 MTH 154 MTH 155 MTH 161
SAT - Math	500 or above	MTH 111 MTH 132 MTH 133 MTH 154 MTH 155 MTH 161
SAT - Math	470 – 490 Range	MTH 111 MTH 132 MTH 133 MTH 154 MTH 155 MTH 161+MDE 61
ACT – Subject Area Test Math	18 or above	MTH 111 MTH 132 MTH 133 MTH 154 MTH 155 MTH 161

ACT – Subject Area Test Math	17	MTH 111 MTH 132 MTH 133 MTH 154 MTH 155 MTH 161+MDE 61
GED – Math (2014 or later)	165 or above	MTH 111 MTH 132 MTH 133 MTH 154 MTH 155 MTH 161+MDE 61
GED – Math (2014 or later)	155 – 164 Range	MTH 111 MTH 132 MTH 133 MTH 154+MDE 54 MTH 155+ MDE 55 MDE 60

# = Students may complete the VPT – Calculus for placement into Pre-Calculus II, Calculus, and 200-level Statistics. Placement directly into Pre-Calculus II, Calculus, and 200-level Statistics based on HSGPA and highest level courses taken will be at the discretion of each college.

## Measures for English Placement

English placement will be determined using one of the following measures:

English Placement Measures	HSGPA or Score Range	Placement
HSGPA Less than 2.0	<2.0	EDE 10
HSGPA 2.0 – 2.99	2.0 – 2.9 range	EDE 11/ENG 111
HSGPA 3.0 +	3.0 or higher	ENG 111
SAT – ERW (Evidenced Based Reading and Writing)	480 or above	ENG 111
SAT – ERW (Evidenced Based Reading and Writing)	400-470 range	EDE 11/ENG 111
ACT – Subject Area Tests English and Reading	18 or above	ENG 111
ACT – Subject Area Tests English and Reading	15-17 range	EDE 11/ENG 111
ACT – Subject Area Tests English and Reading –	14 and below	EDE 10
GED – English (2014 or later)	165 or above	ENG 111

High school GPA (HSGPA) is valid for five (5) years after the date of high school graduation. SAT, ACT and GED Test scores are valid for five (5) years after the date of the test. Virginia Placement Tests-Math and English scores are valid for five (5) years after the date of the test.

Measurement	Beginning Date for Summer 2020	Beginning Date for Spring 2021
High School GPA (HSGPA)	5/1/2014 – (Class of 2015)	5/1/2014 – (Class of 2015)
SAT	After 5/1/2015	After 12/1/2015
ACT	After 5/1/2015	After 12/1/2015
GED	After 5/1/2015	After 12/1/2015
VPT	After 5/1/2015	After 12/1/2015
Developmental Courses*	Completed Summer 2015 or later	Completed Fall 2015 or later

Students who completed high school six or more years ago (2014 or earlier) will meet with an advisor to make an Informed Self-Placement decision regarding course enrollment.

## Transcripts

Students applying for admission should submit their high school or college transcript information to Enrollment Services Office, located in Fox Central/Holton Hall, prior to registering for courses.

## Meet with an Advisor

When a student declares a program of study at Mountain Empire Community College, he or she will be assigned a faculty advisor to assist in choosing the appropriate classes during the student's pursuit of a degree or certificate. The faculty advisor will become the student's main point of contact for academic issues that impact educational progress. Because faculty schedules vary throughout the year, scheduling an appointment to meet with faculty advisors is recommended. However, if a program of study has not been chosen, or if the faculty advisor is not available, academic advising is also available through the Office of Student Services, or other faculty within the student's area of interest. To schedule an appointment with your advisor, call 276.523.7472.

## STEP 4: REGISTER FOR CLASSES

Students can register for classes online through [MyMECC](#), located at [www.mecc.edu](http://www.mecc.edu). This system will ask you to enter your username and password which you received when you completed the online application to the College. Once you have logged in to [MyMECC](#), follow the VCCS SIS: Student Information System/Student Center/Enroll link to register.

### Normal Academic Load

The normal academic load for a student is 15-17 credits. The minimum full-time load is 12 credits and the normal maximum full-time load is 18 credits excluding College Success Skills (SDV 100). Students who wish to carry an academic load of more than 18 credits must have a minimum G.P.A. of 3.0 and the approval of Enrollment Services/Registrar, designee of the Vice-President of Academic and Student Services. Students placed on academic warning or academic probation may be required to take less than the normal course load.

### Adding a Course

Normally, a student may not enter a new class after the first two weeks of classes in a standard session. Any request for registration in a new class after the published add period must be approved by Enrollment Services/Registrar. The add period for classes in non-standard sessions ends on that day which represents completion of fifteen percent of the class days.

### Withdrawing from Class

To withdraw from a class, a student must complete a Class Schedule form, which can be obtained from Enrollment Services/Registrar. If a student withdraws from a class before the last day to withdraw and receives a refund (this date is published in the Class Schedule), the student is removed from the class roll and no grade is awarded. After this date, but prior to the last day to withdraw without grade penalty (also published in the Class Schedule), a student who withdraws or is withdrawn from a course will be assigned a grade of "W."

A student who withdraws after the official withdrawal date will receive a grade of "F" unless he/she withdraws with extenuating circumstances which prevented the student from completing the class and from withdrawing on or before the official withdrawal date. The Request for Withdrawal Due to Extenuating Circumstances form, available from Enrollment Services/Registrar, must be completed by the student or faculty member. The form must be submitted to Enrollment Services/ Registrar prior to the last class meeting for final consideration and approval. The student may appeal a denial within ten business days of notification by written appeal to the Student Affairs Committee.

The student who pre-registers in a class for which tuition is paid, but fails to attend the class, is responsible for completing the withdrawal process to prevent being assigned a grade of "F."

The responsibility for providing documentation of mitigating circumstances rests with the student. Students who wish to withdraw from a class should initiate the withdrawal procedure with a counselor. A short interview may also be required. A student normally will not be allowed to withdraw from a class after the last official class meeting prior to exams. Such a withdrawal will be effective on the date the notice is received. No requests to withdraw from class will be accepted by telephone.

### Administrative Withdrawal

Students may be withdrawn from classes by the instructor for failure to attend classes during the first 60% of the instructional period.

### Repeating a Course

A student will normally be limited to two enrollments in a credit course that is not designated as repeatable for credit or is not a General Usage course. Should the student request to enroll in the same course beyond the second time, the need must be documented and approved by Enrollment Services/Registrar or the Division Dean. The Division Dean's approval is required for enrollment beyond the third time. This limitation does not apply to courses designated as repeatable for credit or General Usage courses. (General Usage courses: 90-190-290; 93-193-293; 95-195-295; 96-196-296; 97-197-297; 98-198-298; 99-199-299.)

Although all grades earned are reflected on students' transcripts, only the last grade earned (A, B, C, D or F) for a repeated course is counted in the computation of the cumulative GPA and for satisfying graduation requirements.

### Auditing a Course

Students desiring to attend a course without taking the examination or receiving credit for the course may do so by registering to audit through the usual registration process and paying the regular tuition. Permission of Enrollment Services/Registrar is required to audit a course.

Audited courses carry no credit and do not count as part of the students' course load. Students desiring to change status in a course from audit to credit or from credit to audit must do so within the add/drop period for the course.

Students who desire to earn credit for a previously audited course must re-enroll in the course for credit and pay normal tuition to earn a grade other than "X." Advanced standing credit should not be awarded for a previously audited course.

# STEP 5: PAY FOR COLLEGE

## Tuition

The tuition for all credit courses is set by the Virginia State Board of Community Colleges and is subject to change. Tuition and fees are listed at the following website: [www.mecc.edu/paying-for-college](http://www.mecc.edu/paying-for-college).

A Virginia domicile is eligible for in-state tuition rates and is one who has been domiciled in, and is and has been a bona fide legal resident of Virginia for a period of at least one year prior to the commencement of the term or semester of entitlement.

Students classified as out-of-state who can provide clear and convincing evidence that they were eligible for Virginia domicile on the first day of class for a term may have their tuition status changed for the current term. In the event that a student's circumstances change after a semester has begun, the student's tuition status may be eligible for reclassification. This reclassification shall be effective for the next academic semester or term following the date of the application for reclassification.

Tuition and fees are due and payable on the scheduled enrollment days. Personal checks are acceptable in the amount of the tuition due. Tuition may be paid via MasterCard or Visa or on line through the student center in PeopleSoft SIS using QuikPAY. The QuikPAY service allows payments to be made by credit/debit card, checking account or savings account.

## Chapter 31 and Chapter 33 Recipients

A DND (Do Not Drop) Service Indicator will be placed on the record of any individual entitled to educational assistance under chapter 31, Vocational Rehabilitation and Employment, or chapter 33, Post 9/11 GI Bill benefits under the following conditions prior to the first day of the semester: 1) The individual has provided a copy of his/her Certificate of Eligibility for entitlement to educational assistance under chapter 31 or 33 (a "certificate of eligibility" can also include a "Statement of Benefits" obtained from the Department of Veterans Affairs' (VA) website -eBenefits, or a VAT 28-1905 form for chapter 31 authorization purposes). 2) The individual has submitted a completed and signed Certificate of Understanding for the current academic year; and 3) the individual has submitted a completed and signed MECC Certification Request for VA Educational Benefits for the current semester.

The DND Service Indicator will remain on the individual's record until the date on which payment from the VA is made to the institution; or 90 after the date the institution certified tuition and fees following the receipt of the documents listed above (whichever date is earlier).

Chapter 33 recipients with an eligibility of less than 100% must pay their portion of tuition/fees by the end of the expiration period.

Payment of tuition and fees also enables the student to use

the library, learning laboratory, bookstore, parking lot, student lounge, and other facilities of the College. There are no special laboratory or library fees, but students are expected to pay charges for any College property which they damage or lose. This policy also applies to chapter 31 and chapter 33 individuals with a DND Service Indicator.charges for any College property which they damage or lose.

## Appeals Process for Applicants Denied In-State Tuition

The initial assessment of eligibility for in-state tuition is made by Enrollment Services/ Admission. Students who wish to appeal their domicile/in-state classification should contact the Dean of Enrollment Services.

## Tuition Payment Plan

To assist in meeting educational expenses, MECC offers the Tuition Management System (TMS) Payment Plan to help budget tuition costs. There are no interest or finance charges assessed and no credit check. Students may budget tuition and fees in the following manner:

- **Automatic Bank Payment:** This is a bank draft from a checking account or savings account, on the 20th day of each month.
- **Credit Card Option:** If you elect to use this option, the monthly payment, along with a convenience fee, are automatically charged to the designated credit card. The convenience fee is in addition to the non-refundable Tuition Management System (TMS) enrollment fee. Payments will be charged on the 20th day of each month until the balance is paid in full.

## Tuition Payment Plan Enrollment Fee

There is a small enrollment fee for using the TMS payment plan. The amount of the fee depends on the time in which you enroll in the plan. The enrollment fee varies from \$35 to \$45. This is the total cost; no interest is applied. The down payment, along with the enrollment fee is deducted from the designated bank account or charged to the designated credit card within one to two business days after registering for the payment plan. Additional scheduled payments are always on the 20th of the month. If bank drafts fail for insufficient funds on any of the payments, you will be assessed a \$25 service fee by TMS and additional service fees assessed by your bank. TMS will attempt another draft on the 5th of the following month. Students enrolled in the payment plan must be sure the funds are available for the bank drafts against your account.

**Registering:** Register for the TMS Payment Plan online at [www.mecc.edu/paying-for-college](http://www.mecc.edu/paying-for-college). Students need their Student ID, social security number, bank name and telephone number, check/savings account and routing numbers or credit card information.

**Terms and Conditions:** A number of terms and conditions apply to the agreement with TMS. Students should thoroughly review all terms and conditions before submitting the agreement. Failure to comply with these terms and conditions may result in cancellation of classes at MECC. For example: If the full amount of your down payment does not clear the bank, the contract with TMS will be immediately terminated and the payment amount satisfied by the contract with MECC will be voided on the student account, leaving an unpaid tuition balance. It is very important to let the Business Office know when you register for the TMS Payment Plan. The Business Office is not informed of payment plan registration until the next business day. If the last day to pay tuition is the same day as enrollment in the payment plan, students must request a DO NOT DROP be placed on their account to insure classes will not be dropped for non-payment. The last day to pay tuition may not necessarily be the last day you may register for the payment plan. It is the student's responsibility to see that tuition is paid on time or to inform the Business Office that you have completed an application with TMS. The number of months you have to finish paying for your tuition depends on how early you apply for the payment plan. Check with the Business Office for details on each semester deadlines.

Students must contact the Business Office if they drop a class (a class is cancelled) or add a class, to have the payment plan adjusted accordingly. In addition, the student may log in to their TMS Payment Plan account and request an adjustment to their balance resulting from changes in their class schedule or contact a TMS representative for assistance. No adjustments are made to any plan without authorization from the student. Questions concerning the TMS Payment Plan should be addressed to the Business Office at 276.523.7475.

## Tuition and Fees Refunds

Students shall be eligible for a refund for those credit hours dropped during the same add/drop period within which the credit hours were added. The refund will be at the applicable per credit hour rate, but no refund will exceed the student's tuition and fees charges. A student will receive a full refund for any course dropped during the first two weeks of classes in a standard session (or 15% of the calendar days in a non-standard session). Refer also to the Title IV Return of Funds Policy in the MECC Student Handbook.

A student who believes that individual circumstances warrant an exception to this refund policy may appeal in writing to the Vice President of Academic and Student Services.

## Military (US Department of Defense) Tuition Assistance Refunds

Active military students may receive military Tuition Assistance (TA) funds for their course enrollment(s) with MECC. When an active military student withdraws from a course(s), the student may not be eligible to receive the full amount of TA funds. MECC will return unearned TA funds on a proportional basis through the 60% portion of the period for which the TA funds were provided. Thus, TA funds are earned proportionally through the last day of course attendance, with unearned

funds returned based upon when a student stops attending.

**Return of Unearned TA Funds:** Any student may drop a course(s) without financial encumbrance within the allowable refund period (last day to drop and receive a refund). During this time, 100% of TA funds will be returned to the government.

After this time and when a military student receiving TA funds from the Department of Defense withdraws or ceases attending, MECC will return unearned TA funds to the government on a proportional basis through the 60% portion of the period for which the TA funds were provided.

MECC will return any unearned TA funds directly to the military service, not to the service member. The student will be notified within 30 days of the withdrawal as to the portion of the funds that need to be returned. However, when the military student stops attending for military obligation, MECC will work toward solutions that avoid student debt for the returned portion of the TA funds.

**Calculation to Return Unearned TA Funds:** For any student using TA funds to pay for education costs at MECC who withdraws from MECC prior to completing 60% of the course, MECC will return any unearned TA funds to the government according to how much of the course a student completes. The percentage of TA funds returned represents the amount of tuition paid to MECC that must be returned to the government. MECC calculates the return of unearned TA funds using the following formula:

$$\text{Percentage TA Funds Returned} = 100\% - \frac{\# \text{ Days Attended}}{\# \text{ Total Days Course Meets}} \times 100$$

These funds must be returned to the government within 45 days of determination of the withdrawal. Date of withdrawal is the date that the student officially withdrew according to the withdrawal documentation in the MECC Records office or the last day of attendance reported by the instructor when the student received final grades of all Fs, or a combination of Fs and Ws, for the term.

The MECC Business Office will return unused TA funds to the government on behalf of the student. However, the MECC Business Office will then add this balance to the student's MECC account resulting in the student then owing MECC the amount of the returned TA funds.

In calculation of Total Days Course Meets, MECC schedules the minimum number of days a course meets according to 5 days per academic calendar week. MECC schedules courses on a semester basis. However, within the semester, classes may meet for non-standard periods. Although the typical fall or spring semester meets for a minimum of 80 days each and the summer semester meets for a minimum of 50 days, MECC does offer limited courses that meet for different lengths of time.



16 Week Session					10 Week Session					8 Week Session					5 Week Session								
Days Attended	Days in Term	% of TA to Return			Days Attended	Days in Term	% of TA to Return			Days Attended	Days in Term	% of TA to Return			Days Attended	Days in Term	% of TA to Return						
Day 1-12	80	100%	15% of Class		Day 1-8	50	100%	15% of Class		Day 1-6	40	100%	15% of Class		Day 1-4	25	100%	15% of Class					
Day 13	80	84%			Day 9	50	82%			Day 7	40	83%			Day 5	25	80%						
Day 14	80	83%			Day 10	50	80%			Day 8	40	80%			Day 6	25	76%						
Day 15	80	81%			Day 11	50	78%			Day 9	40	78%			Day 7	25	72%						
Day 16	80	80%			Day 12	50	76%			Day 10	40	75%			Day 8	25	68%						
Day 17	80	79%			Day 13	50	74%			Day 11	40	73%			Day 9	25	64%						
Day 18	80	78%			Day 14	50	72%			Day 12	40	70%			Day 10	25	60%						
Day 19	80	76%			Day 15	50	70%			Day 13	40	68%			Day 11	25	56%						
Day 20	80	75%			Day 16	50	68%			Day 14	40	65%			Day 12	25	52%						
Day 21	80	74%			Day 17	50	66%			Day 15	40	63%			Day 13	25	48%						
Day 22	80	73%			Day 18	50	64%			Day 16	40	60%			Day 14	25	44%						
Day 23	80	71%			Day 19	50	62%			Day 17	40	58%			Day 15	25	40%						
Day 24	80	70%			Day 20	50	60%			Day 18	40	55%			Day 16	25	0%						
Day 25	80	69%			Day 21	50	58%			Day 19	40	53%											
Day 26	80	68%			Day 22	50	56%			Day 20	40	50%											
Day 27	80	66%			Day 23	50	54%			Day 21	40	48%											
Day 28	80	65%			Day 24	50	52%			Day 22	40	45%											
Day 29	80	64%			Day 25	50	50%			Day 23	40	43%											
Day 30	80	63%			Day 26	50	48%			Day 24	40	40%	60% of Class										
Day 31	80	61%			Day 27	50	46%			Day 25	40	0%											
Day 32	80	60%			Day 28	50	44%																
Day 33	80	59%			Day 29	50	42%																
Day 34	80	58%			Day 30	50	40%	60% of Class															
Day 35	80	56%			Day 31	50	0%																
Day 36	80	55%																					
Day 37	80	54%																					
Day 38	80	53%																					
Day 39	80	51%																					
Day 40	80	50%																					
Day 41	80	49%																					
Day 42	80	48%																					
Day 43	80	46%																					
Day 44	80	45%																					
Day 45	80	44%																					
Day 46	80	43%																					
Day 47	80	41%																					
Day 48	80	40%	60% of Class																				
Day 49	80	0%																					

## Refunds, Credits, Reinstatement as a Result of Military Service

### Tuition and Required Fees

Pursuant to 23-9.6:2 of the Code of Virginia and corresponding SCHEV Guidelines, Mountain Empire Community College provides for the tuition relief, refund, and reinstatement of students whose service in the uniformed services has required their sudden withdrawal or prolonged absence from their enrollment. Service in the uniformed services is defined as service (whether voluntary or involuntary) on active duty in the Armed Forces, including such service by a member of the National Guard or Reserve, for a period of more than 30 days under call or order to active duty of more than 30 days.

The College provides for the following:

- Should a student be ordered to active duty (for reservists) or be mobilized (active military) as described in the Code of Virginia, Section 23-9.6:2, and the State Council's Virginia Tuition Relief, Refund, and Reinstatement Guidelines, and he/she requests to be withdrawn from the College after the last day to withdraw and receive a refund, the student may elect either to be deleted from the registration file and be awarded a full refund or to be administratively withdrawn with no refund and assigned a grade of "W."
- The College will provide, at the option of the student, for such refunds to be retained and to be applicable to tuition and fees charged in the semester or term in which the student returns to study.
- The College will process refunds for textbooks according to established refund policies of the College Bookstore.

### Academic Credits and Grades

Students who are called to active duty or are mobilized, meaning serving in the uniformed services, as described in Virginia Tuition Relief, Refund, and Reinstatement Guidelines should have the opportunity to receive an incomplete grade ("I") until released from active duty (for reservists) or mobilization (for active military personnel). All course requirements shall be completed within one year from the date of release from active duty or mobilization.

Students may be given the option of taking their examinations prior to regularly scheduled times as an exception to VCCS policy 5.6.1 in accordance with the Virginia Tuition Relief, Refund, and Reinstatement Guidelines.

### Reinstatement following Active Duty or Mobilization

Students who are called to active duty or are mobilized will be assured a reasonable opportunity to be reinstated in the same programs of study without having to reapply for admission. Reinstatement will be granted if students return to the College after a cumulative absence of not more than five years so long as the student provides notice of intent to return to the institution not later than three years after the completion of the period of service.

## Suspension of Students for Non-Payment

A student's continued attendance at the College is dependent upon proper settlement of all debts owed the institution. Should the student fail to satisfy all due and payable amounts for tuition and fees, College loans, College fines, or other debts owed the College, the student may be suspended. If suspended, no student will be allowed to register in any succeeding semester until all current debts owed to the College have been satisfied.

## Books and Materials

Students are expected to obtain their own books, supplies, and consumable materials needed in their studies. The estimated cost of these items will average \$750 per semester for a full-time student. Students may also rent their textbooks for the semester at a lower cost. The purchase/rental cost varies according to the number of credit hours taken. Students are urged to check exact book titles and authors required in each course before purchasing books. The College Bookstore has very specific guidelines about returning books for a refund. Students are encouraged to familiarize themselves with these guidelines before making any purchases.



# Important Information You Need to Know

## Admission Categories

Individuals may be admitted to the College as curricular or non-curricular students. Additional information may be required by the College for admission to a specific program or curriculum. If a student in good academic standing has not been enrolled within the last three (3) years, he or she will be required to complete a new application for admission.

## Curricular Student

A student shall be classified as a curricular student if the following three conditions are satisfied: 1.) the student holds a high school diploma, a GED or its equivalent, or is otherwise determined qualified for admission; 2.) the required documents for general admission to a curricular program are received by the Enrollment Services Office; and 3.) the student has been admitted to one of the College's curricula including international students requiring issuance of an I-20. If you have been admitted to the College as a curricular student, you are required to meet with one of the College advisors to discuss educational interests, to determine curricular needs and to plan enrollment in a specific program or curriculum at the College. Additional information may be required by the College for admission to a specific program or curriculum.

Curricular students must submit a completed official application for admission with social security number requested. The online admission application is available at the College's web site [www.mecc.edu/apply](http://www.mecc.edu/apply). Transcripts from all high schools, colleges and universities attended are requested unless the record is five or more years old, or the applicant has completed 20 semester credits at a regionally accredited college or university, or the high school transcript is determined to be of no value for college and/or curricular admission.

Prior coursework may be evaluated for currency, technology application, or approach to discipline. The respective Dean over the degree in question will be responsible for the evaluation.

Graduates who complete secondary school in a home school setting must provide a graduation date and may be required to provide documentation of coursework.

The VCCS Student Information System academic records will be sufficient for courses transferred from colleges within the Virginia Community College System.

Students will not be allowed to register for some math classes unless a high/home school transcript is on file indicating completion of certain algebra and/or geometry classes.

G.E.D. transcripts may be obtained at <https://ged.com/life-after-ged/>. Official transcripts of all work completed at regionally accredited colleges or universities are required unless waived by the Director. Faxed transcripts will be accepted subject to verification. Applicants to Nursing, Practical Nursing, Paramedic, or Respiratory Therapy programs are required

to submit high/home school, GED, and college transcripts prior to admission consideration.

Transcripts received from other institutions are retained by the College for three years after the student's last date of enrollment. Before enrolling for courses to meet the requirements of a degree or certificate program, all curricular students must complete the Virginia Placement Test. The placement test consists of English (writing and reading) and mathematics. Some programs do not require all three tests. Consult the Testing Coordinator for further information. Students who have submitted SAT or ACT scores may be exempt from the English, and/or math placement tests.

## Non-Curricular Student

Students who are not formally admitted to one of the regular curricula but who are classified according to the following student goals or conditions are considered non-curricular students (International students requiring issuance of an I-20 or students receiving Federal or State aid are not eligible for these categories):

- Upgrading employment skills for present job
- Developing skills for new job
- Career exploration
- Personal satisfaction and general knowledge
- Transient student (student who maintains primary enrollment with another postsecondary institution and elects to enroll in the VCCS)
- High school student dual enrollment or dual credit
- Auditing a course

Students desiring to attend a course without taking the examination or receiving credit for the course may do so by registering to audit through the registration process and paying the normal tuition. Permission of Enrollment Services/Registrar is required to audit a course. Audited courses carry no credit and do not count as part of the student's course load. Students desiring to change status in a course from audit to credit or from credit to audit must do so within the add/drop period for the course. Students who desire to earn credit for a previously audited course must re-enroll in the course for credit and pay normal tuition to earn a grade other than "X". Advanced standing credit should not be awarded for a previously audited course.

## Academic Standing

Students are considered to be "in good academic standing" if they maintain a semester minimum GPA of 2.00, are eligible to reenroll at the College, and are not on academic suspension or dismissal status.

## President's List

Students who have at least 12 credits and a GPA of 3.8 or higher during the semester with no I, R, U, or F grades.

## Honors List

Students who have at least 12 credits and a GPA of 3.5 to 3.79 during the semester with no I, R, U, or F grades.

### **Merit List**

Students who have at least 12 credits and a GPA of 3.2 to 3.49 during the semester with no I, U, or F grades, and part-time students who have between 6 and 11 credits and a GPA of 3.2 or higher during the semester with no I, U, or F grades.

### **Satisfactory Progress**

Students pursuing any credit programs are cautioned that, although an average GPA between 1.50 and 1.99 may not result in formal academic probation, a minimum of 2.00 in their curriculum is a prerequisite to the receipt of an associate degree, diploma, or certificate.

### **Academic Warning**

Students who fail to attain a minimum GPA of 2.00 for any semester shall be placed on academic warning. Students on academic warning are encouraged to consult with their advisor/counselor and take advantage of academic support services provided by the College.

### **Academic Probation**

Students who fail to maintain a cumulative GPA of 1.50 shall be on academic probation until such time as their cumulative average is 1.75 or better. The statement "Academic Probation" shall be placed on their permanent records. Students on probation are ineligible for appointive or elective office in student organizations unless special permission is granted by the Vice President of Academic & Student Services. Students may be required to carry less than a normal course load the following semester and are required to consult with their advisor. Students shall be placed on probation only after they have attempted twelve (12) semester credit hours.

### **Academic Suspension**

Students on academic probation who fail to attain a semester GPA of 1.50 shall be placed on suspension only after they have attempted 24 semester credits. Academic suspension shall be for one semester. The statement "Academic Suspension" will be placed on the student's permanent record. Students who have been placed on academic suspension and wish to appeal may submit a Request for Reinstatement of Enrollment form to the Dean of Enrollment Services for reconsideration of his/her case. The Request for Reinstatement of Enrollment form is available at the Enrollment Services office. The appeal must be submitted at least five days prior to the first day of classes for that semester. Suspended students may be reinstated at the conclusion of the suspension period. Suspended students wishing to be reinstated after the suspension period must complete the Request for Reinstatement of Enrollment form available from Enrollment Services. Students who have been reinstated from academic suspension must achieve a 2.00 GPA for the semester of their reinstatement and must earn at least a 1.75 GPA in each subsequent semester of attendance. The statement "Subject to Dismissal" shall be placed on the student's permanent records. Students who have been reinstated from academic suspension will remain

subject to dismissal until their cumulative GPA is raised to a minimum of 1.75. Reinstated students may be required to carry less than a normal course load the following semester and are required to consult with their advisor.

### **Academic Dismissal**

Students who do not attain at least a 2.00 GPA for the semester of reinstatement following academic suspension shall be academically dismissed. Students who achieve a 2.00 GPA for the semester of their reinstatement following academic suspension must earn at least a 1.75 GPA in each subsequent semester of enrollment. Failure to attain a 1.75 GPA in each subsequent semester until the cumulative GPA reaches 1.75 shall result in academic dismissal. "Academic Dismissal" shall be placed on the students' permanent records. Academic dismissal normally is permanent. In exceptional circumstances students may appeal the academic dismissal. A student wishing to appeal a dismissal from the college must make a written request at least five days prior to the first day of classes for that semester to the Dean of Enrollment Services. The statement "Academic Dismissal" shall be placed on the student's permanent record. Students who have been reinstated after academic dismissal will remain subject to dismissal until their cumulative GPA is raised to a minimum of 1.75. Reinstated students may be required to carry less than a normal course load the following semester and are required to consult with their advisor.

### **Admission to Programs/Courses**

In addition to the general admission requirements, specific requirements are normally prescribed for each program of the College. The specific requirements are listed in the Programs of Study section of this catalog. A person applying to enter one of the associate degree (Associate of Arts and Sciences or Associate of Applied Science) programs must be a high school graduate or the equivalent, complete an approved developmental studies program or otherwise be considered eligible by the College. Admission to a specific course is possible when students meet the prerequisite requirements for the course as stated in the College's catalog.

### **Developmental Studies**

The purpose of the Developmental Studies program is to assist students in improving their basic academic skills and to help them enhance their self-confidence in preparation for future academic college courses. The developmental courses are identified with a single-digit prefix (1, 2, 3, 4, 5, etc.). Since the content includes pre-college foundational skills, the courses do not yield college credit. Students are placed into developmental studies courses after an analysis of their scores on placement tests in English, reading, and mathematics, high school transcripts, and other information available concerning their achievement level. Students who are placed in developmental English or mathematics courses may enroll in curriculum courses appropriate to their program of study at the College.

Each developmental studies course has been developed around specific discipline objectives which have been iden-

tified as required for entry into regular curriculum courses. Tests and other diagnostic techniques are administered to determine when the student has met the established course objectives. The length of time a student takes to complete the developmental courses depends primarily upon the student's entering ability and the student's strength of motivation to succeed. Many students can master these skills during the first 15-week semester; others may need to take a year or more of developmental coursework. In all cases the primary goal of the developmental course is to offer students an opportunity to master the basic academic skills necessary for success in regular college courses.

## Waiver of Course Requirements

Students having reason to believe that previous educational studies, training programs, or work experience may entitle them to an adjustment in the required courses in a particular curriculum should contact the Division Dean to determine procedures before registering for classes. Through subsequent interviews and tests, students may qualify for waiver of curriculum admission requirements, of course prerequisites, and of courses in the curriculum upon the recommendations of the appropriate Division Dean. Students may substitute equivalent or more sophisticated courses in the same field in any approved curriculum with the approval of the instructional division and the Chief Academic Officer or designee provided they can, by previous educational accomplishment or college administered examination, demonstrate the capability for success in the courses requested. In addition, if students can demonstrate that previous educational study, training, work experience, or college administered examination results may entitle them to advancement in the courses required or a particular curriculum, upon request and with the approval of the instruction division and the Chief Academic Officer, they may receive advance placement and credit in the course or curriculum for which advancement was requested.

If requirements are waived, students must successfully complete other courses to compensate for the credit hours.

Credits waived are those normally required course credits for a particular program which are administratively exempted. Credits waived require election of additional credit courses to compensate for the credits waived.

The physical education requirements for the degree and certificate programs may be waived for veterans, and the College may grant up to 3 credits of physical education/health credits for basic military training to satisfy the physical/health credit requirement of the veterans' curricula. Veteran students may consult Enrollment Services/Veterans Affairs for assistance with this waiver.

**Substitution of requirements for students with documented disabilities, covered by the Americans with Disabilities Act of 1990 (ADA) and 504 of the Rehabilitation Act of 1973, as amended.** Otherwise qualified students with documented disabilities who are, by reason of their disability, unable to complete a requirement of the program pursued

by the student, with or without reasonable accommodations, may request an approved course substitution. Substitutions will generally not be granted for any course that is deemed essential to the program of instruction being pursued by such student, or to any directly related licensing requirement. If requirements are waived, students must successfully complete other courses to compensate for the credit hours.

## Credit for Prior Learning

Credit for prior learning is the administrative placement of a student that awards credit for subject matter competency based on previous academic study or acquired through non-traditional means. This may include, but is not limited to, college credit and advancement based upon the administration and evaluation of locally-developed examinations; individual college participation in nationally recognized standardization exams; experiential learning; and training provided by non-collegiate institutions, such as armed forces service schools.

- a. **College credit** is a means of achieving Advanced Standing through an administrative determination by the college that equivalent course coverage has been satisfactorily completed at a regionally accredited postsecondary institution. Credit through this means must be verified through receipt of an official transcript submitted to the Office of Enrollment Services.
- b. **Credit by Local Examination** is a means of achieving Advanced Standing through satisfactorily demonstrating subject-matter competency by means of an examination developed, and evaluated by College faculty. Examinations must be based on established course learning outcomes and must be comprehensive.
- c. **Credit by Standardized Examinations** is a means of achieving Advanced Standing through a nationally recognized or college-approved external agency. External examinations used for this purpose include but are not limited to the College Level Examination Program (CLEP), DANTES Subject Standardized Test (DSST), of the Defense Activity for Non-Traditional Educational Support (DANTES), Excelsior Credit by Exam (ECE), the College Entrance Examination Board (CEEB), Advanced Placement (AP) program, Cambridge Advanced (A/AS) examinations, the International Baccalaureate (IB) program, and the Defense Language Proficiency Test (DLPT). Upon receipt of official test scores, all Virginia Community colleges shall accept a score of three (3) and higher for Advanced Placement (AP) courses, a score of four (4) or higher for higher level International Baccalaureate (IB) courses, a score of five (5) or higher for standard level International Baccalaureate (IB) courses, a score of fifty (50) or higher on CLEP courses, and scores of C or better for Cambridge Advanced (A/AS) examinations when the equivalent course is offered by the college. The colleges assume no responsibility regarding the acceptance of Advanced Standing credit by other institutions to which the student may transfer.
- d. **Credit by Experiential Learning** is a means of achieving Advanced Standing through an administrative determination by faculty of the college or by a college-approved learning assessment service that the occupational experi-

ence of an individual is at least equivalent to the course(s) to be exempted. Credit by be awarded based upon an individualized portfolio evaluation, which may be conducted by faculty at the individual colleges or by using the Council for Adult and Experiential Learning's (CAEL) guidelines, and/or CAEL's LearningCounts.org prior learning assessment service.

e. **Credit may be granted for prior learning for non-collegiate education, training, and/or occupational experiences** as recommended by college faculty, the American Council on Education (ACE), the National College Credit Recommendation Service, or another college-approved organization.

(1) In addition to the above, each college shall develop procedures for the award of academic credit to any enrolled student who has successfully completed a military training course or program as part of the student's military service that is applicable to the certificate or degrees requirements and is:

- a. Recommended for academic credit by the national higher education association that programs academic credit recommendations for military training courses or programs;
- b. Noted on the student's military transcript issued by any of the armed forces of the United States; or
- c. Otherwise documented in writing by any of the armed forces of the United States.

The procedures for awarding credit through Advanced Standing are as follows:

- (1) The determination of such credit must be made by qualified faculty members at the institution or according to procedures and standards approved by qualified faculty ensuring that assessment procedures are appropriate for the credit awarded.
- (2) If documentation and interviews are used in lieu of examinations, the institution must demonstrate that these methods provide assurances of academic com-

parability to credit earned by traditional means.

(3) Portfolio-based credit for prior experiential learning may be awarded for no more than 25 percent of the credit hours applied toward a degree. In exceptional individual cases, however, the nature and content of the prior learning experience may be such that additional credit by be appropriately awarded. The institution must justify each case.

(4) In awarding credit for prior experiential learning, the institution must:

- a. Award credit only for documented learning which ties the prior experience to the theories and data of the relevant academic field;
- b. Award credit only to matriculated students, identify such credit on the student's transcript as credit for prior experiential learning, and upon request from another institution, document how such learning was evaluated and the basis on which such credit was awarded;
- c. Adopt, describe in appropriate institutional publications, implement and regularly review policies and procedures for awarding credit for experiential learning; and
- d. Clearly describe, and establish the validity of, the evaluation process and criteria for awarding credit for prior experiential learning.

Students having reason to believe that previous educational studies, training programs, or work experience may entitle them to an adjustment in the required courses in a particular curriculum, should contact their academic advisor or the appropriate faculty member to determine procedures before registering for classes and to complete the appropriate documentation. A student who is currently enrolled in a class and wishes to apply for advanced standing must complete the process and drop the class within the add/drop period.

## General Examinations



<b>Business</b>			
Information Systems & Computer Applications	50	3	ITE 119
Introductory Business Law	50	3	BUS 241
Principles of Management	50	3	BUS 200
Principles of Marketing	50	3	MKT 100
<b>Composition and Literature</b>			
American Literature	50	3	ENG 241
Analyzing and Interpreting Literature	50	3	ENG 125
College Composition	50	6	ENG 111 & 112
English Literature	50	3	ENG 243
<b>World Languages</b>			
French Language (Level 1)	50	6	FRE 101 & 102
French Language (Level 2)	59	9	FRE 101, 102 & 201
German Language (Level 1)	50	6	GER 101 & 102
German Language (Level 2)	60	9	GER 101, 102, & 201
Spanish Language (Level 1)	50	6	SPA 101 & 102
Spanish Language (Level 2)	63	9	SPA 101, 102, & 201
Level 1 – Equivalent to the first two semesters (or six semester hours) of college level foreign language coursework. Level 2 – Equivalent to the first three semesters (or nine semester hours) of college level foreign language coursework.			
<b>History and Social Sciences</b>			
American Government	50	3	PLS 135
History of the United States I: Early Colonization to 1877	50	3	HIS 121
History of the United States II: 1865 to Present	50	3	HIS 122
Human Growth & Development	50	3	PSY 230
Introductory Psychology	50	3	PSY 200
Introductory Sociology	50	3	SOC 200
Principles of Macroeconomics	50	3	ECO 201
Principles of Microeconomics	50	3	ECO 202
Western Civilization I: Ancient Near East to 1648	50	3	HIS 101
Western Civilization II: 1648 to Present	50	3	HIS 102
<b>Science and Mathematics</b>			
Biology	50	6	*BIO 101 & 102
Calculus	50	4	MTH 263
Chemistry	50	6	*CHM 111 & 112
College Algebra	50	3	MTH 161
College Mathematics	50	3	MTH 154
Pre-Calculus	50	3	MTH 162
The scores and credit hours that appear in this table are the credit-granting scores and semester hours recommended by the American Council on Education (ACE). The scores listed above are equivalent to the grade of a C in the corresponding course. Note: Students planning a transfer to another college or university are responsible for determining if that institution will accept CLEP credit. *No credit is awarded for laboratory component. Effective June, 2018			

## Changing Program of Study

Students considering a change in their program of study should schedule an appointment with their advisor. Students must complete an Information Change form and submit the form to the Office of Admissions.

## Quarter to Semester Conversion

The following conversion guidelines will be applied when transferring courses completed under a quarter system to determine if students meet curricular requirements.

- A single quarter course requirement is equivalent to a single semester requirement but receiving 2/3 as much credit. (For example, ECON 160 for 3 quarter credits is equivalent to ECO 120 for 2 semester credits.)
- If only one course in a three-sequence quarter course has been taken, both semester courses must be taken.
- If the first two courses in a three-sequence quarter course have been taken, the last half of the semester course sequence must be taken.
- If the first and the third quarter courses have been taken in a three-sequence quarter course, the last half of the semester course sequence must be taken.
- If the second and the third quarter courses have been taken in a three-sequence quarter course, the first half of the semester course sequence must be taken.

## Grade Point Average

The grade point average (GPA) is determined by dividing the total number of grade points earned in courses by the total number of credits attempted.

### Semester Grade Point Average

Semester GPA is determined by dividing the total number of grade points earned in courses attempted for the semester by the total number of credits attempted.

### Cumulative Grade Point Average

Cumulative GPA, which includes all courses attempted, is computed each semester and is maintained on a continuing basis as a record of the student's academic standing. When students repeat a course, only the last grade earned is counted in the computation of the cumulative GPA and for satisfying curricular requirements, unless the course is designated repeatable for credit in the Master Course File or is a general usage course. In instances of courses designated as repeatable for credit or general usage courses, all grades/credits are counted in the computation of the cumulative grade point average. Grades of "S", "P", "U", "W", "X," and "I" shall not count as first or subsequent attempts when calculating cumulative grade point average. Both the initial attempt and the repeat must be completed at Mountain Empire Community College. General usage courses (in the 90, 95, 96, 97, 98, and 99 series such as 90, 190, 290, etc.) shall not be counted as repeated courses. The repeated courses must be identical in course department and numbers to the first attempt in order to replace the original grade in the cumulative grade point average calculation.

### Curriculum Grade Point Average

A curriculum GPA, which includes only those courses appli-

able to the student's curriculum, is computed in order to ensure that the student satisfies the graduation requirement for that curriculum. When students repeat a course, only the last grade earned is counted in the computation of the curriculum GPA. Both the initial attempt and the repeat must be completed at Mountain Empire Community College. General usage courses (in the 90, 95, 96, 97, 98, and 99 series such as 90, 190, 290, etc.) shall not be counted as repeated courses. The repeated courses must be identical in course department and numbers to the first attempt.

## Academic Renewal Policy

Students who return to the College after a separation of five (5) years, or more, may petition for academic renewal. The request must be in writing and submitted to Enrollment Services/Admission.

If a student is determined to be eligible for academic renewal, D and F grades earned prior to re-enrollment will be deleted from the cumulative and curriculum grade point average (GPA), subject to the following conditions:

- Prior to petitioning for academic renewal the student must demonstrate a renewed academic interest and effort by earning at least a 2.5 G.P.A. in the first twelve (12) semester hours completed after re-enrollment.
- All grades received at the College will be a part of the student's official transcript.
- Students will receive degree credit only for courses in which grades of C or better were earned prior to academic renewal, providing that such courses meet current curriculum requirements.
- Total hours for graduation will be based on all course work taken at the College after readmission, as well as former course work for which a grade of C or better was earned, and credits transferred from other colleges or universities.
- The academic renewal policy may be used only once and cannot be revoked once approved.

## Grading

The grades of "A, B, C, D, P and S" are passing grades. Grades of "F and U" are failing grades. "R and I" are interim grades. Grades of "W and X" are final grades carrying no credit.

The quality of performance in any academic course is reported by a letter grade, the assignment of which is the responsibility of the instructor. These grades denote the character of study and are assigned quality points as follows:

- A – Excellent, 4 grade points per credit
- B – Good, 3 grade points per credit
- C – Average, 2 grade points per credit
- D – Poor, 1 grade point per credit
- F – Failure, 0 grade points per credit
- I – Incomplete, No grade point credit

### I – Incomplete, No Grade Point Credit

The "I" grade is to be used only for verifiable unavoidable reasons that a student is unable to complete a course within the normal course time. To be eligible to receive an "I" grade, the student must (1) have satisfactorily completed more than



60% of the course requirements and (2) must request that faculty member to assign the "I" grade and indicate why it is warranted. The faculty member has the discretion to decide whether the "I" grade will be awarded. Since the "incomplete" extends enrollment in the course, requirements for satisfactory completion shall be established through consultation between the faculty member and the student. In assigning the "I" grade, the faculty member must complete documentation that (1) states the reason for assigning the grade; (2) specifies the work to be completed and indicates its percentage in relation to the total work of the course; (3) specifies the date by which the work must be completed; and (4) identifies the default (B, C, D, F, P, R, or U) based upon course work already completed. Completion dates may not be set beyond the subsequent semester (to include summer term) without written approval of the chief academic officer of the campus. The student will be provided a copy of the documentation. The College will establish procedures to ensure that all "I" grades that have not been changed by the faculty member through the normal grade change processes are subsequently changed to the default grade assigned by the faculty member. An "I" grade will be changed to a "W" only under documented mitigating circumstances which must be approved by the Vice President of Academic and Student Services.

#### **P — Pass, No grade point credit**

The "P" grade applies only to non-developmental studies courses. Pass grades are not included within GPA calculations. Permission of the division dean is required for utilizing the Pass/Fail option. A maximum of seven (7) semester credit hours from courses for which the "P" grade has been awarded may be applied toward completion of a degree, certificate, or diploma.

#### **R—Re-enroll, No grade point credit**

The "R" grade may be used as a grade option, in developmental and ESL courses only, to indicate satisfactory progress toward meeting course objectives. In order to complete course objectives, students receiving an "R" grade must re-enroll in the course and pay the specified tuition.

#### **S—Satisfactory, No grade point credit**

The grade of "S" is used only for satisfactory completion of a developmental studies course (numbered 01-99).

#### **U—Unsatisfactory, No grade point credit**

The grade of "U" applies only to developmental studies courses.

#### **W—Withdrawal, No grade point credit.**

A grade of "W" is awarded to students who withdraw or are withdrawn from a course after the add/drop period but prior to the completion of 60% of the session. After that time, the student shall receive a grade of "F" except under mitigating circumstances which must be documented by the student and approved by the Registrar; a copy of the documentation must be placed in the student's academic file. Extenuating circumstance withdrawal requests must be received by the Registrar by the last class day for the course and prior to exams.

#### **X—Audit**

Students desiring to attend a course without taking the ex-

amination or receiving credit for the course may do so by registering to audit through the usual registration process and paying the normal tuition. Permission of the division dean or another appropriate academic administrator is required to audit a course. Audited courses carry no credit and do not count as a part of the student's course load. Students desiring to change status in a course from audit to credit or from credit to audit must do so within the add/drop period for the course.

Students who desire to earn credit for a previously audited course must re-enroll in the course for credit and pay normal tuition to earn a grade other than "X." Advanced standing credit should not be awarded for a previously audited course.

## **Developmental Studies**

A grade of "S" (Satisfactory) may be assigned for satisfactory completion of a developmental studies course (courses numbered 1-9). "S" grades are not included in grade point average calculations. Students not making satisfactory progress in a developmental studies course shall be graded "U" (Unsatisfactory). The "I" and "W" grades may be utilized.

## **Grade Report**

Final grades are posted to MyMECC at the end of exams each semester. Final grades become a part of the students' academic record. A student may view grades for any term by logging in to MyMECC.

## **Transcripts**

To request an official transcript of academic record a student should go to [www.mecc.edu/request-a-transcript/](http://www.mecc.edu/request-a-transcript/) and either create a new account or sign in through Parchment.com. All electronic delivery requests will have a \$7.50 processing fee through Parchment.com. To send your transcript via USPS, an additional \$2.50 fee will apply. Transcript mail requests can be expedited through FedEx for an additional fee, depending on mailing cost.

Official transcripts are generally processed within 3 business days of receipt. During peak times such as beginning and end of term, processing time will likely be extended. Students can track the status of a transcript request through their Parchment account. Transcript services are withheld for any student who owes Mountain Empire Community College money or property. Sufficient time must be allowed for the posting of grades and computing of averages at the end of each semester.

The College observes Public Law 93-380 (the Family Education Rights and Privacy Act of 1974) in providing for the privacy of official student records and the rights of students to review these records. Students may review their official records by making a request to the Office of Enrollment Services. The College will not release any personally identifiable information other than directory information about any student without the student's written permission, except to certain school and governmental officials as provided by the law. Requests by individuals and agencies for release of student information must be presented in writing. The stu-

dent's permission for the College to release any information must also be in writing. Students may grant permission by completing the Permission to Release Education Record Information form, located in the Office of Enrollment Services, Fox Central/Holton Hall.

## Grade Changes

Occasionally an error in grade recording may occur. Students should review grades carefully and report any errors to Enrollment Services/Registrar immediately. Challenges to grade records must be made within one year of the alleged error.

## Grade Appeals

A student having factual evidence that his/her grade, as reported, is in error and who wishes to appeal said grade, should refer to Grade Appeal Policy listed in the MECC Student Handbook.

## Fees & Fines

Fees are assessed to provide services to students which are not provided with tuition revenues. These fees include a General Auxiliary Fee, a Technology Fee, a Student Activity Fee, and a Capital Fee for out-of-state and contract students.

### Library Fines

In order to encourage students and community library users to return materials promptly, fines are charged on overdue materials. Library fines are charged at the following rates per item:

- Circulating, Juvenile, Oversize collections items, print newspaper and magazine issues, and distance education DVDs and videos -- \$0.10 per day
- Two-Hour Reserve items -- \$0.25 per hour
- Overnight and One-Week Reserve items -- \$0.25 per day
- The maximum fine charged per item is \$5.
- Lost materials are billed at the purchase price of the materials plus a processing fee of \$5 per item for book jacket covers, spine labels, barcodes, date due pockets and cards, and cataloging service fees.

As a reminder, students and community residents will receive three overdue notices when library materials have not been returned. The first two notices will be sent to students' and community members' email accounts. When the third and final notice is mailed, students will be blocked, which means they will not be able to receive a financial aid refund, obtain an official college transcript, or charge items in the bookstore until the library materials have been returned and fines owed on them have been paid. Students and community residents who have unpaid library fines will not be allowed to check out additional items from the library until the fines have been paid unless special permission has been granted by the staff for them to do so.

As required by the Commonwealth of Virginia, unpaid debts for overdue library materials will be submitted to the Virginia Department of Taxation under the Set-Off Debt Collection Program, with the debts deducted from the individual's state income tax refund or lottery winnings. Also, the state requires that unpaid debts be referred to a private collection agency.

The debt collection agency adds a collection fee equal to 33% to the debt. In addition, the debt collection agency reports collection activities to credit reporting agencies which will impact the debtor's consumer credit report.

To avoid having overdue materials and fines, call 276.523.7468 to renew library materials.

### Parking Fines

Parking in unauthorized spaces may result in the following:

- \$3.00 for each ticket received for the following violations:
  - o Improperly parked
  - o Parked in no-parking zone
  - o No MECC parking permit
  - o Parked in Faculty lot
  - o Parked on road
  - o Parked in Small Business Only
  - o Parked in Employee of the Year space
  - o Parked in State Vehicle Only space
- \$10.00 for each ticket received for parking in visitor's space
- \$25.00 for each ticket received for parking in handicapped space

Vehicles parked in a fire zone will be towed away at owner's expense.

## Residence Requirements

The Virginia Community College System is guided by the Code of Virginia and the regulations of the State Council for Higher Education in determining domicile. For tuition assessment purposes, in-state rates will be charged to a student who has been domiciled in, and is and has been an actual bona fide legal resident of Virginia for a period of at least one year immediately prior to the commencement of the term of enrollment. Domicile decisions may not be changed after the term begins.

All applicants for in-state tuition rates will be required to submit a residence affidavit to determine state residency eligibility for tuition purposes. The burden of presenting adequate evidence of residency rests with the applicant. Residents of the Tennessee counties of Hancock, Sullivan and the City of Kingsport are eligible to pay in-state contract tuition rates if they are eligible to pay in-state rates while attending a state supported college or university in their respective state.

When enrollment must be limited for any program or course, first priority will be given to all qualified applicants who are domiciled residents of Lee, Wise, Scott, and Dickenson Counties and the City of Norton, and to Virginia domiciled residents not having access to a given program at their local community college, provided such students apply for admission to the program prior to registration or by a deadline established by the College. A domiciled resident is one who has been a permanent resident in the locality or state for the twelve months before the program application deadline. In addition, residents of localities with which the college has clinical-site affiliation may receive equal consideration for admission.

Mountain Empire Community College has established the following schedule for considering applications to limited

enrollment programs: Before April 1, applications will be considered for only those domiciliary residents of the political subdivisions supporting the College; after April 1, all Virginia domiciliary residents will be considered for admission, and after May 1, out-of-state and international students will be considered for admission. Otherwise, applications are considered in the order in which they are received. Nursing/Respiratory Therapy/Practical Nursing applicants must be local domiciliary residents as of the program application deadline to receive priority consideration. Domiciliary residence normally requires continuous physical presence for a period of at least 12 months with intent to remain permanently.

## Student Email, Canvas and Student Information System Access

### MyMECC

To access your student email, Canvas, and the Student Information System, visit [MyMECC](#). MyMECC is located at the top right corner of the MECC homepage at [www.mecc.edu](http://www.mecc.edu).

### Student Email

To access your MECC Email, log in to [MyMECC](#) with your username and password, and select the "Gmail" link.

### Canvas

Canvas is a web based learning management system (LMS) designed to support online courses and provide a space to supplement a face-to-face course. Canvas provides many types of tools and features for enriching the learning experience.

### SIS (Student Information System)

The Student Information System allows students to complete tasks such as registering for classes, paying tuition/fees, accessing personal information, viewing financial aid, viewing final grades, viewing/printing transcripts and more. To access SIS, students must login to MyMECC.

## General Student Information

### Student Photo ID

All MECC students must register for a student ID. You can obtain your student ID at the MECC Bookstore in Holton Hall.

### Buying or Renting your Books

The MECC Bookstore is located on campus in Holton Hall. Hours and contact information are posted on the Bookstore's Web site. To buy or rent books, visit the MECC Bookstore or the Bookstore's website at <http://bookstore.mecc.edu/home.aspx>. Click the link for books, and then click the dropdown for textbooks and course materials. Enter the specific course information and find the link to the ISBN number for the text. You can use your financial aid funds to pay for textbooks and required supplies only during certain dates each semester.

### Parking Decals

All MECC students must register for a parking permit. Register

for your parking permit at the MECC Bookstore in Holton Hall.

### New Student Seminar

All new students are required to attend the New Student Seminar, a comprehensive two-day SDV 100 course which is scheduled prior to the first day of class. Completion of the New Student Seminar provides an opportunity for new students to begin classes more prepared for their college experience and allows them the opportunity to make connections with their fellow students and college personnel. For more information, visit [www.mecc.edu/newstudent](http://www.mecc.edu/newstudent).

### Wampler Library

MECC's Wampler Library is located on the second floor of Robb Hall. Visit the library to access the material and research you need for courses. Library resources are available online at [www.mecc.edu/library](http://www.mecc.edu/library).

### Email/Text Alerts

For your safety and convenience, MECC strongly recommends students enroll in the College's emergency alert system. The alert system will notify you quickly with an email and/or text about MECC closings due to inclement weather or about emergency situations. To register for text alerts, visit [www.mecc.edu/textalerts](http://www.mecc.edu/textalerts).

### Student Handbook

The MECC Student Handbook contains information about your, college operations and college policies. The Student Handbook contains additional information and MECC's Code of Conduct. To access the MECC Student Handbook, visit [www.mecc.edu/handbook](http://www.mecc.edu/handbook).

### Social Media

Important announcements regarding events, schedule changes, and activities are shared on MECC's social media sites. Join us on Facebook at [facebook.com/mountainempirecollege](https://facebook.com/mountainempirecollege), on Twitter @MECCVa, and on Instagram @MECCedu.

## Get Help When You Need It

### Advising and Testing

The Office of Student Services provides advising and testing services. For more information on testing, visit [www.mecc.edu/testing](http://www.mecc.edu/testing). The Office of Student Services is located in Holton Hall or call 276.523.7472.

### Tutoring and Academic Assistance

MECC's Learning Center provides academic support services to students who meet eligibility requirements. Services include: tutoring, mentoring, transfer assistance, career counseling, personal counseling, academic skills development (study skills, test-taking skills, etc.) and informative seminars. For more information, visit [www.mecc.edu/tutoring](http://www.mecc.edu/tutoring).

### Disability Services

MECC provides services to students with documented disabilities. For more information, visit the Office of Student Services in Holton Hall or call 276.523.9108 or [www.mecc.edu/disabilityservices](http://www.mecc.edu/disabilityservices).

### **Veterans Assistance**

MECC programs are approved for enrollment of qualified veterans, survivors, dependents and certain reservists. For more information on services available to veterans and their families, call 276.523.9028 or visit [www.mecc.edu/veterans](http://www.mecc.edu/veterans).

### **Transfer Assistance**

MECC provides assistance to students planning to transfer to a four-year college. Visit the Office of Student Services in Holton Hall, call 276.523.9106, or visit [www.mecc.edu/transfer](http://www.mecc.edu/transfer).

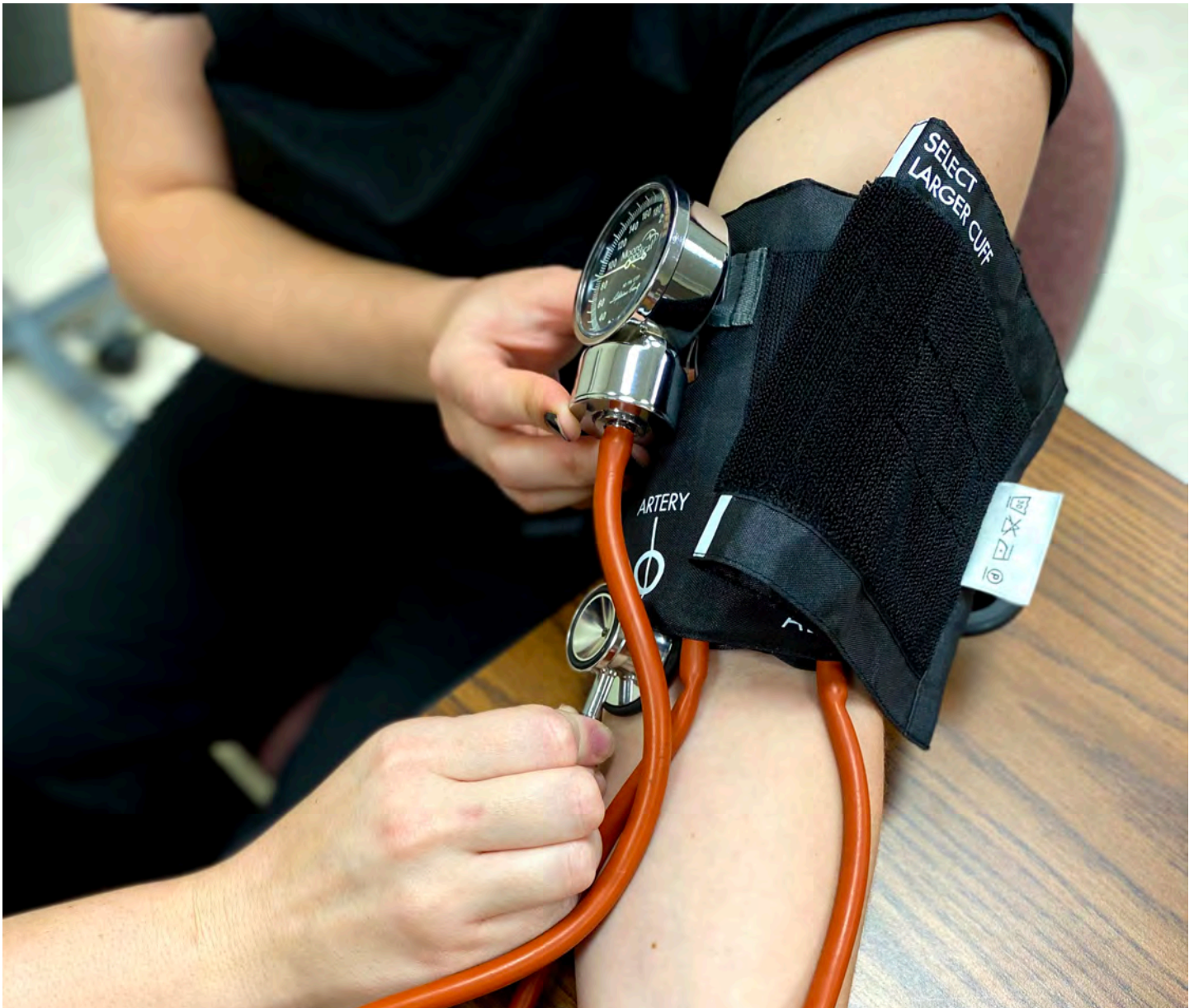
### **Career Assistance**

MECC offers student career counseling to help students determine their career goals and/or college major. Assistance includes computerized career assessments, career planning,

employment preparation, resume development, interview and business etiquette, job search strategies, and more. To schedule an appointment, visit Career Services located in the Office of Student Services in Holton Hall, call 276.523.7472, or visit [www.mecc.edu/career-services](http://www.mecc.edu/career-services).

### **Technology Assistance**

Students who need assistance with Canvas may contact [skennedy@mecc.edu](mailto:skennedy@mecc.edu) or call 276.523.7488 from 8 a.m. to 4:30 p.m. Monday-Friday. Students who need Student Information System (SIS), Student Email, Log-in, Password or Username Assistance should contact the Technology Help Desk at [helpdesk@mecc.edu](mailto:helpdesk@mecc.edu).



# Graduation

To be eligible for graduation with an associate degree, diploma, certificate, or career studies certificate from a Virginia community college, the student must:

- Fulfill all of the course and credit--hour requirements of the curriculum with at least 25% of the credits acquired at the college awarding the award;
- Be certified for graduation by the Academic Divisions and Enrollment Services/ Registrar;
- Earn a grade point average of at least a 2.0 in all studies attempted which are applicable toward graduation in their curricula;
- Meet any other competency requirements established by the College; and
- Resolve all financial obligations to the College and returned all library and College materials.

## Assessment of Student Achievement

Students may be required to participate in one or more assessment activities designed to measure general education achievement and/ or achievement in selected major areas prior to graduation for the purpose of evaluation of academic programs. Results obtained in this context will remain confidential and will not be used to identify individual students. The College also reserves the right to exchange student information with area high schools and senior institutions for the sole purpose of improvement of the College.

## Second Degree or Certificate

When awarding an additional degree, diploma, certificate or career studies certificate, the College may grant credit for all previously completed applicable courses which are requirements of the additional degree, diploma, certificate or career studies certificate. However, the awards must differ from one another by at least 25% of the credits.

## Graduation with Honors

Students who have fulfilled the requirements of degree, diploma, or certificate programs (with the exception of career studies certificates), are eligible for graduation honors.

Appropriate honors are awarded based upon the student's cumulative grade point average recorded one semester prior to graduation (fall semester GPA for spring graduates and spring semester GPA for summer graduates) as follows:

Cum Laude (Honors), 3.2 GPA

Magna Cum Laude (High Honors), 3.5 GPA

Summa Cum Laude (Highest Honors), 3.8 GPA

## Commencement

Mountain Empire Community College will host an annual commencement ceremony at the end of the spring semester.



# Workforce Solutions

Mountain Empire Community College's Center for Workforce Development provides state-of-the-art workforce training and services to individuals, businesses, industries, and government agencies. As an active member of the community, the Workforce Solutions collaborates with regional employers on an ongoing basis to maintain a competitive workforce in today's global economy.

To support the goals of business and industry, the Center provides customized job training offered at MECC or the client's site, as well as open enrollment courses for professional and personal development. Credit, non-credit, and distance education courses promote life-long learning and economic development in the Southwest Virginia Region.

The Virginia Small Business Development Center (SBDC) located at Mountain Empire Community College offers free business consulting, affordable training courses, personal referrals to local resources, guidance, insights, and connections to help businesses succeed.

Many community and continuing education programs are provided in response to the needs and interests of individuals or organizations within the service region. The Center cooperates with public agencies, civic groups, community organizations, business and industry, and other educational institutions to provide educational services for a greater number of people. Individuals in need of Continuing Education Units or CEUs will find a wide variety of options available through the Center. Basic types of programming are offered: customized training, job skill assessments, continuing education/lifelong learning, quick-start training, seminars, and a variety of on-going training institutes.

## Customized Training

Workforce Solutions designs timely, customized training programs to address the ever-changing opportunities and challenges faced by employers. Based on results of Training Needs Assessments, we design and implement Custom Training Programs to update and improve the skills of your workforce, increase employee engagement, improve company performance and help you achieve organizational goals. Our training can be brought to your work site or you can bring your employees to our training facilities.

Customized training focuses on skills that improve:

- organizational productivity (team building, management and leadership, coaching, or lean manufacturing);
- individual productivity (time management, managing stress, communication, or customer service);
- computer skills (Microsoft Office suite, technical certifications, or customized applications); and
- job specific skills (CPR, OSHA, Miner Training/Retraining, and many others).

## Benefits of Customized Training

- Convenient class locations with on-site training available
- A comprehensive training plan, based on a training needs assessment, will address the skills and knowledge your employees need to help achieve your organizational goals
- Programs tailored to meet your company's specific needs
- Training positively impacts employee performance and profitability
- A well-trained workforce provides a competitive advantage

## Job Skills Assessment Tools

WorkKeys® is a job skills assessment system that helps employers select, hire, train, develop, and retain a high-performance workforce. WorkKeys® connects work skills, training, and testing for employers and:

- is the basis for the National Career Readiness Certificate.
- WorkKeys® Foundational and Personal Skills assessments provide reliable, relevant information about workplace skill levels:
  - o Foundational Skills assessments measure cognitive abilities such as applied mathematics, graphic literacy, and workplace documents.
  - o Personal Skills assessment are designed to predict job behavior and measure the full potential of individuals.

## Continuing Education/Lifelong Learning

- Lifelong Learning opportunities (art, crafts, and music classes, summer camps and enrichment programs)
- Continuing Education programs (project management certification classes, teacher recertification, etc.)

## On-going Training and Institutes

Contact Workforce Solutions for scheduling of the following classes:

### @Home Prep

Online Training that is fast, easy, and affordable. Complete our self-paced online training to obtain or renew your license/certificate. Available 24/7. Start and stop as you need. Tablet and smartphone compatible. Instant certificate upon completion for most courses.

### Advanced Cardiovascular Life Support - Classroom

ACLS is designed for healthcare professionals who either direct or participate in the management of cardiopulmonary arrest and other cardiovascular emergencies. This includes personnel in emergency response, emergency medicine, intensive care and critical care units.

### Advanced Emergency Medical Technician

This course is utilized to transition an EMT to an Advanced Emergency Medical Technician. Upon successful completion of the program and requirements, students will apply for National Registry testing and certification in the Commonwealth of Virginia.

### Basic Contractor Licensing

MECC offers an eight-hour course designed to cover the regulations and practices that govern the contracting industry. Students will thoroughly review the required elements of preparing a contract in accordance with regulation, explore methods in selecting customers and jobs based on license classification and experience, explore the various business structures to meet their particular need, and discuss tips that will help them to avoid regulatory and business programs. The course is designed to guide a contractor in making choices that will ensure compliance with regulation and maintain the license through business success. Although the intent of this course is not designed for examination preparation, the subject matter covered and the materials will certainly be useful for those who will take the license text.

### Cardiopulmonary Resuscitation (CPR)

MECC offers the American Heart Association Basic Life Support for Healthcare Provider certification course, covering adult, child, and infant CPR for both one person and two person scenarios.

The use of the AED and bag valve masks, along with assistance in choking response is covered. This course is certified by the American Heart Association.

### **CDL**

Graduates of this four-week training program will have the knowledge and skills to become Class "A" CDL licensed drivers qualified to drive long distances, regionally or locally. Requires DMV Learners Permit Test, State Road Test, and DOT physical.

### **Concealed Weapons Permit**

Discusses and explores safe firearms handling, laws, and procedures to acquire a concealed weapons permit.

### **CPR Instructor**

Individuals who wish to become CPR Instructors can complete the American Heart Association certification course at MECC. The course is designed to credential persons to teach Heartsaver CPR, Heartsaver AED, Heartsaver First Aid, and BLS for Healthcare Provider CPR courses. This course is certified by the American Heart Association.

### **Driver Improvement Clinic**

Mountain Empire Community Colleges offers a Virginia Department of Motor Vehicles approved Driver Improvement Clinic.

### **Emergency Medical Technician**

MECC offers the option of taking our Virginia Office of EMS-approved course as either a credit course or a workforce (non-credit) course. In addition to CPR certification, students successfully completing this 160 hour course will be eligible to take the National Registry exam to become a certified Emergency Medical Technician. Requires successful completion of a drug screen and a criminal and sexual background check.

### **First Aid**

MECC offers the American Heart Association Heartsaver First Aid certification course, covering the basic principles of first aid, care and treatment of medical emergencies, care and treatment of injuries, and care and treatment of environmental emergencies. This course is certified by the American Heart Association.

### **Mine Training Courses**

MECC offers a wide variety of certification courses and programs designed to meet the needs of the mining industry. Customized classes are also available to meet individual and company requests.

- Annual Refresher Surface - VA & KY
- Annual Refresher Underground - VA & KY
- New Miner Training - Underground and Surface
- General Coal Miner - Underground and Surface
- Electrical Retraining - VA, KY, & WV
- Diesel Retraining
- Surface and Underground Mine Foreman
- VA DMME Advanced First Aid
- First Responder - Certification & Recertification
- EMT - Certification & Recertification
- CPR - Cardiopulmonary Resuscitation
- First Aid Certification & Recertification
- DMME Reciprocity Advanced First-Aid
- CDL Training

### **Virginia Nurse Aide**

MECC offers the option of taking our Virginia Board of Nursing-approved course as either a credit course or a workforce (non-credit) course. In addition to CPR certification, students

successfully completing this 140 hour course will be eligible to take the Virginia Board of Nursing exam to become a Certified Nurse Aide. Requires successful completion of a drug screen and a criminal and sexual background check.

### **Occupational Safety and Health Administration (OSHA) Training**

MECC offers a number of OSHA courses covering a variety of topics, including standards and hazard violations, overview of OSHA Act & 29 CFR, fire protection, personal protective equipment, material handling, electrical safety standards, hazard communications and more. These courses can be reserved by employers seeking to train a large number of employees or offered on an individual basis.

### **Paramedic**

This course is utilized to transition experienced EMT-Intermediates or Advanced Emergency Medical Technicians to the paramedic level. Upon successful completion of the program and requirements, students will apply for National Registry testing and certification in the Commonwealth of Virginia.

### **Pediatric Advanced Life Support (PALS)**

The PALS Course is for healthcare providers who respond to emergencies in infants and children. These include personnel in emergency response, emergency medicine, intensive care and critical care units such as physicians, nurses, paramedics and others who need a PALS course completion card for job or other requirements.

### **Pharmacy Technician**

Mountain Empire Community College offers Pharmacy Technician Courses. The courses are designed to enable technicians to identify and describe significant federal legislation affecting pharmacy practice; identify and describe significant federal and state governing bodies affecting pharmacy; specify the duties that may legally be performed by pharmacy technicians; provide an overview of the types of prescription medication errors; and list strategies to reduce or eliminate prescription medication errors in pharmacy practice. The course provides 900 hour (9.0 CEU) of continuing education credit.

### **Power Lineman**

Prepares students with the basic skills necessary to enter the electrical field as a Lineman. These skills include: overall safety considerations, power pole climbing skills, knowledge of the basic tools and materials involved with electrical crafts, general construction standards, basic rigging principles, and basic electrical theory that is specific to this trade. Classes introduce students to job related information and hands-on training. A component of the course includes preparation for the Construction and Skilled Trades (CAST) exam.

### **Security & Firearm Training**

Security Officer Training is offered for individuals seeking their bi-annual recertification with the Department of Criminal Justice Services. Courses are also offered in firearms recertification, an annual requirement of the Department of Criminal Justice Services for any Private Investigator or Security Officer who carries a firearms endorsement card for a handgun or shotgun. Pre-registration for these courses is required.

### **Tradesman Continuing Education Unit (CEU) Courses**

Tradesman CEU courses in Electrical, Plumbing, HVAC and Gas Fitters are offered on campus and online.

# Academic Programs & Requirements

Mountain Empire Community College offers two-year associate degrees, one-year certificates, and short career studies certificates. The requirements for these awards for completion of curricula are determined by the College faculty and are intended to meet the requirements specified by the Commonwealth of Virginia, the Southern Association of Colleges and Schools Commission on Colleges, and certain specialized accrediting agencies.

## Programs of Study

### Associate of Arts & Sciences

The Associate of Arts and Sciences Degree (AA&S) is awarded to students majoring in business administration, education, general studies, science, or software engineering who plan to transfer to a four-year college or university. Visit [www.mecc.edu/programs](http://www.mecc.edu/programs) for detailed program information.

- Business Administration
- General Education Certificate
- General Studies
- Pre-Teacher Education
- Science
- General Studies-Software Engineering
- Science - Engineering

### Associate of Applied Science

The Associate of Applied Science Degree (AAS) is awarded to students majoring in one of the occupational-technical degree curricula who plan to obtain full-time employment upon graduation. Associate of Applied Science degrees (AAS) are not intended for transfer. Visit [www.mecc.edu/programs](http://www.mecc.edu/programs) for detailed program information.

- Administrative Support Technology
- Administrative Support Technology – Medical Office Specialist
- Computer Networking Technology
- Computer Software Specialist
- Computer-Aided Drafting and Design Technology
- Computerized Manufacturing Technology
- Computerized Manufacturing Technology - Electromechanical Technology Specialization
- Correctional Services
- Emergency Medical Services Technology
- Energy Technology
- Energy Technology – Electrical Specialization
- Environmental Science
- Environmental Science – Water/Wastewater Specialization
- Forest Science
- Health Information Management
- Management
- Nursing Track 1- Two Year
- Nursing Track 2- Advanced Placement Option for LPN Transition
- Nursing Track 3- LPN to RN Transition
- Nursing Track 4- Part-Time Evening/Weekend Advanced Placement Option for LPN Transition
- Paralegal Studies
- Police Science
- Respiratory Therapy
- Welding

### State and Regional Cooperative Degree Programs

- Medical Laboratory Technology (WCC)
- Occupational Therapy Assistant (SWCC)
- Physical Therapy Assistant (WCC)
- Radiography Technology (SWCC)



## Certificates

MECC's Certificates are awarded for the completion of various curricula of study less than two years in length, totaling between 30 and 59 credits. At least 15 percent of the credits must be in general education. Most certificates prepare the student for a specific job or aspect of a job. Some certificates are part of an associate degree program, in which case the credit earned in the certificate may be used toward the degree. These curricula typically are not designed for transfer to a four-year college or university. However, in some limited cases, career courses may transfer, and there may be articulation arrangements with four-year colleges as part of a special program.

- Air Conditioning and Refrigeration
- Clerical Assistant
- General Education
- Industrial Maintenance
- Legal Office Assisting
- Medical Office Coding and Procedures
- Nursing – Practical Nursing
- Welding

## Career Studies Certificates

Career Studies Certificates are awarded for a specific group of career-related courses totaling between 9 and 29 credits. Career Studies Certificates are not intended for transfer. Career studies programs are designed for enhancement of job/life skills, retraining for career changes, and/or investigating new career possibilities. Credit earned in most career studies certificates may be used to meet the requirements in certificate and degree programs that require similar courses.

- 3D Design
- Air Conditioning & Refrigeration
- Building Construction – Electrical Emphasis
- Chemical Process Operator
- Child Development
- Child Development - Infant & Toddler Option
- Clinical Research Coordinator
- Computer Software Specialist - Mobile App Development
- Construction
- Corrections Management and Supervision
- Dental Assistant
- Electricity
- Emergency Medical Technician Basic
- Emergency Medical Technician Basic Plus
- Emergency Medical Technician Advanced
- EMT Intermediate to Paramedic Bridge
- Energy Technology - Electrical Emphasis
- Energy Technology - HVAC Emphasis
- Geographical Information Systems
- Health Sciences
- Help Desk Support
- Information Technology Readiness
- Law Enforcement Management and Supervision
- Machinery Maintenance
- Mechatronics
- Medical Records Technician
- Medical Receptionist
- Nursing Assistant
- Old Time Music
- Pharmacy Technician
- Phlebotomy
- Real Estate
- Small Business Management
- Smart Farming I
- Smart Farming II
- Software Development I
- Software Development II
- Sports Medicine Assistant
- Supervisor Training and Development
- Wastewater Plant Operator
- Water Plant Operator
- Welding Operator I
- Welding Operator II

## State and Regional Cooperative Career Studies Certificate Programs

- Computed Tomography (SWCC)
- Mammography Advanced Studies (SWCC)

# Understanding Program Options & Curriculum Requirements

## Degrees & Certificates

Mountain Empire Community College offers two-year associate degrees, one-year certificates, and career studies certificates. The requirements for these awards for completion of curricula are determined by the College faculty and are intended to meet the requirements specified by the Commonwealth of Virginia, the Southern Association of Colleges and Schools Commission on Colleges, and certain specialized accrediting agencies.

## Terminology

Unless otherwise noted, the term program refers to an associate degree with its own curriculum code and all related specializations, certificates, and career studies certificates. The Virginia Community College System defines a major as a grouping of 100- and 200-level courses that define a discipline or interdisciplinary specialty. A degree program is a broadly structured curriculum leading to the award of an associate degree and is listed on a student's diploma. A specialization is an area of concentration within an approved major that varies from the parent major by 9–15 credits. A certificate is awarded for the completion of an approved non-degree curriculum consisting of 30–59 semester credit hours, usually in a career area; a minimum of 15 percent of a certificate's credit hour requirement will be in general education including one three-credit-hour English class. A career studies certificate is awarded for the completion of an approved non-degree curriculum of 9–29 semester credit hours in length.

### Associate of Arts & Sciences Degree (AA&S)

The AA&S degree is designed for those who plan to transfer to a four-year college or university.

### Associate of Applied Science Degree (AAS)

The AAS degree is for students primarily interested in acquiring technical skills that lead directly to employment after graduation. Associate of Applied Science degrees are not intended for transfer.

### Certificate (C)

Certificates are awarded for career-technical programs, usually two semesters in length. Certificates are not intended for transfer.

### Career Studies Certificate (CSC)

Career Studies programs are designed for enhancement of job/life skills, retraining for career changes, and/or investigating new career possibilities. Career Studies certificates are not intended for transfer.

## State and Regional Cooperative Programs

In the Virginia Community College System, certain highly-specialized curricula, though designed to serve all Virginia residents, are offered only in selected locations. These curricula generally reflect geographic, demographic, or economic considerations which preclude extensive statewide offerings, and therefore, usually are approved for not more than three community colleges to meet state or regional requirements. As changing circumstances warrant and additional state and regional needs are determined, specialized curricula may be located in other community college regions.

## Transfer Virginia

Transfer Virginia is a VCCS initiative that embraces the growing need for seamless transfer among the Commonwealth's institutions. Transfer Agreements University partners, in consultation with VCCS partners, develop guidelines, processes, and supporting policy for transfer tools that best serve our collective students. This is through program level articulation agreements, reverse transfer agreements, and guaranteed program admission agreements with the aspiration for regionally created agreements to be more universally applicable across the Commonwealth (see advisor).

## Passport

The Passport is a 16-credit hour community college block of courses in which all courses are transferable and shall satisfy a lower-division general education requirement at any public institution of higher education. Being passport certified means the student completed 16 credits of guaranteed transfer courses over 5 specific academic areas. This is not a credential (see advisor).

## Virginia Dual Enrollment Plan between Public Schools and Community Colleges

Dual enrollment allows qualified high school students to enroll in college coursework while still in high school. Courses are taught by full or part-time faculty who meet VCCS credentialing requirements and credit for dual enrollment courses is generally accepted at all Virginia private and public colleges. It's important that students and their parents understand that the amount of work necessary to succeed in dual enrollment courses is greater than in high school courses. In addition, dual enrollment courses become part of permanent college transcripts so it's essential that students do well in these courses to realize all the benefits of dual enrollment which include:

- A quality, affordable education close to home

- Enriched course opportunities for outstanding high school students both in academic coursework and in career and technical education
- Students enter college with credits applicable to their degree program
- Students gain understanding of the rigor of college work as well as college faculty expectations
- Access to college resources, facilities and services such as advising and career counseling

Interested students must first take the College placement exam. They must also meet the following criteria:

- High school juniors or seniors attending a public or private school (exceptional freshman and sophomores may be eligible with approval from both high school principal and college president)
- Meet or exceed college placement requirements
- Receive a recommendation from a high school official
- Parental consent provided prior to student enrollment

Home-schooled students are also eligible for the program. These students are urged to contact MECC to discuss the options available to them.

Dual enrollment courses may be used to satisfy degree requirements of an Associate of Arts and Science degree with MECC or transfer in most cases directly to a four-year college or university. Credit for Career Technical Education courses is available that may be used to begin a certificate or Associate of Applied Science degree with MECC.

## General Education Core Competencies

General education, as an integrated and cohesive whole, provides the educational foundation necessary to promote intellectual and personal development. Upon completion of the associate degree, graduates of Virginia's Community Colleges will demonstrate competency in student learning outcomes (SLOs) determined and assessed by each college in the following general education areas: 1) civic engagement, 2) critical thinking, 3) professional readiness, 4) quantitative literacy, 5) scientific literacy, and 6) written communication. Collectively, these general education core competencies distinguish graduates of Virginia's Community Colleges as individuals with a breadth of knowledge, skills, and abilities needed to pursue further education and their careers, continue to develop as learners, and contribute to the well-being of their communities. The six competencies are defined in policy (VCCS 5.0.2.1.) with aspirational statements of learning goals for graduates. Each community college will determine and assess specific learning outcomes based on the definitions and aspirational statements.

The associate degree programs within the Virginia's Community College System support a collegiate experience that meets the general education requirements of the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) and the State Council of Higher Education for Virginia (SCHEV). The general education core competencies shall be included in the catalog of each college.

## VCCS/MECC General Education Goals and Student Learning Outcomes

VCCS degree graduates will demonstrate competency in the following general education areas:

1. **Civic Engagement** is the ability to contribute to the civic life and well-being of local, national, and global communities as both as social responsibility and a life-long learning process. Degree graduates will demonstrate the knowledge and civic values necessary to become informed and contributing participants in a democratic society. Degree graduates will demonstrate the ability to:
  - summarize fundamental principles and debates about democracy and citizenship, both within the United States and in other countries
  - reflect on personal social/civic identity and how that identity differs from others in their communities
  - deliberate on issues and problems to advance or achieve a civic aim
  - recognize the value of diverse feelings, perspectives, and life experiences, and the strength that such diversity brings to civic life
  - examine the ethical implications of community and civic actions and decisions
  - consider and respond to civic, social, environmental, or economic challenges at local, national, or global levels
  - identify personal and collective actions that could be taken to address injustices in society
2. **Critical Thinking** is the ability to use information, ideas and arguments from relevant perspectives to make sense of complex issues and solve problems. Degree graduates will locate, evaluate, interpret, and combine information to reach well-reasoned conclusions or solutions. Degree graduates will demonstrate the ability to:
  - discriminate among degrees of credibility, accuracy, and reliability of inferences drawn from given data;
  - recognize parallels, assumptions, or presuppositions in any given source of information;
  - evaluate the strengths and relevance of arguments on a particular question or issue;

- weigh evidence and decide if generalizations or conclusions based on the given data are warranted;
  - determine whether certain conclusions or consequences are supported by the information provided,
  - use problem solving skills.
3. **Professional Readiness** is the ability to work well with others and display situationally and culturally appropriate demeanor and behavior. Degree graduates will demonstrate skills important for successful transition into the workplace and pursuit of further education. Degree graduates will demonstrate the ability to:
- ability to maintain open, effective, and professional communications
  - ability to demonstrate appropriate workplace and classroom demeanor and behavior;
  - ability to work effectively with others on a task in a group or a team to achieve a common goal while maintaining constructive interpersonal relationships
  - ability to solve a challenge or program through innovative ways
  - practice ethical decision-making skills and learn how to describe and analyze positions on ethical issues.
4. **Quantitative Literacy** is the ability to perform accurate calculations, interpret quantitative information, apply and analyze relevant numerical data, and use results to support conclusions. Degree graduates will calculate, interpret, and use numerical and quantitative information in a variety of settings. Degree graduates will demonstrate the ability to:
- determine whether the source of the information is authentic, valid, and reliable.
  - explain numerical information presented in mathematical forms (e.g., equations, graphs, diagrams, tables, words)
  - convert relevant information into various mathematical forms (e.g., equations, graphs, diagrams, tables, words)
  - accurately solve mathematical problems
  - make judgments and draw relevant conclusions from quantitative analysis of data and predict future trends when appropriate
  - use quantitative evidence to support a position or clarify a purpose orally or in writing using appropriate language, symbolism, data, and graphs
5. **Scientific Literacy** is the ability to apply the scientific method and related concepts and principles to make informed decisions and engage with issues related to the natural, physical, and social world. Degree graduates will recognize and know how to use the scientific method, and to evaluate empirical information. Degree graduates will demonstrate the ability to:
- generate an empirically evidenced and logical argument;
  - distinguish a scientific argument from a non-scientific argument;
  - reason by deduction, induction and analogy;
  - distinguish between causal and correlational relationships;
  - recognize methods of inquiry that lead to scientific knowledge.
6. **Written Communication** is the ability to develop, convey, and exchange ideas in writing, as appropriate to a given context and audience. Degree graduates will express themselves effectively in a variety of written forms. Degree graduates will demonstrate the ability to:
- clearly identifies the purpose of the message and focuses the delivery to the audience
  - uses appropriate and relevant content to illustrate main ideas
  - organizes and presents a main idea clearly and concisely with a basic structure
  - uses standard American English, and accepted, conventional grammar and mechanics
  - recognize the role of culture in communication.

Table 5-1  
Minimum Requirements for  
Associate Degrees in the VCCS

	Minimum Number of Semester Hour Credits				
	(1) AA	(2) AS	(3) AA&S	(4) AFA	(5) AAA / AAS
General Education:					
Communication	6 <sup>(a)</sup>	6 <sup>(a)</sup>	6 <sup>(a)</sup>	6 <sup>(b)</sup>	3-6
Humanities/Fine Arts/Literature	6 <sup>(c)</sup>	6 <sup>(c)</sup>	6 <sup>(c)</sup>	3-9	3-6
Social/Behavioral Sciences	6 <sup>(d)</sup>	6 <sup>(d)</sup>	6 <sup>(d)</sup>	3-9	3-6
Natural Sciences	4	4-8	4-8	4	0-6 <sup>(e)</sup>
Mathematics	3	3-6	3-6	3	0-6 <sup>(e)</sup>
Institutional Specific General Education Courses	5-6	5-6	5-6	0	0
Total for General Education =	30-31	30-38	30-38	19-28	15
As specified above, degree programs must contain a minimum of 15 semester hours of general education as defined by SACSCOC.					
Other Requirements for Associate Degrees:					
Student Development	1-2	1-2	1-2	1-2	1-2
Transfer Core <sup>(f)</sup> (columns 1-4) Career/technical courses (column 5)	27-32	20-32	20-32	34-43	43-53
Total for Degree =	60-63	60-63	60-63	60-63	60-69

Notes:

- <sup>(a)</sup> Each of the courses in communication must be in written communication.
- <sup>(b)</sup> One course in humanities/fine arts for the Fine Arts major must be a literature course.
- <sup>(c)</sup> Each of the two courses cannot be from the same discipline area (e.g. humanities).
- <sup>(d)</sup> One course in social/behavioral sciences must be a history course and the second required course cannot be history.
- <sup>(e)</sup> A total of 3-6 semester hours is required in either natural sciences and/or mathematics for the AAA and AAS.
- <sup>(f)</sup> Transfer core includes additional general education and/or major courses.

Table 5-2  
Minimum Requirements for  
Diplomas, Certificates, and Career Studies Certificates

	Diploma	Certificate	Career Studies Certificate
Definition	A two-year curriculum with an emphasis in a career/technical area	A curriculum that consists of a minimum of 30 semester credit hours	A program of study of not less than 9 nor more than 29 semester credit hours
Course Requirements	May include any appropriate courses numbered 10-299	May include any appropriate courses numbered 10-299	May include any appropriate courses numbered 10-299
General Education Requirements	A minimum of fifteen percent (15%) of credit hour requirements shall be in general education, including 1 three-credit English course.	A minimum of fifteen percent (15%) of credit hour requirements shall be in general education, including 1 three-credit English course.	There are no general education requirements.
Graduation Requirements	See page 5-8 <ul style="list-style-type: none"> <li>• 25% of courses must be taken at home institution.</li> <li>• 2.0 GPA</li> <li>• Graduation honors eligible</li> </ul>	See page 5-8 <ul style="list-style-type: none"> <li>• 25% of courses must be taken at home institution.</li> <li>• 2.0 GPA</li> <li>• Graduation honors eligible</li> </ul>	See page 5-8 <ul style="list-style-type: none"> <li>• 25% of courses must be taken at home institution.</li> <li>• 2.0 GPA</li> <li>• Graduation honors eligible</li> </ul>
Approval	State Board for Community Colleges	Chancellor	Local College Board

## License Requirements

The Department of Professional and Occupational Regulation (DPOR) licenses, certifies, registers, and disciplines those professions, occupations, businesses, and individuals that the Virginia General Assembly has determined must be regulated in order to protect the health, welfare, and safety of the public. The majority of professions and occupations regulated by DPOR require applicants to successfully pass minimum competency exams before they are licensed at the entry level. Licensing, certification and registration play a major role in protecting the public. MECC offers courses to prepare for certification in the following professions and occupations:

- Contractor
- LP Gas Fitter
- Real Estate Appraiser
- Real Estate Sales and Broker
- Tradesman (electrician, plumber, HVAC)
- Waterworks/Wastewater Works Facility Operator
- Waste Management Facility Operator

For more information and a complete listing on these professions and occupations, please visit the DPOR web site at [www.dpor.virginia.gov](http://www.dpor.virginia.gov) or call 804.367.8500 and ask for the board regulating the profession or occupation of interest to you.

## College Transfer Electives

This listing represents the courses offered in the transfer degree programs of MECC. Students and advisors may use this listing to select options for transfer electives, humanities electives and social science electives. Several courses are included because they are applicable to a specific articulation agreement. Inclusion in this comprehensive list is not a guarantee that the course will be offered in a given semester nor acceptance of transferability at another college/university. Selection of courses should be made based on planning for a desired career path or for the college/university degree program to which you intend to transfer.

College Transfer Course	CT – College Transfer Elective			H – Humanities Elective		SS – Social Science Elective		Prerequisite
	CT	H	SS					
ACC 211 - Principles of Accounting I	X							Readiness for ENG 111
ACC 212 - Principles of Accounting II	X							ACC 211
ADJ 100 – Survey of Criminal Justice	X							EDE 10
ARA 101 – Beginning Arabic I	X							
ARA 102 – Beginning Arabic II	X							
ART 100 - Art Appreciation	X	X						Readiness for ENG 111
ART 101 - History & Appreciation of Art I	X	X						Readiness for ENG 111
ART 102 - History & Appreciation of Art II	X	X						Readiness for ENG 111
ART 121 - Drawing I	X							EDE 10
ART 122 - Drawing II	X							ART 121
ART 125 - Intro to Painting	X							EDE 10
ART 131 - Two-Dimensional Design	X							EDE 10
ART 180 - Intro to Computer Graphics	X							Readiness for ENG 111
ART 203 – Animation I	X							Readiness for ENG 111
ART 241 – Painting I	X							Readiness for ENG 111
ART 242 – Painting II	X							Readiness for ENG 111
ART 283 – Computer Graphics I	X							Readiness for ENG 111
ASL 101 – American Sign Language I	X							Readiness for ENG 111
ASL 102 - American Sign Language II	X							ASL 101
BIO 101 - General Biology I	X							Readiness for ENG 111 & MDE 60
BIO 102 - General Biology II	X							BIO 101
BIO 141 – Human Anatomy & Physiology I	X							Readiness for ENG 111
BIO 142 – Human Anatomy & Physiology II	X							BIO 141
BIO 145 – Human Anatomy & Physiology for Health Sciences	X							Readiness for ENG 111
BIO 150 – Intro to Microbiology	X							Readiness for ENG 111 & MDE 60
BIO 205 – General Microbiology	X							Readiness for ENG 111, BIO 102, CHM 112
BIO 231 - Human Anatomy & Physiology I	X							Readiness for ENG 111, BIO 102, CHM 112
BIO 232 - Human Anatomy & Physiology II	X							BIO 231
BUS 200 – Principles of Management	X							Readiness for ENG 111
BUS 241 – Business Law I	X							EDE 10
BUS 242 – Business Law II	X							BUS 241
CHI 101 – Beginning Chinese I	X							
CHI 102 – Beginning Chinese II	X							CHI 101
CHM 101 – Introductory Chemistry I	X							Readiness for ENG 111 & MDE 60
CHM 111 - General Chemistry I	X							MDE 60 & Readiness for ENG 111
CHM 112 - General Chemistry II	X							CHM 111
CHM 241 - Organic Chemistry I	X							Readiness for ENG 111, CHM 112, Co-req CHM 243 or 245 Lab I
CHM 242 - Organic Chemistry II	X							Readiness for ENG 111, CHM 112, Co-req CHM 244 or 246 Lab II
CHM 245 - Organic Chemistry Lab I	X							Readiness for ENG 111, Concurrently with CHM 241
CHM 246 - Organic Chemistry Lab II	X							Readiness for ENG 111, Concurrently with CHM 242
CST 100 – Principles of Public Speaking	X							Readiness for ENG 111
CST 105 – Oral Communication	X							Readiness for ENG 111
CST 110 – Intro to Communication	X							Readiness for ENG 111

	CT – College Transfer Elective		H – Humanities Elective		SS – Social Science Elective	
College Transfer Course	CT	H	SS	Prerequisite		
CST 130 – Intro to Theatre	X			Readiness for ENG 111		
CST 141 – Theatre Appreciation I	X	X		Readiness for ENG 111		
CST 229 – Intercultural Communication	X			Readiness for ENG 111		
ECO 150 – Economic Essentials: Theory And Application	X			Readiness for ENG 111		
ECO 201 - Principles of Macroeconomics	X		X	Readiness for ENG 111		
ECO 202 - Principles of Microeconomics	X		X	Readiness for ENG 111		
EDU 200 - Intro to Teaching as a Profession	X			Readiness for ENG 111		
EGR 115 – Engineering Graphics I	X					
EGR 120 – Intro to Engineering	X					
EGR 121 – Foundations of Engineering	X			MTH 263 eligible or completion of MTH 162 or equivalent, and Readiness for ENG 111		
EGR 122 – Engineering Design	X			EGR 121 or department permission		
EGR 140 – Engineering Mechanics - Statics	X			Pre-requisite: MTH 263		
EGR 206 – Engineering Economics	X			Pre-requisite: MTH 263		
EGR 245 – Engineering Mechanics - Dynamics	X			Pre-requisite: EGR 140		
EGR 246 – Mechanics of Materials	X			Pre-requisite: EGR 140		
ENG 111 – College Composition I	X			Readiness for ENG 111		
ENG 112 – College Composition II	X			Readiness for ENG 111		
ENG 211 - Creative Writing I	X	X		ENG 112		
ENG 212 - Creative Writing II	X	X		ENG 112		
ENG 241 - Survey of American Literature I	X	X		ENG 112		
ENG 242 - Survey of American Literature II	X	X		ENG 112		
ENG 243 - Survey of English Literature I	X	X		ENG 112		
ENG 244 - Survey of English Literature II	X	X		ENG 112		
ENG 251 - Survey of World Literature I	X	X		ENG 112		
ENG 252 - Survey of World Literature II	X	X		ENG 112		
ENG 253 – Survey of African-American Literature I	X	X		ENG 112		
ENG 254 – Survey of African-American Literature II	X	X		ENG 112		
ENG 256 - Literature of Science Fiction	X	X		ENG 112		
ENG 278 - Appalachian Literature	X	X		ENG 112		
FRE 101 - Beginning French I	X			Readiness for ENG 111		
FRE 102 - Beginning French II	X			Readiness for ENG 111		
GEO 210 - Intro to Cultural Geography	X		X	Readiness for ENG 111		
GER 101 – Beginning German I	X					
GER 102 – Beginning German II	X					
GOL 105 – Physical Geology	X			Readiness for ENG 111		
GOL 111 - Oceanography I	X			Readiness for ENG 111		
GOL 112 - Oceanography II	X			Readiness for ENG 111		
HIS 101 - Western Civilizations Pre-1600 CE	X		X	Readiness for ENG 111		
HIS 102 - Western Civilizations Post-1600 CE	X		X	Readiness for ENG 111		
HIS 111 – World Civilizations Pre-1500 CE	X		X	Readiness for ENG 111		
HIS 112 – World Civilizations Post-1500 CE	X		X	Readiness for ENG 111		
HIS 121 - United States History Until 1877	X		X	Readiness for ENG 111		
HIS 122 - United States History Since 1865	X		X	Readiness for ENG 111		
HIS 127 – Women in American History	X		X			
HIS 205 – Local History	X		X			
HIS 225 – Topics in European History	X		X	Readiness for ENG 111		
HIS 231 – History of Latin American Civilizations I	X			Readiness for ENG 111		
HIS 262 – U.S. History in Film	X		X	Readiness for ENG 111		
HIS 267 – The Second World War	X		X	Readiness for ENG 111		



	CT – College Transfer Elective		H – Humanities Elective		SS – Social Science Elective
College Transfer Course	CT	H	SS	Prerequisite	
HIS 269 – Civil War and Reconstruction	X		X	Readiness for ENG 111	
HIS 276 – U.S. History Since World War II	X		X	Readiness for ENG 111	
HIS 281 – History of Virginia	X		X		
HLT 105 - CPR	X				
HLT 110 – Concepts of Personal & Community Health	X			Readiness for ENG 111	
HMS 100 – Intro to Human Services	X			Readiness for ENG 111	
HUM 100 - Survey of the Humanities	X	X		Readiness for ENG 111	
HUM 111 - Great Books I	X	X		Readiness for ENG 111	
HUM 112 - Great Books II	X	X		Readiness for ENG 111	
HUM 153 - Intro to Appalachian Studies	X	X		Readiness for ENG 111	
HUM 165 – Controversial Issues in Contemporary American Culture	X	X		Readiness for ENG 111	
HUM 202 - Survey of Western Culture II	X	X		Readiness for ENG 111	
HUM 212 - Survey of American Culture	X	X		Readiness for ENG 111	
HUM 259 – Greek Mythology	X	X		Readiness for ENG 111	
HUM 260 - Survey of 20 <sup>th</sup> Century Culture	X	X		Readiness for ENG 111	
ITE 119 – Information Literacy	X				
ITP 120 – Java Programing I	X			ITP 100, EDE 10	
ITP 132 – C++ Programming I	X			ITP 100, EDE 10	
ITP 232 – C++ Programming II	X			ITP 132	
JPN 101 – Beginning Japanese I	X				
JPN 102 - Beginning Japanese II	X				
MTH 154 – Quantitative Reasoning	X			Readiness for ENG 111, see Table M	
MTH 155 – Statistical Reasoning	X			Readiness for ENG 111, see Table M	
MTH 156 - Elementary Geometry	X			see Table M	
MTH 161 - Precalculus I	X			Readiness for ENG 111, see Table M	
MTH 162 - Precalculus II	X			see Table M	
MTH 165 – Finite Math	X			see Table M	
MTH 167 – Precalculus with Trigonometry	X			see Table M	
MTH 245 – Statistics I	X			see Table M	
MTH 246 – Statistics II	X			see Table M	
MTH 261 – Applied Calculus I	X			see Table M	
MTH 262 – Applied Calculus II	X			see Table M	
MTH 263 - Calculus I	X			Readiness for ENG 111, see Table M	
MTH 264 - Calculus II	X			see Table M	
MTH 265 - Calculus III	X			see Table M	
MTH 266 – Linear Algebra	X			see Table M	
MTH 267 – Differential Equations	X			see Table M	
MTH 280 – College Geometry	X			see Table M	
MTH 281 – Introduction to Abstract Algebra	X			see Table M	
MTH 283 – Probability & Statistics	X			see Table M	
MTH 288 – Discrete Mathematics	X			see Table M	
MTH 289 - Differential Extended	X			see Table M	
MUS 121 - Music in Society	X	X		Readiness for ENG 111	
MUS 122 - Music Appreciation II	X	X		Readiness for ENG 111	
MUS 225 – History of Jazz	X	X		Readiness for ENG 111	
NAS 125 - Meteorology	X			Readiness for ENG 111	
NAS 131 - Astronomy I	X			Readiness for ENG 111	
NAS 132 - Astronomy II	X			Readiness for ENG 111	
PHI 220 - Ethics	X	X		Readiness for ENG 111	

	CT – College Transfer Elective		H – Humanities Elective		SS – Social Science Elective
College Transfer Course	CT	H	SS	Prerequisite	
PHT 101 - Photography I	X			EDE 10	
PHT 102 - Photography II	X			PHT 101	
PHY 201 - General College Physics I	X			MTH 161 or 131. Recommended MTH 162	
PHY 202 - General College Physics II	X			PHY 201	
PHY 241 - University Physics I	X			MTH 263 or 261	
PHY 242 - University Physics II	X			MTH 264 or 262 & PHY 241	
PLS 135 - U.S. Government and Politics	X		X	Readiness for ENG 111	
PLS 136 - State and Local Government and Politics	X		X	Readiness for ENG 111	
PLS 211 - U.S. Government I	X		X	Readiness for ENG 111	
PLS 212 - U.S. Government II	X		X	Readiness for ENG 111	
PSY 200 - Principles of Psychology	X		X	Readiness for ENG 111	
PSY 215 - Abnormal Psychology	X		X	PSY 200	
PSY 230 - Developmental Psychology	X		X	Readiness for ENG 111	
PSY 231 - Life Span Human Development I	X		X	Readiness for ENG 111	
PSY 232 - Life Span Human Development II	X		X	Readiness for ENG 111	
PSY 235 - Child Psychology	X		X	Readiness for ENG 111	
PSY 236 – Adolescent Psychology	X			Readiness for ENG 111	
REL 100 - Intro to the Study of Religion	X	X		Readiness for ENG 111	
REL 200 - Survey of the Old Testament	X	X		Readiness for ENG 111	
REL 210 - Survey of the New Testament	X	X		Readiness for ENG 111	
REL 230 – Religions of the World	X	X		Readiness for ENG 111	
REL 240 - Religions in America	X	X		Readiness for ENG 111	
RUS 101 – Beginning Russian I	X				
RUS 102 – Beginning Russian II	X				
SOC 200 - Principles of Sociology	X		X	Readiness for ENG 111	
SOC 211 – Principles of Anthropology	X		X	Readiness for ENG 111	
SOC 215 - Sociology of the Family	X		X	Readiness for ENG 111	
SOC 268 - Social Problems	X		X	Readiness for ENG 111	
SPA 101 - Beginning Spanish I	X			Readiness for ENG 111	
SPA 102 - Beginning Spanish II	X			Readiness for ENG 111	
SPA 201 – Intermediate Spanish I	X			SPA 102 or equivalent	
SPA 202 – Intermediate Spanish II	X			SPA 102 or equivalent	

**Note about Governor’s School:** Some of the Governor’s School courses are transfer electives and others are technical electives. Please consult with an advisor for specific details.

## How to Use Curriculum Guides for Academic Planning

Curriculum guides are provided for each program of study offered by the College. The guides are listed in alphabetical order by degree classification (Associate of Arts & Sciences, Associate of Applied Science, Certificate, and Career Studies Certificate). The guides are intended to help academic advisors assist students in the planning of courses for their academic programs. Courses will be offered as presented in the curriculum guides (by semester), except where enrollments in a class section are too small to warrant the offering as planned. It is the College’s intention to provide the maximum flexibility in the scheduling of courses to accommodate the scheduling needs of our students. Students and advisors should refer to the online Student Information System prior to each semester for the most up-to-date information on course offerings.

## TRANSFER PATHWAYS

The Associate in Arts and Sciences Degree programs are designed for students planning to transfer to a four-year college or university. The following program guides outline a sequence in which the various courses may be taken. Students may select their own courses and sequences, but should adhere to the requirements for graduation.

### TRANSFER

- Business Administration
- General Education Certificate
- General Studies
- General Studies – Software Engineering Specialization
- Pre-Teacher Education
- Science
- Science-Engineering Specialization

## CAREER PATHWAYS

Career Pathway programs are designed for students majoring in an occupational-technical field who plan to obtain full-time employment upon graduation. Programs of study are developed with the assistance of advisory committees representing business and industry and current market requirements. Students may earn a career certificate, certificate, or degree. These programs are not intended for transfer.

### ALLIED HEALTH

- Administrative Support Technology – Medical Office Specialist
- Clinical Research Coordinator
- Health Information Management
- Medical Office Coding and Procedures
- Medical Receptionist
- Medical Records Technician
- Pharmacy Technician
- Sports Medicine Assistant

### ARTS & MUSIC

- Old Time Music

### BUSINESS

- Administrative Support Technology
- Clerical Assistant
- Help Desk Support
- Legal Office Assisting
- Management
- Paralegal Studies
- Real Estate
- Small Business Management
- Supervisor Training and Development

### CONSTRUCTION

- Air Conditioning and Refrigeration
- Building Construction – Electrical
- Construction
- Electricity
- Energy Technology
  - Electrical Emphasis
  - HVAC Emphasis
- Welding
  - Welding Certificate
  - Welding Operator I & II

### EDUCATION

- Early Child Development
- Early Child Development – Infant & Toddler Option

### ENGINEERING

- 3-D Design
- Computer-Aided Drafting and Design Technology
- Geographic Information Systems

### ENVIRONMENTAL

- Environmental Science
- Environmental Science Water/Wastewater Specialization
- Forest Science
- Geographic Information Systems
- Wastewater Plant Operator
- Water Plant Operator

### HEALTH SCIENCES (Clinical)

- Computed Tomography (SWCC)
- Dental Assistant
- Emergency Medical Services Technology
- Emergency Medical Technician Basic
- Emergency Medical Technician Basic Plus
- Emergency Medical Technician Advanced
- EMT Intermediate to Paramedic Bridge
- Health Sciences
- Mammography Advanced Studies (SWCC)
- Medical Laboratory Technology (WCC)
- Nursing Assistant (CNA)
- Occupational Therapy Assistant (SWCC)
- Phlebotomy
- Physical Therapy Assistant (WCC)
- Practical Nursing Leading to LPN
- Radiography Technology (SWCC)
- Registered Nursing (RN)
  - Track 1: Two-Year Plan
  - Track 2: Advanced Placement Option for LPN Transition
  - Track 3: Part-Time Evening/Weekend
  - Track 4: Part-Time Evening/Weekend Advanced Placement Option for LPN Transition
- Respiratory Therapy

### MANUFACTURING

- 3-D Design
- Chemical Process Operator
- Computer-Aided Drafting and Design Technology
- Computerized Manufacturing Technology
  - Electromechanical Technology Specialization
- Industrial Maintenance
- Machinery Maintenance
- Mechatronics
- Welding
  - Welding Certificate
  - Welding Operator I & II

### PUBLIC SAFETY

- Administration of Justice Corrections Option
- Administration of Justice Law Enforcement Option
- Correctional Services
- Corrections Management and Supervision
- Law Enforcement Management and Supervision
- Police Science

### TECHNOLOGY

- Computer Networking Technology
- Computer Software Specialist
  - Mobile Application Development
- Cybersecurity
- Help Desk Support
- Information Technology Readiness
- Smart Farming I & II
- Software Development I & II
- sUAS

**Associate of Arts & Sciences Degree College/University Transfer****BUSINESS ADMINISTRATION MAJOR (216)****PURPOSE**

The Associate of Arts & Sciences degree programs are designed for students who plan to transfer to a four-year college or university to complete a baccalaureate degree program. The courses in this program are specifically selected for ease of transfer to most four-year colleges and universities. Following the prescribed coursework in this program will result in graduation with the Associate of Arts & Science degree (AA&S). Students should consult with their advisors to ensure that they select general electives that best prepare them for the specific requirements of their intended transfer college or university programs of study. This degree plan is closely aligned to local universities and colleges. Please see your advisor for specific guidelines.

**PROGRAM LEARNING OUTCOMES**

**Upon successful completion, students will be able to:**

1. Civic Engagement: Demonstrate the knowledge and civic values necessary to become informed and contributing participants in a democratic society.
2. Critical Thinking: Locate, evaluate, interpret, and combine information to reach well-reasoned conclusions or solutions.
3. Professional Readiness: Demonstrate skills important for successful transition into the workplace and/or pursuit of further education.
4. Quantitative Literacy: Calculate, interpret, and use numerical and quantitative information in a variety of settings.
5. Scientific Literacy: Recognize and know how to use the scientific method, and to evaluate empirical information.
6. Written Communication: Express themselves effectively in a variety of written forms.
7. Economic Literacy: Apply basic economic concepts to current issues.

**PROGRAM REQUIREMENTS**

Students must meet the requirements for admission established by the college. Depending on specific circumstances, students may need to complete developmental coursework as they begin this course of study. Students are encouraged to check the mathematics requirements of the four-year college or university to which they plan to transfer to determine the appropriate courses to be taken at MECC, as well as to determine the transferability of electives. MECC strongly recommends consulting with an academic advisor at the college in planning their program and selecting courses.

**FOR FURTHER INFORMATION, CONTACT:**

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## BUSINESS ADMINISTRATION MAJOR PROGRAM OF STUDY

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL</b>			
ENG 111	College Composition I	3	Readiness for ENG 111
HIS 101 or HIS 121	Western Civilizations Pre-1600 CE or U.S. History Until 1877	3	Readiness for ENG 111
MTH 161	Pre-Calculus I	3	See Table M
Science	Biology, Chemistry, or Physics <sup>4</sup>	4	BIO and CHM: Readiness for ENG 111 & MTH 161; PHY: MTH 164
SDV 100	College Success Skills	1	
<b>FIRST YEAR SPRING</b>			
ITE 119	Information Literacy <sup>3</sup>	3	
ENG 112	College Composition II	3	ENG 111
HIS 102 or HIS 122	Western Civilizations Post-1600 CE or U.S. History Since 1865	3	Readiness for ENG 111
MTH 261 or MTH 162	Applied Calculus or Pre-Calculus II	3	See Table M
Science	Biology, Chemistry, or Physics <sup>4</sup>	4	BIO 101, CHM 111, PHY 201
<b>SECOND YEAR FALL</b>			
HLT/PED	Health/Physical Education	1	
ACC 211	Principles of Accounting I	3	
ECO 201	Principles of Macroeconomics <sup>1</sup>	3	Readiness for ENG 111
ENG	Literature (241, 242, 243, 244, 251, 252, 253, or 254) <sup>2</sup>	3	ENG 112
CST 100 or CST 105	Principles of Public Speaking or Oral Communication <sup>4</sup>	3	Readiness for ENG 111
	College Transfer Elective	3	
<b>SECOND YEAR SPRING</b>			
ACC 212	Principles of Accounting II	3	ACC 211
ECO 202	Principles of Microeconomics <sup>1</sup>	3	Readiness for ENG 111
	Approved Humanities Elective <sup>2</sup>	3	
	College Transfer Electives	6	
SDV 195	Transfer Education	1	
<b>TOTAL PROGRAM CREDITS</b>		<b>62</b>	

### Notes and Additional Curriculum Options

Course substitutions may be available. Please see an advisor for more information.

<sup>1</sup>In addition to the economics requirements for the community colleges, students are advised to complete a Political Science and Psychology course, or a full year of a sophomore social science if required by the four-year college or university to which you plan to transfer.

<sup>2</sup>At least one semester of World Literature (ENG 251-252) is recommended.

<sup>3</sup>All students pursuing an Associate of Arts and Sciences degree must demonstrate information literacy by completing ITE 119, by satisfying the terms of an articulation agreement, or by establishing competency on an approved assessment test.

<sup>4</sup>Students should consult with their academic advisor to select courses required by their desired degree at their transfer institution.

**Certificate****GENERAL EDUCATION CERTIFICATE (695)****PURPOSE**

The General Education certificate is designed as an intermediate step on the student's progress toward a two or four year degree. This certificate is awarded as recognition of completion of a core of specified requirements in the associate degree program. The associate degree is the gateway for transfer to a senior institution through one of the many articulation and guaranteed admission agreements currently available to MECC students. Students should consult with their advisors to ensure that they select general electives that best prepare them for the specific requirements of their intended transfer college or university programs of study.

**PROGRAM LEARNING OUTCOMES****Upon successful completion, students will be able to:**

1. Civic Engagement: Demonstrate the knowledge and civic values necessary to become informed and contributing participants in a democratic society.
2. Critical Thinking: Locate, evaluate, interpret, and combine information to reach well-reasoned conclusions or solutions.
3. Professional Readiness: Demonstrate skills important for successful transition into the workplace and/or pursuit of further education.
4. Quantitative Literacy: Calculate, interpret, and use numerical and quantitative information in a variety of settings.
5. Scientific Literacy: Recognize and know how to use the scientific method, and to evaluate empirical information.
6. Written Communication: Express themselves effectively in a variety of written forms.

**PROGRAM REQUIREMENTS**

Students must meet the requirements for admission established by the college. Students should have English and Mathematics skills assessed. Depending on specific circumstances, students may need to complete developmental coursework as they begin this course of study. Students are encouraged to check the mathematics requirements of the four-year college or university to which they plan to transfer to determine the appropriate courses to be taken at MECC, as well as to determine the transferability of electives.

**FOR FURTHER INFORMATION, CONTACT:**

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## GENERAL EDUCATION CERTIFICATE PROGRAM OF STUDY

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL</b>			
ENG 111	College Composition I	3	Readiness for ENG 111
BIO 101	General Biology I <sup>1</sup>	4	Readiness for ENG 111 & MDE 60
HIS 101 or HIS 121	Western Civilizations Pre-1600 CE or United States History until 1877	3	Readiness for ENG 111
MTH 154 or MTH 161	Quantitative Reasoning or Pre-Calculus I	3	See Table M
	Humanities or Art Elective	3	See approved list
SDV 100	College Success Skills	1	
<b>FIRST YEAR SPRING</b>			
ENG 112	College Composition II	3	ENG 111
	College Transfer Elective	3	See approved list - if MTH, see Table M
	College Transfer Elective or Natural Science and Lab	3 to 4	See approved list <sup>1</sup>
	Humanities or Art Elective	3	See approved list
	Social Science Elective	3	See approved list
<b>TOTAL PROGRAM CREDITS</b>		<b>32-33</b>	

### Notes and Additional Curriculum Options

Course substitutions may be available. Please see an advisor for more information.

<sup>1</sup>Students may substitute CHM 111/112 or PHY 201/202.

Requirements of four-year institutions may vary. Students should consult an academic advisor to select courses that will satisfy baccalaureate major requirements. In addition, they should confirm with the college or university to which they plan to transfer that they will receive credit at the four-year institution. For selection of all elective courses, see the list on the College Transfer Electives page.

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**Associate of Arts & Sciences Degree College/University Transfer****GENERAL STUDIES MAJOR (697)**

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**PURPOSE**

The Associate of Arts & Sciences degree programs are designed for students who plan to transfer to a four-year college or university to complete a baccalaureate degree program. The courses in this program are specifically selected for ease of transfer to most four-year colleges and universities. Following the prescribed coursework in this program will result in graduation with the Associate of Arts & Science degree (AA&S). Students should consult with their advisors to ensure that they select general electives that best prepare them for the specific requirements of their intended transfer college or university programs of study.

**PROGRAM LEARNING OUTCOMES**

**Upon successful completion, students will be able to:**

1. **Written Communication:** Express themselves effectively in a variety of written forms.
2. **Civic Engagement:** Demonstrate the knowledge and civic values necessary to become informed and contributing participants in a democratic society.
3. **Critical Thinking:** Locate, evaluate, interpret, and combine information to reach well-reasoned conclusions or solutions.
4. **Quantitative Literacy:** Calculate, interpret, and use numerical and quantitative information in a variety of setting.
5. **Professional Readiness:** Demonstrates skills important for successful transition into the workplace and/or pursuit of further education.
6. **Scientific Literacy:** Recognize and know how to use the scientific method, and to evaluate empirical information.
7. **Information Literacy:** Ability to determine the nature and extent of the information needed; access needed information effectively and efficiently; evaluate information and its sources critically and incorporate selected information into his or her knowledge base.

**PROGRAM REQUIREMENTS**

Students must meet the requirements for admission established by the college. Depending on specific circumstances, students may need to complete developmental coursework as they begin this course of study. Students are encouraged to check the mathematics requirements of the four-year college or university to which they plan to transfer to determine the appropriate courses to be taken at MECC, as well as to determine the transferability of electives. MECC strongly recommends consulting with an academic advisor at the college in planning their program and selecting courses.

**FOR FURTHER INFORMATION, CONTACT:**

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## GENERAL STUDIES MAJOR PROGRAM OF STUDY

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL</b>			
ENG 111	College Composition I	3	Readiness for ENG 111
ITE 119	Information Literacy	3	Readiness for ENG 111
MTH 154 or MTH 161	Quantitative Reasoning or Pre-Calculus I	3	See Table M
Science	Biology, Chemistry, or Physics	4	Varies
SDV 100	College Success Skills	1	
<b>FIRST YEAR SPRING</b>			
ENG 112	College Composition II	3	ENG 111
	College Transfer Electives	3	See approved list
	College Transfer Electives	3	See approved list
MTH 155 or MTH 245 or MTH 162	Statistical Reasoning or Statistics I Pre-Calculus II	3	See Table M
Science	Biology, Chemistry, or Physics	4	Varies
<b>SECOND YEAR FALL</b>			
HIS 101 or HIS 121	Western Civilizations Pre-1600 CE or United States History until 1877	3	Readiness for ENG 111
	Social Science Elective	3	See approved list
	Humanities Elective	3	See approved list
CST 100 or CST 105	Principles of Public Speaking or Oral Communication	3	Readiness for ENG 111
	College Transfer Electives	3	See approved list
<b>SECOND YEAR SPRING</b>			
HLT/PED	Health/Physical Education	1	
	Social Science Elective	3	See approved list
	Humanities Elective	3	See approved list
HIS 102 or HIS 122	Western Civilizations Post-1600 CE or U.S. History Since 1865	3	Readiness for ENG 111
	College Transfer Electives	6	See approved list
SDV 195	Transfer Education	1	
<b>TOTAL PROGRAM CREDITS</b>		<b>62</b>	

### Notes and Additional Curriculum Options

Course substitutions may be available. Please see an advisor for more information.

*Requirements of four-year institutions may vary. Students should consult an academic advisor to select courses that will satisfy baccalaureate major requirements. In addition, they should confirm with the college or university to which they plan to transfer that they will receive credit at the four-year institution. For selection of all elective courses, see the list on the College Transfer Electives page.*

**Associate of Arts & Sciences Degree College/University Transfer****GENERAL STUDIES - SOFTWARE ENGINEERING SPECIALIZATION (697-09)****PURPOSE**

The Associate of Arts & Sciences degree programs are designed for students who plan to transfer to a four-year college or university to complete a baccalaureate degree program. The courses in this program are specifically selected for ease of transfer to most four-year colleges and universities. Following the prescribed coursework in this program will result in graduation with the Associate of Arts & Science degree (AA&S). Students should consult with their advisors to ensure that they select general electives that best prepare them for the specific requirements of their intended transfer college or university programs of study. This degree plan is closely aligned to local universities and colleges. Please see your advisor for specific guidelines.

**PROGRAM LEARNING OUTCOMES****Upon successful completion, students will be able to:**

1. Civic Engagement: Demonstrate the knowledge and civic values necessary to become informed and contributing participants in a democratic society.
2. Critical Thinking: Locate, evaluate, interpret, and combine information to reach well-reasoned conclusions or solutions.
3. Professional Readiness: Demonstrate skills important for successful transition into the workplace and/or pursuit of further education.
4. Quantitative Literacy: Calculate, interpret, and use numerical and quantitative information in a variety of settings.
5. Scientific Literacy: Recognize and know how to use the scientific method, and to evaluate empirical information.
6. Written Communication: Express themselves effectively in a variety of written forms.
7. Software Coding: Use predefined specifications to analyze, design and create software programs which comply with specific requirements.

**PROGRAM REQUIREMENTS**

Students must meet the requirements for admission established by the college. Depending on specific circumstances, students may need to complete developmental coursework as they begin this course of study. Students are encouraged to check the mathematics requirements of the four-year college or university to which they plan to transfer to determine the appropriate courses to be taken at MECC, as well as to determine the transferability of electives. MECC strongly recommends consulting with an academic advisor at the college in planning their program and selecting courses.

**Transfer Note**

This specialization is designed to aid students with transfer into the Software Engineering bachelor's degree program at UVA-Wise. Students should consult with any transferring university for appropriate course selection.

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## GENERAL STUDIES - SOFTWARE ENGINEERING SPECIALIZATION PROGRAM OF STUDY

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL</b>			
ENG 111	College Composition I	3	Readiness for ENG 111
HIS 101	Western Civilizations Pre-1600 CE	3	Readiness for ENG 111
MTH 161	Pre-Calculus I	3	See Table M
	Humanities Elective	3	EDE 10
	Approved Social Science	3	EDE 10
SDV 100	College Success Skills	1	
<b>FIRST YEAR SPRING</b>			
ENG 112	College Composition II	3	ENG 111
HIS 102	Western Civilizations Post-1600 CE	3	Readiness for ENG 111
MTH 155	Statistical Reasoning	3	See Table M
MTH 162	Pre-Calculus II	3	See Table M
ITP 100	Software Design	3	
HLT/PE	Health/Physical Education	1	
<b>SECOND YEAR FALL</b>			
ENG	English Survey	3	ENG 112
PHY 201	General College Physics I	4	MTH 161(163)
	Approved Social Science	3	EDE 10
ITP 132	C++ Programming I	3	MTH 161(163)
MTH 263	Calculus I	4	MTH 161(163) and MTH 162(164)
<b>SECOND YEAR SPRING</b>			
ENG 115	Technical Writing	3	
MTH 264	Calculus II	4	MTH 263(273)
ITP 232	C++ Programming II	3	ITP 132
PHY 202	General College Physics II	4	PHY 201
SDV 195	Transfer Education	1	See approved list
<b>TOTAL PROGRAM CREDITS</b>		<b>64</b>	

### Notes and Additional Curriculum Options

Course substitutions may be available. Please see an advisor for more information.

<sup>1</sup>All students pursuing an Associate of Arts and Sciences must demonstrate information literacy by completing ITE 119, by satisfying the terms of an articulation agreement, or by establishing competency on an assessment test.

## Associate of Arts &amp; Sciences Degree College/University Transfer

**PRE-TEACHER EDUCATION (624)**

PK-8, PK-6, Middle School Special Education

**PURPOSE**

The Associate of Arts & Sciences degree programs are designed for students who plan to transfer to a four-year college or university to complete a baccalaureate degree program. The courses in this program are specifically selected for ease of transfer to most four-year colleges and universities. Following the prescribed coursework in this program will result in graduation with the Associate of Arts & Science degree (AA&S). Students should consult with their advisors to ensure that they select general electives that best prepare them for the specific requirements of their intended transfer college or university programs of study. This degree plan is closely aligned to local universities and colleges. Please see your advisor for specific guidelines.

**PROGRAM LEARNING OUTCOMES**

Upon successful completion, students will be able to:

1. Civic Engagement: Demonstrate the knowledge and civic values necessary to become informed and contributing participants in a democratic society.
2. Critical Thinking: Locate, evaluate, interpret, and combine information to reach well-reasoned conclusions or solutions.
3. Professional Readiness: Demonstrate skills important for successful transition into the workplace and/or pursuit of further education.
4. Quantitative Literacy: Calculate, interpret, and use numerical and quantitative information in a variety of settings.
5. Scientific Literacy: Recognize and know how to use the scientific method, and to evaluate empirical information.
6. Written Communication: Express themselves effectively in a variety of written forms.
7. Teacher Preparation: Demonstrate knowledge of the teaching profession in Virginia, including historical perspectives, current issues, and future trends in education on the national and state levels.

**PROGRAM REQUIREMENTS**

Students must meet the requirements for admission established by the college. Depending on specific circumstances, students may need to complete developmental coursework as they begin this course of study. Students are encouraged to check the mathematics requirements of the four-year college or university to which they plan to transfer to determine the appropriate courses to be taken at MECC, as well as to determine the transferability of electives. MECC strongly recommends consulting with an academic advisor at the college in planning their program and selecting courses.

**FOR FURTHER INFORMATION, CONTACT:**

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## PRE-TEACHER EDUCATION PROGRAM OF STUDY

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL</b>			
ENG 111	College Composition I	3	Readiness for ENG 111
HIS 101	Western Civilizations Pre-1600 C	3	Readiness for ENG 111
MTH 154	Quantitative Reasoning	3	See Table M
HLT/PED	Health/Physical Education	1	
ITE 119	Information Literacy <sup>2</sup>	3	
SDV 100	College Success Skills	1	
<b>FIRST YEAR SPRING</b>			
ENG 112	College Composition II	3	ENG 111
HIS 102	Western Civilizations Post-1600 CE	3	Readiness for ENG 111
MTH 155	Statistical Reasoning	3	See Table M
PLS 135	American National Politics	3	Readiness for ENG 111
CST 100	Principles of Public Speaking <sup>1</sup>	3	Readiness for ENG 111
<b>SECOND YEAR FALL</b>			
	Humanities Elective <sup>1</sup>	3	
HIS 121	United States History Until 1877	3	Readiness for ENG 111
ECO 201 or ECO 202	Principles of Macroeconomics or Principles of Microeconomics	3	Readiness for ENG 111
BIO 101	General Biology I <sup>1</sup>	4	Readiness for ENG 111 & MDE 60
GEO 210	Introduction to Cultural Geography	3	Readiness for ENG 111
<b>SECOND YEAR SPRING</b>			
HUM	Elective <sup>1</sup>	3	
BIO 102 or CHM 101	General Biology II or General Chemistry I <sup>1</sup>	4	BIO 102: Bio 101; CHM 101: Readiness for ENG 111 & MDE 60
	College Transfer Elective <sup>1</sup>	3	
ENG	English Survey <sup>1</sup>	3	ENG 112
EDU 200	Introduction to Teaching	3	Readiness for ENG 111
<b>TOTAL PROGRAM CREDITS</b>		<b>61</b>	

### Notes and Additional Curriculum Options

Course substitutions may be available. Please see an advisor for more information.

<sup>1</sup>Select according to requirements of transfer institution. Contact your advisor to determine appropriate course selections. Consult the MECC website for up-to-date guidelines on Teacher Education and for information related to the teaching profession.

<sup>2</sup>All students pursuing an Associate of Arts and Sciences degree must demonstrate information literacy by completing ITE 119, by satisfying the terms of an articulation agreement, or by establishing competency on an approved assessment test.

**Associate of Arts & Sciences Degree College/University Transfer****SCIENCE MAJOR (881)****PURPOSE**

The Associate of Arts & Sciences degree programs are designed for students who plan to transfer to a four-year college or university to complete a baccalaureate degree program. The courses in this program are specifically selected for ease of transfer to most four-year colleges and universities. Following the prescribed coursework in this program will result in graduation with the Associate of Arts & Science degree (AA&S). Students should consult with their advisors to ensure that they select general electives that best prepare them for the specific requirements of their intended transfer college or university programs of study. This degree plan is closely aligned to local universities and colleges. Please see your advisor for specific guidelines.

**PROGRAM LEARNING OUTCOMES****Upon successful completion, students will be able to:**

1. Civic Engagement: Demonstrate the knowledge and civic values necessary to become informed and contributing participants in a democratic society.
2. Critical Thinking: Locate, evaluate, interpret, and combine information to reach well-reasoned conclusions or solutions.
3. Professional Readiness: Demonstrate skills important for successful transition into the workplace and/or pursuit of further education.
4. Quantitative Literacy: Calculate, interpret, and use numerical and quantitative information in a variety of settings.
5. Scientific Literacy: Recognize and know how to use the scientific method, and to evaluate empirical information.
6. Written Communication: Express themselves effectively in a variety of written forms.
7. Science problem solving: Demonstrate proficiency in collecting reliable data and in analyzing, interpreting, and drawing conclusions from data.

**PROGRAM REQUIREMENTS**

Students must meet the requirements for admission established by the college. Depending on specific circumstances, students may need to complete developmental coursework as they begin this course of study. Students are encouraged to check the mathematics requirements of the four-year college or university to which they plan to transfer to determine the appropriate courses to be taken at MECC, as well as to determine the transferability of electives. MECC strongly recommends consulting with an academic advisor at the college in planning their program and selecting courses.

**FOR FURTHER INFORMATION, CONTACT:**

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## SCIENCE MAJOR PROGRAM OF STUDY

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL</b>			
ENG 111	College Composition I	3	Readiness for ENG 111
HIS 101 or HIS 121	Western Civilizations Pre-1600 CE or United States History until 1877	3	Readiness for ENG 111
MTH 161	Pre-Calculus I or higher MTH	3	See Table M
Science	Biology, Chemistry, or Physics <sup>4</sup>	4	Varies
SDV 100	College Success Skills	1	
<b>FIRST YEAR SPRING</b>			
ITE 119	Information Literacy <sup>3</sup>	3	
ENG 112	College Composition II	3	ENG 111
HIS 102 or HIS 122	Western Civilizations Post-1600 CE or U.S. History Since 1865	3	Readiness for ENG 111
Science	Biology, Chemistry, or Physics <sup>4</sup>	4	Varies
MTH 162	Pre-Calculus II or higher MTH	3	See Table M
<b>SECOND YEAR FALL</b>			
CST 100 or CST 105	Principles of Public Speaking or Oral Communication <sup>4</sup>	3	Readiness for ENG 111
ENG	Literature (241, 242, 243, 244, 251, or 252) <sup>1</sup>	3	ENG 112
Science	Biology, Chemistry, or Physics <sup>4</sup>	4	Varies
MTH 263	Calculus I or higher MTH	4	MTH 161(163) and 162(164) with a C or better
	College Transfer Elective	3	See approved list
<b>SECOND YEAR SPRING</b>			
HLT/PED	Health/Physical Education	1	
	Approved Humanities Elective <sup>1</sup>	3	
Science	Biology, Chemistry, or Physics <sup>4</sup>	4	Varies
MTH 155 or MTH 264 or MTH 245 or	Statistical Reasoning or Calculus II or Statistics I or Approved MTH	3 or 4	MTH 263(273) with a C or better; MTH 161 with a C or better
	Social Science Elective <sup>2</sup>	3	
<b>TOTAL PROGRAM CREDITS</b>		<b>61-62</b>	

### Notes and Additional Curriculum Options

Course substitutions may be available. Please see an advisor for more information.

<sup>1</sup> At least one semester of World Literature (ENG 251-252) is recommended.

<sup>2</sup> Students should consult the social science requirements of the institution to which they are transferring. Social sciences include: Economics, Political Science, Psychology, Geography, and Sociology.

<sup>3</sup> All students pursuing an Associate of Arts & Sciences degree must demonstrate information literacy by completing ITE 119, by satisfying the terms of an articulation agreement, or by establishing competency on an approved assessment test.

<sup>4</sup> Students should consult with their academic advisor to select courses required by their desired degree at their transfer institution.

**Associate of Arts & Sciences Degree College/University Transfer****SCIENCE MAJOR - ENGINEERING SPECIALIZATION (881-01)****PURPOSE**

The Associate of Arts & Sciences degree programs are designed for students who plan to transfer to a four-year college or university to complete a baccalaureate degree program. The courses in this program are specifically selected for ease of transfer to most four-year colleges and universities. Following the prescribed coursework in this program will result in graduation with the Associate of Arts & Science degree (AA&S). Students should consult with their advisors to ensure that they select general electives that best prepare them for the specific requirements of their intended transfer college or university programs of study. This degree plan is closely aligned to local universities and colleges and meets the Guaranteed Admission Agreement between Virginia Tech and the Virginia Community College System found at the following link: [https://vt.edu/content/dam/vt\\_edu/admissions/forms/VT-VCCS\\_2021-2024\\_GAA.pdf](https://vt.edu/content/dam/vt_edu/admissions/forms/VT-VCCS_2021-2024_GAA.pdf). Please see your advisor for specific guidelines.

**PROGRAM LEARNING OUTCOMES**

**Upon successful completion, students will be able to:**

1. Civic Engagement: Demonstrate the knowledge and civic values necessary to become informed and contributing participants in a democratic society.
2. Critical Thinking: Locate, evaluate, interpret, and combine information to reach well-reasoned conclusions or solutions.
3. Professional Readiness: Demonstrate skills important for successful transition into the workplace and/or pursuit of further education.
4. Quantitative Literacy: Calculate, interpret, and use numerical and quantitative information in a variety of settings.
5. Scientific Literacy: Recognize and know how to use the scientific method, and to evaluate empirical information.
6. Written Communication: Express themselves effectively in a variety of written forms.
7. Engineering Problem Solving: Apply fundamental engineering concepts to solve open-ended problems through a design process.

**PROGRAM REQUIREMENTS**

Students must meet the requirements for admission established by the college. Depending on specific circumstances, students may need to complete developmental coursework as they begin this course of study. Students are encouraged to check the mathematics requirements of the four-year college or university to which they plan to transfer to determine the appropriate courses to be taken at MECC, as well as to determine the transferability of electives. MECC strongly recommends consulting with an academic advisor at the college in planning their program and selecting courses.

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**TRANSFER**
**SCIENCE MAJOR - ENGINEERING SPECIALIZATION PROGRAM OF STUDY**

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL</b>			
ENG 111	College Composition I	3	Readiness for ENG 1111
HIS 101 or HIS 121 or	Western Civilizations Pre-1600 CE or United States History until 1877 or Approved social science elective <sup>2</sup>	3	Readiness for ENG 111
EGR 121	Foundations of Engineering	2	MTH 162 or equivalent
CHM 111	College Chemistry I	4	Readiness for ENG 111 & MTH 161 or divisional approval
MTH 263	Calculus I	4	MTH 161(163) and 162(164) with a C or better
SDV 100	College Success Skills	1	
<b>FIRST YEAR SPRING</b>			
ENG 112	College Composition II	3	ENG 111
HIS 102 or HIS 122 or	Western Civilizations Post-1600 CE or U.S. History Since 1865 or Approved social science elective <sup>2</sup>	3	Readiness for ENG 111
	Approved Humanities Elective	3	
MTH 264	Calculus II	4	MTH 263(273) with a C or better
EGR 122	Engineering Design	3	EGR 121 or divisional approval
HLT/PED	Health/Physical Education	1	
<b>SECOND YEAR FALL</b>			
PHY 241	University Physics I	4	Calculus I
MTH 265	Calculus III	4	MTH 264 with a C or better
MTH 266	Linear Algebra	3	MTH 263(273) with a B or better or 264(274) with a C or better
EGR 140	Engineering Mechanics – Statics (or approved engineering elective)	3	Vary per VCCS school
ITP 132	C++ Programming I <sup>3</sup>	3	ITP 100 (optional); ENF 2 level
<b>SECOND YEAR SPRING</b>			
ENG	Literature (241, 242, 243, 244, 251, 252, 253, or 254) <sup>1</sup> (or approved humanities elective)	3	ENG 112
EGR 245	Engineering Mechanics - Dynamics (or approved engineering elective)	3	
MTH 267	Differential Equations	3	MTH 264(274) with a C or better
PHY 242	University Physics II	4	PHY 241; Calculus II corequisite
EGR 246	Mechanics of Materials (or approved engineering elective)	3	
SDV 195	Transfer Education	1	
<b>TOTAL PROGRAM CREDITS</b>		<b>68</b>	

**Notes and Additional Curriculum Options**

Course substitutions may be available. Please see an advisor for more information.

<sup>1</sup> At least one semester of World Literature (ENG 251-252) is recommended.

<sup>2</sup> Students should consult the social science requirements of the institution to which they are transferring. Social sciences include: Economics, Political Science, Psychology, Geography, and Sociology.

<sup>3</sup> All students pursuing an Associate of Arts & Sciences degree must demonstrate information literacy by completing ITE 119, by satisfying the terms of an articulation agreement, or by establishing competency on an approved assessment test.

**Associate of Applied Science Degree****ADMINISTRATIVE SUPPORT TECHNOLOGY- MEDICAL OFFICE SPECIALIST (298-02)****PURPOSE**

The Medical Office Specialist program is designed to prepare individuals for administrative support positions in medical offices. Individuals currently employed in medical office positions will also benefit from the program. The program includes courses that provide the knowledge and skills necessary for effective job performance in entry-level medical office administrative support positions.

**PROGRAM LEARNING OUTCOMES**

**Upon successful completion, students will be able to:**

1. **Written Communications:** Students will apply effective writing and formatting techniques to the composition of e-mail messages, interoffice memos, routine letters, goodwill messages, persuasive messages, negative messages, informal reports, proposals, and formal reports.
2. **Scientific Reasoning:** Students will demonstrate proficiency in recording, analyzing, and reporting data using computerized tools and methods.
3. **Critical Thinking:** Students will be able to select, analyze, interpret and evaluate a range of source materials.
4. **Quantitative Reasoning:** Students will be able to explain information presented in graphs, diagrams, and tables.
5. **Information Literacy:** Students will be able to recognize when information is needed and have the ability to locate, evaluate, and effectively use the needed information.

**EMPLOYMENT OPPORTUNITIES**

Medical Office Specialists generally work in hospitals, clinics, and private practice offices, assisting with billing and maintaining patient accounts, and performing general office and routine administrative duties. These professionals exhibit expertise in professional conduct, telephone etiquette, computer applications, filing and records management, patient scheduling, and medical office management.

**PROGRAM REQUIREMENTS**

Students should have English and Mathematics skills assessed. Deficiencies in these areas may be corrected by completing the appropriate developmental studies courses.

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**ADMINISTRATIVE SUPPORT TECHNOLOGY - MEDICAL OFFICE SPECIALIST  
PROGRAM OF STUDY**

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL</b>			
AST 101	Keyboarding I	2	
AST 102	Keyboarding II	3	AST 101
AST 107	Editing/Proofreading	3	
HIM 150	Health Records	3	
HIM 113	Medical Terminology and Disease Processes I	3	
HIM 130	Healthcare Information Systems	3	
SDV 100	College Success Skills	1	
<b>ELIGIBLE FOR HDM HIPAA CERTIFICATION</b>			
<b>FIRST YEAR SPRING</b>			
AST 141	Word Processing I	3	
<b>ELIGIBLE FOR MOS WORD CORE CERTIFICATION</b>			
AST 271	Medical Office Procedures	3	AST 102 Co-requisite
HIM 114	Medical Terminology and Disease Processes II	3	
HIM 230	Information Systems & Technology in Healthcare	3	
HIM 226	Legal Aspects of Health Record Documentation	2	
HIM 251	Clinical Experience	3	
<b>ELIGIBLE FOR NATIONAL HEALTHCAREER ASSOCIATION CERTIFIED ELECTRONIC HEALTH RECORDS SPECIALIST CERTIFICATION</b>			
<b>SECOND YEAR FALL</b>			
ACC 115	Applied Accounting	3	
AST 205	Business Communications	3	
ENG 111	College Composition I	3	
AST 243	Office Administration I	3	AST 141
	Humanities Elective	3	
	Social Science Elective	3	
<b>SECOND YEAR SPRING</b>			
AST 108	Telephone Techniques	1	
AST 244	Office Administration II	3	AST 243
AST 290	Coordinated Internship	3	
<b>ELIGIBLE FOR CAREER READINESS CERTIFICATIONS WHILE ENROLLED IN AST 290</b>			
ITE 140	Spreadsheet Software	3	
MTH 132	Business Math	3	
	Humanities or Social Science Elective	3	
<b>TOTAL PROGRAM CREDITS</b>		<b>69</b>	

**Notes and Additional Curriculum Options**

Course substitutions may be available. Please see an advisor for more information.

## Career Studies Certificate

**CLINICAL RESEARCH COORDINATOR (221-152-08)****PURPOSE**

The Clinical Research Coordinator Certificate is designed to provide entry-level specialization in clinical classification vocabularies for healthcare professionals working under the direction of a Clinical Principal Investigator for Clinical Trials. The Clinical Research Coordinator supports, facilitates and coordinates the daily clinical trial activities and plays a critical role in the conduct of the clinical study. The curriculum provides statistical calculation concepts for data collection, an examination of clinical systems and sources of data collection within a healthcare organization, health information privacy and security compliance and a review of ICD 10 disease classification vocabularies. This program is designed for healthcare professionals working in population health, insurance, compliance auditing, healthcare finance and institutional support for clinical studies. This program is designed as a specialization for the health professional with a bachelors degree in public health or healthcare management.

**PROGRAM LEARNING OUTCOMES**

Upon successful completion, students will be able to:

1. Apply Diagnosis and Procedure codes according to current professional classification systems guidelines.
2. Identify complete health record according to organizational policies, external regulations and professional standards.
3. Analyze and interpret data and data sources for patient care (management, billing, reports, registries and other databases)
4. Analyze managed care and accountable care strategies and their impact to the delivery of care.

**EMPLOYMENT OPPORTUNITIES**

Employers are increasingly looking for clinical trials staff with a developed set of core competencies such as data classification, health informatics and healthcare statistics.

**CLINICAL RESEARCH COORDINATOR PROGRAM OF STUDY**

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR</b>			
HIM 260	Pharmacology for Health Professionals	3	
HIM 150	Health Records Management	3	
HIT 143	Managing Electronic Billing in a Medical Practice	3	
HIM 220	Health Statistics	3	
HIM 250	Health Data Classifications Systems I	3	
HIM 256	Clinical Classification Systems & Reimbursement Methodologies	5	
HIM 280	Capstone	1	
<b>TOTAL PROGRAM CREDITS</b>		<b>21</b>	

**Notes and Additional Curriculum Options**

Course substitutions may be available. Please see an advisor for more information.

*This career studies certificate is designed for students who have existing training and/or experience in a healthcare field and/or medical coding. Students should consult with an advisor for details.*

**FOR FURTHER INFORMATION, CONTACT:**

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## ALLIED HEALTH

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### Associate of Applied Science Degree

## HEALTH INFORMATION MANAGEMENT (152)

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### PURPOSE

The Health Information Management (HIM) degree provides students the opportunity to gain knowledge and skills required to perform a variety of specialized duties in a non-clinical healthcare setting. Graduates may seek positions as medical records technicians, coders, health information specialists, and similar designations.

### PROGRAM LEARNING OUTCOMES

Upon successful completion, students will be able to:

1. Apply Diagnosis and Procedure codes according to current professional classification systems guidelines.
2. Identify complete health record according to organizational policies, external regulations and professional standards.
3. Analyze and interpret data and data sources for patient care (management, billing, reports, registries and other databases)
4. Use current concepts and government regulations to assign policies for data integrity and data exchange standards.
5. Apply healthcare legal terminology to identify the use of legal document, consents for treatment, retention and release of information, privacy and patient rights.
6. Apply confidentiality, privacy and security measures and policies and procedures for internal and external of and exchange to protect electronic health information.
7. Use payment methodologies and systems such as capitation, Prospective Payment Systems, case mix and health insurance policies to evaluate the revenue cycle management process.
8. Use billing processes and procedures such as claims, electronic data exchange, advanced beneficiary notice, charge master, coding and bill reconciliation process to support the reimbursement cycle.
9. Analyze managed care and accountable care organization strategies and their impact to the delivery of care setting.
10. Obtain Certified Coding Associate through AHIMA (American Health Information Management Association), Certified Professional Coder through AAPC (American Association of Professional Coders).

### EMPLOYMENT OPPORTUNITIES

HIM graduates will be able to work at acute care hospitals, clinics, behavioral healthcare facilities, hospice, home care, healthcare government agencies, EHR vendors, insurance companies, and Managed Care Organizations. Opportunities for certification include Certified Professional Coder (CPC) and Certified Coding Associate (CCA).

### PROGRAM REQUIREMENTS

Students entering the HIM program must meet the College's general admissions requirements, as well as program specific admission requirements which include:

- Completion of the Health Information Management Application for Admission packet, including a letter of intent and criminal background check and drug screening.
- Students should have English and Mathematics skills assessed. Deficiencies in these areas may be corrected by completing the appropriate developmental studies courses.
- Students may receive college credit for verified on-the-job experience.
- Courses taken out of suggested sequence must have the approval of the program advisor.

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**Clinical Affiliation Agreement for HIM Internship**

The Health Information Management Program has clinical affiliation agreements with clinical agencies to ensure student safety. If students cannot comply with these contractual requirements, they will not be able to participate in clinical experiences and will be asked to withdraw from the program. General guidelines follow:

- Clinical agencies reserve the right to dismiss a student from their agency at any time with due cause. This will be done with advance notice, except in an emergency.
- Published policies of the clinical agency must be followed. Each student must successfully complete an orientation program prior to participating in activities at any clinical facility.
- Clinical facilities requires that all students have documentation of ability to perform the physical demands required in direct patient care activities.
- Immunizations must be current. A flu vaccine may be required.
- Students release clinical agencies, its agents and employees from any liability for personal injury or death, or damage to personal property arising from the use of the clinical agency's facilities.
- Proof of HIPAA Certification must be provided.
- Clinical facilities require a criminal background check and drug screen clearance as a condition for student placement.



*The Health Information Management accreditor of Mountain Empire Community College is the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM). The College's accreditation for the Associate of Applied Science degree in Health Information Management has been reaffirmed through 2027.*

## HEALTH INFORMATION MANAGEMENT PROGRAM OF STUDY

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL</b>			
NAS 171	Human Anatomy & Physiology I	4	
ENG 111	College Composition I	3	
HIT 130	Intro to Computer Systems for Health Info Technology	3	
HIM 113	Medical Term. & Disease Processes I	3	
HIM 260	Pharmacology for HIM	3	
SDV 100	College Success Skills	1	
<b>FIRST YEAR SPRING</b>			
HIM 114	Medical Term. & Disease Processes II	3	
	Guided General Education Elective	3	
HIM 150	Health Records Management	3	
HIM 233	Electronic Health Records Management	3	HIT 130 or HIM 130
HIM 253	Health Records Coding	4	
SDV 106	Preparation for Employment	1	
<b>ELIGIBLE FOR CAREER READINESS CERTIFICATIONS WHILE ENROLLED IN SDV 106</b>			
<b>SECOND YEAR FALL</b>			
HIM 149	Introduction to Medical Practice	2	
HIM 151	Reimbursement Issues in Medical Practice Mgmt.	2	
HIM 249	Supervision & Management Practices in HIM	3	
HIM 254	Advanced Coding & Reimbursements	4	HIM 253
<b>ELIGIBLE FOR AMERICAN PROFESSIONAL CODING CERTIFICATION (AAPC) CERTIFIED PROFESSIONAL CODER (CPC)</b>			
HIM 251	Clinical Practice I	3	
	Humanities Elective	3	
<b>SECOND YEAR SPRING</b>			
HIM 220	Health Statistics	3	
HIM 226	Legal Aspects of Health Record Documentation	2	
HIM 229	Performance Improvement in Healthcare	2	
HIM 265	Facility Based Coding	3	
HIM 290	Coordinated Internship	2	
HIM 295	RHIT Test Prep	1	
	Social Science Elective	3	
<b>ELIGIBLE FOR AMERICAN HEALTH INFORMATION MANAGEMENT ASSOCIATION (AHIMA) CERTIFIED CODING ASSOCIATE (CCA) AND AMERICAN HEALTH INFORMATION MANAGEMENT (AHIMA) REGISTERED HEALTH INFORMATION TECHNICIAN (RHIT)</b>			
<b>TOTAL PROGRAM CREDITS</b>		<b>67</b>	

### Notes and Additional Curriculum Options

Course substitutions may be available. Please see an advisor for more information.

**Certificate****MEDICAL OFFICE CODING AND PROCEDURES (285)****PURPOSE**

The Medical Office Coding & Procedures Certificate is designed to provide entry-level skills for individuals preparing for employment in the healthcare industry as medical coders, medical office assistants, medical secretaries, insurance billing specialists, or medical records technicians. The curriculum provides basics in diagnostic/procedural and medical terminology and coding, medical office procedures and the reporting of data to third party payers, insurance companies and government agencies for reimbursement.

**PROGRAM LEARNING OUTCOMES**

**Upon successful completion, students will be able to:**

1. Apply Diagnosis and Procedure codes according to current professional classification systems guidelines.
2. Identify complete health record according to organizational policies, external regulations and professional standards.
3. Analyze and interpret data and data sources for patient care (management, billing, reports, registries and other databases)
4. Analyze managed care and accountable care strategies and their impact to the delivery of care.
5. Obtain Certified Professional Coder (CPC) through AAPC (American Association of Professional Coders).

**EMPLOYMENT OPPORTUNITIES**

Students will have the opportunity to gain the knowledge and skills required to perform a variety of specialized duties with competence and understanding. The Medical Office Coding & Procedures certificate will prepare students for a wide range of entry-level positions in healthcare facilities such as clinics, private medical practices, and hospitals.

**PROGRAM REQUIREMENTS**

Students should have English and Mathematics skills assessed. Deficiencies in these areas may be corrected by completing the appropriate developmental studies courses.

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## MEDICAL OFFICE CODING AND PROCEDURES PROGRAM OF STUDY

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL</b>			
AST 101	Keyboarding I	2	
AST 102	Keyboarding II	3	AST 101
ENG 111	College Composition I	3	
HIM 111	Medical Terminology I	3	
HIM 130	Healthcare Information Systems	3	
HIM 150	Health Records Management	3	
SDV 100	College Success Skills	1	
<b>FIRST YEAR SPRING</b>			
AST 108	Telephone Techniques	1	
AST 141	Word Processing I	3	AST 101
<b><i>ELIGIBLE FOR MICROSOFT OFFICE WORD CORE CERTIFICATION UPON COMPLETION OF AST 141</i></b>			
AST 271	Medical Office Procedures	3	
HIM 112	Medical Terminology II	3	
HIM 253	Health Records Coding	4	
HIM 265	Facility Based Medical Coding	3	
<b>SECOND YEAR FALL</b>			
AST 215	Medical Keyboarding	3	AST 102
HIM 254	Advanced Coding & Reimbursement	4	HIM 253
<b><i>ELIGIBLE FOR CPC (CERTIFIED PROFESSIONAL CODER), CCA (CERTIFIED CODING ASSOCIATE), AND CBCS (CERTIFIED BILLING AND CODING SPECIALIST) EXAMS UPON COMPLETION OF HIM 253 AND HIM 254</i></b>			
MTH 132	Business Math	3	
NAS 171	Human Anatomy and Physiology	4	
	Social Science or Humanities Elective	3	
<b>TOTAL PROGRAM CREDITS</b>		<b>52</b>	

**Notes and Additional Curriculum Options**

Course substitutions may be available. Please see an advisor for more information.

## Career Studies Certificate

**MEDICAL RECEPTIONIST (221-286-01)****PURPOSE**

The Medical Receptionist Career Studies Certificate prepares individuals for entry-level responsibilities in the health care environment. Emphasis is placed on developing skills in transcribing and interpreting the physician's dictation into diagnostic test results, operative reports, referral letters, and other medical documents; greeting and scheduling patients and visitors, using patient accounting software for patient record creation/maintenance, and contemporary medical office procedures.

**PROGRAM LEARNING OUTCOMES**

Upon successful completion, students will be able to:

1. Apply Diagnosis and Procedure codes according to current professional classification systems guidelines.
2. Identify complete health record according to organizational policies, external regulations and professional standards.
3. Analyze and interpret data and data sources for patient care (management, billing, reports, registries and other databases)
4. Analyze managed care and accountable care strategies and their impact to the delivery of care.

**EMPLOYMENT OPPORTUNITIES**

Employers are increasingly looking for clinical trials staff with a developed set of core competencies such as data classification, health informatics and healthcare statistics.

**MEDICAL RECEPTIONIST PROGRAM OF STUDY**

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL</b>			
AST 101	Keyboarding I	2	
AST 102	Keyboarding II	3	AST 101
AST 107	Editing/Proofreading	3	
AST 108	Telephone Techniques	1	
HIM 150	Health Records	3	
HIM 113	Medical Terminology and Disease Processes I	3	
HIM 130	Healthcare Information Systems	3	
<b>ELIGIBLE FOR HDM HIPAA CERTIFICATION</b>			
<b>TOTAL PROGRAM CREDITS</b>		<b>18</b>	

**Notes and Additional Curriculum Options**

Course substitutions may be available. Please see an advisor for more information.

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## ALLIED HEALTH

### Career Studies Certificate

## MEDICAL RECORDS TECHNICIAN (221-285-73)

### PURPOSE

This career studies certificate prepares individuals for entry-level responsibilities in the medical records/healthcare environment. Emphasis is placed on developing skills in accurately compiling and maintaining medical records of patients, reviewing medical records for completeness, using patient accounting and application software.

### PROGRAM LEARNING OUTCOMES

Upon successful completion, students will be able to:

1. Understand the definition, benefits, standards, functionality, confidentiality and security, and impact of the electronic health record (EHR) in the healthcare environment.
2. Understand the basic concepts of computer software to include operating systems, word processing, spreadsheets, database, and presentation software applications as they are used in the healthcare environment.

### EMPLOYMENT OPPORTUNITIES

Medical Records Technicians generally work in entry-level support positions in hospitals, clinics, and private practice offices.

## MEDICAL RECORDS TECHNICIAN PROGRAM OF STUDY

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL</b>			
AST 141	Word Processing I	3	
<i>ELIGIBLE FOR MOS WORD CORE CERTIFICATION</i>			
AST 271	Medical Office Procedures	3	AST 102 Co-requisite
HIM 114	Medical Terminology and Disease Processes II	3	
HIM 230	Information Systems & Technology in Healthcare	3	
HIM 226	Legal Aspects of Health Record Documentation	2	
HIM 251	Clinical Experience	3	
<i>ELIGIBLE FOR NATIONAL HEALTHCAREER ASSOCIATION CERTIFIED ELECTRONIC HEALTH RECORDS SPECIALIST CERTIFICATION</i>			
<b>TOTAL PROGRAM CREDITS</b>		<b>17</b>	

### Notes and Additional Curriculum Options

Course substitutions may be available. Please see an advisor for more information.

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**Career Studies Certificate****PHARMACY TECHNICIAN (221-190-07)****PURPOSE**

Provide students with advanced theory and laboratory experience required for employment in acute care and retail pharmacies. Prepare students to take the Virginia and/or national certification exam(s). Provide employers with competent, entry-level pharmacy technicians. Provide students with exposure to the latest technology and devices being used.

**PROGRAM LEARNING OUTCOMES**

**Upon successful completion, students will be able to:**

1. Understand and describe hospital and institutional practice and formulary guidelines.
2. Describe proper procedures for repackaging and dispensing medications. Describe the functions associated with drug information centers, specialty services such as intravenous admixture and total parenteral nutrition, satellite pharmacies, and clinical pharmacists working in an institution. Maintain a floor stock.
3. Describe and apply Standard (universal) Procedures, aseptic technique, sterilization, contamination, and the germ theory of disease. Identify parenterals, appropriate means of disposing hazardous agents, and procedures to follow in the event of exposure. Identify an automated dispensing device.
4. Describe the characteristics of intravenous solutions including solubility, osmolality, osmolarity, and pH. Describe equipment and supplies necessary for preparing intravenous parenterals. Identify the components of an intravenous administration set, syringe, needle, vial, and ampule. Perform conversions between Fahrenheit and Celsius and the reverse, calculate molecular weight, specific gravity, and intravenous administration rates.
5. Understand the extent and effect of medical errors on patient health and safety. Describe how and to what extent medication errors contribute to medical errors. Identify, define, and determine how to reduce types of medical errors. Describe root cause analysis of medication errors. Identify error reporting systems.
6. Understand the importance of human relations, communications, ethics, attitude, and appearance. Describe policies and procedures. Understand the importance of not dispensing medical or pharmaceutical advice.
7. Describe and abide by the confidentiality laws in healthcare. Understand and practice within the scope of duties of a pharmacy technician. Maintain professionalism at all times.
8. Create a resume that stands out in the job market and increases employability. Understand Virginia registration and licensure, Virginia certification, and national certifications, and the benefits of each. Identify recertification requirements.

**EMPLOYMENT OPPORTUNITIES**

Job opportunities for Pharmacy Technicians include retail pharmacies, acute care facilities, long term care facilities, and pharmaceutical companies.

**PROGRAM REQUIREMENTS**

Students should have English and Mathematics skills assessed. Deficiencies in these areas may be corrected by completing the appropriate developmental studies courses.

**ADDITIONAL INFORMATION**

MDE 10 equivalence must be met prior to enrolling in HLT 262. All courses may be completed online with the exception of one hybrid course, HLT 105 and SDV 107. Completion of HLT 261 and HLT 262 with a grade of "C" or better is required for eligibility to take the pharmacy technician certification exam.

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## PHARMACY TECHNICIAN PROGRAM OF STUDY

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST SEMESTER</b>			
SDV 100	College Success Skills	1	
HIM 111	Medical Terminology I	3	
HLT 105	CPR	1	
<b>STUDENT RECEIVES AHA BLS FOR HEALTHCARE PROVIDER CPR CERTIFICATION</b>			
HLT 145	Ethics/Healthcare Personnel	2	
HLT 261	Basic Pharmacy I	3	
HLT 262	Basic Pharmacy II	3	HLT 261
<b>ELIGIBLE TO TAKE THE NATIONAL PTCB (PHARMACY TECHNICIAN CERTIFICATION BOARD) EXAM</b>			
<b>SECOND SEMESTER</b>			
HIM 112	Medical Terminology II	3	
HLT 121	Introduction to Drug Use and Abuse	3	
ITE 119	Information Literacy	3	
MTH 133	Mathematics for Health Professionals	3	
SDV 107	Career Education	3	
<b>ELIGIBLE TO TAKE THE WORK ETHIC PROFICIENCY CERTIFICATION EXAM</b>			
<b>TOTAL PROGRAM CREDITS</b>		<b>28</b>	

### Notes and Additional Curriculum Options

Course substitutions may be available. Please see an advisor for more information.

*HLT 119, HLT 100, EMS 100, EMS 111, or EMS 101 may be substituted for HLT 105. ITE 100, ITE 115, or HIM 130 may be substituted for ITE 119. HLT 261 and 262 should be taken in the same semester, 261 in the first 8-week session and 262 in the last 8-week session. A grade of "C" or better is a pre-requisite to HLT 262.*

**Career Studies Certificate****SPORTS MEDICINE ASSISTANT (221-197-01)****PURPOSE**

Provide students with theory and laboratory experience desired for coaching, athletic, and personal training activities. Provide students with a credential to supplement applications to competitive physician assistant, athletic trainer, and sports medicine programs.

**PROGRAM LEARNING OUTCOMES**

Upon successful completion, students will be able to:

1. Demonstrate workplace readiness skills.
2. Obtain first aid and CPR certification.
3. Describe components needed to perform and interpret a nutritional analysis.
4. Explain the integumentary, musculoskeletal, respiratory, cardiovascular, nervous, immune, and endocrine systems.
5. Use appropriate medical terminology.
6. Describe the principles associated with the planes and axes of human movement.
7. Differentiate between many common injuries and illnesses.
8. Explain the legal and ethical significance of documentation and record-keeping in sports medicine.
9. Demonstrate ethical behavior within the sports medicine profession.
10. Describe components needed to perform a fitness assessment.
11. Explain the basic principles and importance of strength training.
12. Describe components needed to develop a safe strengthening program for healthy individuals.
13. Identify factors related to equipment safety.
14. Manage an injury within the scope of first aid.
15. Describe components needed to utilize various methods to perform and analyze body composition.

**EMPLOYMENT OPPORTUNITIES**

Job opportunities may include coaching assistance, fitness and wellness centers. Volunteer opportunities may include coaching, athletic, and personal training activities.

**PROGRAM REQUIREMENTS**

Students should have English and Mathematics skills assessed. Deficiencies in these areas may be corrected by completing the appropriate developmental studies courses.

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**SPORTS MEDICINE ASSISTANT PROGRAM OF STUDY**

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FALL SEMESTER</b>			
SDV 100	Student Success Skills	1	
SAF 130	Safety - OSHA 10 (Healthcare Track)	1	
HLT 145	Ethics/Healthcare Personnel	2	
HLT 130	Nutrition & Diet Therapy	2	
HLT 100	First Aid & CPR	3	
<b>STUDENTS EARN AHA BLS FOR HEALTHCARE PROVIDER CPR CERTIFICATION, AHA HEARTSAVER OSHA BLOODBORNE PATHOGEN CERTIFICATION, OSHA 10 SAFETY CERTIFICATION, AND AHA HEARTSAVER FIRST AID CERTIFICATION</b>			
<b>SPRING SEMESTER</b>			
HLT 141	Introduction to Medical Terminology	1	
HLT 125	Anatomy & Physiology for Exercise Science	3	
HLT 156	Health Care for Athletic Injuries	3	
	Approved Elective	3	
<b>TOTAL PROGRAM CREDITS</b>		<b>19</b>	

**Notes and Additional Curriculum Options**

Course substitutions may be available. Please see an advisor for more information.

## Career Studies Certificate

**OLD TIME MUSIC (221-529-30)****PURPOSE**

The purpose of the Career Studies Certificate in Old Time Music is to allow students to expand or enhance their knowledge and performance skills in cultural heritage music and explore this field as a career option. This certificate is not intended for transfer.

**PROGRAM LEARNING OUTCOMES**

Upon successful completion, students will be able to:

1. Discuss and write about the culture and history of the central Appalachian region with more extensive knowledge on the heritage music.
2. Perform proficiently on one instrument of their choice and have a beginning level of proficiency on a second instrument of their choice.
3. Set up and operate the equipment for providing audio sound and recording as well as assist with the establishment and operation of a heritage music event.
4. Teach heritage music to others in private and group lessons.
5. Explore cultural heritage as a career option for music education and performance as well as event management.

**EMPLOYMENT OPPORTUNITIES**

- Assist with heritage festival and event planning and management.
- Perform heritage music.
- Teach private and group music lessons.
- Work in a music store.

<b>OLD TIME MUSIC PROGRAM OF STUDY</b>			
<b>Course #</b>	<b>Course Title</b>	<b>Credit</b>	<b>Pre-Requisite Courses (if applicable)</b>
<b>FIRST YEAR FALL</b>			
SDV 107	Career Education	1	
HUM 153	Introduction to Appalachian Studies	3	
MUS 133	Recording Systems Services I	3	
	Elective Instrument Class	3	
	Elective	3	
MUS 150	Old Time String Band	3	
<b>FIRST YEAR SPRING</b>			
TRV 295	Festival Management	3	
	Elective	3	
	Elective Instrument Class	3	
MUS 290	Internship in Recording	3	
<b>TOTAL PROGRAM CREDITS</b>		<b>28</b>	

**Notes and Additional Curriculum Options**

Course substitutions may be available. Please see an advisor for more information.

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**ADMINISTRATIVE SUPPORT TECHNOLOGY (298)**

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**PURPOSE**

The Administrative Support Technology major is designed to prepare individuals for positions in an office and/or to update skills of office workers. The program provides the knowledge and skills necessary for effective job performance in office administrative support positions. In addition, the program helps prepare individuals for MCAS (Microsoft Certified Application Specialist) and CAP (Certified Administrative Professional).

**PROGRAM LEARNING OUTCOMES**

**Upon successful completion, students will be able to:**

1. **Written Communications:** Students will apply effective writing and formatting techniques to the composition of e-mail messages, interoffice memos, routine letters, goodwill messages, persuasive messages, negative messages, informal reports, proposals, and formal reports.
2. **Scientific Reasoning:** Students will demonstrate proficiency in recording, analyzing, and reporting data using computerized tools and methods.
3. **Critical Thinking:** Students will be able to select, analyze, interpret and evaluate a range of source materials.
4. **Quantitative Reasoning:** Students will be able to explain information presented in graphs, diagrams, and tables.
5. **Information Literacy:** Students will be able to recognize when information is needed and have the ability to locate, evaluate, and effectively use the needed information.

**EMPLOYMENT OPPORTUNITIES**

Administrative Support Technologists work in office support positions and perform a variety of office tasks. Employers seek workers who have excellent skills in computer applications, communications, decision making, critical thinking, and team-work. Job opportunities as executive secretaries, administrative assistants, receptionists, word processing specialists, and office technicians are available locally, regionally, and nationally.

**PROGRAM REQUIREMENTS**

Students should have English and Mathematics skills assessed. Deficiencies in these areas may be corrected by completing the appropriate developmental studies courses.

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## ADMINISTRATIVE SUPPORT TECHNOLOGY PROGRAM OF STUDY

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL</b>			
ACC 115	Applied Accounting	3	
AST 101	Keyboarding I	2	
AST 102	Keyboarding II	3	AST 101
AST 107	Editing/Proofreading Skills	3	
ENG 111	College Composition	3	
ITE 119	Information Literacy	3	
SDV 100	College Success Skills	1	
<b>FIRST YEAR SPRING</b>			
ACC 215	Computerized Accounting	3	ACC 105, 111/211, or 115
<b>ELIGIBLE FOR QUICKBOOKS ONLINE CERTIFIED USER CERTIFICATION UPON COMPLETION OF ACC 215</b>			
AST 137	Records Management	3	
AST 141	Word Processing I	3	AST 101
	Humanities Elective	3	
<b>ELIGIBLE FOR MICROSOFT OFFICE SPECIALIST WORD CERTIFICATION CORE &amp; MASTER UPON COMPLETION OF AST 141 AND AST 238</b>			
MTH 132	Business Math	3	
AST 108	Telephone Techniques	1	
<b>SECOND YEAR FALL</b>			
AST 205	Business Communications	3	
AST 236	Specialized Software Applications	3	
AST 243	Office Administration I	3	AST 141
BUS 205	Human Resource Management	3	
BUS 241	Business Law I	3	
<b>SECOND YEAR SPRING</b>			
AST 244	Office Administration II	3	AST 243
AST 290	Coordinated Internship	3	
<b>ELIGIBLE FOR CAREER READINESS CERTIFICATIONS WHILE ENROLLED IN AST 290</b>			
ITE 140	Spreadsheet Software	3	
<b>ELIGIBLE FOR MICROSOFT OFFICE SPECIALIST EXCEL CERTIFICATION CORE UPON COMPLETION OF ITE 140</b>			
	Humanities or Social Science Elective	3	
MKT 170	Customer Service	1	
	Social Science Elective	3	
<b>TOTAL PROGRAM CREDITS</b>		<b>65</b>	

### Notes and Additional Curriculum Options

Course substitutions may be available. Please see an advisor for more information.

## BUSINESS

### Certificate

## CLERICAL ASSISTANT (218)

### PURPOSE

The Clerical Assistant Certificate is designed to prepare students for entry-level positions in an office. Keyboarding, filing, word processing, administrative support technology, and general education courses provide individuals with the knowledge and skills necessary for performance in today's automated office.

### PROGRAM LEARNING OUTCOMES

Upon successful completion, students will be able to:

1. Demonstrate the fundamental accounting concepts and principles that governs the accounting cycle.
2. Create documents, spreadsheets, databases, and presentations using integrated software.
3. Develop keyboarding and document production skills with emphasis on preparation of business documents.
4. Develop business communication skills essential in proofreading and editing business documents.

### EMPLOYMENT OPPORTUNITIES

Business, industry, and government offices have job opportunities for entry-level office workers in the immediate area and throughout the nation.

### PROGRAM REQUIREMENTS

Students should have English and Mathematics skills assessed. Deficiencies in these areas may be corrected by completing the appropriate developmental studies courses.

## CLERICAL ASSISTANT PROGRAM OF STUDY

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FALL SEMESTER</b>			
ACC 115	Applied Accounting	3	
AST 101	Keyboarding I	2	
AST 102	Keyboarding II	3	AST 101
AST 107	Editing/Proofreading Skills	3	
AST 236	Specialized Software Apps.	3	AST 101
ENG 111	College Composition I	3	
MKT 170	Customer Service	1	
SDV 100	College Success Skills	1	
<b>SPRING SEMESTER</b>			
AST 108	Telephone Techniques	1	
AST 137	Records Management	3	
AST 141	Word Processing I	3	AST 101
<b>ELIGIBLE FOR MICROSOFT OFFICE SPECIALIST WORD CORE &amp; MASTER CERTIFICATIONS UPON COMPLETION OF AST 141 AND AST 238</b>			
MTH 132	Business Math	3	
	Social Science Elective	3	
<b>TOTAL PROGRAM CREDITS</b>		<b>32</b>	

### Notes and Additional Curriculum Options

Course substitutions may be available. Please see an advisor for more information.

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## Career Studies Certificate

**HELP DESK SUPPORT (221-299-09)****PURPOSE**

The Help Desk Support Career Studies Certificate prepares students to fill entry-level information technology positions which require the employee to provide technical assistance and support related to computer systems, software, and hardware in person, over the web, and/or over the phone.

**PROGRAM LEARNING OUTCOMES**

Upon successful completion, students will be able to:

1. Perform help desk functions to address end-user needs.
2. Use proper computer system and networking terminology. Install, configure, and deploy desktop operating systems.
3. Troubleshoot/debug, maintain, repair and upgrade client desktop systems.
4. Use proper help desk support principles and practices while interacting with customers.
5. Document actions taken to resolve customer problems and or issues.
6. Use computer systems and networks in a responsible and ethical manner.
7. Work as an effective member of a work group.

**EMPLOYMENT OPPORTUNITIES**

Opportunities for employment in the immediate area and throughout the nation abound for students trained in computers. Students who complete the certificate will be qualified to work as Help Desk Technicians in a variety of businesses and organizations.

**HELP DESK SUPPORT PROGRAM OF STUDY**

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR</b>			
ITE 140	Spreadsheet Software	3	
ITN 110	Client Operating System	3	
ITN 171	Unix	3	
ITE 150	Desktop Database Software	3	
ITN 101	Introduction to Network Concepts	3	
BUS 106	Security Awareness for Managers	3	
ITN 107	Personal Computer Hardware & Troubleshooting	3	
ITE 182	User Support/Help Desk Principles	3	
<b>TOTAL PROGRAM CREDITS</b>		<b>24</b>	

**Notes and Additional Curriculum Options**

Course substitutions may be available. Please see an advisor for more information.

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## BUSINESS

### Certificate

## LEGAL OFFICE ASSISTING (261)

### PURPOSE

The Legal Office Assisting Certificate is designed to prepare students for an entry-level position in a legal office setting. Students will gain basic skills in word processing, telephone reception, ethics, and professionalism. Specialized legal courses are complemented by several general education courses. The Legal Office Assisting Certificate is a milestone for students who plan to pursue the Paralegal Studies Associate of Applied Science degree.

### PROGRAM LEARNING OUTCOMES

Upon successful completion, students will be able to:

1. Demonstrate effective communication skills through interaction, in person, by telephone, in written and electronic correspondence, with lawyers, clients, witnesses, court personnel, co-workers, and other business professionals, using appropriate legal terminology and formatting.
2. Utilize strong organizational skills necessary to sort through and manage information, manually and electronically.
3. Apply ethical and professional principles that guide paralegal conduct, including but not limited to: unauthorized practice of law and lawyer supervision of non-lawyers; confidentiality and attorney-client privilege; conflicts of interests; competency; handling of client funds; office decorum and dress.
4. Integrate appropriate skills to work effectively and positively with others beginning on the first day of a new job.

### EMPLOYMENT OPPORTUNITIES

The Legal Office Assisting program prepares students for a wide range of entry-level positions in the legal/paraprofessional field.

### PROGRAM REQUIREMENTS

Students should have English and Mathematics skills assessed. Deficiencies in these areas may be corrected by completing the appropriate developmental studies courses.

## LEGAL OFFICE ASSISTING PROGRAM OF STUDY

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FALL SEMESTER</b>			
AST 101	Keyboarding I	2	
AST 108	Telephone Techniques	1	
BUS 241	Business Law I	3	
ENG 111	College Composition	3	
LGL 120	Legal Terminology	3	
LGL 110	Intro. to Law & the Legal Assistant	3	
LGL 200	Ethics for the Paralegal	1	
SDV 100	College Success Skills	1	
<b>SPRING SEMESTER</b>			
MKT 170	Customer Service	1	
AST 141	Word Processing I	3	AST 101
LGL 115	Real Estate Law	3	
LGL 117	Family Law	3	
MTH 132	Business Math	3	
<b>TOTAL PROGRAM CREDITS</b>		<b>30</b>	

### Notes and Additional Curriculum Options

Course substitutions may be available. Please see an advisor for more information.

### FOR FURTHER INFORMATION, CONTACT:

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**Associate of Applied Science Degree****MANAGEMENT (212)****PURPOSE**

The Associate of Applied Science Degree in Management prepares students for employment in entry-level management positions. Business managers are essential to all organizations. Managers plan, organize, lead, and control activities to effectively and efficiently accomplish organizational goals. The successful manager has excellent communication and interpersonal skills; demonstrates team-building and leadership abilities; exercises initiative, self-discipline, and good judgment; and possesses basic computer skills. The curriculum consists of courses in business management, computer applications, marketing, and general education.

**PROGRAM LEARNING OUTCOMES**

**Upon successful completion, students will be able to:**

1. Explain the major concepts in the functional areas of accounting, marketing, finance, and management.
2. Evaluate the legal, social, and economic environments of business.
3. Describe the global environment of business.
4. Describe and explain the ethical obligations and responsibilities of business.
5. Apply decision-support tools to business decision-making.
6. Construct and present effective oral and written forms of professional communication.
7. Apply knowledge of business concepts and functions in an integrated manner.
8. Use management processes in an applied organization or business situation to manage people, processes, and resources within a diverse organization.
9. Apply knowledge of key marketing concepts in an integrated manner to analyze marketing decisions in a dynamic business environment.

**EMPLOYMENT OPPORTUNITIES**

The Management major is designed for students who seek employment in business or who wish to operate their own business upon completion of the program. Salaries of managers vary depending on the level of responsibility, length of service, and the size of the business.

**PROGRAM REQUIREMENTS**

Students should have English and Mathematics skills assessed. Deficiencies in these areas may be corrected by completing the appropriate developmental studies courses.

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<b>MANAGEMENT PROGRAM OF STUDY</b>			
<b>Course #</b>	<b>Course Title</b>	<b>Credit</b>	<b>Pre-Requisite Courses (if applicable)</b>
<b>FIRST YEAR FALL (SUPERVISOR TRAINING &amp; DEVELOPMENT CSC)</b>			
ACC 115	Applied Accounting	3	
MKT 170	Customer Service	1	
SDV 100	College Success Skills	1	
BUS 117	Leadership	3	
BUS 100	Introduction to Business	3	
BUS 241	Business Law I	3	
BUS 111	Principles of Supervision	3	
SDV 106	Preparation for Employment	1	
<b>ELIGIBLE FOR CAREER READINESS CERTIFICATIONS WHILE ENROLLED IN SDV 106</b>			
<b>FIRST YEAR SPRING (SMALL BUSINESS MANAGEMENT CSC)</b>			
ACC 215	Computerized Accounting--QuickBooks Online	3	ACC 115
<b>ELIGIBLE FOR QUICKBOOKS ONLINE PRO-ADVISOR CERTIFICATION UPON COMPLETION OF ACC 215</b>			
ACC 134	Small Business Taxes	2	
BUS 165	Small Business Management	3	
BUS 205	Human Resource Management	3	
MKT 100	Principles of Marketing	3	
MKT 284	Social Media Marketing	3	
BUS 149	Workplace Ethics	1	
<b>SECOND YEAR FALL (MANAGEMENT DEGREE)</b>			
ITE 119	Information Literacy	3	
ITE 140	Spreadsheet Software	3	
ITE 150	Desktop Database Software	3	
ECO 150	Economic Essentials: Theory and Application	3	
AST 205	Business Communications	3	
<b>SECOND YEAR SPRING (MANAGEMENT DEGREE)</b>			
ENG 111	College Composition I	3	
BUS 285	Current Issues in Management	3	
MTH 132	Business Math	3	
PSY 120	Human Relations	3	
	Humanities Elective	3	
<b>TOTAL PROGRAM CREDITS</b>		<b>66</b>	

**Notes and Additional Curriculum Options**

Course substitutions may be available. Please see an advisor for more information.

**Associate of Applied Science Degree****PARALEGAL STUDIES (260)****PURPOSE**

The Paralegal Studies Degree is designed to prepare individuals to work in a legal office environment. The program provides training in the general processes of American law and the knowledge/skills to perform specific legal tasks under the supervision of an attorney. In addition, the program helps prepare individuals for paralegal certification exams.

**PROGRAM LEARNING OUTCOMES**

**Upon successful completion, students will be able to:**

1. Demonstrate effective communication skills through interaction, in person, by telephone, in written and electronic correspondence, with lawyers, clients, witnesses, court personnel, co-workers, and other business professionals, using appropriate legal terminology and formatting.
2. Perform basic legal research and analysis necessary to identify legal issues and potential solutions to legal problems.
3. Utilize strong organizational skills necessary to sort through and manage information, manually and electronically.
4. Apply principles of writing and rules of English grammar to all writing tasks, to be able to prepare legal documents commonly used in the profession.
5. Demonstrate competent understanding of computer literacy and proficiency required in the typical law office.
6. Apply ethical and professional principles that guide paralegal conduct, including but not limited to: unauthorized practice of law and lawyer supervision of non-lawyers; confidentiality and attorney-client privilege; conflicts of interests; competency; handling of client funds; office decorum and dress.
7. Integrate appropriate skills to work effectively and positively with others beginning on the first day of a new job.

**EMPLOYMENT OPPORTUNITIES**

Students will have opportunity to gain the knowledge and skills required to perform a variety of specialized duties with competence and understanding. The Paralegal Studies Degree will help prepare students for a wide range of entry-level positions as a paraprofessional in the legal field with opportunities in law firms, mortgage companies, banks, title insurance companies, private corporations, and government and administrative agencies.

**PROGRAM REQUIREMENTS**

Students should have English and Mathematics skills assessed. Deficiencies in these areas may be corrected by completing the appropriate developmental studies courses.

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**PARALEGAL STUDIES PROGRAM OF STUDY**

<b>Course #</b>	<b>Course Title</b>	<b>Credit</b>	<b>Pre-Requisite Courses (if applicable)</b>
<b>FIRST YEAR FALL</b>			
AST 101	Keyboarding I	2	
BUS 241	Business Law I	3	
ENG 111	College Composition	3	
LGL 120	Legal Terminology	3	
LGL 110	Introduction to Law & the Legal Assistant	3	
LGL 200	Ethics for the Paralegal	1	
SDV 100	College Success Skills	1	
<b>FIRST YEAR SPRING</b>			
AST 108	Telephone Techniques	1	
MKT 170	Customer Service	1	
AST 141	Word Processing I	3	AST 101
<b>ELIGIBLE FOR MICROSOFT OFFICE SPECIALIST WORD CORE EXAM UPON COMPLETION OF AST 141</b>			
LGL 115	Real Estate Law	3	
LGL 117	Family Law	3	
LGL 127	Legal Research & Writing	3	
MTH 132	Business Math	3	
<b>ELIGIBLE FOR LEGAL OFFICE ASSISTING CERTIFICATE (261)</b>			
<b>SECOND YEAR FALL</b>			
LGL 195	Topics in Paralegal Studies	2	
AST 205	Business Communications	3	
ITE 119	Information Literacy	3	
LGL 216	Trial Preparation & Discovery Practice	3	
LGL 218	Criminal Law	3	
PLS 135	U.S. Government I	3	
SDV 106	Preparation for Employment	1	
<b>SECOND YEAR SPRING</b>			
AST 265	Legal Office Procedures I	3	ENG 111; AST 141
LGL 225	Estate Planning & Probate	3	
LGL 230	Legal Transactions	3	ENG 111
LGL 290	Coordinated Internship	3	
<b>ELIGIBLE FOR CAREER READINESS CERTIFICATIONS WHILE ENROLLED IN LGL 290</b>			
PSY 120	Human Relations	3	
	Humanities Elective	3	
<b>TOTAL PROGRAM CREDITS</b>		<b>69</b>	

**Notes and Additional Curriculum Options**

Course substitutions may be available. Please see an advisor for more information.

## Career Studies Certificate

**REAL ESTATE (221-273-01)****PURPOSE**

The Real Estate Career Studies Certificate is designed to provide a high quality, cost effective, accessible education to those seeking to enter the real estate business, and to those who are seeking licensure as a real estate agent.

**PROGRAM LEARNING OUTCOMES**

Upon successful completion, students will be able to:

1. Understand common types of real estate transactions and conveyances such as deeds, contracts, leases, and deeds of trust.
2. Understand real estate principles such as study of titles, estates, land descriptions, contracts, legal instruments, financing, and management of real estate.
3. Demonstrate basic computer concepts, Internet skills, and the use of Microsoft Office.

**EMPLOYMENT OPPORTUNITIES**

Employment opportunities are available with local real estate agencies, as well as agencies throughout the state for students who obtain licensure as a real estate agent in Virginia.

**REAL ESTATE PROGRAM OF STUDY**

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FALL SEMESTER</b>			
ITE 119	Information Literacy	3	
UMS 107	Small Unmanned Aircraft Systems (sUAS) Remote Pilot Ground School	3	
<b>SPRING SEMESTER</b>			
REA 100	Principles of Real Estate	4	
<b>ELIGIBLE FOR VIRGINIA REALTOR LICENSING EXAM UPON COMPLETION OF REA 100</b>			
LGL 115	Real Estate Law	3	
MKT 284	Social Media Marketing	3	
<b>TOTAL PROGRAM CREDITS</b>		<b>16</b>	

**Notes and Additional Curriculum Options**

Course substitutions may be available. Please see an advisor for more information.

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## BUSINESS

### Career Studies Certificate

## SMALL BUSINESS MANAGEMENT (221-212-24)

### PURPOSE

The Small Business Management Career Studies Certificate provides training in the effective and efficient management and operation of a small business. The curriculum includes coursework in accounting, management, marketing, and finance.

### PROGRAM LEARNING OUTCOMES

Upon successful completion, students will be able to:

1. Explain the major concepts in the functional areas of accounting, marketing, finance, and management.
2. Describe and explain the ethical obligations and responsibilities of business.
3. Apply knowledge of business concepts and functions in an integrated manner.

### EMPLOYMENT OPPORTUNITIES

The Small Business Management Career Studies Certificate is designed for students who seek an entry-level managerial position in a small business or who wish to operate their own small business.

## SMALL BUSINESS MANAGEMENT PROGRAM OF STUDY

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR SPRING</b>			
ACC 215	Computerized Accounting -Quickbooks Online	3	ACC 115
<i>ELIGIBLE FOR QUICKBOOKS ONLINE CERTIFIED USER CERTIFICATION UPON COMPLETION OF ACC 215</i>			
ACC 134	Small Business Taxes	2	
BUS 165	Small Business Management	3	
BUS 205	Human Resource Management	3	
MKT 100	Principles of Marketing	3	
MKT 284	Social Media Marketing	3	
BUS 149	Workplace Ethics	1	
<i>ELIGIBLE FOR WORKPLACE ETHICS CERTIFICATION</i>			
<b>TOTAL PROGRAM CREDITS</b>		<b>18</b>	

### Notes and Additional Curriculum Options

Course substitutions may be available. Please see an advisor for more information.

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## Career Studies Certificate

**SUPERVISOR TRAINING AND DEVELOPMENT (TBA)****PURPOSE**

The purpose of the Supervisor Training and Development Career Studies Certificate Program is to assist students with acquiring the skills necessary to gain employment as first-line supervisors and managers. Therefore, the student will demonstrate his or her ability to plan and direct the work of the organization, evaluate the work of subordinates, assist with setting policies, and confidence with establishing channels of communication. Moreover, the student will demonstrate his or her awareness (including Self-awareness) of how to effectively work with others and foster positive relationships, increase subordinates job satisfaction, and ensure that customer/client needs are met.

**PROGRAM LEARNING OUTCOMES**

Upon successful completion, students will be able to:

1. Demonstrate knowledge of best practice for effectively building relationships and communication with internal and external stakeholders, while managing diverse work groups and teams, as well as change in oneself and the organization.
2. Demonstrate awareness of their role as a supervisor, including the skills necessary to lead in a supervisory or front line management situation, knowledge of the nature of business in the managerial context, and ability to apply critical thinking skills to a broad range of technical and/ or economic issues in a complex business environment.

**EMPLOYMENT OPPORTUNITIES**

This program is designed to prepare students for entry-level supervisory positions within various businesses.

**SUPERVISOR TRAINING AND DEVELOPMENT PROGRAM OF STUDY**

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL</b>			
ACC 115	Applied Accounting	3	
MKT 170	Customer Service	1	
SDV 100	College Success Skills	1	
BUS 117	Leadership	3	
BUS 100	Introduction to Business	3	
BUS 241	Business Law I	3	
BUS 111	Principals of Supervision	3	
SDV 106	Preparation for Employment	1	
<i>ELIGIBLE FOR CAREER READINESS CERTIFICATIONS WHILE ENROLLED IN SDV 106</i>			
<b>TOTAL PROGRAM CREDITS</b>		<b>18</b>	

**Notes and Additional Curriculum Options**

Course substitutions may be available. Please see an advisor for more information.

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## CONSTRUCTION

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### Certificate

## AIR CONDITIONING AND REFRIGERATION (903)

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### PURPOSE

The Air Conditioning and Refrigeration program is designed to provide the job skills necessary for employment a beginning electrician or as a HVAC service technician. Special emphasis is placed upon the installation and repairing of residential and commercial air conditioning units. The program is offered during the day and on a part time basis in the evening.

### PROGRAM LEARNING OUTCOMES

Upon successful completion, students will be able to:

1. Follow safe working practice.
2. Apply the principles and strategies used for the installation of air condition systems, heat pump systems, electric furnace, fossil fuel furnace, and system controls.
3. Apply the principles and strategies used to troubleshoot and service air condition systems, heat pump systems, electric furnaces, fossil fuel furnace, and system controls.
4. Recognize components and design principles used in air distribution systems.
5. Use mathematical skills to solve problems in electrical, heating, and air conditioning systems.
6. Apply troubleshooting skills to diagnose and repair the following: air distribution, heating systems, cooling systems, and system controls.
7. Use tools and equipment required for repairing, testing, and installation of air conditioning systems, refrigeration systems, heat pump systems, electric furnace, fossil fuel furnace, and system controls.
8. Perform basic business, employability and customer service skills as related to the HVA/C-R industry.
9. Handle refrigerant by completing EPA Section 608 Type II Technician Certification.

### EMPLOYMENT OPPORTUNITIES

The certificate in Air Conditioning and Refrigeration is designed to prepare graduates for occupations such as Air Conditioning Service & Installation technicians or beginning electricians.

### PROGRAM REQUIREMENTS

Students should have English and Mathematics skills assessed. Deficiencies in these areas may be corrected by completing the appropriate developmental studies courses.

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## AIR CONDITIONING AND REFRIGERATION PROGRAM OF STUDY

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL</b>			
AIR 111	AC & Refrigeration Controls I	3	
AIR 121	AC & Refrigeration I	4	
ELE 140	Basic Electricity & Machinery	4	
<b>ELIGIBLE FOR NCCER LEVEL 1 ELECTRICAL</b>			
ELE 131	National Electric Code I	3	
BLD 110	Introduction to Construction	3	
SDV 100	College Success Skills	1	
<b>FIRST YEAR SPRING</b>			
AIR 112	AC & Refrigeration Controls II	3	
AIR 154	Heating Systems I	3	
ENE 230	Geothermal Applications I	4	
ELE 156	Electrical Control Systems I	3	ELE 140
ELE 110	Home Electric Power	3	
<b>FIRST YEAR SUMMER</b>			
AIR 116	Duct Construction and Maintenance	2	
ENG 111	College Composition	3	
AIR 281	Energy Management I	3	
<b>ELIGIBLE FOR NCCER LEVEL HVAC 1</b>			
	Social Science Elective	3	
MTH 111	Basic Technical Math	3	
<b>TOTAL PROGRAM CREDITS</b>		<b>48</b>	

### Notes and Additional Curriculum Options

Course substitutions may be available. Please see an advisor for more information.

## CONSTRUCTION

### Career Studies Certificate

## AIR CONDITIONING AND REFRIGERATION (221-903-10)

### PURPOSE

The Air Conditioning and Refrigeration Career Studies Certificate is designed to provide the job skills necessary for employment as an entry level HVAC service technician. Special emphasis is placed upon the installation and repairing of residential and commercial air conditioning units.

### PROGRAM LEARNING OUTCOMES

Upon successful completion, students will be able to:

1. Follow industry safety practices.
2. Apply the principles and strategies used for the installation of air condition systems, heat pump systems, electric furnace, fossil fuel furnace, and system controls.
3. Apply the principles and strategies used to troubleshoot and service air condition systems, heat pump systems, electric furnaces, fossil fuel furnace, and system controls.
4. Recognize components and design principles used in air distribution systems.
5. Use mathematical skills to solve problems in electrical, heating, and air conditioning systems.
6. Apply troubleshooting skills to diagnose and repair the following: air distribution, heating systems, cooling systems, and system controls.
7. Use tools and equipment required for repairing, testing, and installation of air conditioning systems, Refrigeration systems, heat pump systems, electric furnace, fossil fuel furnace, and system controls.
8. Handle refrigerant by completing EPA Section 608 Type II Technician Certification.

### EMPLOYMENT OPPORTUNITIES

The certificate in Air Conditioning and refrigeration is designed to prepare graduates for occupations such as Air Conditioning Service & Installation technicians.

## AIR CONDITIONING AND REFRIGERATION PROGRAM OF STUDY

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL</b>			
AIR 111	AC & Refrigeration Controls I	3	
AIR 121	AC & Refrigeration I	4	
<b>FIRST YEAR SPRING</b>			
AIR 112	AC & Refrigeration Controls II	3	
AIR 154	Heating Systems I	3	
ENE 230	Geothermal Applications I	4	
<b>ELIGIBLE FOR NCCER HVAC LEVEL 1 CERTIFICATION</b>			
<b>TOTAL PROGRAM CREDITS</b>		<b>17</b>	

### Notes and Additional Curriculum Options

Course substitutions may be available. Please see an advisor for more information.

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## Career Studies Certificate

**BUILDING CONSTRUCTION - ELECTRICAL EMPHASIS (221-989-01)****PURPOSE**

The Building Construction Electrical program is designed to provide the job skills necessary for employment as an entry level electrical technician. Special emphasis is placed upon the installation and repairing of residential electrical distribution Systems.

**PROGRAM LEARNING OUTCOMES**

Upon successful completion, students will be able to:

1. Demonstrate the knowledge of safe working practices and procedures.
2. Demonstrate and understand reading of blue prints and building design, and schematic.
3. Demonstrate and understand troubleshooting techniques.
4. Gain knowledge of the National Electrical Code.
5. Gain an NCCER certification in Electrical and Core curriculums.
6. Gain the ability to Communicate and demonstrate good working practices with other workers.
7. Demonstrate common wiring methods of residential standards.

**EMPLOYMENT OPPORTUNITIES**

The certificate in Construction - Electrical Emphasis is designed to prepare graduates for occupations such as electrician's helpers.

**PROGRAM REQUIREMENTS**

Participants must be enrolled in Plugged- In program.

**BUILDING CONSTRUCTION - ELECTRICAL EMPHASIS PROGRAM OF STUDY**

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL</b>			
SDV 100	College Success Skills	1	
BLD 105	Shop Practices & Procedures	2	
BLD 110	Intro to Construction	3	
MTH 111	Basic Technical Math	3	
ENG 100	Basic Occupational English	3	
<b>FIRST YEAR SPRING</b>			
ELE 131	National Electric Code I	3	
ELE 110	Home Electric Power	3	
ELE 140	Basic Electricity & Machinery	4	
<b>ELIGIBLE FOR NCCER CONSTRUCTION CORE AND ELECTRICAL LEVEL 1 CERTIFICATION</b>			
<b>TOTAL PROGRAM CREDITS</b>		<b>22</b>	

**Notes and Additional Curriculum Options**

Course substitutions may be available. Please see an advisor for more information. *This program is not offered continuously and enrollment is by permission only.*

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## CONSTRUCTION

### Career Studies Certificate

## CONSTRUCTION (221-989-10)

### PURPOSE

The Building Construction program is designed to provide the job skills necessary for employment as an entry level construction technician. This program is designed to be flexible and meet industry needs as they arise. This program is not offered continuously and admission is by permission only .

### PROGRAM LEARNING OUTCOMES

Upon successful completion, students will be able to:

1. Demonstrate the knowledge of safe working practices and procedures.
2. Demonstrate and understand reading of blue prints and building design, and schematic.
3. Apply basic construction math so solve problems.
4. Gain an NCCER certification in Core curriculums.
5. Gain the ability to Communicate and demonstrate good working practices with other workers.
6. Apply technical construction skill particular to the concentration.

### EMPLOYMENT OPPORTUNITIES

The certificate in Construction is designed to prepare graduates for occupations such as entry level construction trades.

### PROGRAM REQUIREMENTS

Participants must be enrolled in a specific cohort with permission.

CONSTRUCTION PROGRAM OF STUDY			
Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL</b>			
BLD 105	Shop Practices and Procedures	2	
BLD 110	Intro to Construction	3	
<b>ELIGIBLE FOR NCCER CONSTRUCTION CORE CERTIFICATION</b>			
SAF 295	Topics in Safety WorkZone Intermediate	3	
SAF 130	Industrial Safety OSHA 10	1	
SAF 195	Construction Service Equipment Operation and Safety	1	
HLT 106	First aid and Safety	2	
IND 149	Workplace Ethics	1	
Elective	ELE 148 Power Distribution Systems or BLD 295 Topics in Construction	3	
<b>TOTAL PROGRAM CREDITS</b>		<b>22</b>	

### Notes and Additional Curriculum Options

Course substitutions may be available. Please see an advisor for more information.

*NOTE: For Lineman Elective is ELE 148 Power Distribution Systems; for RSVP Elective is BLD 295 Topics in Construction.*

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## Career Studies Certificate

**ELECTRICITY (221-941-01)****PURPOSE**

The Electricity Career Studies Certificate is designed to provide the job skills necessary for employment as an entry level electrical technician. Special emphasis is placed upon the installation and repairing of residential electrical distribution Systems.

**PROGRAM LEARNING OUTCOMES**

Upon successful completion, students will be able to:

1. Demonstrate the knowledge of safe working practices and procedures.
2. Demonstrate and understand reading of blue prints and building design, and schematic.
3. Demonstrate and understand troubleshooting techniques.
4. Gain knowledge of the National Electrical Code.
5. Gain an NCCER certification in Electrical, and Core curriculum.
6. Gain the ability to Communicate and demonstrate good working practices with other workers.
7. Demonstrate common wiring methods of residential standards.

**EMPLOYMENT OPPORTUNITIES**

The career studies certificate in Electricity is designed to prepare graduates for occupations such as electricians helpers and entry level electricians.

<b>ELECTRICITY PROGRAM OF STUDY</b>			
<b>Course #</b>	<b>Course Title</b>	<b>Credit</b>	<b>Pre-Requisite Courses (if applicable)</b>
<b>FIRST YEAR FALL</b>			
BLD 110	Introduction to Construction	3	
<b>ELIGIBLE FOR NCCER CONSTRUCTION CORE CERTIFICATION</b>			
ELE 131	National Electrical Code I	3	
ELE 140	Basic Electrical Machinery	4	
<b>FIRST YEAR SPRING</b>			
ELE 156	Electrical Control Systems	3	ELE 140
ELE 110	Home Electric Power	3	
<b>ELIGIBLE FOR NCCER ELECTRICAL LEVEL 1 CERTIFICATION</b>			
ETR 143	Device and Applications	3	
<b>TOTAL PROGRAM CREDITS</b>		<b>19</b>	

**Notes and Additional Curriculum Options**

Course substitutions may be available. Please see an advisor for more information.

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## CONSTRUCTION

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Associate of Applied Science Degree

### **ENERGY TECHNOLOGY (820)**

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#### **PURPOSE**

Graduates of the Energy Technology program are trained in the job skills necessary for employment as an entry level HVAC/Electrical technician in both commercial and residential fields. These fields include leading edge technologies such as geothermal, solar PV installation, and solar thermal systems. Graduates will find employment in various industries and service sectors as HVAC technicians or electricians.

#### **PROGRAM LEARNING OUTCOMES**

**Upon successful completion, students will be able to:**

1. Demonstrate the knowledge of safe working practices and procedures.
2. Demonstrate and understand reading of blue prints and building design, and schematic.
3. Demonstrate and understand the installation of HVAC units for both residential and commercial, Loads and calculations.
4. Demonstrate and understand troubleshooting techniques.
5. Gain knowledge of the National Electrical Code.
6. Gain an NCCER certification in Electrical and start the HVAC NCCER.
7. Gain the ability to Communicate and demonstrate good working practices with other workers.

#### **EMPLOYMENT OPPORTUNITIES**

Graduates can expect find as entry level or apprentice HVAC technicians or electricians in the residential or commercial construction industries or as industrial maintenance technicians.

#### **PROGRAM REQUIREMENTS**

Students should have English and Mathematics skills assessed. Deficiencies in these areas may be corrected by completing the appropriate developmental studies courses.

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## ENERGY TECHNOLOGY PROGRAM OF STUDY

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL</b>			
AIR 121	Air Conditioning & Refrigeration I	4	
AIR 111	Air Conditioning & Refrigeration Controls I	3	
ELE 131	National Electrical Code I	3	
ELE 140	Basic Electrical Machinery	4	
<b>STUDENTS ARE ELIGIBLE FOR NCCER LEVEL 1 ELECTRICAL</b>			
ITE 102	Computers and Information Systems	1	
SDV 100	College Success Skills	1	
<b>FIRST YEAR SPRING</b>			
ENG 111	College Composition	3	
ELE 132	National Electrical Code II	3	
AIR 112	Air Conditioning & Refrigeration Controls II	3	
ENE 230	Geothermal Applications	4	
MTH 111	Basic Technical Math	3	
HLT 105	CPR	1	
<b>SECOND YEAR FALL</b>			
AIR 281	Energy Management I	3	
AIR 205	Hydronic and Zoning	4	
ENE 110	Solar Power Installations	4	
AIR 282	Energy Management II	2	
<b>ELIGIBLE FOR BUILDING PERFORMANCE INSTITUTE LEVEL 1</b>			
PHY 131	Applied Physics	3	MTH 103, 111
<b>SECOND YEAR SPRING</b>			
AIR 154	Heating System I	3	
ELE 239	Programmable Controllers	3	ELE 140, ELE 143 or AIR 112
ELE 298	Seminar & Project	3	
ENE 105	Solar Thermal Active and Passive Technology	4	
	Social Science Elective	3	
	Humanities Elective	3	
<b>TOTAL PROGRAM CREDITS</b>		<b>67</b>	

### Notes and Additional Curriculum Options

Course substitutions may be available. Please see an advisor for more information.

## CONSTRUCTION

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Associate of Applied Science Degree

## ENERGY TECHNOLOGY - ELECTRICAL SPECIALIZATION (820-01)

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### PURPOSE

Graduates of the Energy Technology Electrical Specialization program are trained in the job skills necessary for employment as an entry level electrician in both commercial and residential fields. Course work includes a strong emphasis in electrical technology with related courses in computer applications, quality control, teamwork and communication.

### PROGRAM LEARNING OUTCOMES

Upon successful completion, students will be able to:

1. Demonstrate the knowledge of safe working practices and procedures.
2. Demonstrate and understand reading of blue prints and building design, and schematic.
3. Demonstrate and understand the installation of HVAC units for both residential and commercial.
4. Demonstrate and understand troubleshooting techniques.
5. Gain knowledge of the National Electrical Code.
6. Gain an NCCER certification in Electrical, Core and HVAC.
7. Gain the ability to communicate and demonstrate good working practices with other workers.
8. Demonstrate common wiring methods of both residential and commercial standards.

### EMPLOYMENT OPPORTUNITIES

Graduates can expect to find positions as entry level or apprentice electricians in various industries and service sectors.

### PROGRAM REQUIREMENTS

Students should have English and Mathematics skills assessed. Deficiencies in these areas may be corrected by completing the appropriate developmental studies courses.

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## ENERGY TECHNOLOGY - ELECTRICAL SPECIALIZATION PROGRAM OF STUDY

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL</b>			
BLD 110	Introduction to Construction	3	
<b>STUDENTS ARE ELIGIBLE FOR NCCER CONSTRUCTION CORE</b>			
AIR 111	Air Conditioning & Refrigeration I	3	
AIR 281	Energy Management I	3	
ELE 131	National Electrical Code I	3	
ELE 140	Basic Electrical Machinery	4	
<b>STUDENTS ARE ELIGIBLE FOR NCCER LEVEL I ELECTRICAL</b>			
SDV 100	College Success Skills	1	
<b>FIRST YEAR SPRING</b>			
MTH 111	Basic Technical Math	3	
ELE 132	National Electrical Code II	3	
ELE 156	Electrical Control Systems	3	ELE 140, ETR 143 (co-req)
AIR 112	Air Conditioning & Refrigeration	3	
ETR 143	Devices and Applications 1	3	
ELE 110	Home Electric Power	3	
<b>SECOND YEAR FALL</b>			
ELE 239	Programmable Controllers	3	ELE 156
ENE 110	Solar Power Installations	4	ELE 140
DRF 200	Survey of Computer aided Drafting	4	
ENG 111	College Composition I	3	
PHY 131	Applied Physics	3	
HLT 105	CPR	1	
<b>SECOND YEAR SPRING</b>			
ETR 218	Industrial Electronics Circuits	4	
ELE 298	Seminar & Project	3	
ITE 102	Computers and Information Systems	1	
	Humanities Elective	3	
	Social Science Elective	3	
<b>TOTAL PROGRAM CREDITS</b>		<b>67</b>	

### Notes and Additional Curriculum Options

Course substitutions may be available. Please see an advisor for more information.

## CONSTRUCTION

### Career Studies Certificate

## ENERGY TECHNOLOGY - ELECTRICAL EMPHASIS (221-820-05)

### PURPOSE

Graduates of the Energy Technology Electrical Emphasis Career Studies program are trained in the job skills necessary for employment as an entry level Electrical technician in both commercial and residential fields. These fields include leading edge technologies such as Solar PV and storage.

### PROGRAM LEARNING OUTCOMES

Upon successful completion, students will be able to:

1. Demonstrate the knowledge of safe working practices and procedures.
2. Demonstrate and understand reading of blue prints and building design, and schematic.
3. Demonstrate and understand troubleshooting techniques.
4. Gain knowledge of the National Electrical Code.
5. Gain an NCCER certification in Electrical.
6. Gain the ability to Communicate and demonstrate good working practices with other workers.
7. Demonstrate common wiring methods of both residential and commercial standards.
8. Demonstrate wiring methods for alternative energy using solar electricity.

### EMPLOYMENT OPPORTUNITIES

Graduates will find employment in various industries and service sectors as entry level electrical technicians.

### PROGRAM REQUIREMENTS

Students may receive college credit for verified on-the-job experience.

ENERGY TECHNOLOGY - ELECTRICAL EMPHASIS PROGRAM OF STUDY			
Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL</b>			
AIR 281	Energy Management I	3	
ELE 131	National Electrical Code I	3	
ELE 140	Basic Electrical Machinery	4	
<i>ELIGIBLE FOR NCCER ELECTRICAL LEVEL 1 CERTIFICATION</i>			
SDV 100	College Success Skills	1	
MTH 111	Basic Technical Math	3	
<b>FIRST YEAR SPRING</b>			
ELE 156	Electrical Control Systems	3	ELE 140, ETR 143 Co-Req
ETR 143	Device and Applications	3	
ENE 110	Solar Power Installations	4	ELE 140
<b>TOTAL PROGRAM CREDITS</b>		<b>24</b>	

### Notes and Additional Curriculum Options

Course substitutions may be available. Please see an advisor for more information.

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## Career Studies Certificate

**ENERGY TECHNOLOGY - HVAC EMPHASIS (221-820-06)****PURPOSE**

Graduates of the Energy Technology HVAC Emphasis Career Studies program are trained in the job skills necessary for employment as an entry level HVAC technician in both commercial and residential fields. These fields include leading edge technologies such as geothermal, and solar thermal systems.

**PROGRAM LEARNING OUTCOMES**

Upon successful completion, students will be able to:

1. Demonstrate the knowledge of safe working practices and procedures.
2. Demonstrate and understand reading of blue prints and building design, and schematic.
3. Demonstrate and understand the installation of HVAC units for both residential and commercial, Loads and calculations.
4. Demonstrate and understand troubleshooting technique.
5. Gain an NCCER certification in Electrical and start the HVAC NCCER.
6. Gain the ability to Communicate and demonstrate good working practices with other workers.

**EMPLOYMENT OPPORTUNITIES**

Graduates will find employment in various industries and service sectors as HVAC technicians

**PROGRAM REQUIREMENTS**

Students may receive college credit for verified on-the-job experience.

**ENERGY TECHNOLOGY - HVAC EMPHASIS PROGRAM OF STUDY**

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL</b>			
SDV 100	College Success Skills	1	
ENE 230	Geothermal Applications	4	
ENE 105	Solar Therm. Active/Passive Tech.	4	
AIR 205	Hydronic and Zoning	4	
AIR 281	Energy Management I	3	
<b>FIRST YEAR SPRING</b>			
MTH 111	Basic Technical Math	3	
ELE 140	Basic Electrical Machinery	4	
AIR 282	Energy Management II	2	
<b>TOTAL PROGRAM CREDITS</b>		<b>25</b>	

**Notes and Additional Curriculum Options**

Course substitutions may be available. Please see an advisor for more information.

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## CONSTRUCTION

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Associate of Applied Science Degree

### **WELDING (718-02)**

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#### **PURPOSE**

Graduates of the Technical Studies Welding program are trained in the job skills necessary to enter employment as apprentice welders immediately upon completion of the curriculum. Course work includes a strong emphasis in welding technology with related courses in computer applications, quality control, teamwork, and communication.

#### **PROGRAM LEARNING OUTCOMES**

Upon successful completion, students will be able to:

1. Follow industry safety practices.
2. Cut metals using (oxyfuel and plasma arc) cutting processes .
3. Weld in (flat, horizontal, vertical and overhead positions) using the basic welding processes of SMAW, GMAW, FCAW and GTAW..
4. Apply basic math and measurement.
5. Read and interpret basic blueprints and welding symbols to fabricate components.
6. Know the basic fundamentals of welding processes and applications, metallurgy.
7. Demonstrates professional and ethical work behavior.

#### **EMPLOYMENT OPPORTUNITIES**

Graduates can expect to find employment as welders in a variety of industries including mining, manufacturing and construction.

#### **PROGRAM REQUIREMENTS**

Students should have English and Mathematics skills assessed. Deficiencies in these areas may be corrected by completing the appropriate developmental studies courses.

#### **ADDITIONAL INFORMATION**

Up to 15 hours credit may be given for documented previous work experience and certifications. Although the program is designed to educate and train welders entering the industry, the program offers increased skill levels and knowledge for experienced welders as well. Welders seeking a degree or desiring promotion to upper level managerial positions should also take advantage of this excellent opportunity.

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## WELDING PROGRAM OF STUDY

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL</b>			
WEL 110	Welding Process	3	
WEL 100	Fundamentals of Welding	3	
WEL 115	Arc and Gas Welding	3	
WEL 123	Arc Welding I	3	
IND 101	Quality Assurance Tech	3	
SDV 100	College Success Skills	1	
<b>FIRST YEAR SPRING</b>			
WEL 198	Seminar and Project	3	
WEL 153	Layout and Fitting for Welders	3	
DRF 160	Machine Blueprint Reading	3	
WEL 130	Inert Gas Welding	3	
WEL 160	Semi-Automatic Welding	3	
	Personal Development Elective	1	
<b>SUMMER</b>			
WEL 129	Pipefitting & Fabrication	3	
WEL 126	Pipe Welding	3	
<b>SECOND YEAR FALL</b>			
ITE 119	Information Literacy	3	
	Humanities Elective	3	
DRF 200	Survey of Computer-Aided Drafting	4	
	Social Science Elective	3	
ENG 111	College Composition I	3	
<b>SECOND YEAR SPRING</b>			
	Math/Science Elective	3	
IND 137	Team Concepts	3	
	Social Science Elective	3	
ENG 115	Technical Writing	3	
<b>ELIGIBLE FOR NCCER WELDING LEVEL 1 CERTIFICATION</b>			
<b>TOTAL PROGRAM CREDITS</b>		<b>66</b>	

### Notes and Additional Curriculum Options

Course substitutions may be available. Please see an advisor for more information.

## CONSTRUCTION

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### Certificate

## WELDING (995)

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### PURPOSE

The Certificate in Welding is designed to prepare students for employment as apprentice welders immediately upon completion of the curriculum. Technical courses and shop experience comprise the majority of the program. The remaining courses are in related subjects and general education.

### PROGRAM LEARNING OUTCOMES

Upon successful completion, students will be able to:

1. Follow industry safety practices.
2. Cut metals using (oxyfuel and plasma arc) cutting processes.
3. Weld in (flat, horizontal, vertical and overhead positions) using the basic welding processes of SMAW, GMAW, FCAW and GTAW.
4. Apply basic math and measurement.
5. Read and interpret basic blueprints and welding symbols to fabricate components.

### EMPLOYMENT OPPORTUNITIES

The Certificate in Welding will prepare students for the occupational goal of welder.

### PROGRAM REQUIREMENTS

Students should have English and Mathematics skills assessed. Deficiencies in these areas may be corrected by completing the appropriate developmental studies courses.

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## WELDING PROGRAM OF STUDY

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL</b>			
MTH 111	Basic Technical Math	3	
SDV 100	College Success Skills	1	
WEL 100	Fundamentals of Welding	3	
WEL 110	Welding Process	3	
WEL 115	Arc and Gas Welding	3	
WEL 123	Arc Welding I	3	
<b>FIRST YEAR SPRING</b>			
ENG 111	College Composition I	3	
WEL 124	Arc Welding II	3	
WEL 130	Inert Gas Welding	3	
WEL 141	Welder Qualification Tests	3	
WEL 198	Seminar and Project	3	
	Social Science Elective	3	
<b>FIRST YEAR SUMMER</b>			
WEL 126	Pipe Welding I	3	
WEL 160	Semi-Automatic Welding	3	
WEL 129	Pipefitting & Fabrication	3	
<b>STUDENTS ARE ELIGIBLE FOR NCCER CONSTRUCTION CORE AND WELDING LEVEL ONE CERTIFICATION</b>			
<b>TOTAL PROGRAM CREDITS</b>		<b>43</b>	

### Notes and Additional Curriculum Options

Course substitutions may be available. Please see an advisor for more information.

## CONSTRUCTION

### Career Studies Certificate

## WELDING OPERATOR I (221-995-01)

### PURPOSE

The Welding Operator I career studies certificate is designed to prepare students for employment as apprentice welders immediately upon completion of the curriculum. Technical courses and shop experience comprise the program.

### PROGRAM LEARNING OUTCOMES

Upon successful completion, students will be able to:

1. Follow industry safety practices.
2. Cut metals using oxyfuel and plasma arc cutting processes.
3. Weld in flat, horizontal, vertical and overhead positions using the basic welding processes of SMAW and GTAW.
4. Read and interpret basic blueprints and welding symbols to fabricate components.

### EMPLOYMENT OPPORTUNITIES

The Career Studies Certificate in Welding Operator I will prepare students for the occupational goal of an entry level welder.

### PROGRAM REQUIREMENTS

Articulation course credits may be earned by the validation of welding skills learned in a vocational school or on-the-job experience.

## WELDING OPERATOR I PROGRAM OF STUDY

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL</b>			
WEL 110	Welding Processes	3	
WEL 115	Arc and Gas Welding	3	
WEL 100	Fundamentals of Welding	3	
WEL 123	Arc Welding I	3	
BLD 110	Introduction to Construction	3	
SDV 100	College Success Skills	1	
<b>ELIGIBLE FOR NCCER CORE AND WELDING LEVEL ONE CERTIFICATION</b>			
<b>TOTAL PROGRAM CREDITS</b>		<b>16</b>	

### Notes and Additional Curriculum Options

Course substitutions may be available. Please see an advisor for more information.

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## Career Studies Certificate

**WELDING OPERATOR II (221-995-02)****PURPOSE**

The Welding Operator II career studies certificate is designed to prepare students for employment as apprentice welders immediately upon completion of the curriculum. Technical courses and shop experience comprise the program.

**PROGRAM LEARNING OUTCOMES**

Upon successful completion, students will be able to:

1. Follow industry safety practices.
2. Cut metals using oxyfuel and plasma arc cutting processes.
3. Weld in flat, horizontal, vertical and overhead positions using the basic welding processes of GMAW and FCAW.
4. Read and interpret basic blueprints and welding symbols to fabricate components.

**EMPLOYMENT OPPORTUNITIES**

The Career Studies Certificate in Welding Operator II will prepare students for the occupational goal of an entry level welder.

**PROGRAM REQUIREMENTS**

Articulation course credits may be earned by the validation of welding skills learned in a vocational school or on-the-job experience.

### WELDING OPERATOR II PROGRAM OF STUDY

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL</b>			
HLT 105	CPR	1	
DRF 160	Machine Blueprint Reading	3	
WEL 160	Semi Automatic Process	3	
WEL 153	Layout and Fitting for Welders	3	
WEL 130	Inert Gas Welding	3	
WEL 198	Seminar and Project	3	
<b>ELIGIBLE FOR NCCER WELDING LEVEL TWO CERTIFICATION WITH COMPLETION OF LEVEL ONE</b>			
<b>TOTAL PROGRAM CREDITS</b>		<b>16</b>	

**Notes and Additional Curriculum Options**

Course substitutions may be available. Please see an advisor for more information.

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## EDUCATION

### Career Studies Certificate

## EARLY CHILDHOOD DEVELOPMENT (221-636-04)

### PURPOSE

This program is designed as an introduction to the field. The curriculum is designed to provide entry-level competencies documented by Virginia's Competencies for Early Childhood Professionals. These competencies include health, safety and nutrition, understanding child growth and development, appropriate child observation and assessment, partnering with families and community, learning environment, effective interactions, program management, teacher qualifications and professional development curriculum. Additionally, this program provides the necessary CPR training for young children desired by many employment agencies.

### PROGRAM LEARNING OUTCOMES

Upon successful completion, students will be able to:

1. Recognize the stages of early childhood development.
2. Utilize the arts and other creative developmentally appropriate activities for young children.
3. Use developmentally appropriate practices to plan activities to stimulate the logical thinking skills in children
4. Create positive ways to build self-esteem in children and to help them develop self-control.

### EMPLOYMENT OPPORTUNITIES

Upon completion of the Early Childhood Career Studies Certificate graduates possess the knowledge and skills required for entry into Early Childhood Educational facilities such as, Head Start and Early Head Start programs, family day care homes, and preschool programs. Graduates will also be equipped to apply for a minimum of two Early Childhood Endorsements from the Virginia Department of Social Services (VDSS).

### PROGRAM REQUIREMENTS

The Code of Virginia restricts who may legally provide child care in Virginia. Most agencies require a criminal background check through the Virginia State Police Department and a child abuse or neglect check through the Virginia Department of Social Services before employment involving contact with young children. In addition, some child care facilities and schools may require proof of specific vaccinations and health related tests for students to complete their supervised workplace experiences.

## EARLY CHILDHOOD DEVELOPMENT PROGRAM OF STUDY

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST SEMESTER</b>			
CHD 120	Intro. to Early Childhood Education	3	
CHD 145	Teaching Art, Music and Movement to Children	3	
CHD 205	Guiding the Behavior of Children	3	
HLT 135 or EDU 235	Child Health and Nutrition or Health, Safety, and Nutrition Education	3	
CHD 165	Observation and Participation in Early Childhood Settings	3	
HLT Elec.	HLT 105 Cardiopulmonary Resuscitation	1	
<b>TOTAL PROGRAM CREDITS</b>		<b>16</b>	

### Notes and Additional Curriculum Options

Course substitutions may be available. Please see an advisor for more information.

### FOR FURTHER INFORMATION, CONTACT:

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**Career Studies Certificate****EARLY CHILDHOOD DEVELOPMENT - INFANT & TODDLER OPTION (221-636-05)****PURPOSE**

This program is designed as an introduction to the field, specializing in infant and toddler care. The curriculum is designed to provide entry-level competencies documented by Virginia's Competencies for Early Childhood Professionals. These competencies include health, safety and nutrition, understanding child growth and development, appropriate child observation and assessment, partnering with families and community, learning environment, effective interactions, program management, teacher qualifications and professional development curriculum. Additionally, this program provides the necessary CPR training for young children desired by many employment agencies.

**PROGRAM LEARNING OUTCOMES**

Upon successful completion, students will be able to:

1. Recognize the stages of early childhood development.
2. Understand regulatory standards for infant/ toddler caregiving.
3. Use developmentally appropriate curriculum and learning environment for very young children.
4. Create positive ways to build self-esteem in children and to help them develop self-control.

**EMPLOYMENT OPPORTUNITIES**

Upon completion of the Early Childhood Career Studies Certificate graduates possess the knowledge and skills required for entry into Early Childhood Educational facilities such as, Head Start and Early Head Start programs, family day care homes, and preschool programs. Graduates will also be equipped to apply for a minimum of two Early Childhood Endorsements from the Virginia Department of Social Services (VDSS).

**PROGRAM REQUIREMENTS**

The Code of Virginia restricts who may legally provide child care in Virginia. Most agencies require a criminal background check through the Virginia State Police Department and a child abuse or neglect check through the Virginia Department of Social Services before employment involving contact with young children. In addition, some child care facilities and schools may require proof of specific vaccinations and health related tests for students to complete their supervised workplace experiences.

<b>EARLY CHILDHOOD DEVELOPMENT - INFANT &amp; TODDLER OPTION PROGRAM OF STUDY</b>			
<b>Course #</b>	<b>Course Title</b>	<b>Credit</b>	<b>Pre-Requisite Courses (if applicable)</b>
<b>FIRST SEMESTER</b>			
CHD 120	Intro. to Early Childhood Education	3	
CHD 164	Working with Infants & Toddlers in an Inclusive Setting	3	
CHD 165	Observation and Participation in Early Childhood Settings	3	
CHD 166	Infant and Toddler Programs	3	
HLT 135 or EDU 235	Child Health and Nutrition or Health, Safety, and Nutrition Education	3	
HLT Elec.	HLT 105 Cardiopulmonary Resuscitation	1	
<b>TOTAL PROGRAM CREDITS</b>		<b>16</b>	

**Notes and Additional Curriculum Options**

Course substitutions may be available. Please see an advisor for more information.

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## ENGINEERING

### Career Studies Certificate

## 3-D DESIGN (221-727-09)

### PURPOSE

Classes offered in the 3D Design Technology program will introduce you to design techniques that will prepare you to work in engineering technology fields. All of the courses taken are in the computer-aided drafting and design curriculum. Students will take courses in related areas only. MECC utilizes CADD operations extensively. 3D software programs are available and used extensively. These programs are the most widely used in industry in our service area. 3D Design classes are available to day and evening students.

### PROGRAM LEARNING OUTCOMES

Upon successful completion, students will be able to:

1. Practice industry recognized safety practices and guidelines, including the use of personal protective equipment in an industrial operating environment.
2. Demonstrate knowledge of drafting conventions including symbols, linetypes, lineweights, and dimension styles as applicable to the design discipline.
3. Demonstrate the ability to develop and /or interpret 2D and 3D projects to solve common engineering problems.
4. Illustrate the engineering design process from the transformation of an idea or need into a completed project.

### 3-D DESIGN PROGRAM OF STUDY

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL</b>			
DRF 160	Blueprint Reading	3	
DRF 200	Survey of Computer-Aided Drafting	4	
DRF 298	Seminar and Project*	4	
<b>FIRST YEAR SPRING</b>			
DRF 233	Computer-Aided Drafting III	3	
MEC 122	3D Printing for Engineering Design	3	
<b>TOTAL PROGRAM CREDITS</b>		<b>17</b>	

### Notes and Additional Curriculum Options

\*Please consult with your advisor on the availability of courses and possible prerequisites and course substitutions.

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Associate of Applied Science Degree

## COMPUTER-AIDED DRAFTING AND DESIGN TECHNOLOGY (729)

### PURPOSE

Classes offered in the Computer-Aided Drafting & Design Technology major program will introduce you to architectural and mechanical design that will prepare you to work as a drafts person. Approximately one-half of the courses taken are in drafting and design technology. Students will also take courses in related areas and general education. MECC utilizes CADD operations extensively. Micro-Station PC, AutoCADD, and 3D software programs are available. These programs are the most widely used in industry in our service area. Computer-Aided Drafting & Design Technology major classes are available to evening students.

### PROGRAM LEARNING OUTCOMES

Upon successful completion, students will be able to:

1. Demonstrate knowledge of drafting conventions including symbols, linetypes, lineweights, and dimension styles as applicable to the design discipline.
2. Perform and support estimating functions including quantity, types, costs, labor requirements, equipment, and scheduling functions.
3. Demonstrate the ability to develop and/or interpret 2D and 3D projects to solve common engineering problems.
4. Illustrate the engineering design process from the transformation of an idea or need into a completed project.
5. Develop quantitative reasoning skills useful in working in industry.
6. Collaborate with team members to identify and evaluate solutions to engineering problems.

### EMPLOYMENT OPPORTUNITIES

Successful completion of the Associate of Applied Science degree in the Computer-Aided Drafting & Design Technology major will prepare you for employment in areas in drafting and design including: mechanical, architectural, structural steel, and civil engineering.

### PROGRAM REQUIREMENTS

Students should have English and Mathematics skills assessed. Deficiencies in these areas may be corrected by completing the appropriate developmental studies courses.

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**COMPUTER-AIDED DRAFTING AND DESIGN TECHNOLOGY PROGRAM OF STUDY**

<b>Course #</b>	<b>Course Title</b>	<b>Credit</b>	<b>Pre-Requisite Courses (if applicable)</b>
<b>FIRST YEAR FALL</b>			
GIS 200	Geographical Info. Systems I	3	
DRF 160	Machine Blueprint Reading	3	
DRF 200	Survey of Computer-Aided Drafting (CAD)	4	
MTH 111	Basic Technical Math	3	
UMS 107	sUAS Remote Pilot School	3	
SDV 100	College Success Skills	1	
<b>FIRST YEAR SPRING</b>			
DRF 233	Computer-Aided Drafting III	3	
GIS 201	Geographical Info. Systems II	3	
DRF 201	Computer-Aided Drafting and Design I	3	DRF 200
PE/HLT	Personal Development Elective	1	
	Technical Elective	3	
MEC 122	3D Printing for Engineering Design	3	
<b>SECOND YEAR FALL</b>			
ENG 111	College Composition	3	
CIV 171	Surveying I	3	MTH 103 or Ready for 111
DRF 231	Computer-Aided Drafting I	2	
GIS 205	GIS 3-D Dimension Analysis	3	
PHY 131	Applied Physics	3	
	Social Science Elective	3	See approved Social Science list
<b>SECOND YEAR SPRING</b>			
BLD 110	Intro to Construction	3	
	Humanities Elective	3	
GIS 210	Understanding Geographic Data	3	
CIV 172	Surveying II	3	
DRF 232	Computer-Aided Drafting and Design II	2	DRF 231
DRF 298 or DRF 290	Seminar and Project in Drafting or Coordinated Internship	4	
<b>TOTAL PROGRAM CREDITS</b>		<b>68</b>	

**Notes and Additional Curriculum Options**

Course substitutions may be available. Please see an advisor for more information.

## Career Studies Certificate

**GEOGRAPHIC INFORMATION SYSTEMS (221-719-71)****PURPOSE**

Classes offered in the Geographic Information Systems (GIS) program will provide a hands-on approach to education that will prepare you to work with GIS in the field. The program will prepare you to address advanced topics in problem solving, decision-making, modeling, programming, and data management, using 2D and 3D data.

**PROGRAM LEARNING OUTCOMES**

Upon successful completion, students will be able to:

1. Comprehend fundamental concepts and practices of Geographic Information Systems (GIS).
2. Demonstrate organizational skills in file and database management.
3. Give examples of interdisciplinary applications of Geospatial Information Science and Technology.
4. Apply GIS analysis to address geospatial problems and/or research questions.
5. Manipulate data for the purpose of analysis, presentation, and decision-making.
6. Recognize, gather, and process data for GIS.
7. Display, create and analyze 2D and 3D spatial GIS data.

**EMPLOYMENT OPPORTUNITIES**

Successful completion of the career studies certificate in Geographic Information Systems (GIS) will prepare you for employment in areas of GIS including: GIS Technician, Civil and Municipal Planning, Cartographic Design, GIS Analysis, Computer modeling.

**GEOGRAPHIC INFORMATION SYSTEMS PROGRAM OF STUDY**

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL</b>			
GIS 200	Geographical Info. Systems I	4	ITE 115/119 or equiv.
GIS 201	Geographical Info. Systems II	4	ITE 115/119 or equiv.
GIS 205	GIS 3-D Dimensional Analysis	4	ITE 115/119 or equiv.
GIS 210	Understanding Geographical Data	4	ITE 115/119 or equiv.
<b>TOTAL PROGRAM CREDITS</b>		<b>16</b>	

**Notes and Additional Curriculum Options**

Course substitutions may be available. Please see an advisor for more information.

**FOR FURTHER INFORMATION, CONTACT:**

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276.523.7431

## ENVIRONMENTAL

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Associate of Applied Science Degree

## ENVIRONMENTAL SCIENCE (828)

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### PURPOSE

The Environmental Science student will take course work from a wide array of natural resource offerings. This will prepare the student to work in all areas of environmental science related jobs.

### PROGRAM LEARNING OUTCOMES

Upon successful completion, students will be able to:

1. Understand the natural environment and its relationships with human activities.
2. Characterize and analyze human impacts on the environment.
3. Integrate facts, concepts, and methods from multiple disciplines and apply to environmental problems.
4. Acquire practical skills for scientific problem-solving, including familiarity with laboratory and field instrumentation, computer applications, statistical and modeling techniques.
5. Understand and implement scientific research strategies, including collection, management, evaluation, and interpretation of environmental data.
6. Design and evaluate strategies, technologies, and methods for sustainable management of environmental systems and for the remediation or restoration of degraded environments.

### EMPLOYMENT OPPORTUNITIES

The Associate of Applied Science degree program in Environmental Science is designed to prepare students for employment as an Environmental Technician.

### PROGRAM REQUIREMENTS

Students should have English and Mathematics skills assessed. Deficiencies in these areas may be corrected by completing the appropriate developmental studies courses.

#### FOR FURTHER INFORMATION, CONTACT:

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276.523.7431

## ENVIRONMENTAL SCIENCE PROGRAM OF STUDY

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL</b>			
ENG 111	College Composition I	3	
ENV 220	Environmental Problems	3	
FOR 100	Introduction to Forestry	3	
MTH 111	Basic Technical Math	3	
SCT 111	Intro to Environmental & Science Technology I	4	
SDV 100	College Success Skills	1	
<b>FIRST YEAR SPRING</b>			
GIS 200	Geographical Info Systems	3	ITE 119, 115 or Equiv.
	Humanities Elective	3	
HRT 137	Environmental Factors in Plant Growth	3	
NAS 106	Conservation of Natural Resources	3	
SCT 112	Intro to Environmental & Science Technology II	4	
<b>SECOND YEAR FALL</b>			
AGR 205	Soil Fertility Management	3	
ENV 227	Environmental Law	3	
ENV 230 or GIS 230	GIS: Apps in Environmental Science	3	
ENV 235	Soil Conservation & Spoils	3	
HLT/PED 111	Health/Physical Education	1	
	Technical Elective	3	
<b>SECOND YEAR SPRING</b>			
AGR 208	Insect Control	3	
CIV 246	Water Resource Tech	3	
ENV 290	Coordinated Internship in Environmental Science	4	
ENV 211	Sanitary Biology & Chemistry	3	
	Social Science Elective	3	
<b>TOTAL PROGRAM CREDITS</b>		<b>65</b>	

### Notes and Additional Curriculum Options

Course substitutions may be available. Please see an advisor for more information.

## ENVIRONMENTAL

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Associate of Applied Science Degree

## ENVIRONMENTAL SCIENCE - WATER/WASTEWATER SPECIALIZATION (828-02)

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### PURPOSE

The Water/Wastewater Major student will take course work from a wide array of natural resource offerings. These courses stress the practical application of scientific principles to the treatment of water for human consumption and for protection of water resources.

### PROGRAM LEARNING OUTCOMES

Upon successful completion, students will be able to:

1. Possess the knowledge and skills necessary to succeed in an entry-level position in a water/wastewater treatment facility.
2. Become knowledgeable about processes and equipment used in water treatment, water distribution, wastewater collection and wastewater treatment.
3. Demonstrate knowledge of the procedures related to water and wastewater treatment processes.
4. Demonstrate basic knowledge of microbiology and chemistry applicable to water and wastewater treatment.
5. Demonstrate knowledge of the principles of hydraulic systems as related to water and wastewater systems.
6. Analyze and solve operational problems and perform mathematical calculations related to water and wastewater treatment processes.
7. Describe major concepts, theories, and classic research studies in environmental science.
8. Operate a treatment plant in a respectable and ethical manner as dictated by state and federal regulations.

### EMPLOYMENT OPPORTUNITIES

The Associate of Applied Science degree program in Environmental Science is designed to prepare students for employment in municipal and industrial treatment facilities and laboratories. State agencies and private companies also employ MECC Environmental Science graduates. As environmental concerns continue to make news headlines, the job market continues to expand.

### PROGRAM REQUIREMENTS

Students should have English and Mathematics skills assessed. Deficiencies in these areas may be corrected by completing the appropriate developmental studies courses.

### ADDITIONAL INFORMATION

Distance Education Option: The entire Water/Wastewater Program can be completed through distance education courses. All technical courses are available through [water.mecc.edu](http://water.mecc.edu). All support courses are available through web-based instruction. Opportunities for Advancement: Coursework in the Water/Wastewater major prepares students for the state certification exam required for a water or wastewater operator's license. This license is essential for career advancement. Students will also be able to keep abreast of technological advances in the field of environmental science, thus furthering career opportunities in this and related fields.

### FOR FURTHER INFORMATION, CONTACT:

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## ENVIRONMENTAL SCIENCE - WATER/WASTEWATER SPECIALIZATION PROGRAM OF STUDY

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL</b>			
ENG 111	College Composition I	3	
ENV 110	Intro to Water-Wastewater Technology	3	
ENV 220	Environmental Problems	3	
MTH 111	Basic Technical Math	3	
SCT 111	Intro to Environmental & Science Technology I	4	
SDV 100	College Success Skills	1	
<b>FIRST YEAR SPRING</b>			
ENV 115	Water Purification	3	
	Humanities Elective	3	
NAS 106	Conservation of Natural Resources	3	
SCT 112	Intro to Environmental & Science Tech. II	4	
	Technical Elective	3	
<b>SECOND YEAR FALL</b>			
ENV 108	Environmental Microbiology	3	
ENV 149	Wastewater Treatment Plant Operation	3	
ENV 227	Environmental Law	3	
CIV 246	Water Resource Technology Experience	3	
	Social Science Elective	3	
	Health or PE Elective	1	
<b>SECOND YEAR SPRING</b>			
CIV 240	Fluid Mechanics/Hydraulics	3	
	Elective	3	
ENV 211	Sanitary Biology and Chemistry	3	
ENV 290	Coordinated Internship in Environmental Science	4	
	Social Science Elective	3	
<b>TOTAL PROGRAM CREDITS</b>		<b>65</b>	

### Notes and Additional Curriculum Options

Course substitutions may be available. Please see an advisor for more information.



## ENVIRONMENTAL

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Associate of Applied Science Degree

### **FOREST SCIENCE (839)**

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#### **PURPOSE**

Forest Science students will take course work from a wide array of natural resource offerings. This will prepare the student to work in all phases of forest science from monitoring, managing, and protecting forest areas, harvesting timber, and producing primary and secondary wood products.

#### **PROGRAM LEARNING OUTCOMES**

**Upon successful completion, students will be able to:**

1. Apply knowledge of mathematics, and natural and management sciences to challenges related to timber management and forest operations in an efficient, safe, and environmentally and socially acceptable manner.
2. Recognize environmental conditions, such as those involving soil, water, and aesthetics, that impact forest operations and to design procedures that minimize adverse environmental impacts.
3. Design and conduct timber management tasks including silvicultural prescriptions, harvest scheduling, and timber appraisal, procurement and marketing.
4. Communicate effectively in a professional setting and to function productively in multi-disciplinary teams.
5. Demonstrate an understanding of how forest operations impact society in local, regional, and global contexts.
6. Apply business skills and modern forestry tools necessary for professional practice.

#### **EMPLOYMENT OPPORTUNITIES**

The Associate of Applied Science degree program in Forest Science is designed to prepare students for employment as a forestry technician, lumber grader and other technical/supervisory positions within the forestry and timber industries.

#### **PROGRAM REQUIREMENTS**

Students should have English and Mathematics skills assessed. Deficiencies in these areas may be corrected by completing the appropriate developmental studies courses.

#### **FOR FURTHER INFORMATION, CONTACT:**

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## FOREST SCIENCE PROGRAM OF STUDY

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL</b>			
ENG 111	College Composition I	3	
FOR 100	Introduction to Forestry	3	
FOR 115	Dendrology	4	
IND 137	Team Concepts and Problem Solving	3	
SDV 100	College Success Skills	1	
<b>FIRST YEAR SPRING</b>			
GIS 200	Geographical Info Systems	3	ITE 119, 115 or Equiv.
	Humanities Elective	3	See approved Humanities list
MTH 111	Basic Technical Math	3	
NAS 106	Conservation of Natural Resources	3	
	Technical Elective	3	
<b>SUMMER</b>			
FOR 215	Applied Silviculture	4	FOR 100 or 115
FOR 237	Wildlife Ecology	3	
<b>SECOND YEAR FALL</b>			
AGR 205	Soil Fertility & Management	3	
ENV 227	Environmental Law	3	
CIV 171	Surveying I	3	
GIS 230	GIS: Apps in Environmental Sciences	3	
<b>SECOND YEAR SPRING</b>			
AGR 208	Insect Control	3	
CIV 172 or FOR 201	Surveying II or Forest Mensuration	3 4	
FOR 245	Forest Products I	2	
FOR 290	Coordinated Internship in Forestry	4	
	HLT or PED	1	
	Social Science Elective	3	See approved Social Science list
<b>TOTAL PROGRAM CREDITS</b>		<b>64/65</b>	

### Notes and Additional Curriculum Options

Course substitutions may be available. Please see an advisor for more information.

## ENVIRONMENTAL

### Career Studies Certificate

## GEOGRAPHIC INFORMATION SYSTEMS (221-719-71)

### PURPOSE

Classes offered in the Geographic Information Systems (GIS) program will provide a hands-on approach to education that will prepare you to work with GIS in the field. The program will prepare you to address advanced topics in problem solving, decision-making, modeling, programming, and data management, using 2D and 3D data.

### PROGRAM LEARNING OUTCOMES

Upon successful completion, students will be able to:

1. Comprehend fundamental concepts and practices of Geographic Information Systems (GIS).
2. Demonstrate organizational skills in file and database management.
3. Give examples of interdisciplinary applications of Geospatial Information Science and Technology.
4. Apply GIS analysis to address geospatial problems and/or research questions.
5. Manipulate data for the purpose of analysis, presentation, and decision-making.
6. Recognize, gather, and process data for GIS.
7. Display, create and analyze 2D and 3D spatial GIS data.

### EMPLOYMENT OPPORTUNITIES

Successful completion of the career studies certificate in Geographic Information Systems (GIS) will prepare you for employment in areas of GIS including: GIS Technician, Civil and Municipal Planning, Cartographic Design, GIS Analysis, Computer modeling.

## GEOGRAPHIC INFORMATION SYSTEMS PROGRAM OF STUDY

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL</b>			
GIS 200	Geographical Info. Systems I	4	ITE 115/119 or equiv.
GIS 201	Geographical Info. Systems II	4	ITE 115/119 or equiv.
GIS 205	GIS 3-D Dimensional Analysis	4	ITE 115/119 or equiv.
GIS 210	Understanding Geographical Data	4	ITE 115/119 or equiv.
<b>TOTAL PROGRAM CREDITS</b>		<b>16</b>	

### Notes and Additional Curriculum Options

Course substitutions may be available. Please see an advisor for more information.

### FOR FURTHER INFORMATION, CONTACT:

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## Career Studies Certificate

**WASTEWATER PLANT OPERATOR (221-828-68)****PURPOSE**

These courses stress the practical application of scientific principles to the treatment of wastewater for safe release back into the environment.

**PROGRAM LEARNING OUTCOMES**

Upon successful completion, students will be able to:

1. Possess the knowledge and skills necessary to succeed in an entry-level position in a water/wastewater treatment facility.
2. Become knowledgeable about processes and equipment used in water treatment, water distribution, wastewater collection and wastewater treatment.
3. Demonstrate knowledge of the procedures related to water and wastewater treatment processes.
4. Demonstrate basic knowledge of microbiology and chemistry applicable to water and wastewater treatment.
5. Demonstrate knowledge of the principles of hydraulic systems as related to water and wastewater systems.
6. Analyze and solve operational problems and perform mathematical calculations related to water and wastewater treatment processes.
7. Operate a treatment plant in a respectable and ethical manner as dictated by state and federal regulations.

**EMPLOYMENT OPPORTUNITIES**

This program is designed to provide entry level wastewater plant operator skills.

**ADDITIONAL INFORMATION**

To view additional details regarding the Water/Wastewater program, visit [water.mecc.edu](http://water.mecc.edu).

**WASTEWATER PLANT OPERATOR PROGRAM OF STUDY**

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL</b>			
ENV 108	Environmental Microbiology	3	
ENV 110	Introduction to Water/Wastewater Technology	3	
ENV 149	Wastewater Treatment Plant Operator	3	
CIV 246	Water Resources Technology	3	
<b>FIRST YEAR SPRING</b>			
ENV 211	Sanitary Biology & Chemistry	3	
CIV 240	Fluid Mechanical Hydraulics	3	
ENV 227	Environmental Law	3	
ENV 290	Coordinated Internship in Wastewater Plant Operator	4	
<b>TOTAL PROGRAM CREDITS</b>		<b>25</b>	

**Notes and Additional Curriculum Options**

Course substitutions may be available. Please see an advisor for more information.

**FOR FURTHER INFORMATION, CONTACT:**

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## ENVIRONMENTAL

### Career Studies Certificate

## WATER PLANT OPERATOR (221-828-67)

### PURPOSE

These courses stress the practical application of scientific principles to the treatment of water for human consumption and for protection of water resources.

### PROGRAM LEARNING OUTCOMES

Upon successful completion, students will be able to:

1. Possess the knowledge and skills necessary to succeed in an entry-level position in a water/wastewater treatment facility.
2. Become knowledgeable about processes and equipment used in water treatment, water distribution, wastewater collection and wastewater treatment.
3. Demonstrate knowledge of the procedures related to water and wastewater treatment processes.
4. Demonstrate basic knowledge of microbiology and chemistry applicable to water and wastewater treatment.
5. Demonstrate knowledge of the principles of hydraulic systems as related to water and wastewater systems.
6. Analyze and solve operational problems and perform mathematical calculations related to water and wastewater treatment processes.
7. Operate a treatment plant in a respectable and ethical manner as dictated by state and federal regulations.

### EMPLOYMENT OPPORTUNITIES

This program is designed to provide entry level water plant operator skills.

### ADDITIONAL INFORMATION

To view additional details regarding the Water/Wastewater program, visit [water.mecc.edu](http://water.mecc.edu).

## WATER PLANT OPERATOR PROGRAM OF STUDY

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL</b>			
ENV 108	Environmental Microbiology	3	
ENV 110	Introduction to Water/Wastewater Technology	3	
ENV 115	Water Purification	3	
CIV 246	Water Resources Technology	3	
<b>FIRST YEAR SPRING</b>			
ENV 211	Sanitary Biology & Chemistry	3	
CIV 240	Fluid Mechanical Hydraulics	3	
ENV 227	Environmental Law	3	
ENV 290	Coordinated Internship in Wastewater Plant Operator	4	
<b>TOTAL PROGRAM CREDITS</b>		<b>25</b>	

### Notes and Additional Curriculum Options

Course substitutions may be available. Please see an advisor for more information.

### FOR FURTHER INFORMATION, CONTACT:

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**Career Studies Certificate****COMPUTED TOMOGRAPHY (SWCC)****PURPOSE**

The Career Studies Certificate in Computed Tomography Imaging is designed to prepare selected students to qualify as contributing members of the allied health interdisciplinary team. Upon completion of the curriculum (and successful completion and documentation of all required clinical competencies as set for by the American Registry of Radiologic Technologists), the student is eligible to apply to take the National Registry examination leading to advanced certification as a Registered Radiographer in CT by the ARRT.

**PROGRAM LEARNING OUTCOMES**

Upon successful completion, students will be able to:

1. Demonstrate competence in the essential aspects of computed tomography at the entry-level.
2. Understand the importance of life-long continuing education in the field of computed tomography.

**EMPLOYMENT OPPORTUNITIES**

Employment opportunities for well-trained registered CT radiographers are available in hospitals, clinics, education, industry, government agencies, and private offices.

**PROGRAM REQUIREMENTS**

Students should have English and Mathematics skills assessed. Deficiencies in these areas may be corrected by completing the appropriate developmental studies courses.

**ADMISSION REQUIREMENTS**

The student in Computed Tomography must have completed an approved program in radiography, radiation therapy, or nuclear medicine technology (either AART or NMTCB). The student must be registered by the appropriate certification agency. All students must have a current CPR certification and must maintain that certification throughout the program. Applicants must have maintained a "C" average in past program courses in the discipline or certification. Applicants must provide the following to be considered for admission.

1. Application to SWCC or VHCC
2. Official transcripts of all other colleges attended submitted to the appropriate admissions office at either SWCC or VHCC
3. Completed CT program application submitted to Christy Lee at clee@mecc.edu
4. Copy of current ARRT or NMTCB certification card submitted to Christy Lee at clee@mecc.edu

The student in Computed Tomography must abide by all community college policies as well as hospital policies while enrolled in the program.

**ADDITIONAL INFORMATION****Program Requirements**

Upon admission and during the course of study, the college and hospital faculty will carefully observe and evaluate the student's progress. If, in the opinion of the faculty, a student does not exhibit professional behavior, the student will be asked to withdraw from the program.

Students will not be eligible to receive the certificate until a grade of "C" or better is obtained in each of the required courses. Before entering the clinical areas, the student must receive complete clinical clearance. Please see Ms. Lee for details. Students who can provide documentation of continuous employment in CT for a minimum of 1 year prior to the application deadline have the option of NOT completing the RAD 196 clinical class requirements.

**FOR FURTHER INFORMATION, CONTACT:**

Sarah Clarkston  
sclarkston@mecc.edu  
276.523.9010

Christy Lee, Program Coordinator  
clee@mecc.edu  
276.523.9016

Kim Dorton, Dean, Health Sciences  
kdorton@mecc.edu  
276.523.9014

## HEALTH SCIENCES (CLINICAL)

### **Criminal Background Check/Drug Screening/Vaccinations and Testing**

Background checks for criminal history and sex offender crimes against minors are required for entrance into some clinical agencies. Students with convictions may be prohibited from clinical practice and may not complete the program. Clinical agencies may require drug testing prior to placement of students for clinical rotations. Students with positive drug test results may be prohibited from clinical practice and may not complete the program. Students must provide documentation of a recent PPD TB skin test and up-to-date vaccinations for MMR, Varicella, Hepatitis B, and seasonal influenza. Other requirements may be specified by various clinical affiliates. Cost for criminal background checks, vaccinations, PPD testing, and drug testing will be the responsibility of the student.

## COMPUTED TOMOGRAPHY PROGRAM OF STUDY

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL</b>			
RAD 247	Cross Sectional Anatomy for CT/MR	3	
RAD 242	CT Procedures and Instrumentation	2	
RAD 195	Topics in Pharmacology for Technologists	1	
RAD 196	Clinical Internship in CT	1	
<b>FIRST YEAR SPRING</b>			
RAD 295	Topics in CT Registry Preparation	3	
RAD 196	Clinical Internship in CT	2	
HLT 143	Medical Terminology I	3	
HLT 145	Ethics for Healthcare Personnel	2	
<b>ELIGIBLE FOR THE NATIONAL REGISTRY EXAMINATION LEADING TO ADVANCED CERTIFICATION AS A REGISTERED TECHNOLOGIST IN COMPUTED TOMOGRAPHY BY THE ARRT</b>			
<b>TOTAL PROGRAM CREDITS</b>		<b>17</b>	

### **Notes and Additional Curriculum Options**

Applicants must be ARRT or CNMT registered.

**Career Studies Certificate****DENTAL ASSISTANT (221-120-02)****PURPOSE**

Provide students with the theory, skills, laboratory and clinical experience to perform as entry-level dental assistants. Prepare students for employment in dental offices, hospitals, corporations, specialty dental clinics and the public health setting. Prepare students for the Dental Assistant National Board NELDA certification exam.

**PROGRAM LEARNING OUTCOMES**

**Upon successful completion, students will be able to:**

1. Demonstrate workplace readiness skills.
2. Obtain first aid and CPR certification
3. Collect and record vital signs
4. Assist with oral examinations
5. Prepare tray set-ups for oral procedures
6. Prepare patients and operatories for dental procedures
7. Take radiographic images and chart findings
8. Help dentists by transferring instruments during procedures, such as fillings, crown preparations, and tooth extractions
9. Provide better visibility for dentists by using suction, retractors, and other equipment
10. Take impressions and prepare models
11. Assist in maintaining accurate patient treatment records
12. Schedule patient appointments and follow-up care
13. Assist with patient billing, insurance, and other office tasks
14. Protect patients and employees by adhering to infection control policies and protocols
15. Maintain equipment, dental supply, and office supply inventories
16. Assist with patient emergencies
17. Assist dental professionals with patient education activities
18. Assist in procedures by selecting, mixing, or providing needed materials

**EMPLOYMENT OPPORTUNITIES**

Job opportunities may include working with other dental health professionals in private dental offices, hospitals, corporations, specialty dental clinics, volunteer dental events, and public health settings.

**PROGRAM REQUIREMENTS**

Students should have English and Mathematics skills assessed. Deficiencies in these areas may be corrected by completing the appropriate developmental studies courses.

**ADMISSION REQUIREMENTS**

Dental Assistant is a competitive admissions program. The deadline to submit a program application to the spring cohort is October 15th, the deadline to apply for admission to the summer cohort is April 15th. Please visit [www.mecc.edu](http://www.mecc.edu) to apply for program admission. Travel to clinical assignments and to the Center for Workforce and Innovation in Appalachia is required. The following immunizations, checks and screenings are required.

- Proof & record of three Hepatitis B vaccinations OR proof of immunity by titer.
- Proof & record of two MMR vaccines OR proof of immunity by titer.
- Proof & record of negative TB test (two-step).
- Proof & record of seasonal flu shot.
- Proof & record of two varicella vaccinations OR proof of immunity by titer.
- Proof & record of DTP (diphtheria, tetanus, pertussis) vaccinations OR proof of immunity by titer.
- Passing of criminal and sexual background checks and drug screen.
- Proof and record of two Hepatitis A vaccinations OR proof of immunity by titer OR proof of the first in the series being received within the past six months
- Proof and record of current health insurance coverage

**FOR FURTHER INFORMATION, CONTACT:**

Sarah Clarkston, Health Sciences Advisor  
[sclarkston@mecc.edu](mailto:sclarkston@mecc.edu)  
 276.523.9010

Dr. Emily Bowen, DDS, Program Director  
[ebowen@mecc.edu](mailto:ebowen@mecc.edu)  
 276.523.9008

Kim Dorton, Dean of Health Sciences  
[kdorton@mecc.edu](mailto:kdorton@mecc.edu)  
 276.523.9014



## DENTAL ASSISTANT PROGRAM OF STUDY

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST SEMESTER</b>			
SDV 100	College Success Skills	1	
DNA 103	Introduction to Oral Health	1	
DNA 109	Practical Infection Control	3	
DNA 113	Chairside Assisting I	3	
DNA 108	Dental Science I	3	
HLT 100	First Aid & CPR	3	
<b>STUDENTS EARN AHA BLS FOR HEALTHCARE PROVIDER CPR CERTIFICATION, AHA HEARTSAVER OSHA BLOODBORNE PATHOGEN CERTIFICATION, AND AHA HEARTSAVER FIRST AID CERTIFICATION</b>			
<b>SECOND SEMESTER</b>			
DNA 114	Chairside Assisting II	4	DNA 103, 108, 109, 113
DNA 110	Dental Materials	3	DNA 103, 108, 109, 113
SDV 107	Career Exploration	3	
<b>STUDENTS ELIGIBLE TO TAKE THE WORK ETHIC PROFICIENCY CERTIFICATION EXAM</b>			
DNA 135	Dental Radiation Safety	2	DNA 103, 108, 109, 113
<b>STUDENTS ELIGIBLE FOR DENTAL ASSISTING NATIONAL BOARD RADIATION AND HEALTH SAFETY (RHS) CERTIFICATION EXAM</b>			
DNA 130	Dental Office Management	2	DNA 103, 108, 109, 113
<b>STUDENTS ELIGIBLE FOR DENTAL ASSISTING NATIONAL BOARD NELDA EXAM (NATIONAL ENTRY LEVEL DENTAL ASSISTANT</b>			
<b>TOTAL PROGRAM CREDITS</b>		<b>28</b>	

### Notes and Additional Curriculum Options

Please see an advisor for more information.

**Associate of Applied Science Degree****EMERGENCY MEDICAL SERVICES TECHNOLOGY (146)****PURPOSE**

The purpose of this curriculum is to produce competent entry-level Paramedics who can provide the highest level of out-of-hospital care. Upon completion of the program, students will be eligible for National Registry testing and certification. This credential leads to Paramedic licensure or certification in Virginia and most other states.

**PROGRAM LEARNING OUTCOMES****Upon successful completion, students will be able to:**

1. Perform current techniques in pre-hospital emergency care to include signs and symptoms of illness, injuries, medical emergencies, appropriate medical techniques, and ambulance operations.
2. Assess, extricate, and care for victims of trauma incidents utilizing the following management skills; scene size-up, disentanglement, victim stabilization for single and multi-victim situations, hazardous materials incidents, integration of local emergency medical services (EMS) for patient assessment and management, and standard operating procedures.
3. Describe the basic pharmacological background and actions of drugs, regulations, human body systems, pharmacokinetics, and drug calculations.
4. Demonstrate the advanced life support skills approach to emergency care of the emotionally disturbed to include emotional aspects, approach to the patient, psychiatric emergencies and techniques of management.
5. Perform an advanced physical assessment on an emergency patient to include the physical exam, integrative and on-going exams, and communicate/document the findings to the patient and others.
6. Recognize and intervene in medical emergencies related to toxicology, hazardous materials, infectious disease, and hematology. Include poisoning, drug overdose, and transmission of infectious diseases.
7. Identify pathophysiological principles and assessment findings to formulate a field impression and implement the treatment plan for the patient with cardiovascular disease/injury based on 3-lead and 12-lead cardiac monitoring and interpretation. Define cardiovascular anatomy and physiology, cardiovascular pathologies and management, and adjunctive diagnostics.
8. Utilize assessment findings to formulate a field impression and implement the treatment plan for obstetric, neonatal, pediatric, geriatric, and chronic-care patients.

**PROGRAM GOAL**

To prepare competent entry-level Paramedics in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains with or without exit points at the Advanced Emergency Medical Technician and/or Emergency Medical Technician, and/or Emergency Medical Responder levels.

**EMPLOYMENT OPPORTUNITIES**

Opportunities for paramedics include employment by fire and rescue service providers, hospitals, school systems, industry, ambulance and transportation services, local, state and federal government agencies, humanitarian relief organizations, and the military.

**PROGRAM REQUIREMENTS**

Students should have English and Mathematics skills assessed. Deficiencies in these areas may be corrected by completing the appropriate developmental studies courses. Admission to the program will be governed by the requirements for general admission to the College and the Commonwealth of Virginia Office of Emergency Medical Services. Individuals who have a felony conviction may not be eligible to take the certification exam.

**FOR FURTHER INFORMATION, CONTACT:**

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kdorton@mecc.edu  
276.523.9014

Bill Akers, EMS Program Director  
Bill.Akers@sw.edu  
276.964.7729

## HEALTH SCIENCES (CLINICAL)

### ADDITIONAL INFORMATION

The paramedic curriculum is an academically rigorous program, but one having the potential to provide a rewarding career for participants. Applicants for the advanced life support component of the program must meet the following:

- Be at least 18 years of age by the beginning of the program pursuant to Section 12VAC5-30-270A.1. of the Rules and Regulations of the Board of Health Governing Emergency Medical Services. Be a high school graduate or have satisfactorily completed the GED.
- Have a current and valid certificate evidencing Emergency Medical Technician certification in Virginia pursuant to Section 12VAC5-30-290 of the Rules and Regulations of the Board of Health Governing Emergency Medical Services. See <http://www.vdh.virginia.gov/content/uploads/sites/23/2016/05/TR-35-Prereqs-and-Conduct-3-5-19.pdf>
- Possess and maintain current CPR certification.

### Accreditation and State Approval

This program is accredited by the Virginia Office of Emergency Medical Services and is offered in conjunction with Southwest Virginia and Virginia Highland Community Colleges. The Southwest Virginia Paramedic program is accredited by the Committee on Accreditation of Allied Health Educational Programs (CAAHEP), upon the recommendation of the Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions (CoAEMSP). Committee on Accreditation of Allied Health Educational Programs (CAAHEP) 9355 113th Street North, #7709, Seminole, FL 33775, phone 727-210-2350., [www.caahep.org](http://www.caahep.org). To contact the CoAEMSP: 8301 Lakeview Parkway, Suite 111-312, Rowlett, TX 75088, phone 214-703-8445, fax 214-703-8992, [www.coaemsp.org](http://www.coaemsp.org). Meets state educational requirements for licensure for NREMT in all states with the exception of IL and MT.

### Licensure Reciprocity

Licensure	Meets state educational requirements for licensure	Does not meet the state educational requirements for licensure	MECC has not made a determination on licensure reciprocity
NREMT	AL, AK, AZ, AR, CA, CO, CT, DC, DE, FL, GA, HI, ID, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY	IL, MT	

Further information regarding EMS certifications may be found at: <https://nasemso.org/>

### Statement for Emergency Medical Services (EMS):

Pursuant to United States Department of Education (US DOE) regulation 34 CFR 668.43 (a) (5) (v), the Mountain Empire Community College Associate Degree in Emergency Medical Services Technology program provides the following information for all prospective and current students:

The National Assoc. of EMS Officials (NASEMSO) has ruled EMS provider licensure and certification to be synonymous and National Registry certification is recognized for reciprocity in 48 of our 50 states.

Mountain Empire Community College is regionally accredited by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC).

### Academic Requirements:

Any student receiving a grade of less than "C" in any of the required program courses will be placed on programmatic academic probation. That course shall be remediated once, with a written contract drafted containing the requirements of the remediation. Remediated courses must be completed with a final grade of "C" or better. Dismissal from the program shall result if the student does not meet the requirements of the contract.

### Course and Behavioral Requirements:

Selected and supervised student clinical experience is required by the program and will be accomplished at selected, regional health care facilities. The student is responsible for transportation to these facilities, as well as to any scheduled field trips or combined program classes. Program preceptors will observe and evaluate the student's aptitude for the profession. If the student does not exhibit those documented behaviors required of the EMS professional, the student may be asked to withdraw from the program.

### Physical Requirements

An EMS provider is faced with many physical and psychological challenges. Please refer to the Office of Emergency Medical Services web site for a more detailed functional job description. <http://www.vdh.virginia.gov/content/uploads/sites/23/2016/05/TR-14A-ALS-Functional-Job-Description-1-2-20.pdf>.

**Other Requirements:**

In addition to basic college costs such as tuition and fees, this program requires expenditures for uniforms, books, liability insurance, CPR certification, immunizations and physical, testing fees, certification courses and some medical equipment items. Students are also responsible for their own transportation to clinical sites. Applicants accepted to the program are required to submit a health certificate signed by a licensed physician or nurse practitioner and should include documentation of measles, seasonal flu, mumps, Hepatitis B, Rubella (MMR) and chicken pox exposure, TB testing, and overall general health of the applicant. A criminal background check and drug screening is also done to confirm compliance with state regulations. See <http://www.vdh.virginia.gov/content/uploads/sites/23/2016/05/TR-35-Prereqs-and-Conduct-3-5-19.pdf> Students who elect to take support courses recommended by the Program Director prior to formal acceptance into the program will find this activity to be advantageous in subsequent course scheduling.

Please see the CoAEMSP Outcomes Summary -1010 for program pass rates, retention and job placements.

**Selection Process:**

To be eligible for selection to the program, interested persons should complete the following process by May 15:

- Submit a college admission application.
- Submit an online application to the program with required attachments.
- Take the Program Entrance Exam at the June orientation meeting
- Take the VPT placement test (or submit ASSET, COMPASS, SAT or ACT scores). To enroll in EMS courses the student must test above ENF 1 and MTE 1 or the equivalent as determined by VCCS Multiple Measures guidelines.
- Send transcripts of previous college courses to MECC.
- Send high school transcripts to MECC.

After May 15th the first round of students will be selected. Selection will be based on previous college coursework, entrance exam score, and college placement reading scores. Should openings still be available, persons who apply or meet requirements after May 15 will be considered.

<b>EMERGENCY MEDICAL SERVICES TECHNOLOGY PROGRAM OF STUDY</b>			
<b>Course #</b>	<b>Course Title</b>	<b>Credit</b>	<b>Pre-Requisite Courses (if applicable)</b>
<b>FIRST YEAR SUMMER</b>			
SDV 100	College Success Skills	1	
EMS 111	EMT-Basic	7	Co-req EMS 120
EMS 100	CPR for Healthcare Providers	1	
<b>STUDENTS EARN AHA BLS FOR HEALTHCARE PROVIDER CPR CERTIFICATION</b>			
EMS 120	EMT-Basic Clinical	1	Co-req EMS 111
<b>ELIGIBLE TO TAKE NATIONAL REGISTRY EMERGENCY MEDICAL TECHNICIAN EXAM</b>			
BIO 145	Human Anatomy & Physiology	4	
<b>FIRST YEAR FALL</b>			
EMS 121	Preparatory Foundations	2	
EMS 123	EMS Clinical Preparation	1	
EMS 125	Basic Pharmacology	1	Co-req EMS 126
EMS 126	Basic Pharmacology Lab	1	Co-req EMS 125
EMS 127	Airway, Shock and Resuscitation	1	Co-req EMS 128
EMS 128	Airway, Shock and Resuscitation Lab	1	Co-req EMS 127
EMS 135	Emergency Medical Care	2	Co-req EMS 136
EMS 136	Emergency Medical Care Lab	1	Co-req EMS 135
EMS 137	Trauma Care	1	Co-req EMS 138
EMS 138	Trauma Care Lab	1	Co-req EMS 137
<b>ELIGIBLE TO TAKE NATIONAL REGISTRY ADVANCED EMERGENCY MEDICAL TECHNICIAN EXAM</b>			

**HEALTH SCIENCES (CLINICAL)**

<b>FIRST YEAR SPRING</b>			
EMS 139	Special Populations	1	Co-req EMS 140
EMS 140	Special Populations Lab	1	Co-req EMS 139
EMS 141	Cardiovascular Care	2	Co-req EMS 142
EMS 142	Cardiovascular Care Lab	1	Co-req EMS 141
EMS 175	Paramedic Clinical Experience I	2	EMS 121,123,125,126,127,128
ENG 111	College Composition I	3	
PSY 230	Developmental Psychology	3	
<b>SECOND YEAR FALL</b>			
EMS 202	Paramedic Pharmacology	2	EMS 125,126,135,136,137,138,139,140,141,142
EMS 203	Advanced Patient Care	2	Co-req EMS 204; Pre-req EMS 125,126,135,136,137,138,139,140,141,142
EMS 204	Advanced Patient Care Lab	2	Co-req EMS 203
EMS 206	Pathophysiology for Health Professions	3	BIO 145 or 141&142
EMS 247	Paramedic Clinical Experience II	1	EMS 135,136,137,138,139,140,141,142,175
EMS 248	Paramedic Comprehensive Field Experience	2	EMS 135,136,137,138,139,140,141,142,175
<b>SECOND YEAR SPRING</b>			
EMS 210	EMS Operations	1	EMS 135,136,137,138,139, 140,141,142
EMS 212	Leadership and Professional Development	1	EMS 135,136,137,138,139, 140,141,142
EMS 165	Advanced Cardiac Life Support	1	
EMS 163	Prehospital Trauma Life Support	1	
EMS 167	Emergency Pediatric Care	1	
EMS 164	Advanced Medical Life Support	1	
EMS 216	Paramedic Review	1	
EMS 249	Paramedic Capstone Internship	2	EMS 202,203,204,206, 247, 248
	General Education Elective	3	
	Humanities Elective	3	
<b>ELIGIBLE TO TAKE NATIONAL REGISTRY EMERGENCY MEDICAL TECHNICIAN PARAMEDIC EXAM</b>			
<b>TOTAL PROGRAM CREDITS</b>		<b>66</b>	

**Notes and Additional Curriculum Options**

Course substitutions may be available. Please see an advisor for more information.

BIO 141 and 142 or 231 and 232 will substitute for BIO 145 and the additional credits may satisfy the general education elective.

## Career Studies Certificate

**EMERGENCY MEDICAL TECHNICIAN BASIC (221-146-01)****PURPOSE**

The purpose of this curriculum is to produce competent entry-level EMTs who can provide basic out-of-hospital care. Upon completion of the program, students will be eligible for National Registry testing and certification. This credential leads to EMT certification in Virginia and most other states.

**PROGRAM LEARNING OUTCOMES****Upon successful completion, students will be able to:**

1. Apply fundamental knowledge of the EMS system, safety/well-being of the Paramedic, medical/legal and ethical issues to the provision of the emergency care.
2. Integrate knowledge of the anatomy, physiology, and pathophysiology of the airway, respiratory, and circulatory system to the practice of EMS.
3. Use simple knowledge of the principles of the role of EMS during public health emergencies.
4. Apply fundamental knowledge of the medications utilized by the EMT that may be administered to the patient during an emergency.
5. Apply knowledge of upper airway anatomy and physiology to patient assessment and management in order to assure a patent airway, adequate mechanical ventilation and respiration for patients of all ages.
6. Apply scene information and patient assessment findings (scene size-up, primary and secondary assessment, patient history, reassessment) to guide emergency management.
7. Apply fundamental knowledge to provide basic and selected advanced emergency care and transportation based on assessment findings for an acutely ill medical (neurology, GI/GU, immunology, infectious disease, endocrine, psychiatric, cardiovascular, toxicology, respiratory, hematology, OB/GYN) patient.
8. Apply fundamental knowledge to provide basic and selected advanced emergency care and transportation based on assessment findings for a patient in shock, respiratory failure or arrest, cardiac failure or arrest and post resuscitation management.
9. Apply fundamental knowledge to provide basic and selected advanced emergency care and transportation based on assessment findings for an acutely injured trauma (bleeding, chest trauma, abdominal/GI trauma, orthopedic trauma, soft tissue trauma, head/facial/neck/spinal trauma, nervous system trauma, environmental) patient.
10. Apply fundamental knowledge of growth, development, aging, and assessment findings to provide a basic and selected advanced emergency care and transportation for a patient with special needs (OB, neonatal, pediatrics, geriatrics).
11. Apply fundamental knowledge of operational roles and responsibilities to ensure patient, public, and personnel safety to include ambulance operations, incident management, MCI, air medical, vehicle extrication and hazmat awareness.
12. Competently perform the skills and administer medications listed in the Virginia scope of practice for an EMT provider.

**EMPLOYMENT OPPORTUNITIES**

Opportunities for EMTs include employment by fire and rescue service providers, hospitals, school systems, industry, ambulance and transportation services, local, state and federal government agencies, humanitarian relief organizations, and the military.

**PROGRAM REQUIREMENTS**

Students should have English and Mathematics skills assessed. Deficiencies in these areas may be corrected by completing the appropriate developmental studies courses.

**ADDITIONAL INFORMATION**

Admission to the program will be governed by the requirements for general admission to the College and the Commonwealth of Virginia Office of Emergency Medical Services. Individuals who have a felony conviction may not be eligible to take the certification exam. Applicants must be at least 16 years of age by the beginning of the program pursuant to Section 12VAC5-30-270A.1 of the Rules and Regulations of the Board of Health governing Emergency Medical Services and possess and maintain current CPR certification. This program is accredited by the Virginia Office of Emergency Medical Services and is offered in conjunction with Southwest Virginia Community College and Virginia Highlands Community College. Travel to clinical/field assignments is required.

**FOR FURTHER INFORMATION, CONTACT:**

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kdorton@mecc.edu  
276.523.9014

Bill Akers, EMS Program Director  
Bill.Akers@sw.edu  
276.964.7729

## HEALTH SCIENCES (CLINICAL)

### Licensure Reciprocity

Licensure	Meets state educational requirements for licensure	Does not meet the state educational requirements for licensure	MECC has not made a determination on licensure reciprocity
NREMT	AL, AK, AZ, AR, CA, CO, CT, DC, DE, FL, GA, HI, ID, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY	IL, MT	

Further information regarding EMS certifications may be found at: <https://nasmso.org/>

### Statement for Emergency Medical Services (EMS):

Pursuant to United States Department of Education (US DOE) regulation 34 CFR 668.43 (a) (5) (v), the Mountain Empire Community College Associate Degree in Emergency Medical Services Technology program provides the following information for all prospective and current students:

The National Assoc. of EMS Officials (NASEMSO) has ruled EMS provider licensure and certification to be synonymous and National Registry certification is recognized for reciprocity in 48 of our 50 states.

Mountain Empire Community College is regionally accredited by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC).

## EMERGENCY MEDICAL TECHNICIAN BASIC PROGRAM OF STUDY

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL OR FIRST YEAR SPRING</b>			
SDV 100 or HLT 105	College Success Skills or CPR	1	
EMS 111	EMT-Basic	7	Co-req EMS 120
EMS 120	EMT-Clinical	1	Co-req EMS 111
<b>STUDENTS EARN AHA BLS FOR HEALTHCARE PROVIDER CPR CERTIFICATION AND ELIGIBLE TO TAKE NATIONAL REGISTRY MEDICAL TECHNICIAN EXAM</b>			
<b>TOTAL PROGRAM CREDITS</b>		<b>9</b>	

### Notes and Additional Curriculum Options

Course substitutions may be available. Please see an advisor for more information.  
EMS 100 or HLT 100 will substitute for HLT 105.

**Career Studies Certificate****EMERGENCY MEDICAL TECHNICIAN BASIC PLUS (221-146-02)****PURPOSE**

The purpose of this curriculum is to produce competent entry-level EMTs who can provide basic out-of-hospital care. Upon completion of the program, students will be eligible for National Registry testing and certification. This credential leads to EMT certification in Virginia and most other states.

**PROGRAM LEARNING OUTCOMES**

**Upon successful completion, students will be able to:**

1. Apply fundamental knowledge of the EMS system, safety/well-being of the EMT, medical/legal and ethical issues to the provision of the emergency care.
2. Integrate knowledge of the anatomy, physiology, and pathophysiology of the airway, respiratory, and circulatory system to the practice of EMS.
3. Use simple knowledge of the principles of the role of EMS during public health emergencies.
4. Apply fundamental knowledge of the medications utilized by the EMT that may be administered to the patient during an emergency.
5. Apply knowledge of upper airway anatomy and physiology to patient assessment and management in order to assure a patent airway, adequate mechanical ventilation and respiration for patients of all ages.
6. Apply scene information and patient assessment findings (scene size-up, primary and secondary assessment, patient history, reassessment) to guide emergency management.
7. Apply fundamental knowledge to provide basic and selected advanced emergency care and transportation based on assessment findings for an acutely ill medical (neurology, GI/GU, immunology, infectious disease, endocrine, psychiatric, cardiovascular, toxicology, respiratory, hematology, OB/GYN) patient.
8. Apply fundamental knowledge to provide basic and selected advanced emergency care and transportation based on assessment findings for a patient in shock, respiratory failure or arrest, cardiac failure or arrest and post resuscitation management.
9. Apply fundamental knowledge to provide basic and selected advanced emergency care and transportation based on assessment findings for an acutely injured trauma (bleeding, chest trauma, abdominal/GI trauma, orthopedic trauma, soft tissue trauma, head/facial/neck/spinal trauma, nervous system trauma, environmental) patient.
10. Apply fundamental knowledge of growth, development, aging, and assessment findings to provide a basic and selected advanced emergency care and transportation for a patient with special needs (OB, neonatal, pediatrics, geriatrics).
11. Apply fundamental knowledge of operational roles and responsibilities to ensure patient, public, and personnel safety to include ambulance operations, incident management, MCI, air medical, vehicle extrication and hazmat awareness.
12. Competently perform the skills and administer medications listed in the Virginia scope of practice for an EMT provider.

**EMPLOYMENT OPPORTUNITIES**

Opportunities for EMTs include employment by fire and rescue service providers, hospitals, school systems, industry, ambulance and transportation services, local, state and federal government agencies, humanitarian relief organizations, and the military.

**PROGRAM REQUIREMENTS**

Students should have English and Mathematics skills assessed. Deficiencies in these areas may be corrected by completing the appropriate developmental studies courses.

**ADDITIONAL INFORMATION**

Admission to the program will be governed by the requirements for general admission to the College and the Commonwealth of Virginia Office of Emergency Medical Services. Individuals who have a felony conviction may not be eligible to take the certification exam. Applicants must be at least 16 years of age by the beginning of the program pursuant to Section 12VAC5-30-270A.1 of the Rules and Regulations of the Board of Health governing Emergency Medical Services and possess and maintain current CPR certification. This program is accredited by the Virginia Office of Emergency Medical Services and is offered in conjunction with Southwest Virginia Community College and Virginia Highlands Community College. Travel to clinical/field assignments is required.

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## HEALTH SCIENCES (CLINICAL)

### Licensure Reciprocity

Licensure	Meets state educational requirements for licensure	Does not meet the state educational requirements for licensure	MECC has not made a determination on licensure reciprocity
NREMT	AL, AK, AZ, AR, CA, CO, CT, DC, DE, FL, GA, HI, ID, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY	IL, MT	

Further information regarding EMS certifications may be found at: <https://nasemsso.org/>

### Statement for Emergency Medical Services (EMS):

Pursuant to United States Department of Education (US DOE) regulation 34 CFR 668.43 (a) (5) (v), the Mountain Empire Community College Associate Degree in Emergency Medical Services Technology program provides the following information for all prospective and current students:

The National Assoc. of EMS Officials (NASEMSO) has ruled EMS provider licensure and certification to be synonymous and National Registry certification is recognized for reciprocity in 48 of our 50 states.

Mountain Empire Community College is regionally accredited by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC).

## EMERGENCY MEDICAL TECHNICIAN BASIC PLUS PROGRAM OF STUDY

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST SEMESTER</b>			
SDV 100	College Success Skills	1	
EMS 100	CPR for Healthcare Providers	1	
ENG 111	College Composition I <sup>1</sup>	3	
ENG 112	College Composition II <sup>1</sup>	3	ENG 111
PSY 230	Developmental Psychology	3	
EMS 111	Emergency Medical Technician	7	Co-req EMS 120
EMS 120	EMT-Clinical	1	Co-req EMS 111
<b>STUDENTS EARN AHA BLS FOR HEALTHCARE PROVIDER CPR CERTIFICATION AND ELIGIBLE TO TAKE NATIONAL REGISTRY MEDICAL TECHNICIAN EXAM</b>			
<b>TOTAL PROGRAM CREDITS</b>		<b>19</b>	

### Notes and Additional Curriculum Options

Course substitutions may be available. Please see an advisor for more information.

<sup>1</sup>ENG 111-1st 8 wk course; ENG 112-2nd 8 wk course.

Effective Fall 2020.

## Career Studies Certificate

**EMERGENCY MEDICAL TECHNICIAN ADVANCED (221-146-08)****PURPOSE**

The purpose of this curriculum is to produce competent, entry-level Advanced Emergency Medical Technicians who can service the community with advanced life support care via the Emergency Medical Services infrastructure. Upon successful completion of the program, students will be eligible for National Registry testing and certification in the Commonwealth of Virginia.

**PROGRAM LEARNING OUTCOMES**

**Upon successful completion, students will be able to:**

1. Apply fundamental knowledge of the EMS system, safety/well-being of the EMT, medical/legal and ethical issues to the provision of the emergency care.
2. Integrate complex knowledge of the anatomy, physiology, and pathophysiology of the airway, respiratory, and circulatory system to the practice of EMS.
3. Use simple knowledge of the principles of the role of EMS during public health emergencies.
4. Apply fundamental knowledge of the medications carried by the Advanced EMT that may be administered to the patient during an emergency
5. Apply knowledge of upper airway anatomy and physiology to patient assessment and management in order to assure a patient's airway, adequate mechanical ventilation and respiration for patients of all ages.
6. Apply scene information and patient assessment findings (scene size-up, primary and secondary assessment, patient history, reassessment) to guide emergency management
7. Apply fundamental knowledge to provide basic and selected advanced emergency care and transportation based on assessment findings for a patient in shock, respiratory failure or arrest, cardiac failure or arrest and post resuscitation management.
8. Apply fundamental knowledge to provide basic and selected advanced emergency care and transportation based on assessment findings for an acutely injured trauma (bleeding, chest trauma, abdominal/GI trauma, orthopedic trauma, soft tissue trauma, head/facial/neck/spinal trauma, nervous system trauma, environmental) patient
9. Apply fundamental knowledge of operational roles and responsibilities to ensure patient, public, and personnel safety to include ambulance operations, incident management, MCI, air medical, vehicle extrication and hazmat awareness.
10. Competently perform the skills and administer medications listed in the Virginia scope of practice for an Advanced EMT provider.

**EMPLOYMENT OPPORTUNITIES**

Opportunities for AEMTs include employment by fire and rescue service providers, hospitals, school systems, industry, ambulance and transportation services, local, state and federal government agencies, humanitarian relief organizations, and the military.

**PROGRAM REQUIREMENTS**

Students should have English and Mathematics skills assessed. Deficiencies in these areas may be corrected by completing the appropriate developmental studies courses.

**ADDITIONAL INFORMATION**

Admission to the program will be governed by the requirements for general admission to the College and the Commonwealth of Virginia Office of Emergency Medical Services. Individuals who have a felony conviction may not be eligible to take the certification exam.

**Applicants must meet the following requirements:**

- Be at least 18 years of age by the beginning of the program pursuant to Section 12VAC5-30-270A.1. of the Rules and Regulations of the Board of Health Governing Emergency Medical Services.
- Be a high school graduate or have satisfactorily completed the GED.
- Have a current and valid certificate evidencing Emergency Medical Technician certification in Virginia pursuant to Section 12VAC5-30-290 of the Rules and Regulations of the Board of Health Governing Emergency Medical Services. See <http://www.vdh.virginia.gov/content/uploads/sites/23/2016/05/TR-35-Prereqs-and-Conduct-3-5-19.pdf>
- Possess and maintain current CPR certification.

**FOR FURTHER INFORMATION, CONTACT:**

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Bill Akers, EMS Program Director  
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## HEALTH SCIENCES (CLINICAL)

### **Academic Requirements**

Any student receiving a grade of less than "C" in any of the required program courses will be placed on programmatic academic probation. That course shall be remediated once, with a written contract drafted containing the requirements of the remediation. Remediated courses must be completed with a final grade of "C" or better. Dismissal from the program shall result if the student does not meet the requirements of the contract.

### **Clinical and Behavioral Requirements**

Selected and supervised student clinical experience is required by the program and will be accomplished at selected, regional health care facilities. The student is responsible for transportation to these facilities, as well as to any scheduled field trips or combined program classes. Program preceptors will observe and evaluate the student's aptitude for the profession. If the student does not exhibit those documented behaviors required of the EMS professional, the student may be asked to withdraw from the program.

### **Selection Process**

To be eligible for selection to the program, interested persons should complete the following process by May 15:

- Submit a college admission application.
- Submit an online application to the program (separate document) with required attachments.
- Take the Program Entrance Exam.
- Take the VPT placement test (or submit ASSET, COMPASS, SAT or ACT scores). To enroll in EMS courses the student must test above ENF 1 and MTE 1 or the equivalent as determined by VCCS Multiple Measures guidelines.
- Have transcripts of previous college courses sent to MECC.
- Have high school transcripts sent to MECC.

After May 15th the first round of students will be selected. Selection will be based on previous college coursework, entrance exam score, and college placement reading scores. Should openings still be available, persons who apply or meet requirements after May 15 will be considered.

### **Other Requirements**

In addition to basic college costs such as tuition and fees, this program requires expenditures for uniforms, books, liability insurance, CPR certification, immunizations and physical, testing fees, certification courses and some medical equipment items. Students are also responsible for their own transportation to clinical sites. Applicants accepted to the program are required to submit a health certificate signed by a licensed physician or nurse practitioner and should include documentation of measles, seasonal flu, mumps, Hepatitis B, Rubella (MMR) and chicken pox exposure, TB testing, and overall general health of the applicant.

### **Physical Requirements**

This program requires extensive walking, stooping, bending, pushing, pulling, climbing stairs, and lifting. Lifting and carrying requirements: at least 125 pounds; Motor coordination is necessary because over uneven terrain, the patients', EMTs', and other workers' well-being must not be jeopardized. Further, extensive use of sight, hearing, and speaking is required. An EMS provider is faced with many physical and psychological challenges. Please refer to the Virginia Office of Emergency Medical Services web site for a more detailed functional job description – [www.vdh.virginia.gov/oems/training](http://www.vdh.virginia.gov/oems/training).

### **Accreditation**

This program is accredited by the Virginia Office of Emergency Medical Services and is offered in conjunction with Southwest Virginia and Virginia Highland Community Colleges. The Southwest Virginia Advanced EMT program is accredited by the Committee on Accreditation of Allied Health Educational Programs (CAAHEP), upon the recommendation of the Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions (CoAEMSP).

Commission of Accreditation of Allied Health Education Programs (CAAHEP), 9355 113<sup>th</sup> Street, North #7709, Seminole, FL 33775, 727-210-2350, [www.caahep.org](http://www.caahep.org). To contact the CoAEMSP: 8301 Lakeview Parkway, Suite 111-312, Rowlett, TX 75088, phone 214-703-8445, Fax: 214-703-8992, [www.coaemsp.org](http://www.coaemsp.org). Meets state educational requirements for licensure for NREMT in all states with the exception of IL and MT.

### **Licensure Reciprocity**

Licensure	Meets state educational requirements for licensure	Does not meet the state educational requirements for licensure	MECC has not made a determination on licensure reciprocity
NREMT	AL, AK, AZ, AR, CA, CO, CT, DC, DE, FL, GA, HI, ID, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY	IL, MT	

Further information regarding EMS certifications may be found at: <https://nasemso.org/>

**Statement for Emergency Medical Services (EMS):**

Pursuant to United States Department of Education (US DOE) regulation 34 CFR 668.43 (a) (5) (v), the Mountain Empire Community College Associate Degree in Emergency Medical Services Technology program provides the following information for all prospective and current students:

The National Assoc. of EMS Officials (NASEMSO) has ruled EMS provider licensure and certification to be synonymous and National Registry certification is recognized for reciprocity in 48 of our 50 states.

Mountain Empire Community College is regionally accredited by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC).

## EMERGENCY MEDICAL TECHNICIAN ADVANCED PROGRAM OF STUDY

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST SEMESTER</b>			
SDV 100	College Success Skills I	1	
EMS 111	Emergency Medical Technician	7	Co-req EMS 120
EMS 100	CPR for Healthcare Providers	1	
<b>STUDENTS EARN AHA BLS FOR HEALTHCARE PROVIDER CPR CERTIFICATION</b>			
EMS 120	Emergency Medical Technician-Basic Clinical	1	Co-req EMS 111
<b>ELIGIBLE TO TAKE NATIONAL REGISTRY EMERGENCY MEDICAL TECHNICIAN EXAM</b>			
<b>SECOND SEMESTER</b>			
EMS 121	Preparatory Foundations	2	
EMS 123	EMS Clinical Preparation	1	
EMS 125	Basic Pharmacology	1	Co-req EMS 126
EMS 126	Basic Pharmacology Lab	1	Co-req EMS 125
EMS 127	Airway, Shock and Resuscitation	1	Co-req EMS 128
EMS 128	Airway, Shock and Resuscitation Lab	1	Co-req EMS 127
EMS 135	Emergency Medical Care	2	Co-req EMS 136
EMS 136	Emergency Medical Care Lab	1	Co-req EMS 135
EMS 137	Trauma Care	1	Co-req EMS 138
EMS 138	Trauma Care Lab	1	Co-req EMS 137
EMS 170	ALS Internship I	1	
<b>ELIGIBLE TO TAKE NATIONAL REGISTRY ADVANCED EMERGENCY MEDICAL TECHNICIAN EXAM</b>			
<b>TOTAL PROGRAM CREDITS</b>		<b>23</b>	

**Notes and Additional Curriculum Options**

Course substitutions may be available. Please see an advisor for more information.

## EMT INTERMEDIATE TO PARAMEDIC BRIDGE (221-146-05)

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### PURPOSE

The purpose of this curriculum is to produce competent entry-level Paramedics who can provide the highest level of out-of-hospital care. Upon completion of the program EMT Intermediates will be eligible for National Registry testing and certification. This credential leads to Paramedic licensure or certification in Virginia and most other states.

### PROGRAM LEARNING OUTCOMES

Upon successful completion, students will be able to:

1. Perform current techniques in pre-hospital emergency care to include signs and symptoms of illness, injuries, medical emergencies, appropriate medical techniques, and ambulance operations.
2. Assess, extricate, and care for victims of trauma incidents utilizing the following management skills; scene size-up, disentanglement, victim stabilization for single and multi-victim situations, hazardous materials incidents, integration of local emergency medical services (EMS) for patient assessment and management, and standard operating procedures.
3. Describe the basic pharmacological background and actions of drugs, regulations, human body systems, pharmacokinetics, and drug calculations.
4. Demonstrate the advanced life support skills approach to emergency care of the emotionally disturbed to include emotional aspects, approach to the patient, psychiatric emergencies and techniques of management.
5. Perform an advanced physical assessment on an emergency patient to include the physical exam, integrative and on-going exams, and communicate/document the findings to the patient and others.
6. Perform a pediatric assessment, manage airway and respiratory emergencies, cardiovascular emergencies, neonatal emergencies, and Sudden Infant Death Syndrome (SIDS). Treat children with special healthcare needs.
7. Recognize and intervene in medical emergencies related to toxicology, hazardous materials, infectious disease, and hematology. Include poisoning, drug overdose, and transmission of infectious diseases.
8. Identify pathophysiological principles and assessment findings to formulate a field impression and implement the treatment plan for the patient with cardiovascular disease/injury based on 3-lead and 12-lead cardiac monitoring and interpretation. Define cardiovascular anatomy and physiology, cardiovascular pathologies and management, and adjunctive diagnostics.
9. Utilize assessment findings to formulate a field impression and implement the treatment plan for obstetric, neonatal, pediatric, geriatric, and chronic-care patients.

### EMPLOYMENT OPPORTUNITIES

Opportunities for paramedics include employment by fire and rescue service providers, hospitals, school systems, industry, ambulance and transportation services, local, state and federal government agencies, humanitarian relief organizations, and the military.

### PROGRAM REQUIREMENTS

**PLEASE NOTE:** This route to becoming a National Registry paramedic is only available to EMT-Intermediates who can submit documentation of three years of experience working as an EMT-Intermediate and approval by the Operational Medical Director of the program.

Students should have English and Mathematics skills assessed. Deficiencies in these areas may be corrected by completing the appropriate developmental studies courses.

### ADDITIONAL INFORMATION

The paramedic curriculum is an academically rigorous program, but one having the potential to provide a rewarding career for participants. Admission to the program will be governed by the requirements for general admission to the College and the

#### FOR FURTHER INFORMATION, CONTACT:

Kim Dorton, Dean of Health Sciences  
kdorton@mecc.edu  
276.523.9014

Bill Akers, EMS Program Director  
Bill.Akers@sw.edu  
276.964.7729

Commonwealth of Virginia Office of Emergency Medical Services. Individuals who have a felony conviction may not be eligible to take the certification exam.

**Applicants must meet the following requirements:**

- Be at least 18 years of age by the beginning of the program pursuant to Section 12VAC5-30-270A.1. of the Rules and Regulations of the Board of Health governing Emergency Medical Services.
- Be a high school graduate or have satisfactorily completed the GED.
- Have a current and valid certificate evidencing Emergency Medical Technician certification in Virginia pursuant to Section 12VAC5-30-290 of the Rules and Regulations of the Board of Health governing Emergency Medical Services.
- Possess and maintain current CPR certification.

**Accreditation**

This program is accredited by the Virginia Office of Emergency Medical Services and is offered in conjunction with Southwest Virginia and Virginia Highland Community Colleges. The program is also nationally accredited by the Committee on Accreditation of Allied Health Educational Programs (CAAHEP), 25400 U.S. Highway 19 North, Suite 158, Clearwater, FL 33763, phone 727-210-2350.

**Licensure Reciprocity**

Licensure	Meets state educational requirements for licensure	Does not meet the state educational requirements for licensure	MECC has not made a determination on licensure reciprocity
NREMT	AL, AK, AZ, AR, CA, CO, CT, DC, DE, FL, GA, HI, ID, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY	IL, MT	

Further information regarding EMS certifications may be found at: <https://nasemso.org/>

**Statement for Emergency Medical Services (EMS):**

Pursuant to United States Department of Education (US DOE) regulation 34 CFR 668.43 (a) (5) (v), the Mountain Empire Community College Associate Degree in Emergency Medical Services Technology program provides the following information for all prospective and current students:

The National Assoc. of EMS Officials (NASEMSO) has ruled EMS provider licensure and certification to be synonymous and National Registry certification is recognized for reciprocity in 48 of our 50 states.

Mountain Empire Community College is regionally accredited by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC).

**Academic Requirements**

Any student receiving a grade of less than “C” in any of the required program courses will be placed on programmatic academic probation. That course shall be remediated once, with a written contract drafted containing the requirements of the remediation. Remediated courses must be completed with a final grade of “C” or better. Dismissal from the program shall result if the student does not meet the requirements of the contract.

**Clinical and Behavioral Requirements**

Selected and supervised student clinical experience is required by the program and will be accomplished at selected, regional health care facilities. The student is responsible for transportation to these facilities, as well as to any scheduled field trips or combined program classes. Program preceptors will observe and evaluate the student’s aptitude for the profession. If the student does not exhibit those documented behaviors required of the EMS professional, the student may be asked to withdraw from the program.

**Physical Requirements**

An EMS provider is faced with many physical and psychological challenges. Please refer to the Office of Emergency Medical Services web site for a more detailed functional job description. <http://www.vdh.virginia.gov/content/uploads/sites/23/2016/05/TR-14A-ALS-Functional-Job-Description-1-2-20.pdf>

**Selection Process**

To be eligible for selection to the program, interested persons should complete the following process by May 15:

- Submit a college admission application.
- Submit an application to the program (separate document) with required attachments.

## HEALTH SCIENCES (CLINICAL)

- Take the Program Entrance Exam.
- Take the VPT placement test (or submit ASSET, COMPASS, SAT or ACT scores). To enroll in EMS courses the student must test above ENF 1 and MTE 1 or the equivalent as determined by VCCS Multiple Measures guidelines.
- Have transcripts of previous college courses sent to MECC.
- Have high school transcripts sent to MECC.

After May 15th the first round of students will be selected. Selection will be based on previous college coursework, entrance exam score, and college placement reading scores. Should openings still be available, persons who apply or meet requirements after May 15 will be considered.

### Other Requirements

In addition to basic college costs such as tuition and fees, this program requires expenditures for uniforms, books, liability insurance, CPR certification, immunizations and physical, testing fees, certification courses and some medical equipment items. Students are also responsible for their own transportation to clinical sites. Applicants accepted to the program are required to submit a health certificate signed by a licensed physician or nurse practitioner and should include documentation of measles, seasonal flu, mumps, Hepatitis B, Rubella (MMR) and chicken pox exposure, TB testing, and overall general health of the applicant. A criminal background check and drug screening is also done to confirm compliance with state regulations. See <http://www.vdh.virginia.gov/content/uploads/sites/23/2016/05/TR-35-Prereqs-and-Conduct-3-5-19.pdf> Students who elect to take support courses recommended by the Program Director prior to formal acceptance into the program will find this activity to be advantageous in subsequent course scheduling.

<b>EMT INTERMEDIATE TO PARAMEDIC BRIDGE PROGRAM OF STUDY</b>			
<b>Course #</b>	<b>Course Title</b>	<b>Credit</b>	<b>Pre-Requisite Courses (if applicable)</b>
<b>FIRST YEAR SUMMER</b>			
SDV 100	College Success Skills I	1	
EMS 213	ALS Skills Development	2	Program Director approval
EMS 123	EMS Clinical Preparation	1	
BIO 145	Human Anatomy & Physiology	4	
<b>FIRST YEAR FALL</b>			
EMS 202	Paramedic Pharmacology	2	
EMS 203	Advanced Patient Care	2	
EMS 204	Advanced Patient Care Lab	2	
EMS 206	Pathophysiology for Health Professions	3	
EMS 247	Paramedic Clinical Experience II	1	
EMS 248	Paramedic Comprehensive Clinical Experience	2	
<b>FIRST YEAR SPRING</b>			
EMS 210	EMS Operations	1	
EMS 212	Leadership and Professional Development	1	
EMS 165	Advanced Cardiac Life Support	1	
EMS 163	Prehospital Trauma Life Support	1	
EMS 167	Emergency Pediatric Care	1	
EMS 164	Advanced Medical Life Support	1	
EMS 216	Paramedic Review	1	
EMS 249	Paramedic Capstone Internship	2	EMS 202, 203, 204, 206, 247, 248
<b>ELIGIBLE TO TAKE NATIONAL REGISTRY EMERGENCY MEDICAL TECHNICIAN PARAMEDIC EXAM</b>			
<b>TOTAL PROGRAM CREDITS</b>		<b>29</b>	

### Notes and Additional Curriculum Options

Course substitutions may be available. Please see an advisor for more information.

Program only available for EMT Intermediates with a minimum three years of documented experience per Operational Medical Director.

## Career Studies Certificate

**HEALTH SCIENCES (221-190-01)****PURPOSE**

The Health Sciences Career Studies Certificate is designed for students preparing for admission through a selective/competitive process to a healthcare certificate or degree program. Although some courses are standard, each track will differ to some degree. Students are encouraged to work closely with their assigned advisor to prepare the strongest program application. The advisor will also assist students with the various individual program application processes.

**PROGRAM LEARNING OUTCOMES:****Upon successful completion, students will be able to:**

1. Earn credits that prepare them for entry into competitive admissions healthcare educational programs.
2. Demonstrate understanding of the various options for healthcare careers that are available to pursue.
3. Participate in laboratory experiences that increase their knowledge of the human body.
4. Increase their skills in communicating verbally, in writing and using electronic methods.
5. Participate in classroom activities that increase their understanding of providing care for individuals with acute, chronic, or life-threatening physical, psychological, and psychosocial health conditions

**EMPLOYMENT OPPORTUNITIES**

Completion of this certificate prepares a student to competitively seek admission to a selective admissions healthcare program. Various elective course options may prepare a student for employment as a pharmacy technician, emergency medical technician, or nursing assistant.

**PROGRAM REQUIREMENTS**

Students should have English and Mathematics skills assessed. Deficiencies in these areas may be corrected by completing the appropriate developmental studies courses.

**HEALTH SCIENCES PROGRAM OF STUDY**

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST SEMESTER</b>			
SDV 100	College Success Skills I	1	
HLT 105	CPR	1	
<b>STUDENT RECEIVES AHA BLS FOR HEALTHCARE PROVIDER CPR CERTIFICATION</b>			
ENG 111	College Composition	3	
BIO 141	Human Anatomy & Physiology I	4	
PSY 230	Developmental Psychology	3	
	Humanities Elective	3	
<b>SECOND SEMESTER</b>			
BIO 142	Human Anatomy & Physiology II	4	BIO 141
	Electives	10	
<b>*STUDENT ELIGIBLE TO TAKE THE NATIONAL REGISTRY EMERGENCY MEDICAL TECHNICIAN EXAM</b> <b>**STUDENT ELIGIBLE TO TAKE THE VIRGINIA BOARD OF NURSING CERTIFIED NURSE AIDE EXAM</b> <b>***STUDENT ELIGIBLE TO TAKE THE PHARMACY TECHNICIAN CERTIFICATION BOARD EXAM</b>			
<b>TOTAL PROGRAM CREDITS</b>		<b>29</b>	

**Notes and Additional Curriculum Options**

Course substitutions may be available. Please see an advisor for more information.

Please see your advisor as selective admission healthcare programs require different electives.

**FOR FURTHER INFORMATION, CONTACT:**

Sarah Clarkston, Health Sciences Advisor  
 sclarston@mecc.edu  
 276.523.9010

Kim Dorton, Dean of Health Sciences  
 kdorton@mecc.edu  
 276.523.9014



## HEALTH SCIENCES (CLINICAL)

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### Career Studies Certificate

## MAMMOGRAPHY ADVANCED STUDIES (SWCC)

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### PURPOSE

The Career Studies Certificate in Mammography Advanced Studies is designed to prepare selected students to qualify as contributing members of the allied health interdisciplinary team. Upon completion of the advanced studies curriculum (and successful completion and documentation of all required clinical competencies as set for by the American Registry of Radiologic Technologists), the student is eligible to apply to take the National Registry examination leading to advanced certification as a Registered Radiographer in Mammography by the ARRT.

### ADVANCED STUDIES LEARNING OUTCOMES

**Upon successful completion, students will be able to:**

1. Demonstrate competence in the essential aspects of Mammographic imaging at the entry-level.
2. Understand the importance of life-long continuing education in the field of Mammographic imaging .

### EMPLOYMENT OPPORTUNITIES

Employment opportunities for well-trained registered mammographers are available in hospitals, clinics, education, industry, government agencies, and private offices.

### ADVANCED STUDIES REQUIREMENTS

Students should have English and Mathematics skills assessed. Deficiencies in these areas may be corrected by completing the appropriate developmental studies courses.

### ADMISSION REQUIREMENTS

The student in Mammography must have completed an approved program in radiography. The student must be registered (or registry eligible) by the appropriate certification agency (ARRT). All students must have a current CPR certification and must maintain that certification throughout the program. Applicants must have maintained a "C" average in past program courses in the discipline or certification. Applicants must provide the following to be considered for admission.

- Application to SWCC or VHCC
- Official transcripts of all other colleges attended submitted to the admissions office at either SWCC or VHCC
- Completed Mammography advanced studies application submitted to Christy Lee at cle@mecc.edu
- Copy of current ARRT certification card submitted to Christy Lee at cle@mecc.edu
- Copy of current CPR certification by the American Heart Association

The student in Mammography Advanced Studies must abide by all community college policies as well as hospital policies while enrolled in advanced studies.

### ADDITIONAL INFORMATION

#### **Advanced Studies Requirements:**

Upon admission and during the course of study, the college and hospital faculty will carefully observe and evaluate the student's progress. If, in the opinion of the faculty, a student does not exhibit professional behavior, the student will be asked to withdraw from advanced studies.

Students will not be eligible to receive the certificate until a grade of "C" or better is obtained in each of the required courses. Before entering the clinical areas, the student must receive complete clinical clearance. Please see Ms. Lee for details.

This curriculum is typically offered in a 10-week summer session.

#### **FOR FURTHER INFORMATION, CONTACT:**

Sarah Clarkston, Health Sciences Advisor  
sclarkston@mecc.edu  
276.523.9010

Christy Lee, Program Coordinator  
cle@mecc.edu  
276.523.9016

Kim Dorton, Dean, Health Sciences  
kdorton@mecc.edu  
276.523.9014

**Criminal Background Check/Drug Screening/Vaccinations and Testing**

Background checks for criminal history and sex offender crimes against minors are required for entrance into some clinical agencies. Students with convictions may be prohibited from clinical practice and may not complete the advanced studies. Students must provide documentation of a recent PPD TB skin test and up-to-date vaccinations for MMR, Varicella, Hepatitis B, and seasonal influenza. Other requirements may be specified by various clinical affiliates. Clinical agencies may require drug testing prior to placement of students for clinical rotations. Students with positive drug test results may be prohibited from clinical practice and may not complete the advanced studies. Cost for criminal background checks, vaccinations, PPD testing, HIPAA training, and drug testing will be the responsibility of the student.

- If you require the RAD 196 clinical education (75 total clinical hours):
  - ◊ Copy of current CPR certification by the American Heart Association
  - ◊ Current PPD
  - ◊ Immunization records (Varicella, MMR, Hepatitis B, Flu)
  - ◊ \*HIPAA training, criminal background check, and drug screen will be required at the student's cost (approximately \$95). Hospital facility orientation will be required. These must be complete before the student can begin clinical education. The faculty will provide instructions to students who are accepted into the Mammography Advanced Studies track.

## MAMMOGRAPHY ADVANCED STUDIES PROGRAM OF STUDY

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR SPRING</b>			
RAD 233	Anatomy and Positioning of the Breast	1	
RAD 234	Breast Imaging/Instrumentation	1	
RAD 235	Quality Assurance in Mammography	1	
RAD 196	Clinical Internship in Mammography	1	
<b>ELIGIBLE FOR THE NATIONAL REGISTRY EXAMINATION LEADING TO ADVANCED CERTIFICATION AS A REGISTERED TECHNOLOGIST IN MAMMOGRAPHY BY THE ARRT</b>			
<b>TOTAL PROGRAM CREDITS</b>		<b>4</b>	

**Notes and Additional Curriculum Options**

Course substitutions may be available. Please see an advisor for more information. *Applicants must be ARRT registered.*

*This curriculum is typically offered in a 10-week summer semester. Students have the option of NOT completing the RAD 196 clinical class requirement; however, without clinical competencies, the student is ineligible to apply to sit for the ARRT Registry examination, nor does the student complete MQSA requirements. Students can complete those competencies through employment, if their employer provides those cross-training opportunities.*

## HEALTH SCIENCES (CLINICAL)

### Associate of Applied Science Degree

## MEDICAL LABORATORY TECHNOLOGY (WCC)

### PURPOSE

The Medical Laboratory Technology curriculum is a concentrated course of study and coordinated practice designed to prepare students with the knowledge and skills necessary to join the medical field as a contributing health professional. The Associate Degree program prepares students for employment as Medical Laboratory Technicians. Upon satisfactory completion of program requirements, the student is eligible to take a national registry examination for certification as a Medical Laboratory Technician and is eligible for employment in a variety of medical and scientific laboratory settings. The program is fully approved by the State Council of Higher Education and the National Accrediting Agency of Clinical Laboratory Sciences (NAACLS). This program is being provided through an innovative, cooperative arrangement between Wytheville Community College and Mountain Empire Community College. Students will register at MECC for their general education course requirements and register through WCC for their program courses. However, all course offerings and clinicals will be provided on the MECC campus and at regional healthcare facilities. The AAS degree will be awarded by Wytheville Community College. Opportunities for Employment Opportunities for MLTs include employment at hospital clinical laboratories, reference and industrial laboratories, pharmaceutical firms, independent clinical laboratories, service agencies, physicians' offices, clinics, government agencies, research institutions and the armed forces.

### PROGRAM LEARNING OUTCOMES

Upon successful completion, students will be able to:

1. Perform routine clinical laboratory procedures within acceptable quality control parameters in Hematology, Chemistry, Immunohematology, and Microbiology under the general supervision of a Clinical Laboratory Scientist or Pathologist.
2. Demonstrate technical skills, social behavior, and professional awareness incumbent upon a laboratory technician as defined by the American Society for Clinical Laboratory Science and the American Society of Clinical Pathologists.
3. Effect a transition of information and experiences learned in the MLT program to employment situations and performance on the written examinations conducted by the American Society of Clinical Pathologists and/or the National Certifying Agency for Clinical Laboratory Personnel.
4. Apply systematized problem solving techniques to identify and correct procedural errors, identify instrument malfunctions and seek proper supervisory assistance, and verify the accuracy of laboratory results obtained.
5. Operate and maintain laboratory equipment, utilizing appropriate quality control and safety procedures.
6. Perform within the guidelines of the code of ethics of the American Society for Clinical Laboratory Science, the American Society of Clinical Pathologists, and the restrictions established by state and local regulatory groups.
7. Recognize and participate in activities which will provide current knowledge and upgrading of skills in laboratory medicine.

### EMPLOYMENT OPPORTUNITIES

Opportunities for MLTs include employment at hospital clinical laboratories, reference and industrial laboratories, pharmaceutical firms, independent clinical laboratories, service agencies, physicians' offices, clinics, government agencies, research institutions and the armed forces.

### PROGRAM REQUIREMENTS

Students should have English and Mathematics skills assessed. Deficiencies in these areas may be corrected by completing the appropriate developmental studies courses.

Applicants must be high school graduates or the equivalent. In order to meet the admission requirements, the applicant must have completed:

1. A WCC application (including all high school and college transcripts or copy of GED by February 15.
2. Competency in English and Math Essentials MTE 1-9 (or MDE 10 and MDE 60) as demonstrated through the placement and diagnostic tests, or by satisfactorily completing the required MTE units or equivalent. All developmental courses must be completed the spring semester before entering the program in the fall of the next academic year.\*
3. High school biology or equivalent (one unit) with at least "C".
4. High school chemistry or equivalent (one unit) with at least "C".
5. A 2.0 average for high school courses or a 2.0 cumulative average for all college course work.\*\*

### FOR FURTHER INFORMATION, CONTACT:

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sclarkston@mecc.edu  
276.523.9010

Dawn Warren, Program Head, WCC  
dwarren@wcc.vccs.edu  
276.223.4827

Kim Dorton, Dean, Health Sciences  
kdorton@mecc.edu  
276.523.9014

6. Shadowing hours in selected program to be determined by program head.
7. Take the TEAS Test for Allied Health.
8. An interview/information session with the program head or designee.

\*Students who have completed all academic requirements prior to the February 15th deadline will be admitted first. Students completing developmental coursework in the spring will be admitted to any remaining unfilled slots in the program, based on the selective admission criteria.

\*\*If the student has completed a minimum of 12 college credits that are included in calculating the college GPA (non-developmental courses), the 2.0 high school GPA requirement will be waived.

In the event there are more applicants who apply in a given year than there are slots available the college will employ selective admission. Please consult the Health Professions Admission Packet for a detailed description of the selective criteria.

## **ADDITIONAL INFORMATION**

### **Program Requirements**

Upon admission to the Medical Laboratory program, the following are necessary:

1. The student must have a complete medical examination, which must include a 2-step tuberculin skin test, a profile of medical condition, designated immunizations, and documentation of HBV and varicella status. A chest x-ray is required only if the tuberculin test is positive. Cost for the medical examination and all necessary testing will be the responsibility of the student.
2. The student must obtain a criminal background check and urine drug screen (see below). Costs will be the responsibility of the student.
3. The student must read the Essential/Technical Standards required for the program and indicate by signature readiness for physical requirements of the profession.
4. The student must maintain a minimum of a "C" grade in each Medical Laboratory course. The student must demonstrate the desire and capability to become a contributor of quality patient health care.
5. Clinical experience will be provided in affiliated hospitals or laboratories. Each student will be responsible for transportation to and from the hospital and must also secure the required apparel.

### **Criminal Background Check/Drug Screening**

Background checks for criminal history and sex offender crimes and urine drug screens are required for admission to clinical sites. Students with convictions and/or positive tests may be prohibited from clinical practice and may not complete the program. Costs for criminal background checks and urine drug screens will be the responsibility of the student.

**HEALTH SCIENCES (CLINICAL)****MEDICAL LABORATORY TECHNOLOGY PROGRAM OF STUDY**

<b>Course #</b>	<b>Course Title</b>	<b>Credit</b>	<b>Pre-Requisite Courses (if applicable)</b>
<b>FIRST YEAR FALL</b>			
BIO 141	Human Anatomy & Physiology I	4	
CHM 111	College Chemistry I	4	
MDL 101	Intro to Med Lab Techniques	3	
MDL 127	Hematology	3	MDL 101
ENG 111	College Composition I	3	
SDV 100	College Success Skills	1	
<b>FIRST YEAR SPRING</b>			
BIO 142	Human Anatomy & Physiology II	4	
MDL 126	Clinical Immunohematology & Immunology I	4	MDL 101 & 127
BIO 150	Introductory Microbiology	4	
MDL 261	Clinical Chemistry & Instrumentation I	4	MDL 101 & 127
<b>SECOND YEAR SUMMER</b>			
	Humanities/Fine Arts Elective	3	
	Social/Behavioral Science Elective	3	
MDL 199	Supervised Study in Phlebotomy & Lab Math	2	Completion of first year
MDL 130	Basic Clinical Microbiology	3	MDL 101 & 127
<b>SECOND YEAR FALL</b>			
MDL 190	Coordinated Practice	2	Completion of first year
MDL 225	Clinical Hematology II	3	MDL 126
MDL 240	Clinical Microscopy II	2	MDL 261
MDL 252	Clinical Microbiology II	3	MDL 130
MDL 262	Clinical Chemistry & Instrumentation II	4	MDL 261
<b>SECOND YEAR SPRING</b>			
MDL 227	Clinical Immunohematology/Immunology II	3	MDL 126
MDL 263	Clinical Chemistry & Instrumentation III	3	MDL 262
MDL 275	Clinical Hematology III	3	MDL 225
MDL 279	Clinical Microbiology III	2	MDL 252
MDL 290	Coordinated Practice	2	
<b>ELIGIBLE TO TAKE A NATIONAL REGISTRY EXAMINATION FOR CERTIFICATION AS A MEDICAL LABORATORY TECHNICIAN</b>			
<b>TOTAL PROGRAM CREDITS</b>		<b>72</b>	

**Notes and Additional Curriculum Options**

Course substitutions may be available. Please see an advisor for more information.

*BIO 231 will substitute for BIO 141 and BIO 231 will substitute for BIO 142.*

## Career Studies Certificate

**NURSING ASSISTANT (CNA) (221-157-06)****PURPOSE**

Provide students with theory and laboratory experience required for employment in acute care, long-term care, and assisted living healthcare institutions. Prepare students to take the Virginia Board of Nursing Certified Nurse Aide exams. Provide employers with competent, entry-level CNAs.

**PROGRAM LEARNING OUTCOMES**

Upon successful completion, students will be able to:

1. Assist professional health care providers in assessing the physical, social, emotional, and spiritual needs of patients.
2. Communicate and relate interpersonally with patients and co-workers.
3. Observe, chart, and report patient findings.
4. Perform safety and infection control practices at all times.
5. Competently perform all skills required by the Virginia Board of Nursing curriculum.
6. Competently care for patients of various ages, with special emphasis on geriatric, home health, and long term facilities.
7. Register to take the skills and written portion of the certification exam.

**EMPLOYMENT OPPORTUNITIES**

Opportunities for CNA's include employment in hospitals, long term care facilities, assisted living facilities, home health agencies, private care, and physician and practice offices.

**PROGRAM REQUIREMENTS**

Students should have English and Mathematics skills assessed. Deficiencies in these areas may be corrected by completing the appropriate developmental studies courses.

**ADDITIONAL INFORMATION**

Applicants must pass a drug screen and criminal background check. Applicants must submit proof of required vaccinations and health screenings. Travel is required to clinical facilities. Eligibility for certification testing is determined by the Virginia Board of Nursing.

**NURSING ASSISTANT (CNA) PROGRAM OF STUDY**

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST SEMESTER</b>			
SDV 100	College Success Skills	1	
HLT 105	CPR	1	
<b>STUDENTS RECEIVE AHA BLS FOR HEALTHCARE PROVIDER CPR CERTIFICATION</b>			
HCT 101	Health Care Technician I	3	Co-Req HCT 102
HCT 102	Health Care Technician II	4	Pre- or Co-Req HCT 101
<b>STUDENTS ARE ELIGIBLE TO TAKE THE VIRGINIA BOARD OF NURSING CERTIFIED NURSE AIDE EXAMS</b>			
	Electives (from approved list)	7	
<b>STUDENTS MAY BE ELIGIBLE TO TAKE THE VIRGINIA BOARD OF NURSING CERTIFIED MEDICATION AIDE EXAM, THE PHARMACY TECHNICIAN CERTIFICATION BOARD EXAM, THE NATIONAL PHLEBOTOMY ASSOCIATION CERTIFICATION EXAM, OR THE CCI EXAM FOR CERTIFICATION AS AN EKG TECHNICIAN</b>			
<b>TOTAL PROGRAM CREDITS</b>		<b>16</b>	

**Notes and Additional Curriculum Options**

Course substitutions may be available. Please see an advisor for more information.

**FOR FURTHER INFORMATION, CONTACT:**

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## HEALTH SCIENCES (CLINICAL)

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### Associate of Applied Science Degree

## OCCUPATIONAL THERAPY ASSISTANT (SWCC)

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### PURPOSE

Graduates of the program are prepared to qualify as contributing members of the health care team who will care for patients under the supervision of a Registered Occupational Therapist. The goals of the occupational therapy team are to develop, restore, or maintain adaptive skills in individuals whose abilities to cope with daily living are threatened or impaired by disease, injury, developmental disability, or social disadvantage. This program is offered in partnership with Southwest Virginia Community College (SWCC) and degrees will be conferred from SWCC.

The Occupational Therapy Assistant Program is accredited by the Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA), located at 4720 Montgomery Lane, P. O. Box 31220, Bethesda, MD 20824-1220. AOTA's phone number is (301) 652-2582. Graduates of the program will be able to sit for the national certification examination for the occupational therapy assistant administered by the National Board for Certification in Occupational Therapy (NBCOT). After successful completion of this exam, the individual will be a Certified Occupational Therapy Assistant (COTA). Most states require licensure in order to practice; however, state licenses are usually based on the results of the NBCOT Certification Examination.

### PROGRAM LEARNING OUTCOMES

**Upon successful completion, students will be able to:**

1. Demonstrate knowledge of the structure and function of the human body.
2. Demonstrate knowledge of common diseases and disorders treated by OT.
3. Demonstrate the ability to document OT services to ensure accountability and to meet standards for reimbursement.
4. Identify components of professional behavior in the clinic and work setting.

### EMPLOYMENT OPPORTUNITIES

Occupational therapy assistants earn good incomes and work in a wide variety of settings. The U.S. Labor Department estimates that job openings for occupational therapy assistant will rise by nearly 40 percent over the next decade.

Certified Occupational Therapy Assistants can find employment in a wide variety of settings, including: hospitals, nursing homes, rehabilitation clinics, schools, and social service agencies.

### PROGRAM REQUIREMENTS

Students should have English and Mathematics skills assessed. Deficiencies in these areas may be corrected by completing the appropriate developmental studies courses.

### ADMISSION REQUIREMENTS

In addition to the general requirements for admission to the College, consideration for a position in this program requires the following:

1. Graduation from high school or satisfactory completion of the GED.
2. The completion of one unit each of biology (with laboratory) and chemistry (with laboratory) or completion of BIO 141 and 142 with no grade below a "C", prior to January 15 application deadline (deficiencies can be made up through developmental studies or college courses).
3. High school seniors who have not completed the full sequence of the prerequisite courses must be enrolled in the second semester of these courses and have earned a grade of "C" or above for the first semester to be considered for program admission. Grades in these courses must reflect a minimum of "C."
4. All high school courses and/or college work must reflect an overall grade average of "C" (2.5 GPA) or higher.
5. The completion of the Virginia Placement Tests (VPT) or multiple measures policy, with demonstrated readiness for ENG 111 and proficiency in MTE 1-6.
  - Satisfactory completion of ENG 111 with grade of "C" or above will meet the ENG pre-requisite
  - Scores of 520 or above for SAT math and 22 for ACT math or College Math courses number 151 or above with at least a "C" grade or better will meet the Math pre-requisite
  - The completion of the TEAS-AH test

### FOR FURTHER INFORMATION, CONTACT:

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6. Any prescribed developmental studies courses, must be successfully completed before the January 15 application deadline.
7. Twelve (12) hours of observation in an occupational therapy setting should be documented by the OT personnel denoting and date(s) and time(s).

Classes begin the fall semester of each academic year. Students accepted into the program are required to submit a certificate reflecting a successful physical examination, signed by a licensed physician. The physical examination must be completed after receiving notification of acceptance to the program and prior to beginning classes. Immunizations must be current and include Hepatitis B and MMR. Proof of Tuberculin skin test (PPD) and CPR certification must be shown on admission to the program and kept current throughout the program. Students are responsible for any additional costs related to physicals, vaccinations, uniforms, insurance, background checks, drug testing, clinical travel, or other needed supplies or requirements.

## **ADDITIONAL INFORMATION**

### **Clinical and Behavioral Requirements**

Selected and supervised learning experiences are required by this program and will be accomplished at selected health care facilities. Because there are limited clinical sites within the area, students may be required to travel to other areas to complete clinical training. Students are responsible for providing their own transportation, uniforms, and living expenses during fieldwork experiences. In the fifth semester, there will be 40 hours per week of clinical time (Level II fieldwork) in two eight week segments, so students must plan their schedules accordingly. Program faculty will observe and evaluate the student's suitability for the profession. If in the judgment of the Program Faculty the student does not exhibit those behaviors required of the occupational therapy assistant, the student may be asked to withdraw from the program. All OTA students must complete Level II Fieldwork within 18 months following completion of academic preparation. A felony conviction may affect a graduate's ability to sit for the NBCOT certification examination or attain state licensure.

### **Program Requirements**

The student is required to complete a sequence of courses and learning experiences. Students must achieve a grade of "C" or better in all program courses. Any student receiving a grade of "D" in any of the program courses will be placed on Program Probation. That course shall be remediated once, with a written contract containing the requirements of the remediation. Please note: Students may be required to wait at least one academic year before they will have an opportunity to remediate the course. Students on program probation status will only be allowed to remediate the course if there is an open position in the class. Dismissal from the program shall result if: 1) the student does not meet the requirements of the probationary contract; 2) the student receives a final grade of less than "C" in any program courses either during or after the period of the Program Probation; or 3) a final grade of "F" in any coursework after admittance to the program will result in dismissal from the program. Remediated courses must be completed with a final grade of "C" or better.

### **Criminal Background Check/Drug Screening**

Background checks for criminal history and sex offender crimes against minors are required for entrance into some clinical agencies. Students with convictions may be prohibited from clinical practice and may not complete the program. Clinical agencies may require drug testing prior to placement of students for clinical rotations. Students with positive drug test results may be prohibited from clinical practice and may not complete the program. Cost for criminal background checks and drug testing will be the responsibility of the student.



## OCCUPATIONAL THERAPY ASSISTANT PROGRAM OF STUDY

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL</b>			
BIO 141	Human Anatomy & Physiology I	4	
ENG 111	College Composition I	3	
HLT 143	Medical Terminology	3	
OCT 100	Introduction to OT	3	
PSY 230	Developmental Psychology	3	
SDV 100	College Success Skills	1	
<b>FIRST YEAR SPRING</b>			
BIO 142	Human Anatomy & Physiology II	4	
OCT 195	Topics in OT for Physical Dysfunction	2	
OCT 201	OT with Psychosocial	3	
OCT 205	Therapeutic Media	2	
NAS 177	Upper Extremity Anatomy & Kinesiology	2	
	Humanities/Fine Arts Elective	3	
<b>SECOND YEAR SUMMER</b>			
OCT 190	Coordinate Practice in OT I-Level I Fieldwork	1	
OCT 207	Therapeutic Skills	3	
OCT 220	OT for the Adult	2	
<b>SECOND YEAR FALL</b>			
OCT 190	Coord. Practice in OT I-Level I Fieldwork	1	
OCT 202	OT with Physical Disabilities	4	
OCT 203	OT with Developmental Disabilities	4	
OCT 208	OT Service Management & Delivery	3	
OCT 210	Assistive Tech in OT	2	
<b>SECOND YEAR SPRING</b>			
OCT 290	Coordinate Practice in OT III-Level II Fieldwork	6	
OCT 290	Coordinate Practice in OT IV-Level II Fieldwork	6	
OCT 298	Seminar and Project OTA	1	
<b>ELIGIBILITY TO SIT FOR NBCOT CERTIFICATION</b>			
<b>TOTAL PROGRAM CREDITS</b>		<b>66</b>	

### Notes and Additional Curriculum Options

Course substitutions may be available. Please see an advisor for more information.

*ITE 115 or ITE 100 will substitute for ITE 119. HIM 111 or HIM 112 will substitute for HLT 143. The completion of both PSY 231 and 232 will substitute for PSY 230. BIO 231 will substitute for BIO 141 and BIO 232 will substitute for BIO 142.*

**Career Studies Certificate****PHLEBOTOMY (221-151-02)****PURPOSE**

Provide students with advanced theory and laboratory experience required for employment in healthcare facilities. Prepare students to take the NPA (National Phlebotomy Association) certification exam. Provide employers with competent, entry-level phlebotomists. Provide students with exposure to the latest technology and devices being used.

**PROGRAM LEARNING OUTCOMES**

**Upon successful completion, students will be able to:**

1. Utilize universal precautions as outlined by the CDC.
2. Identify the venous anatomy and surfaces on which phlebotomy can be performed.
3. Differentiate between serum and plasma.
4. Analyze factors to be considered in venipuncture or skin puncture site selection.
5. Assemble the equipment and supplies needed to collect blood by venipuncture and skin puncture.
6. Discuss critically complications associated with blood collection.
7. Perform the steps in accurate specimen collection, tube draw order, and documentation procedures.
8. Perform a minimum of 100 successful venipunctures on human patients.

**EMPLOYMENT OPPORTUNITIES**

Phlebotomists may be employed by physician and other practices, acute care facilities, long term care facilities, home health agencies, insurers and by some government agencies.

**PROGRAM REQUIREMENTS**

Students should have English and Mathematics skills assessed. Deficiencies these areas may be corrected by completing the appropriate developmental studies courses.

**ADDITIONAL INFORMATION**

This is a competitive admissions program. The deadline to submit a program application to the summer cohort is April 15th, the deadline to apply for admission to the fall cohort is July 15th. Please visit [www.mecc.edu](http://www.mecc.edu) to apply for program admission. Phlebotomy students must complete the following prior to enrolling in MDL 106:

- Proof & record of three Hepatitis B vaccinations OR proof of immunity by titer.
- Proof & record of two MMR vaccines OR proof of immunity by titer.
- Proof & record of negative TB test (two-step).
- Proof & record of seasonal flu shot.
- Proof & record of two varicella vaccinations OR proof of immunity by titer.
- Proof & record of DTP (diphtheria, tetanus, pertussis) vaccinations OR proof of immunity by titer.
- Copy of BLS for Healthcare Provider (CPR) certification card, back and front.
- Passing of criminal and sexual background checks and drug screen.
- Clinical affiliates require documentation of current health insurance coverage.

**FOR FURTHER INFORMATION, CONTACT:**

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## PHLEBOTOMY PROGRAM OF STUDY

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST SEMESTER (SUMMER OR FALL)</b>			
SDV 100	College Success Skills	1	
HIM 111	Medical Terminology I	3	
ENG 111	College Composition I	3	
HLT 100	First Aid & CPR	3	
<b>STUDENTS EARN AHA BLS FOR HEALTHCARE PROVIDER CPR CERTIFICATION, AHA HEARTSAVER OSHA BLOODBORNE PATHOGEN CERTIFICATION, AND AHA HEARTSAVER FIRST AID CERTIFICATION</b>			
HLT 145	Ethics/Healthcare Personnel	2	
MDL 105	Phlebotomy	3	
<b>SECOND SEMESTER (FALL OR SPRING)</b>			
HIM 112	Medical Terminology II	3	
SDV 107	Career Education	3	
<b>ELIGIBLE TO TAKE THE WORK ETHIC PROFICIENCY CERTIFICATION EXAM</b>			
ITE 119	Information Literacy	3	
MDL 106	Clinical Phlebotomy	4	HIM 111, HLT 145, MDL 105
<b>STUDENTS ELIGIBLE TO TAKE THE NATIONAL PHLEBOTOMY ASSOCIATION CERTIFICATION EXAM</b>			
<b>TOTAL PROGRAM CREDITS</b>		<b>28</b>	

### Notes and Additional Curriculum Options

Course substitutions may be available. Please see an advisor for more information.

*Proof and record of clinical affiliate required vaccinations and titers are required for program admission. Please see an advisor for details.*

## Associate of Applied Science Degree

**PHYSICAL THERAPY ASSISTANT (WCC)****PURPOSE**

The two-year program is designed to prepare the student with the philosophical, theoretical, and clinical knowledge to become a trained technical health care worker who can assist the physical therapist in meeting the physical therapy needs of the public. These needs include, but are not limited to, improving patient mobility, relieving pain, lessening the functional limitations that occur as a result of physical disability. The profession of physical therapy also includes health and wellness promotion, public education, and injury and disability prevention. Students may register at MECC for their general education course requirements and apply to the WCC Physical Therapist Assistant Program for admission according to the procedure outlined below. Students will be totally responsible for transportation to and from the college(s) and the health agencies utilized for clinical experiences. The A.A.S. degree will be awarded by Wytheville Community College. Employment opportunities for the licensed Physical Therapist Assistant include positions in hospitals, nursing homes, home health care agencies, rehabilitation centers, school systems, and private practices. Graduates work under the direction and supervision of a physical therapist to provide such interventions as exercises, massage, electrical stimulation, paraffin baths, hot and cold packs, traction, or ultrasound. They also record the patient's response to treatment and report this to the supervising physical therapist. Employment settings include: outpatient clinics, acute care hospitals, long-term care and skilled care facilities, rehabilitation centers, home health care agencies, contracting agencies and corporations, and school systems. Patients range in age from newborn to the elderly, with age- and developmental stage-specific concerns.

**PROGRAM LEARNING OUTCOMES**

**Upon successful completion, students will be able to:**

1. Demonstrate a general core of academic general education knowledge that includes written communication and biological, physical, behavioral, and social sciences.
2. Demonstrate knowledge of sciences and scientific reasoning in topics basic to physical therapy including the cardiovascular, endocrine and metabolic, gastrointestinal, genital and reproductive, hematologic, hepatic and biliary, immune, integumentary, lymphatic, musculoskeletal, nervous, respiratory, and renal and urologic systems; and the medical and surgical conditions across the lifespan commonly seen by physical therapist assistants.
3. Provide physical therapy care that adheres to practice standards of ethics, values, and responsibilities.
4. Provide Patient/Client management
5. Carry out the plan of care established by the physical therapist.
6. Demonstrate competence in implementing selected components of physical therapy interventions in the plan of care established by the physical therapist.
7. Demonstrate competence in performing components of data collection skills essential for carrying out the plan of care by administering the appropriate tests and measures (before, during, and after interventions).
8. Complete accurate documentation that follows guidelines and specific documentation formats required by state practice acts, the practice setting, and other regulatory agencies.
9. Respond effectively to patient/client and environmental emergencies that commonly occur in the clinical setting.
10. Participate in and promote the healthcare environment and practice management.

**EMPLOYMENT OPPORTUNITIES**

Employment opportunities for the licensed Physical Therapist Assistant include positions in hospitals, nursing homes, home health care agencies, rehabilitation centers, school systems, and private practices. Graduates work under the direction and supervision of a physical therapist to provide such interventions as exercises, massage, electrical stimulation, paraffin baths, hot and cold packs, traction, or ultrasound. They also record the patient's response to treatment and report this to the supervising physical therapist. Employment settings include: outpatient clinics, acute care hospitals, long-term care and skilled care facilities, rehabilitation centers, home health care agencies, contracting agencies and corporations, and school systems. Patients range in age from newborn to the elderly, with age- and developmental stage-specific concerns.

**PROGRAM REQUIREMENTS**

Students should have English and Mathematics skills assessed. Deficiencies in these areas may be corrected by completing the appropriate developmental studies courses.

**FOR FURTHER INFORMATION, CONTACT:**

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## HEALTH SCIENCES (CLINICAL)

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The Physical Therapist Assistant Program participates in the WCC Health Programs' Selective Admissions process. In the event that there are more applicants for the PTA program than there are slots, a selective admissions process outlined below will take effect. Deadline for submitting all required information to be considered for admission is February 15 of the spring before the desired fall semester admissions. The following Minimal admission requirements must be met by February 15 in the spring prior to the desired fall admission:

- Student must complete a Wytheville Community College General Student Application.
- Student must forward to WCC an official transcript of any and all non-VCCS college work previously attempted and/or completed by February 15. The student must ALSO forward to WCC an official high school transcript or copy of the student's GED by February 15. Students currently enrolled in high school at the time of application for admission should forward to WCC a copy of their high school transcript through the fall semester of the senior year. Transcripts should be sent as early as possible so that previous course work can be evaluated to determine the need for developmental courses prior to applying for admission to the PTA program.
- Competency in English and Math Essentials MTE 1-5 (or MDE 10) as demonstrated through the placement and diagnostic tests, or by satisfactorily completing the required MTE and/or ENF units or equivalent.
- Student must have completed one high school Biology with a lab with a minimum grade of "C", or the student must have successfully completed one unit of developmental or college-level Biology.
- Student must have completed one high school Chemistry with a lab with a minimum grade of a "C", or the student must have successfully completed one unit of developmental or college-level Chemistry.
- All Developmental coursework must be completed prior to the February 15 admission deadline.
- The student must have an overall minimum GPA of 2.5 for all college or high school work attempted. If the student has completed > 12 semester credit hours of college-level work, the college GPA will be used in calculating the student's admissions score. If the student has completed <12 semester credit hours of college-level work, the high school GPA will be used in calculating the student's admissions score. Because grades for courses taken during the spring semester of the application process will not be available during the student's application assessment, all GPA calculations will be based on work completed through the fall semester preceding the February 15 deadline.
- Student must complete twelve (12) shadowing hours with a physical therapist or a licensed physical therapist assistant in a physical therapy practice of the student's choice PRIOR to Feb. 15. The student may choose to complete the shadowing hours in one facility or in several, and the student may choose to perform more than the minimum number of hours required in order to have a more thorough knowledge of the field of physical therapy. Students should make the arrangements for the shadowing experience at a facility of their choosing at the convenience of the facility. The student should log the hours spent in the shadowing experience and should have their supervising clinician sign the log to verify the experience. Shadowing log forms are available here or you may use a form of your own choosing. Documentation of the shadowing experience is due in the WCC Admissions Office by Feb. 15.
- Student must take a pre-admissions screening test through WCC. The student must contact the WCC Testing Center at (276) 223 – 4707 or by e-mail at [testing@wcc.vccs.edu](mailto:testing@wcc.vccs.edu) to set up an appointment to take the ATI TEAS-AH Test. This is a web-based test that will cost the student a nominal fee payable via credit or debit card directly to the testing company on-line. The ATI TEAS-AH will assess the student's competency in high school level reading, high school level grammar, high school level Math up through Algebra I, and high school level general sciences. Tests may be taken at alternate sites; however, the student must make arrangements and schedule the test through the WCC testing center. Further information on the testing is available from the WCC Admissions Office at (276) 223 – 4702 or [admission@wcc.vccs.edu](mailto:admission@wcc.vccs.edu). For the purposes of admission to the WCC PTA program, there is no "passing" or lowest possible score on the ATI TEAS-AH test. The score is merely added to the selective admissions score. Therefore, the higher the ATI TEAS-AH score, the more points toward the admissions score. The ATI TEAS-AH test must be completed in time for the scores to be reported to the WCC Admissions Office by February 15.
- Please take great care to sign up for the ATI TEAS-AH and not the TEAS test used for Nursing Program admission.
- Student must complete an application from the Selective Admissions Procedures for Health Professions Programs packet by February 15. This form identifies the student as an applicant for one of WCC's Health Programs and includes a checklist of required criteria for each program.
- All applicants meeting the above requirements by the February 15 deadline will be screened based upon items ranging from overall and sciences GPAs, TEAS-AH test performance, and completion of college level science classes. The top-scoring finalists will be offered an admissions interview with program faculty.

Following the completion of the interview, each application will be scored on items ranging from overall and science GPAs, ATI TEAS-AH test performance, completion of college-level science classes, and knowledge of the field of physical therapy communicated in the interview. The top scores will be offered admissions slots for the upcoming fall semester.

Students will be notified by approximately May 1st prior to the fall of admission of their admissions status. Students who are accepted for admission must notify the WCC Admissions Office of their intention to accept or decline the offered slot by the deadline listed on their admission letter. Failure to do so will result in the loss of that slot to an alternate.

Students who are not accepted into the program must re-submit the Health Professions Application from the Selective Admissions Procedure for Health Professions Programs packet to reapply for a future year. If they wish, these students may also schedule an appointment with PTA faculty to discuss ways to improve their application.

Students who fail to submit any of the required material to the WCC Admissions Office by the February 15 deadline will not be considered for admission for the following fall semester. There will be no exceptions. The WCC PTA program will establish only one admission deadline, as there are frequently many more applicants than available slots. Students submitting materials late may be considered for admission for the following year if they wish. It is HIGHLY recommended that students applying to the PTA program begin the admissions process early and check frequently with the WCC Admissions Office to ensure that their application is complete well before the February 15 deadline. It is not the duty of the WCC Admissions Office to notify applicants of incomplete application packets or missing information. Making sure that the admissions packet is complete is the sole responsibility of the applicant.

### **ADDITIONAL PROGRAM REQUIREMENTS**

- Upon admission, the student must schedule a complete medical physical examination and return the completed physical form to the WCC Admissions Office by August 15. Included in this information must be a current record of the student's immunizations including all recommended childhood vaccines, immunization against Hepatitis B or waiver, current tetanus immunity, chicken pox and mumps immunity, and proof of HIV status.
- Students will be required to complete a criminal background check prior to enrollment in the program and a drug screen to be completed in the spring semester of the first year. These screens and checks will be provided to the student through WCC at a nominal fee to the student. It should be noted that applicants who have been convicted of felonies or misdemeanors of a personal injury nature will have considerable difficulty in obtaining professional licensure in a health care field. Students with a history of illegal substance abuse indicated by criminal conviction or by positive drug screens will also have difficulty obtaining professional licensure.
- Students will achieve and maintain certification in Cardiopulmonary Resuscitation (Health Care Provider) throughout the course of the program, beginning in the spring of the first year.
- Students will take all program courses in the order that they are offered and are expected to complete all courses successfully prior to moving forward. Students must complete BIO 141 with a grade of "C" or better prior to enrolling in the second semester of the program. Students must complete BIO 142 with a grade of "C" or better prior to enrolling in the summer term between the second and third semesters of the program.
- In order to progress through the program, all students must receive a final grade of "C" or better in all courses with a PTH prefix and in BIO 141 and BIO 142. Students who do not receive a final grade of "C" or better in these courses will be ineligible to continue in the program and will be withdrawn. In addition, for all PTH classes that have a lab component, each student must earn an overall average of 75% in both the didactic and the laboratory portion of the course to successfully complete the course. Students who do not earn a 75% in both portions of the course will be considered to have failed the course and will be ineligible to continue in the program, regardless of their average in the other portion of the course.
- If a student must leave the program due to poor academic performance, or because of personal reasons, he or she may apply for reinstatement according to the following procedure:
- The student must apply in writing to the Physical Therapist Assistant Program Head at least one semester before the requested readmission date, requesting permission to repeat the course in which they received a grade lower than a "C." For students who left the program for reasons other than academics, they should request permission to re-enter the program at the point where they last successfully completed work.
- The student requesting re-entry must have at least a 2.0 cumulative GPA at the time of the request.
- Confer with the PTA Program Head, discussing the following subjects:
- Any personal or professional factors which may have an influence on the student's future academic success in the program
- Any academic or professional activities that the student may have participated in since leaving the program that may have an influence on the student's future academic success in the program
- There must be an available open slot in the program.
- Students may be required to take and pass written final examinations or lab skill check-offs for the courses that they have previously completed to ensure that they continue to have mastery of the content of these courses.

Normally the student will be notified of his or her re-admission to the program approximately 4 weeks prior to the beginning of the re-enrollment date. However, special circumstances may arise requiring shorter notice.

During the time that the student is not enrolled in the PTA program, he or she may elect to complete co-requisite work or other college courses; however, performance in these courses will be part of the student's overall GPA and may influence readmission. Having taken the co-requisites for the program will not influence the decision to readmit the student to the program, other than the

## HEALTH SCIENCES (CLINICAL)

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influence these courses may make on the student's overall GPA. If a student has been withdrawn from the program due to a grade lower than a "C" in BIO 141 or BIO 142, the student must successfully complete these courses prior to re-admission.

### ADDITIONAL INFORMATION

#### **Clinical Education Requirements**

- Prior to beginning the clinical education portion of the program, the following criteria must be met:
- The student must sign a waiver freeing the clinical site, Wytheville Community College, the Virginia Community College System, and the Commonwealth of Virginia from any liability for any injury the student may receive or from any liability claim that the student may incur, while engaged in the clinical portions of the physical therapist assistant program.
- The student must have a current physical examination.
- The student must read and agree to, as is evidenced by their signature, the rules and regulations of the WCC Physical Therapist Assistant Program as outlined in the Student Handbook.
- The student must read and acknowledge capability in all areas of the Physical Therapist Assistant Essential Functions, as indicated by the student's signature.
- The student must hold a current CPR (Healthcare Provider) Certification.
- The student must provide the college with a current immunization record including evidence of completion of the Hepatitis B immunization series or a waiver, current tetanus immunity, chicken pox and mumps immunity, and proof of HIV status.
- The student will be required to complete a criminal background check prior to enrollment in the program and a drug screen to be completed in the spring semester of the first year. These screens and checks will be provided to the student through WCC at a nominal fee to the student.
- If a student has a positive finding on the Criminal Background Check and/or the Urine Drug Screen, the student may not be accepted for clinical education by any of the clinical education sites. If positive results occur, the program is not responsible for finding a clinical education placement for the student, and the student may not be able to continue his or her education in the program due to a lack of clinical education sites which are willing to accommodate the student. It then becomes the student's sole responsibility to locate a clinical education site that is willing to accommodate the student, after having been fully informed of the findings of the screen(s). The student is referred to the Student Handbook for specific policies and procedures that apply to positive results on the Criminal Background Check and/or the Urine Drug Screen.

## PHYSICAL THERAPY ASSISTANT PROGRAM OF STUDY

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL</b>			
BIO 141	Human Anatomy & Physiology I	4	
ENG 111	College Composition I	3	
PSY 230	Developmental Psychology	3	
PTH 105	Introduction to Physical Therapy	3	
PTH 110	Medical Reporting	2	
SDV 100	College Success Skills	1	
<b>FIRST YEAR SPRING</b>			
BIO 142	Human Anatomy & Physiology II	4	
PTH 115	Kinesiology for the Physical Therapy	4	PTH 105 and 110
PTH 121	Therapeutic Procedures I	5	PTH 105 and 110
PTH 151	Musculoskeletal Structure & Function	5	PTH 105 and 110
<b>SECOND YEAR SUMMER</b>			
PTH 131	Clinical Education I	2	PTH 105 and 110
PTH 210	Psychological Aspects of Therapy	2	PTH 105, 110, 115, 121, 131, 151
PTH 227	Pathological Conditions	3	PTH 105, 110, 115, 121, 131, 151
<b>SECOND YEAR FALL</b>			
PTH 122	Therapeutic Procedures II	5	PTH 105, 110, 115, 121, 131, 151
PTH 225	Rehabilitation Procedures	5	PTH 105, 110, 115, 121, 131, 151
PTH 226	Therapeutic Exercise	4	PTH 105, 110, 115, 121, 131, 151, 210, 227, 122, 225
<b>SECOND YEAR SPRING</b>			
PTH 245	Professional Issues	3	PTH 105, 110, 115, 121, 131, 151, 210, 227, 122, 225
PTH 251	Clinical Practicum I	3	PTH 105, 110, 115, 121, 131, 151, 210, 227, 122, 225
PTH 252	Clinical Practicum II	4	PTH 105, 110, 115, 121, 131, 151, 210, 227, 122, 225
	Humanities/Fine Arts Elective	3	
<b>ELIGIBILITY FOR LICENSURE EXAM AS A PTA</b>			
<b>TOTAL PROGRAM CREDITS</b>		<b>68</b>	

### Notes and Additional Curriculum Options

Course substitutions may be available. Please see an advisor for more information. *Applicants must be ARRT registered.*

*The completion of both PSY 231 and PSY 232 is a substitute for PSY 230. BIO 231 is a substitute for BIO 141. BIO 232 is a substitute for BIO 142.*



### Certificate

## PRACTICAL NURSING LEADING TO LPN (157)

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### PURPOSE

The mission of the MECC Practical Nursing program is to facilitate the health of the community. This mission is accomplished through nursing education, leadership, scholarship, and innovative nursing practice. The foundation of these goals is lifelong learning, responsiveness to changing healthcare needs, generation and dissemination of new knowledge, and service to the public and the profession.

### PROGRAM LEARNING OUTCOMES

Upon successful completion, students will be able to:

1. Obtain an entry-level nursing position within a variety of healthcare settings.
2. Provide nursing care encompassing the attainment and maintenance of the physical and mental health of clients and groups with multiple chronic conditions throughout the life span in a variety of healthcare settings.
3. Provide focused assessments of client status that includes the use of quantitative reasoning to determine client needs, care, data collection, evaluation, reporting, and documentation of care rendered.
4. Development of working concepts of anatomy, physiology, chemistry, microbiology, and behavioral sciences.
5. Development of communication skills to enhance the nurse-client and interdisciplinary team relations.
6. Develop and provide care based on understanding of the concepts of the ethical and legal aspects of nursing, including Virginia Code of Nursing, client rights, privacy, confidentiality, prevention, recognition, intervention, and reporting evidence of child or elder abuse; roles of the practical nurse; professional boundaries; history and trends in nursing care.
7. Provide care to clients throughout the life span in concepts of medication administration, dosage calculations, and nutrition and diet therapy.
8. Provide client-centered care that incorporates respect of cultural differences, promotion of healthy lifestyles, and client and healthcare setting safety; prevention and appropriate response to bioterrorism, natural and man-made disasters, and intimate partner and family violence; use of critical thinking skills in the implementation of safe client care and care of clients with multiple, chronic conditions.
9. Development of management and supervisor skills that include technology use, quality improvement and supervision of aides and assistive personnel.

### EMPLOYMENT OPPORTUNITIES

Employment opportunities for the Licensed Practical Nurse include, but are not limited to, staff positions in hospitals, nursing homes, health departments, physicians' offices, clinics, home health agencies, day care centers, public schools, and civil service.

### PROGRAM REQUIREMENTS

Students must have English and Mathematics skills assessed. Deficiencies in these areas may be corrected by completing the appropriate developmental studies courses. All identified developmental course needs must be completed prior to admission to the Practical Nursing program.

1. State accredited high school diploma, home school diploma, or GED.
2. For high school graduates/GED recipients with less than twelve (12) transferable college credits completed, the cumulative high school GPA will be used. The GPA for GED recipients will be computed based on the total GED score.
3. Applicants are solely responsible for completing and/or submitting the following items:
  - o MECC application for admission to the college
  - o MECC Practical Nursing Program Application (Spring Semester deadline is October 15; Fall Semester deadline is June 15. Applicants will be notified of status for admission during the month following application deadline.
  - o A copy of high school transcript or GED scores and any college transcripts must be submitted as an attachment to the Application for Practical Nursing online program application.
  - o It is the sole responsibility of the applicant to ensure the application file is complete and all supporting documents have been uploaded as part of the online program application.
  - o A copy of TEAS testing scoring sheet must be uploaded with the online application.
  - o Completion of an online Practical Nursing Program Application is required for each academic year for which the applicant is interested in being considered.

### FOR FURTHER INFORMATION, CONTACT:

Lena Whisenhunt, Program Director  
lwhisenhunt@mecc.edu  
276.523.9022

Sabrina Cowden  
scowden@mecc.edu  
276.523.9012

Mitzi Jones  
mjones@mecc.edu  
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Kim Dorton, Dean of Health Sciences  
kdorton@mecc.edu  
276.523.9014

**Additional Information**

Admission to Practical Nursing program is based upon:

- Demonstrated competency in math, English, and science by one or more of the following:
  - » Readiness for MTH 133 (minimum testing scores of MTE 1-3 or MDE 10) or completion of MTH 133 (C or better course grade)
  - » Readiness for ENG 111; or completion of ENG 111 (C or better course grade). All developmental course work must be completed prior to program admission.
- Biology with a lab (high school or college) with a “C” or better. **Applied biology and/or ecology does not satisfy this requirement.** PNE 155, BIO 1, BIO 101 or BIO 102, BIO 141 or BIO 142, BIO 145, or NAS 171 will meet the admission requirements.
- Cumulative GPA will be calculated at 40% into the overall scoring rubric. GED recipients will be ranked according to their general equivalent diploma scores. **The most current grade recorded for coursework will be used in admission consideration.** Minimum GPA for admission consideration is 2.0.
- TEAS (Test of Essential Academic Skills) entrance testing: Applicants must complete all sections of the TEAS test. The individualized adjusted score will be calculated at 25% into the overall grading rubric for admission.
- TEAS scores must be attached to the application and submitted to Enrollment Services.
  - o Scheduling a TEAS examination: Go to [www.mecc.edu/testing](http://www.mecc.edu/testing) and click on the TEAS registration form link. Complete this form to register for a date and time to take the TEAS assessment. After you submit the form, you will receive an Outlook Calendar invitation within 48 hours.
  - o Students can choose to submit previous completed TEAS testing scores. Testing scores must be completed and dated within the last two (2) years.
  - o Testing fee: \$70.00. (price for testing subject to change).
  - o Paying for TEAS testing: Fees for TEAS testing must be paid by credit card, debit card, or prepaid card in the Student Services Testing Center. Please bring one of these methods of payment with you on the day of your test. Student Services staff will assist test takers in processing online payment.
- Study guides for the TEAS test can be found online at [www.atitesting.com](http://www.atitesting.com), [uniontestprep.com/teas](http://uniontestprep.com/teas) and the Wampler Library on MECC campus. Other resources may be found online using the search term: TEAS study guides.
- General Education Course Requirements. These are the required general education program courses that will be used to give points towards program admission. Students will receive credit for up to 14 credits for completed non-nursing coursework. These courses will be calculated into the overall scoring rubric at 35%. Courses must be successfully completed with a grade of “C” or higher for admission points values. Students are highly encouraged, but not required, to complete this coursework prior to submission of program application.
  - a. -ENG 111- 3 credits
  - b. MTH 133 – 3 credits
  - c. -HLT 130- 2 credits
  - d. -SDV 100- 1 credit
  - e. -PSY 230 – 3 credits
  - f. -BIO 141 and 142- 8 credits (recommended for those students planning for LPN to RN bridge)
  - g. -PNE 155 – 3 credits
  - h. -BIO 145 – 4 credits
  - i. -SAF 130 – 1 credit

**Criminal Background Check/Drug Screening**

Background checks for criminal history and sex offender crimes against minors are required for entrance into clinical agencies. Background check and drug screening documentation must be dated within one (1) year of entry into the PN program and be conducted through our approved third-party vendor. If background check and drug screen become dated over one year, and the student continues in the program, the criminal/sexual background check and the drug screening must be repeated at the student’s expense. Students with convictions may be prohibited from clinical practice and may not be allowed to complete the program. Any questionable background check will be reported to the clinical agency. Clinical agencies have final say whether a student may attend clinical or not. If a student is denied admission into the clinical agency, the student must withdraw from the program. Clinical agencies require drug testing prior to placement of students for clinical rotations. Students with positive drug test results will be prohibited from clinical practice and will not be eligible to complete the program. The cost of criminal background checks and drug testing will be the responsibility of the student.

**Financial Requirements**

Students are responsible for the following costs in addition to tuition, fees, and book costs: uniforms, CPR/First Aid certification, immunizations, physical exam, medical equipment (stethoscope, sphygmomanometer, pen light, watch with second hand, etc.), and mandatory review and testing services (ATI) throughout the program. Upon completion of training, students will be prepared to take the NCLEX-PN examination. All fees related to licensure examination are the student’s responsibility. Students are also

## HEALTH SCIENCES (CLINICAL)

responsible for their own transportation to the college and all clinical sites. Students who fail to meet these responsibilities will not be able to continue in the program. The anticipated cost of the entire training program is \$8000.00 (subject to change as prices and tuition fluctuate).

### Licensure Requirements

Qualifications for a Practical Nurse licensure have been established by the Virginia State Board of Nursing and can be found in Nursing Law of Virginia that may be seen in the Program Director's office. Upon satisfactory completion of the Practical Nursing Program, the student should apply to graduate and will be awarded the Certificate in Practical Nursing. Graduates are prepared to take the NCLEX-PN examination and subsequent licensure. Students are responsible for all fees relating to the NCLEX-PN examination.

Links for further NCLEX-PN and licensure information can be found at:

- <https://www.dhp.virginia.gov/nursing/>
- <https://www.ncsbn.org/index.htm>

### Selection of Cohort

Applicants, submitting applications on time, will be admitted by highest to lowest scores. Applications received after the deadline may be considered: 1) if the cohort is not filled or 2) when current enrollment grades are posted. Applicants must have minimum 54 points on the scoring rubric to be considered for admission.

### Scoring Rubric

Criteria	Weight	Calculation	Score
Cumulative GPA (high school or college)	40%	GPA: _____ X 10	_____
General Education Courses completed	35%	Grade Points Earned ____/up to 14 X 35	_____
TEAS testing (individual adjusted score)	25%	IAS TEAS score _____ X 0.25	_____
Possible bonus points:			
Certified nurse aid and work experience	+10 points	+10 points	_____
		Scoring rubric total: _____	_____

### Notification of Acceptance

All applicants will receive email notification of acceptance/non-acceptance by December 21 for Spring admission and August 1 for Fall admission (dates are subject to change based on number of applications to process). Email notifications will be sent to the student's MECC email account. The college is not responsible for undeliverable or unchecked email. It is the student's responsibility to check their email daily for correspondence regarding admission and follow all instructions outlined in emails. **If the applicant's acceptance of an admission offer is not completed by the stated deadline, the offer will be withdrawn without notice.** Appeals of an Admission Committee decision must be made in writing to the program faculty.

When the class has been filled, the remaining applicants will be placed on an alternate list by the score from the selection process. Should an admitted student not accept his/her position, applicants from the alternate list will be admitted into the program through the last day of registration for spring/fall classes. If the College is unable to contact the next student on the alternate list by mail/phone, or if the student is unable to immediately commit to accept, the next student, on the alternate list, will be contacted with the offer.

Priority will be given to all qualified applicants applying by the deadline for the respective semester who are domiciled residents of Lee, Wise, Scott, Dickenson Counties and the City of Norton, and to Virginia domiciled residents not having access to a given program at their local community college. A domiciled resident is one who has lived in the locality or state for the twelve months before application deadlines. Applicants moving out of the locality or state between April 1 or September 1 and the first day of classes will lose their preferred status and any offer of admission to the program may be withdrawn. In addition, residents of localities with which the college has clinical-site affiliation (Sullivan County, TN, Hawkins County, TN, Hancock County, TN, and the city of Kingsport) may receive equal consideration for admission as local residents. **Applicants who may not meet requirements for domicile are encouraged to meet with a faculty advisor.**

### Orientation

Students accepted into the program are required to complete a mandatory online Practical Nursing Program orientation. This will be followed by an in-house meeting to finalize registration. An acceptance email will be sent with the online orientation link to be completed within five (5) days of receipt of email. It is the student's responsibility to check their student email accounts for correspondence.

**Other admission point availability**

Certified Nurse Aides with a minimum of 1,000 hours and 6 month work experience wishing to receive credit for work experience must submit the required documentation as an attachment to the online PN program application:

- A copy of their Board certification
- An official letter from Human Resources verifying length of work experience (1,000 hours or 6 months minimum), area of experience, and contact information
- All documentation will be verified by the program director.

**Program Progression**

Upon admission and during the course of the program, the LPN faculty will carefully observe and evaluate the student's aptitude for nursing. Students are expected to complete all courses listed in each semester of the curriculum before being allowed to enter subsequent semesters.

Any student who earns a grade **lower than "C" in any practical nursing curricular course must repeat the course and earn a final grade of "C" or better** before progressing to the next nursing course or graduating from the Practical Nursing Program. Courses must be completed by semester in sequential order. **Once a student is accepted into the Practical Nursing Program - Students may repeat one PNE prefix course, or acceptable substitute, once. Repeat is limited to the original enrollment and one additional enrollment in one course.** If a student fails a second time or subsequent course, the student will be dismissed from the Practical Nursing Program. Any exception to the above policy must have the approval of the director of the nursing program. Students who must repeat a nursing course will be enrolled in that course on a "space available" basis.

Students will be allowed two withdrawals from PNE courses. Upon a third withdrawal, the student will be dismissed from the program.

A minimum GPA of 2.0 must be maintained throughout the program. Upon failure to maintain a GPA of 2.0, the student will be dismissed from the program.

Students are highly encouraged to repeat PNE courses within the next available semester. If repeated coursework is not completed within one year, students must apply as new applicants to the program.

Students may, and are encouraged to, complete all non-nursing coursework prior to admission. After acceptance into the Practical Nursing program, students are required to complete the coursework within the designated semester listed in the Practical Nursing curriculum.

ATI Proctor Exams: Content proctored exams will be required in the following courses: PNE 161, PNE 164, PNE 173, PNE 158, PNE 145, and PNE 132 and PNE 159. Prior to proctor exam dates, students are required to complete the two ATI online practice tests with 100% as preparation for the final ATI exams. These practice tests are timed at 48 hours between each attempt. Instead of a comprehensive final exam, the ATI proctor exam will be completed and grade calculated as the final exam.

ATI exit exam: The final exit exam is the ATI probability exam. This exam measures the readiness of students to pass NCLEX PN on the first attempt. An exit exam will be given to all students enrolled in PNE 145 and who are in their last semester of the PN program. Students will be given a practice probability exam (students are responsible for fee) and two (2) final attempts (purchased as part of the ATI review package) on the probability exam. This probability exam will calculate into the overall grade average for the PNE 145 – Trends in PN course. The probability exam is calculated into the overall course grade average as follows:

Actual probability exam grade earned will be weighted at 80% of overall course grade average

**Physical Examination/ Immunization Requirements**

Individuals accepted into the program must pass a physical examination given by a licensed physician, nurse practitioner, or physician assistant and be free of any physical or mental condition, which would adversely affect performance as a member of the nursing profession. Physical examinations documentation must be dated within one (1) year of program admission. After initial physical examination, while active in the program, students must complete a continuation of health statement form verifying continued health status for training.

- Physical demands in this program include duties that frequently require squatting, bending, kneeling, reaching, stair climbing, lifting and carrying up to 50 pounds, frequent pushing and pulling up to 200 pounds with assistance, and occasional lifting and carrying up to 51-74 pounds. Duties also require constant use of sight, hearing, touch, and speech. Environmental conditions include procedures that involve handling blood and body fluids using standard precautions.
- Immunizations must be current,
  - a. If students are unable to provide proof of immunization (vaccination record or HCP documented history of disease), titers proving immunity to diseases must be submitted.

## HEALTH SCIENCES (CLINICAL)

- b. Upon entrance to program, 2 step TB testing – 4 weeks apart  
 --If a student is unable to take PPD due to history of positive reaction, the student must be asymptomatic of tuberculosis as documented on the physical form. A current copy of a recent chest x-ray with results clearly documented must be on file. After clearance by two step TB testing, student will complete TB training modules (CDC website: \*\*\*TB 101 for Health Care Workers) and symptom questionnaire annually for clinical clearance. The TB training modules completion certificates and questionnaire must be loaded in to the student's Castlebranch account.
- c. MMR X2,
- d. tetanus every 10 years,
- e. varicella X2 (or documented history), and
- f. The Hepatitis B vaccine The series must be started prior to beginning clinical experience. This is a series of three vaccines over a 6-9 month period of time. Or students can choose to request from their healthcare provider the Dynavax two vaccine series, two vaccines scheduled one month apart.
- g. Hepatitis A vaccine. Series of two vaccines scheduled at last six months apart.
- h. Students must receive an annual, current season, flu vaccination or submit physician proof of documented allergy. Clinical affiliates require the documentation to include: manufacturer, lot number, expiration date of lot, and site of injection.
  - Students must also be certified in CPR (American Heart Association Healthcare Provider or American Red Cross Professional Rescuer).
  - Students are NOT covered under any type of medical insurance through Mountain Empire Community College. Any and all expenses related to medical issues/injuries, whether personal or training related, is the sole responsibility of the student. Clinical affiliates require documentation of current health insurance coverage.

### **Core Performance Standards\* for Admission to and Progression through the Nursing Program**

In addition to the nursing program's admission requirements, the nursing program sets forth eligibility requirements by citing the core performance standards. The standards set forth cognitive, sensory, affective and psychomotor performance requirements for every nursing student. Each core performance standard is accompanied by examples of activities nursing students and nurses are required to perform while executing nursing care. Students must be able to demonstrate satisfactory application of these core performance standards in classroom, clinical and laboratory settings, with or without reasonable accommodations, during the course of the nursing program.

Requirement	Performance Standard	Examples
Critical Thinking	Critical thinking ability sufficient for clinical judgment and delivery of safe client care	Identify cause and effect relationships in clinical situations; evaluate effectiveness of nursing interventions; use the scientific method in the development of nursing interventions; prioritize nursing tasks and solve problems
Quantitative Literacy	Quantitative literacy sufficient for clinical judgment and delivery of safe client care	Ability to take measurements; perform arithmetic and numerical operations (such as is necessary for calculating medication dosages and rates); read and record graphical displays of scientific and real-time physiologic data
Professional Relationships	Interpersonal and emotional skills sufficient for professional interactions with individuals, families and groups from a variety of social, emotional, cultural, and intellectual backgrounds	Establish rapport with clients and colleagues; ability to engage in conflict resolution, demonstrate peer accountability; adapt to changing environments/stressors; perform multiple responsibilities concurrently; establish therapeutic boundaries
Communication	Ability for professional interactions with others in verbal, non-verbal and written form	Explain treatment procedures; initiate health teaching; document and interpret nursing actions and client responses; ability to interpret common non-verbal expressions indicating pain, discomfort, anxiety and other behavioral states
Mobility/Endurance	Physical abilities sufficient for movement from room to room and in small spaces; ability to execute movements required to provide care and treatment to clients in all health settings including functioning in emergency situations	Move around in client rooms, work spaces and treatment areas; administer cardiopulmonary resuscitation; walk and/or stand for prolonged periods during a 12 hour shift Perform lifting, as required, up to 50 pounds
Motor Skills	Gross and fine motor abilities sufficient for providing safe, effective nursing care	Ability to bend, squat, kneel, climb stairs, push, pull, reach for extended periods and assist in lifting, transferring, ambulating and positioning clients of all age groups and weights; calibrate and use equipment such as IV pumps; manipulate small equipment and containers such as syringes, vials and medication packages

Hearing	Auditory ability sufficient for monitoring and assessing health needs	Ability to hear alarms and other emergency signals, normal speaking level sounds, cries for help and auscultatory sounds on assessment
Visual	Visual ability sufficient for observation and assessment necessary in client care	Ability to observe client's condition and responses to treatments; ability to discern colors and changes in color shading; ability to read handwritten and printed data such as orders, medication labels, calibrations on syringes; ability to read chart content and interpret data correctly by clearly viewing monitors
Tactile Sense	Tactile ability sufficient for physical assessment	Ability to sufficiently perform physical assessments including palpation, pulses, changes in skin temperature and anatomical appearance

\*Southern Regional Education Board (SREB) Council on Collegiate Education for Nursing

### **Student Accommodations Statement**

The nursing program is committed to the policies set forth by the Virginia Community College System regarding disabilities and reasonable accommodations. If you require special services or accommodations, you should visit the Disability Services web page <https://www.mecc.edu/disabilityservices/> and contact the Disability Services Counselor for an appointment at least 2 weeks prior to the beginning of nursing classes. Your success is contingent upon your ability to fulfill the core performance standards of the program with or without reasonable accommodations.

### **Virginia Board of Nursing request for accommodations for NCLEX PN testing information link:**

Please refer to the link below for guidance on Virginia State Board of Nursing guidance on requests and follow through of requests for accommodations on NCLEX PN examination.

<https://www.dhp.virginia.gov/media/dhpweb/docs/nursing/guidance/90-22.pdf>

### **Reapplication to the Practical Nursing Program**

If a student is not admitted to the program but wishes to reapply for the next year's class, he/she **MUST** complete a new online Practical Nursing Program Application form prior to established deadlines for the next year.

Students dismissed for academic reasons can reapply to the Practical Nursing program one time only. These students must complete the nurse aide program, obtain certification, and obtain at least 1,000 hours or 6 months' work experience prior to submitting application for re-admission. Students must also repeat all PNE coursework regardless of previous letter grade.

### **Special Note**

The State Board of Nursing has the authority to deny licensure to any applicant who has violated any of the provisions of 54.1-3008 of the Code of Virginia. Any student entering the Practical Nursing program who has committed any legal offenses other than minor traffic violations may want to discuss these matters with the Program Director of the Practical Nursing program prior to application.

### **Transfer into the Practical Nursing program**

Students wishing to transfer from other colleges' nursing programs will be given consideration by the program on an individual basis.

Students requesting to use TEAS scores from another institution or nursing program must have completed the test within the previous two (2) years prior to admission into the Practical Nursing program. It is the student's responsibility to submit copies of the TEAS testing results as an attachment to their online program application.

Students who transfer from another State Board of Nursing approved program will have to complete the following to receive credit:

a) apply and meet all program admission requirements, b) Skills lab final exam and performance exam/check off, c) Medical math test with 90% accuracy (3 attempts allowed), d) complete a final comprehensive exam on transfer materials with 80% or greater score, and e) Received a grade of "C" (80% or higher) on any course requested for transfer.

### **Licensure Reciprocity**

Licensure	Meets state educational requirements for licensure	Does not meet the state educational requirements for licensure	MECC has not made a determination on licensure reciprocity
LPN	AL, AZ, AR, CO, DE, FL, GA, ID, IN, IA, KS, KY, LA, ME, MD, MS, MO, NE, NH, NM, NC, ND, OK, RI, SC, SD, TN, TX, UT, VA, WV, WI, WY	AK, CA, CT, HI, IL, MN, NV, NY, DC, OR, WA	MA, MI, NJ, OH, PA, RI, VT

Sources cited:

- The Uniform Licensing Requirements (ULRs) are found at: [https://www.ncsbn.org/NLC\\_ULRs.pdf](https://www.ncsbn.org/NLC_ULRs.pdf)
- States currently in the NLC are found at: <https://www.ncsbn.org/nlcmemberstates.pdf>
- A list of all state requirements is found at: <https://www.ncsbn.org/14730.htm>

## HEALTH SCIENCES (CLINICAL)

### Statement for Practical Nursing program (LPN):

Pursuant to United States Department of Education (US DOE) regulation 34 CFR 668.43 (a) (5) (v), the Mountain Empire Community College Certificate in Practical Nursing (LPN) program provides the following information for all prospective and current students:

The Mountain Empire Community College LPN program meets all Virginia Board of Nursing requirements for pre-licensure nursing education programs in the Commonwealth of Virginia.

The Commonwealth of Virginia participates with multiple (see table) other states in the National Council of State Boards of Nursing (NCSBN) National Licensing Compact (NLC) to allow nurses licensed in one state to provide nursing care across state lines in other compact states. Information listed is current per NCSBN as of July 1, 2020.

Mountain Empire Community College is regionally accredited by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC).

## PRACTICAL NURSING LEADING TO LPN PROGRAM OF STUDY

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST SEMESTER</b>			
SDV 100	College Success Skills	1	
PNE 161	Nursing in Health Changes I (Actual Clinic hours-24 Geriatrics)	6	Acceptance into Practical Nursing program
SAF 130	OSHA Safety for Healthcare	1	
<b>STUDENTS EARN AHA HEARTSAVER OSHA BLOODBORNE PATHOGEN CERTIFICATION. OPTION: AFTER SUCCESSFUL COMPLETION OF PNE 161 AND 40 CLINICAL HOURS STUDENTS ARE ELIGIBLE TO CHALLENGE THE CERTIFIED NURSE AIDE EXAM</b>			
MTH 133	Mathematics for Health Professions	3	
PNE 143	Applied Nursing Skills	1	Acceptance into Practical Nursing program
PNE 173	Pharmacology for PNs	2	Acceptance into Practical Nursing program
PNE 155	Body Structure & Function	3	Working on courses for or acceptance into Practical Nursing program
<b>STUDENTS MAY BE ELIGIBLE TO TAKE THE VIRGINIA BOARD OF NURSING CERTIFIED MEDICATION AIDE EXAM</b>			
<b>SECOND SEMESTER</b>			
PNE 162	Nursing in Health Changes II (Actual Clinic hours-210 MS/Geri/Pedi/Mental)	10	SDV 100, ENG 111, PNE 161, SAF 130, MTH 133, PNE 143, PNE 173, PNE 155
PSY 230	Developmental Psychology	3	
PNE 158	Mental Health	1	SDV 100, ENG 111, PNE 161, SAF 130, MTH 133, PNE 143, PNE 173, PNE 155
PNE 159	Care of Pediatric Clients	2	SDV 100, ENG 111, PNE 161, SAF 130, MTH 133, PNE 143, PNE 173, PNE 155
<b>THIRD SEMESTER</b>			
ENG 111	College Composition*	3	
PNE 164	Nursing in Health Changes IV (Actual Clinic hours-210 (OB/advanced clinical)	10	PNE 162, PSY 230, PNE 158, PNE 159
PNE 132	Care of Maternal and Newborn Clients	2	PNE 162, PSY 230, PNE 158, PNE 159
PNE 145	Trends	1	PNE 162, PSY 230, PNE 158, PNE 159
HLT 130	Nutrition and Diet Therapy	2	
<b>GRADUATES WILL BE PREPARED TO TAKE THE NCLEX-PN EXAMINATION AND OBTAIN SUBSEQUENT LICENSURE.</b>			
<b>TOTAL PROGRAM CREDITS</b>		<b>51</b>	

### Notes and Additional Curriculum Options

Course substitutions may be available. Please see an advisor for more information.

*Completion of both PSY 231 and PSY 232 will substitute for PSY 230. Completion of BIO 145, or both BIO 141 and 142, or completion of both BIO 231 and 232, will substitute for PNE 155.*

## Associate of Applied Science Degree

**RADIOGRAPHY TECHNOLOGY (SWCC)****PURPOSE**

Graduates of the radiography technology program are prepared to contribute as members of the allied health team, care for patients under the supervision of qualified physicians, and meet requirements for ARRT certification. This program is being provided through an innovative, cooperative agreement with Southwest Virginia Community College. Students will register at MECC for their general education course requirements and register through SWCC for their program courses.

The educational experience will be comprised of both classroom instruction and clinical rotations for completing required competency objectives. Classroom instruction incorporates interactive video-teleconferencing between classroom locations. The A.A.S. degree will be awarded by Southwest Virginia Community College. The cooperative Radiologic Technology Program at Southwest Virginia Community College is dedicated to serve students from southwest Virginia and east Tennessee. The Program will provide a quality educational experience in the art and science of radiologic technology and help the students succeed, both academically and clinically, as entry-level radiographers. It is the Program's aim to provide a sound foundation for our students towards building a rewarding professional career, and an opportunity to qualify as a valued contributing member in the healthcare team for our region.

**PROGRAM LEARNING OUTCOMES**

**Upon successful completion, students will be able to:**

1. Practice positioning competency.
2. Practice the appropriate use of ionizing radiation and protection skills.
3. Practice the appropriate use of technical factors for exposure.
4. Practice critical thinking/problem solving skills for image quality and acceptability for diagnosis.
5. Practice critical thinking/problem solving skills on non-routine patient examinations.
6. Practice age appropriate patient communication skills.
7. Practice good writing skills.
8. Practice good oral skills.
9. Practice personal accountability for punctuality and appearance.
10. Understand the role of professional organizations in their career development.
11. Practice an understanding of professional/legal ethics.
12. Practice networking with colleagues/peers within the profession.

**EMPLOYMENT OPPORTUNITIES**

Employment opportunities exist for well-trained, registered radiological technologists in hospitals, clinics, education, industry, government agencies, and private offices.

**PROGRAM REQUIREMENTS**

Students should have English and Mathematics skills assessed. Deficiencies in these areas may be corrected by completing the appropriate developmental studies courses.

In addition to the general admission requirements to the College, applicants must be high school graduates or the equivalent and must reflect a "C" average. A cumulative grade point average of 2.0 must be achieved on all college work. To meet the Radiography Program admission requirements, the applicant must have completed:

1. One unit of Biology with lab, one unit of Chemistry with lab with a "C" or better.
2. BIO 101 or 20 and CHM 05 or 111 will be considered equivalent to high school Biology and Chemistry. Completion or test credit for MTE 1-6 or proficiency in MTH 154 within the past five years will fulfill the math pre-requisite.
3. Completion of a college placement test, which includes sections of reading, writing and mathematics. All prescribed developmental work must be completed before admission into the program.
4. Submitted a college and a radiography application (including all high school and college transcripts or copy of GED) to the Admissions Office at SWCC or VHCC.
5. Complete the TEAS-AH test prior to January 15th and submit to the Admissions Office (must be taken within the past five years).

**FOR FURTHER INFORMATION, CONTACT:**

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276.523.9016

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276.523.9010

Kim Dorton, Dean, Health Sciences  
kdorton@mecc.edu  
276.523.9014



## HEALTH SCIENCES (CLINICAL)

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6. Observation in a Radiology Department for a minimum of twelve (12) hours; this observation is to be documented by radiology personnel denoting date(s) and time(s); and be submitted to Christy Lee at MECC.
7. Attend a general information session.
8. Because entry into this program is competitive, students must complete the application process with the Admissions Office at SWCC by no later than February 15th.

### ADDITIONAL INFORMATION

#### **Accreditation**

The program is fully accredited, with an 8 year award, by the Joint Review Committee for Radiologic Technology Education (JRCERT) 20 North Wacker Drive, Suite 2850, Chicago, IL, 60606-3182, phone (312)704-5300. You may also contact JCERT at [mail@jcert.org](mailto:mail@jcert.org) or at [www.jrcert.org](http://www.jrcert.org). Detailed Program Effectiveness Data is available from the link on the right side of the page. The JRCERT also publishes program effectiveness data, available at <https://portal.jrcertaccreditation.org/accredited-educational-programs/details/3fdeb5d1-39bf-4da8-8aff-0f5fe1a817a0>

#### **Environmental Conditions**

Environmental conditions include procedures that involve handling blood and body fluids using universal precautions.

#### **Program Requirements**

Upon admission and during the course of the program, the radiologic faculty will carefully observe and evaluate the student's suitability for the profession. If, in the opinion of the radiologic faculty, a student does not exhibit professional behavior, the student may be asked to withdraw from the program. Once enrolled, students who receive a final grade lower than "C" in any of the courses in radiography or related areas must obtain permission from the program director to continue the major in radiography. The Radiography Curriculum grading scale is as follows: A: 94-100; B: 87-93; C: 80-86; D: 73-79; F: Below 73.

Selected learning experiences will be provided at the cooperating hospitals within the geographic areas served by the colleges. Travel distance will vary, and can be more than 60 miles one way from your home campus, depending on the hospital clinical assignment. Travel can regularly exceed 60 miles from your home, depending on your residence location and the hospital clinical assignment. The program cannot guarantee clinical placement close to all students' homes. Students will rotate to a minimum of two clinical sites, at different locations, during the clinical component of the program.

Clinical Affiliates are located at the following facilities:

- Bristol Regional Medical Center, Bristol, TN
- Buchanan General Hospital, Grundy, VA
- New River Valley Medical Center, Christiansburg, VA
- Tazewell Community Hospital, Tazewell, VA
- Clinch Valley Medical Center, Richlands, VA
- Holston Valley Medical Center, Kingsport, TN
- Johnston Memorial Hospital, Abingdon, VA
- Lewis Gale Hospital, Pulaski, VA
- Lonesome Pine Hospital, Big Stone Gap, VA
- Russell County Hospital, Lebanon, VA
- Smyth County Community Hospital, Marion, VA
- Twin County Regional Hospital, Galax, VA
- Wythe County Community Hospital, Wytheville, VA

The purchase of and payment for items (such as: student uniforms, accessories, radiographic markers, dosimetry radiation monitoring service, club dues, state affiliation membership, educational software, clinical requirement document management account, HIPAA training, clinical tracking account, personal health insurance, liability insurance, required immunizations, physical examinations, background checks, drug screens, American Heart Association CPR certification fee, and ARRT licensure/certification application fee) is the responsibility of the individual student. Students are required to provide proof of health insurance at least annually while enrolled in the program.

#### **Criminal Background Check/Drug Screening**

Background checks for criminal history and sex offender crimes against minors are required for entrance into some clinical agencies. Students with convictions may be prohibited from clinical practice and may not complete the program. Clinical agencies may require drug testing prior to placement of students for clinical rotations. Students with positive drug test results may be prohibited from clinical practice and may not complete the program. Cost for criminal background checks and drug testing will be the responsibility of the student.

## RADIOGRAPHY TECHNOLOGY PROGRAM OF STUDY

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR SUMMER</b>			
RAD 105	Intro. to Rad. Protection & Patient Care	3	
SDV 100	College Success Skills	1	
RAD 195	Ethics, Teamwork, & Professional Development	1	
ENG 111	English Composition	3	
<b>FIRST YEAR FALL</b>			
MTH 154	Quantitative Reasoning	3	
BIO 141	Human Anatomy & Physiology I	4	
RAD 110	Imaging Equipment & Protection	3	
RAD 121	Radiographic Procedures I	4	
<b>FIRST YEAR SPRING</b>			
HLT 143	Medical Terminology	3	
BIO 142	Human Anatomy & Physiology II	4	
RAD 112	Radiologic Science II	4	
RAD 221	Radiologic Procedures II	4	
<b>SECOND YEAR SUMMER</b>			
RAD 190	Coordinated Internship (Term II)	3	
RAD 190	Coordinated Internship (Term I)	2	
RAD 205	Rad. Protection & Radiobiology (Term 1)	3	
<b>SECOND YEAR FALL</b>			
RAD 290	Coordinated Internship	6	
PSY 230	Developmental Psychology	3	
RAD 246	Special Procedures	2	
RAD 270	Digital Acquisition and Display	2	
<b>SECOND YEAR SPRING</b>			
RAD 290	Coordinated Internship	6	
	Humanities/Fine Arts Elective	3	
RAD 240	Radiographic Pathology	3	
RAD 215	Correlated Radiographic Theory	2	
<b>STUDENTS ARE ELIGIBLE TO TAKE THE NATIONAL REGISTRY EXAMINATION LEADING TO CERTIFICATION AS A REGISTERED TECHNOLOGIST IN RADIOGRAPHY BY THE ARRT</b>			
<b>TOTAL PROGRAM CREDITS</b>		<b>72</b>	

### Notes and Additional Curriculum Options

Course substitutions may be available. Please see an advisor for more information.

Completion of both PSY 231 and PSY 232 will substitute for PSY 230. Completion of either HIM 111 or HIM 112 will substitute for HLT 143. Completion of BIO 231 will substitute for BIO 141. Completion of BIO 232 will substitute for BIO 142.

## HEALTH SCIENCES (CLINICAL)

### Associate of Applied Science Degree

## NURSING - TRACK 1: TWO-YEAR (156)

### PURPOSE

The mission of the Mountain Empire Community College Nursing Program (AAS in Nursing degree) and other nursing programs of the Virginia Community College System (VCCS) is to provide affordable, community access to quality nursing education. The VCCS nursing programs prepare qualified students to provide safe, competent, entry-level nursing care in 21st century healthcare environments. Students are prepared to meet the ever-increasing complexity of the healthcare needs of the citizens of Virginia. Upon successful completion of the program, qualified graduates have the opportunity to apply to take the National Council Licensure Examination (NCLEX-RN) leading to licensure as a registered nurse.

### PROGRAM LEARNING OUTCOMES

**Upon successful completion of the curriculum, students are expected to be able to incorporate competencies that accomplish the following outcomes:**

1. Client-Centered Care - Provide client-centered care promoting therapeutic relationships, caring behaviors, and self-determination across the lifespan for diverse populations.
2. Safety - Practice safe nursing care that minimizes risk of harm across systems and client populations.
3. Clinical Judgment - Demonstrate nursing judgment through the use of clinical reasoning, the nursing process, and evidence-based practice in the provision of safe, quality care
4. Professional Behaviors - Practice professional behaviors that encompass the legal/ethical framework while incorporating self-reflection, leadership and a commitment to recognize the value of life-long learning.
5. Quality Improvement - Manage client care through quality improvement processes, information technology, and fiscal responsibility to meet client needs and support organizational outcomes
6. Collaboration - Demonstrate principles of collaborative practice within the nursing and interdisciplinary teams fostering mutual respect and shared decision-making to achieve stated outcomes of care.

### PROGRAM DESCRIPTION

The two-year Associate of Applied Science degree curriculum in Nursing is designed to prepare selected students to qualify as contributing members of the healthcare team, rendering direct patient care as beginning practitioners of nursing in a variety of healthcare settings. Track 1 offers eligible students the opportunity to complete the nursing degree program after two years of full-time attendance (1 summer session and 4 semesters). This is a rigorous and academically challenging program.

### EMPLOYMENT OPPORTUNITIES

The occupational objective of nursing graduates is to secure and sustain employment as a registered nurse providing nursing care to individuals, families, communities, and/or populations in a variety of healthcare settings.

### PROGRAM REQUIREMENTS

Students should have English and Mathematics skills assessed. Deficiencies in these areas may be corrected by completing the appropriate developmental studies courses. Admission to the nursing program is a selective and competitive process. The program is open to applicants who are free of any physical or mental condition that might adversely affect performance as a member of the nursing profession. In addition to the requirements for admission to the college, the applicant must meet the following requirements:

- State recognized high school, home school (at least 18 years of age), or GED transcript.
- College students must be in good standing with the most recently attended institution with a minimum GPA of 2.0.
- Demonstrated competency in science as evidenced by completion of high school biology (with laboratory) or high school chemistry (with laboratory) or the college equivalents or completion of BIO 141 and BIO 142 with no grade below a "C" prior to application deadline.

### FOR FURTHER INFORMATION, CONTACT:

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- Demonstrated competency in mathematics as evidenced by placement out of MTE 1-5 on the Virginia Placement Test (VPT) or completion of MDE 10. For those who do not meet this requirement, all prescribed developmental work must be completed prior to application deadline.
- Demonstrated competency in English as evidenced by placement into ENG 111. For those who do not meet this requirement, all prescribed developmental work must be completed prior to application deadline
- Completion of Nursing Application for each academic year interested in being considered for the nursing program
- Completion of the Test of Essential Academic Skills (TEAS) with a National Percentile Rank score of 45 or above (Total Score of 63.3% or above) within the past 5 years

**NOTE: Applicants who meet the requirements listed above will be ranked for admission using their ATI TEAS National Percentile Rank**

- A 2.5 curricular grade point average (GPA) for the following six general education courses: BIO 141, ENG 111, SDV 100, PSY 230, LBR 105 and NUR 135 is required for the nursing program. **These courses must be completed prior to enrollment in any nursing (NSG) courses.**
- Students must not have been enrolled in the first semester of the nursing program (NSG courses) more than one time. After two attempts in NSG courses, students are ineligible for admission consideration unless permission is obtained from the nursing program coordinator.

Applications for the nursing program are currently being accepted. The application deadline is February 15 of each year, however late applicants may apply for consideration should there be space available.

The number of qualified applicants offered admission to the nursing program is contingent upon space available in the classrooms and nursing laboratories, the program's access to sufficient clinical placements in the region's healthcare settings in order to meet the program's learning outcomes, and the number of qualified nursing faculty to teach students in classrooms, laboratories, and clinical settings. If the number of applicants exceeds the number of available qualified faculty and the amount of enrollment space available in the program, some applicants may not be accepted even if the minimum requirements for admission are met.

Transcripts from other Virginia Community Colleges are not required; however, any Virginia Community Colleges attended must be listed on both the Admissions Application and the Nursing Application.

All admission requirements (including English, science and math competencies) must be met and all documents submitted by the February 15 deadline. The nursing program application is now available online and further details of the application process may be found at <http://www.mecc.edu/forms/>.

Although applications are welcome from residents of other jurisdictions, first priority will be given to all qualified applicants who are domiciled residents of Lee, Wise, Scott, and Dickenson Counties and the City of Norton, and to Virginia domiciled residents not having access to a given program at their local community college, provided such students apply for admission to the program prior to registration or by a deadline established by the college and that they meet the minimum admission requirements. A domiciled resident is one who has been a permanent resident in the locality or state for the twelve months before the program application deadline. In addition, residents of localities with which the college has clinical-site affiliation may receive equal consideration for admission. Please contact Enrollment Services immediately upon applying to the program with any questions regarding jurisdiction.

The nursing program is dependent on use of local clinical agencies to meet the experiential or clinical learning needs of its students. In order to protect patients and visitors, as well as students, clinical agencies require that each student have proof of completion of the following:

1. Required Student Forms
2. Annual Student Statement of Health form
3. Student Information, Physical and Immunization forms. The nursing program physical examination form must be completed by a healthcare practitioner, MD, PA or CNP.
  - a. Immunizations include Tetanus, Mumps-Measles-Rubella (MMR), Varicella, and Hepatitis B
  - b. Proof of negative two-step TB Skin Test (TST) or proof of negative approved TB screening blood test or if a person has a previously documented positive TB screening test or a documented diagnosis of TB or Latent TB Infection (LTBI) in the past, perform an annual risk assessment/symptom check with your healthcare provider. Chest x-ray is only required if symptoms develop.
  - c. Documentation of ability to perform physical demands required in direct patient care activities.

## HEALTH SCIENCES (CLINICAL)

4. Purchase a background check, drug screen, and Medical Document Package
5. Clearance of criminal background check and drug testing
6. Copy of course completion card for Cardiopulmonary Resuscitation (CPR) , American Heart Association, "Basic Life Support (BLS) for Healthcare Providers" completed during the summer (May 15-August 15) prior to admission to NSG courses and maintained throughout the program.
7. Additional annual immunization requirements: Flu immunizations are required by most healthcare agencies and should be obtained when instructed to do so.
8. Personal health insurance
9. Other mandatory clinical facility requirements including professional responsibilities and patient confidentiality

Students should not attempt to complete any of these requirements until they have been admitted to the nursing program and attended the mandatory orientation session.

The cost of these requirements is the responsibility of the student.

Prior to enrollment in any NSG course, the student must provide the required clinical documentation.

### ADDITIONAL INFORMATION

#### **NCLEX-RN Licensure Examination Pass Rates, Program Completion, and Employment Data**

Year of Graduation	VATNP Program Completion	VATNP NCLEX-RN Pass Rate*	National NCLEX-RN Pass Rate All US Graduates*
2015 (N=128)	73%	93.0%	82%
2016 (N=129)	71%	90.7%	81.68%
2017 (N=136)	72%	89.7%	84.24%
2018 (N=190)	77%	90.53%	85.11%
2019 (N= 180)	73%	87.7%	88.18%
2020 (N= 197)	81%	72.54%	82.5%

\*NCLEX National Statistics from [www.NCSBN.org](http://www.NCSBN.org)

\*\*2020 will be the last graduates of the VATNP program at MECC

#### **Accreditation and State Approval**

The nursing program is approved by the Virginia Board of Nursing and accredited by the Accreditation Commission for Education in Nursing (ACEN), 3390 Peachtree Road NE, Suite 1400, Atlanta, GA 30326, 404-975-5000, website: [www.acenursing.org](http://www.acenursing.org)). ACEN is officially recognized as the national accrediting agency for nursing education by the Council on Post-Secondary Accreditation (COPA) and by the U.S. Department of Education.

#### **Licensure Reciprocity**

Licensure	Meets state educational requirements for licensure	Does not meet the state educational requirements for licensure	MECC has not made a determination on licensure reciprocity
RN	AL, AZ, AR, CO, DE, FL, GA, ID, IN, IA, KS, KY, LA, ME, MD, MS, MO, NE, NH, NM, NC, ND, OK, RI, SC, SD, TN, TX, UT, VA, WV, WI, WY	AK, CA, CT, HI, IL, MN, NV, NY, DC, OR, WA	MA, MI, NJ, OH, PA, RI, VT

Sources cited:

- *The Uniform Licensing Requirements (ULRs) are found at: [https://www.ncsbn.org/NLC\\_ULRs.pdf](https://www.ncsbn.org/NLC_ULRs.pdf)*
- *States currently in the NLC are found at: <https://www.ncsbn.org/nlcmemberstates.pdf>*
- *A list of all state requirements is found at: <https://www.ncsbn.org/14730.htm>*

#### **Statement for Nursing program (ADN):**

Pursuant to United States Department of Education (US DOE) regulation 34 CFR 668.43 (a) (5) (v), the Mountain Empire Community College Associate Degree in Nursing (ADN) program provides the following information for all prospective and current students:

The Mountain Empire Community College ADN program meets all Virginia Board of Nursing requirements for pre-licensure nursing education programs in the Commonwealth of Virginia. In addition, the Mountain Empire Community College ADN program meets all requirements for nationally recognized accreditation by the Accrediting Commission for Education in Nursing.

The Commonwealth of Virginia participates with multiple (see table) other states in the National Council of State Boards of Nursing (NCSBN) National Licensing Compact (NLC) to allow nurses licensed in one state to provide nursing care across state lines in other compact states. Information listed is current per NCSBN as of July 1, 2020.

Mountain Empire Community College is regionally accredited by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC).

### **Clinical Contracts**

Individual contracts are in effect with each affiliate clinical agency and these contracts differ in requirements for students. If students cannot comply with these contractual requirements, they will not be able to participate in clinical activities and will be asked to withdraw from the program. In general, contracts include the following:

1. Clinical agencies reserve the right to dismiss a student from their agency at any time with due cause. This will be done with advance notice except in an emergency.
2. Published policies of the clinical agency must be followed.
3. Students must wear the proper uniform, adhering to program and healthcare agency standards.
4. Students must attend and complete the healthcare agency's orientation program prior to participating in clinical activities.
5. Clinical agencies require that all students have documentation of ability to perform the physical demands required in direct patient care activities.
6. Students must meet health, immunity, and immunization requirements.
7. Student releases clinical agencies, its agents and employees from any liability for any injury or death to self or damage to personal property arising out of the clinical agreement or use of the clinical agency's facilities. Students must sign an Assumption of Risk document that serves to provide a general outline of hazards encountered within nursing. This list includes exposure to infectious, biological, chemical, environmental/mechanical, and psychosocial hazards, as well as, loss of personal property.
8. Student is financially responsible for any medical care required while in the clinical setting.
9. Student must provide current copy of course completion card for American Heart Association CPR BLS for Healthcare Provider.
10. Student must successfully complete HIPAA training as part of nursing orientation.
11. Student must complete a criminal background check and drug screen, which may be repeated during the program. The health care agency may deny a student participation in direct patient care based on results of the criminal background check and drug screen.
12. Demonstration of professional behavior is expected at all clinical learning experiences. Faculty will direct a student to leave the learning environment if unacceptable behaviors are observed.
13. Clinical agencies may require personal health insurance as a condition for student placement.
14. Student must submit required clinical documents with each clinical rotation. A student who does not meet published deadlines for submission forfeits his/her enrollment.
15. If a student is dismissed by a clinical agency, alternate placement (if available) will require disclosure of information related to the dismissal. The student must consent to disclosure through completion of a FERPA form.

**Important Note:** All prospective students are required to be eligible to participate in all clinical facilities where the nursing program is contracted to provide clinical instruction and supervision. Students who are not eligible for rehire in any facility may be excluded from clinical experiences, and thus may forfeit their seats in the nursing program. Students will be asked to disclose, upon admission, if they are current or former employees of any regional healthcare agencies.

### **Course Requirements**

The student is required to complete the sequence of courses as outlined by the curriculum pathway.

- All courses, general education and nursing, must be completed in sequence prior to continuing in the program. Exceptions due to unusual circumstances must be approved by the program coordinator.
- A student must have a "C" or above in theory plus "satisfactory" in clinical performance in all nursing courses to remain in the program. A grade of "C" or above in any related requirements is a prerequisite for continuing in the nursing program.
- The student is required to complete a sequence of courses and learning experiences provided at the college and selected community agencies such as hospitals, nursing homes, clinics, physicians' offices and comparable facilities. The nursing faculty will observe and evaluate the student's suitability for nursing and direct patient care.
- The nursing program faculty reserves the right to recommend, through appropriate channels, the withdrawal of any student who does not exhibit suitable demeanor/attendance.

## HEALTH SCIENCES (CLINICAL)

### **Criminal Background Checks/Barrier Crimes**

The State Board of Nursing has the authority to deny license to any applicant who has violated any of the provisions of 54.1-3007 of the Code of Virginia. Most healthcare organizations are prohibited from hiring persons who have been convicted of certain criminal acts (For a list of crimes under this category refer to the Virginia Board of Nursing webpage under the heading Practitioner Resources>Guidance Documents. Then choose Licensure/Applicants under the drop-down box and select Article 90-55 "Joint statement of the Department of Health and the Department of Health Professions on Impact of Criminal Convictions on Nursing Licensure or Certification and Employment in Virginia, revised November 2015"). Students with convictions or positive drug tests may be prohibited from clinical practice and may not be able to complete the program requirements.

### **Financial Requirements**

In addition to the usual college tuition and fees, the nursing program requires pre-admission testing and other expenses as identified below. Students are responsible for these costs as well as the cost of transportation to and from the college and health agencies used for clinical experiences.

Pre-Admission Testing (Test of Essential Academic Skills or TEAS)	\$70.00
Uniforms/Shoes/Watch/Stethoscope/ Lab Supply Kit	\$400.00
Standardized Progressive Testing Program	\$1340.00
Textbooks/Electronic Resources/Digital Devices	\$1800.00
CastleBranch© Criminal Background Check, Document Manager, Drug Screen, and Rechecks	\$133.00
Physical Exam, Immunizations, TB test	\$250.00
AHA CPR BLS for Healthcare Providers	\$157.00
Estimated In-state Tuition 67 credit hours @ \$157.00 per credit hour	\$10,519.00
NCLEX-RN Application Fees	\$425.00
Transportation (to and from college and clinical agencies)	Variable

*These costs are estimates and are subject to change without notification to faculty or students.*

### **Core Performance Standards\* for Admission to and Progression through the Nursing Program**

In addition to the nursing program's admission requirements, the nursing program sets forth eligibility requirements by citing the core performance standards. The standards set forth cognitive, sensory, affective and psychomotor performance requirements for every nursing student. Each core performance standard is accompanied by examples of activities nursing students and nurses are required to perform while executing nursing care. Students must be able to demonstrate satisfactory application of these core performance standards in classroom, clinical and laboratory settings, with or without reasonable accommodations, during the course of the nursing program.

Requirement	Performance Standard	Examples
Critical Thinking	Critical thinking ability sufficient for clinical judgment and delivery of safe client care	Identify cause and effect relationships in clinical situations; evaluate effectiveness of nursing interventions; use the scientific method in the development of nursing interventions; prioritize nursing tasks and solve problems
Quantitative Literacy	Quantitative literacy sufficient for clinical judgment and delivery of safe client care	Ability to take measurements; perform arithmetic and numerical operations (such as is necessary for calculating medication dosages and rates); read and record graphical displays of scientific and real-time physiologic data
Professional Relationships	Interpersonal and emotional skills sufficient for professional interactions with individuals, families and groups from a variety of social, emotional, cultural, and intellectual backgrounds	Establish rapport with clients and colleagues; ability to engage in conflict resolution, demonstrate peer accountability; adapt to changing environments/stressors; perform multiple responsibilities concurrently; establish therapeutic boundaries
Communication	Ability for professional interactions with others in verbal, non-verbal and written form	Explain treatment procedures; initiate health teaching; document and interpret nursing actions and client responses; ability to interpret common non-verbal expressions indicating pain, discomfort, anxiety and other behavioral states

Mobility/ Endurance	Physical abilities sufficient for movement from room to room and in small spaces; ability to execute movements required to provide care and treatment to clients in all health settings including functioning in emergency situations	Move around in client rooms, work spaces and treatment areas; administer cardiopulmonary resuscitation; walk and/or stand for prolonged periods during a 12 hour shift Perform lifting, as required, up to 50 pounds
Motor Skills	Gross and fine motor abilities sufficient for providing safe, effective nursing care	Ability to bend, squat, kneel, climb stairs, push, pull, reach for extended periods and assist in lifting, transferring, ambulating and positioning clients of all age groups and weights; calibrate and use equipment such as IV pumps; manipulate small equipment and containers such as syringes, vials and medication packages
Hearing	Auditory ability sufficient for monitoring and assessing health needs	Ability to hear alarms and other emergency signals, normal speaking level sounds, cries for help and auscultatory sounds on assessment
Visual	Visual ability sufficient for observation and assessment necessary in client care	Ability to observe client's condition and responses to treatments; ability to discern colors and changes in color shading; ability to read handwritten and printed data such as orders, medication labels, calibrations on syringes; ability to read chart content and interpret data correctly by clearly viewing monitors
Tactile Sense	Tactile ability sufficient for physical assessment	Ability to sufficiently perform physical assessments including palpation, pulses, changes in skin temperature and anatomical appearance

\*Southern Regional Education Board (SREB) Council on Collegiate Education for Nursing

### **Student Accommodations Statement**

The nursing program is committed to the policies set forth by the Virginia Community College System regarding disabilities and reasonable accommodations. Students may request academic accommodations for disabilities through the Office of Student Services. That office will evaluate the request and make recommendations for appropriate and reasonable accommodations, which the student will provide to the instructor. Individuals requiring temporary parking accommodations due to short-term illness should also contact Student Services. All correspondence will be kept confidential. You may visit the Disability Services web page <https://www.mecc.edu/disabilityservices>. The nursing program recommends that you contact the Disability Services Counselor for an appointment at least 2 weeks prior to the beginning of nursing classes. Success in the nursing program is contingent upon your ability to fulfill the core performance standards of the program with or without reasonable accommodations.

### **Reapplication/Readmission/Program Progression Process**

All courses in the curriculum, both general education and nursing, must be completed in sequence prior to progressing to the next semester. Students must earn a minimum grade of "C" (80) in all nursing courses, a minimum grade of "C" in all non-nursing courses and maintain a minimum cumulative GPA of 2.0 to remain eligible for continued enrollment in the nursing program. A student may enroll only in the nursing courses listed in his/her current semester in the nursing program. Clinical performance in a course is graded as Satisfactory/Unsatisfactory. A student who does not meet the clinical learning outcomes will fail the course. In addition, during the NSG 106/100, 115, 170, 210/211, and 252 courses, a Comprehensive Drug Calculation Exam (CDCE) will be administered to verify dosage calculation skills. Students must achieve at least 90 percent of maximum score on the CDCE with no more than three attempts in order to achieve a passing grade in the course.

- Students who are not successful in any first semester nursing (NSG) course must reapply to the nursing program. Re-enrollment must occur no later than three years from successful completion of NSG 100 or 115, otherwise the student will have to repeat all nursing courses.
- Any student who drops or withdraws from NSG 106 or NSG 200 must also drop or withdraw from NSG 100 due to the inability to complete clinical requirements.
- A student may continue in NSG 200 regardless of dropping or withdrawing from NSG 100 and/or NSG 106.
- Any student who drops or withdraws from NSG 252 or NSG 270 must withdraw from the other course as they are corequisites.
- A student who has 2 academic failures (grades below a "C") in nursing courses, other than first semester courses, will be ineligible for reenrollment in the program unless the student obtains licensure as a practical nurse. The student may then apply to Tracks 2 and 4.



## HEALTH SCIENCES (CLINICAL)

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- A student who wishes to reenter the nursing curriculum at any other level (e.g., NSG 152, 170, 210, 211, 230, 252, 270) must write a letter to the nursing program coordinator requesting readmission in the semester prior to the semester of enrollment. Each student's application for readmission will be considered by the nursing faculty and the decision to readmit will be based on additional requested data, prior performance in the nursing program, and space availability. Based on the course(s) that must be repeated, the student who is readmitted may be required to complete a skills competency course or demonstrate competency in critical nursing skills before progressing to the next level.
- According to the VCCS Policy 5.7.4, "A student will normally be limited to two enrollments in the same credit course." Any exception to this policy must be approved by the nursing program coordinator and the vice president of academic services and workforce solutions.

A student must obtain permission from the nursing program coordinator to continue in the nursing program under the following conditions:

- Repeating a course with a grade below "C";
- Withdrawal from a nursing course;
- Cumulative GPA below 2.0.

### **Transfer of Nursing Credit**

Students seeking to transfer credit from nursing programs at other institutions will be considered on an individual basis. Students must meet the admission requirements identified by the college and the nursing program. The student may be asked to provide course descriptions, documentation of completed direct patient care clinical hours, course syllabi, achievement or progressive testing scores, and selected data from the course instructor or program coordinator in order to determine placement in the nursing program. Consideration will be subject to availability of space. Since there frequently are differences among nursing programs, students wishing to transfer should be aware that there may be an interruption in program progression and courses may need to be repeated. Applicants must be in good standing at their previous college with a "C" average or better and must provide documentation of eligibility to return to that nursing program as well as documentation of the number of hours of clinical experience providing direct patient care supervised by a qualified instructor. Nursing courses which are being transferred must have been completed within three (3) years prior to admission to the nursing program.

Decisions on admission offers to transferring applicants will be determined by the nursing program coordinator following official transcript analysis, review of completed nursing course outlines, and space and faculty availability. A transferring student must demonstrate expected level proficiencies by testing including demonstration of competency in critical skills.

## NURSING - TRACK 1: TWO-YEAR PROGRAM OF STUDY

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR SUMMER</b>			
SDV 100	College Success Skills	1	
PSY 230	Developmental Psychology	3	
ENG 111	College Composition I	3	
NUR 135	Drug Dosage Calculations	2	
LBR 105	Library Skills for Research	1	
BIO 141	Human Anatomy & Physiology I	4	
<b>FIRST YEAR FALL</b>			
BIO 142	Human Anatomy & Physiology II	4	BIO 141
NSG 100	Introduction to Nursing Concepts	4	BIO 141
<b>OPTION: AFTER SUCCESSFUL COMPLETION OF NSG 100, (WHICH INCLUDES 45 DIRECT PATIENT CARE HOURS), STUDENTS ARE ELIGIBLE TO CHALLENGE THE CERTIFIED NURSE AIDE EXAM</b>			
NSG 106	Competencies for Nursing Practice	2	BIO 141
NSG 130	Professional Nursing Concepts	1	BIO 141
NSG 200	Health Promotion & Assessment	3	BIO 141
<b>FIRST YEAR SPRING</b>			
BIO 150	Introductory Microbiology	4	
NSG 152	Health Care Participant	3	BIO 142, NSG 100, NSG 106, NSG 130, NSG 200
NSG 170	Health/Illness Concepts	6	BIO 142, NSG 100, NSG 106, NSG 130, NSG 200
<b>SECOND YEAR FALL</b>			
ENG 112	College Composition II	3	ENG 111
NSG 210	Health Care Concepts I	5	BIO 150, NSG 152, NSG 170
NSG 211	Health Care Concepts II	5	BIO 150, NSG 152, NSG 170
<b>SECOND YEAR SPRING</b>			
NSG 230	Advanced Professional Nursing Concepts	2	NSG 210, NSG 211
NSG 252	Complex Health Care Concepts	4	NSG 210, NSG 211
NSG 270	Nursing Capstone	4	NSG 210, NSG 211
	Humanities Elective	3	
<b>GRADUATES ARE ELIGIBLE TO SIT FOR THE NCLEX-RN EXAMINATION AND SUBSEQUENT LICENSURE</b>			
<b>TOTAL PROGRAM CREDITS</b>		<b>67</b>	

### Notes and Additional Curriculum Options

Course substitutions may be available. Please see an advisor for more information.

## NURSING - TRACK 2: ADVANCED PLACEMENT OPTION FOR LPN TRANSITION (156)

### PURPOSE

The mission of the Associate of Applied Science Degree (AAS) in Nursing curriculum is to provide affordable, community access to quality nursing education. The nursing program prepares qualified students to provide safe, competent, entry-level nursing care in 21st century healthcare environments. Students are prepared to meet the ever-increasing complexity of the healthcare needs of the citizens of Virginia. Upon successful completion of the program, qualified graduates have the opportunity to take the National Council Licensure Examination (NCLEX-RN) leading to licensure as a registered nurse.

### PROGRAM LEARNING OUTCOMES

**Upon successful completion of the curriculum, students are expected to be able to incorporate competencies that accomplish the following outcomes:**

1. Client-Centered Care - Provide client-centered care promoting therapeutic relationships, caring behaviors, and self-determination across the lifespan for diverse populations.
2. Safety - Practice safe nursing care that minimizes risk of harm across systems and client populations.
3. Clinical Judgment - Demonstrate nursing judgment through the use of clinical reasoning, the nursing process, and evidence-based practice in the provision of safe, quality care
4. Professional Behaviors - Practice professional behaviors that encompass the legal/ethical framework while incorporating self-reflection, leadership and a commitment to recognize the value of life-long learning.
5. Quality Improvement - Manage client care through quality improvement processes, information technology, and fiscal responsibility to meet client needs and support organizational outcomes
6. Collaboration - Demonstrate principles of collaborative practice within the nursing and interdisciplinary teams fostering mutual respect and shared decision-making to achieve stated outcomes of care.

### PROGRAM DESCRIPTION

The Track 2 Advanced Placement Option for LPN Transition curriculum is designed to grant advanced placement to LPNs who have been admitted to the MECC Associate Degree program and meet pre-requisite requirements. If there is sufficient enrollment in the nursing program, students who meet the eligibility requirements for the advanced placement will take a transition course in the summer term then be eligible to take the sophomore level courses and graduate within one (1) academic year with an AAS degree in Nursing. The length of this track depends on the amount of time needed to complete the general education classes. The nursing classes can be completed in one year.

### EMPLOYMENT OPPORTUNITIES

The occupational objective of Nursing graduates is to secure and sustain employment as a registered nurse providing nursing care to individuals, families, communities, and/or populations in a variety of health care settings.

### PROGRAM REQUIREMENTS

Students should have English and Mathematics skills assessed. Deficiencies in these areas may be corrected by completing the appropriate developmental studies courses. Admission to the Mountain Empire Community College Nursing Program is a selective process. The program is open to applicants who are free of any physical or mental condition that might adversely affect performance as a member of the nursing profession. In addition to the requirements for admission to the college, the applicant must meet the following requirements:

- State recognized high school, home school (at least 18 years of age), or GED transcript.
- College students must be in good standing with the most recently attended institution with a minimum GPA of 2.0.

### FOR FURTHER INFORMATION, CONTACT:

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- Demonstrated competency in science as evidenced by completion of high school biology (with laboratory) or high school chemistry (with laboratory) or the college equivalents or completion of BIO 141 and BIO 142 with no grade below a "C" prior to application deadline.
- Demonstrated competency in mathematics as evidenced by placement out of MTE 1-5 on the Virginia Placement Test (VPT) or completion of MDE 10. For those who do not meet this requirement, all prescribed developmental work must be completed prior to application deadline.
- Demonstrated competency in English as evidenced by placement into ENG 111. For those who do not meet this requirement, all prescribed developmental work must be completed prior to application deadline.
- Completion of the Test of Essential Academic Skills (TEAS) with a National Percentile Rank score of 45 (Total Score of 63.3% or above) or above within the past five years.
- Completion of Nursing Application for each academic year interested in being considered for the nursing program.
- Be a currently licensed LPN (Copy of LPN license must be provided).
- Must have graduated from a PN program after May 15, 2018 or have at least one year (2000 hours) of full time LPN work experience in direct patient care during the past three years
- Applicants to Nursing Track 2: Advanced Placement Option for LPN Transition Curriculum must complete 22 credits of general education courses prior to admission to the program: BIO 141, BIO 142, BIO 150, ENG 111, SDV 100, PSY 230, LBR 105, and NUR 135.

**NOTE: Applicants who meet the requirements listed above will be ranked for admission using their ATI TEAS National Percentile Rank.**

Any student who does not have evidence on file in Enrollment Services by the February 15 application deadline indicating that these requirements will be met by the end of Summer semester (prior to the beginning of the first Nursing course) will not be considered for the Track 2: Advanced Placement Option for LPN Transition track or curriculum.

A 2.5 curricular grade point average (GPA) for the following six general education courses: BIO 141, ENG 111, SDV 100, PSY 230, LBR 105, and NUR 135 is required for the nursing program. These courses must be completed prior to enrollment in any nursing (NSG) courses.

Students must not have been enrolled in the first semester of the nursing (NUR or NSG courses) more than one time. After two attempts in NUR/NSG courses, students are ineligible for admission consideration unless permission is obtained from the nursing program coordinator.

Applications for the nursing program are currently being accepted. The application deadline is February 15th of each year, however late applicants may apply for consideration should there be space available.

The number of qualified applicants offered admission to the nursing program is contingent upon space available in the classrooms and nursing laboratories, the program's access to sufficient clinical placements in the region's healthcare settings in order to meet the program's learning outcomes, and the number of qualified nursing faculty to teach students in classrooms, laboratories, and clinical settings. If the number of applicants exceeds the number of available qualified faculty and the amount of enrollment space available in the program, some applicants may not be accepted even if the minimum requirements for admission are met.

Transcripts from other Virginia Community Colleges are not required; however, any Virginia Community Colleges attended must be listed on both the Admissions Application and the Nursing Application.

The Nursing program application is available online and further details of the application process may be found at <http://www.mecc.edu/forms/>.

Although applications are welcomed from residents of other jurisdictions, first priority will be given to all qualified applicants who are domiciled residents of Lee, Wise, Scott, and Dickenson Counties and the City of Norton, and to Virginia domiciled residents not having access to a given program at their local community college, provided such students apply for admission to the program prior to registration or by a deadline established by the college and that they meet the minimum admission requirements. A domiciled resident is one who has been a permanent resident in the locality or state for the twelve months before the program application deadline. In addition, residents of localities with which the college has clinical-site affiliation may receive equal consideration for admission. Please contact Enrollment Services immediately upon applying to the program with any questions regarding your jurisdiction status..

## HEALTH SCIENCES (CLINICAL)

The MECC nursing program is dependent on use of local clinical agencies to meet the experiential or clinical learning needs of its students. In order to protect patients and visitors, as well as students, clinical agencies require that each student have proof of completion of the following:

1. Required Student Forms
2. Annual Student Statement of Health form
3. Student Information, Physical and Immunization forms (must be completed by a healthcare practitioner, MD, PA or CNP).
  - a. Immunizations include Tetanus, Mumps-Measles-Rubella (MMR), Varicella, and Hepatitis B
  - b. Proof of negative two-step TB Skin Test (TST) or proof of negative approved TB screening blood test or if a person has a previously documented positive TB screening test or a documented diagnosis of TB or Latent TB Infection (LTBI) in the past, perform an annual risk assessment/symptom check with your healthcare provider. Chest x-ray is only required if symptoms develop.
  - c. Documentation of ability to perform physical demands required in direct patient care activities.
4. Purchase a background check, drug screen, and Medical Document Package
5. Clearance of criminal background check and drug testing
6. Proof of CPR completion, American Heart Association, "Basic Life Support (BLS) for Healthcare Providers" completed during the summer (May 15-August 15) prior to admission to NSG courses and maintained throughout the program
7. Additional annual immunization requirements: Flu immunizations are required by most healthcare agencies and should be obtained when instructed to do so.
8. Personal health insurance
9. Other mandatory clinical facility requirements including professional responsibilities and patient confidentiality.

Students should not attempt to complete any of these requirements until they have been admitted to the nursing program and attended the mandatory orientation session.

The cost of these requirements is the responsibility of the student.

Prior to enrollment in any NSG course, the student must provide the required clinical documentation.

### ADDITIONAL INFORMATION

#### **NCLEX-RN Licensure Examination Pass Rates, Program Completion, and Employment Data**

Year of Graduation	VATNP Program Completion	VATNP NCLEX-RN Pass Rate*	National NCLEX-RN Pass Rate All US Graduates*
2015 (N=128)	73%	93.0%	82%
2016 (N=129)	71%	90.7%	81.68%
2017 (N=136)	72%	89.7%	84.24%
2018 (N=190)	77%	90.53%	85.11%
2019 (N= 180)	73%	87.7%	88.18%
2020 (N= 197)	81%	72.54%	82.5%

\*NCLEX National Statistics from [www.NCSBN.org](http://www.NCSBN.org)

\*\*2020 will be the last graduates of the VATNP program at MECC

#### **Accreditation and State Approval**

The nursing program is approved by the Virginia Board of Nursing and accredited by the Accreditation Commission for Education in Nursing (ACEN), 3390 Peachtree Road NE, Suite 1400, Atlanta, GA 30326, 404-975-5000, website: [www.acenursing.org](http://www.acenursing.org)). ACEN is officially recognized as the national accrediting agency for nursing education by the Council on Post-Secondary Accreditation (COPA) and by the U.S. Department of Education.

**Licensure Reciprocity**

Licensure	Meets state educational requirements for licensure	Does not meet the state educational requirements for licensure	MECC has not made a determination on licensure reciprocity
RN	AL, AZ, AR, CO, DE, FL, GA, ID, IN, IA, KS, KY, LA, ME, MD, MS, MO, NE, NH, NM, NC, ND, OK, RI, SC, SD, TN, TX, UT, VA, WV, WI, WY	AK, CA, CT, HI, IL, MN, NV, NY, DC, OR, WA	MA, MI, NJ, OH, PA, RI, VT

Sources cited:

- *The Uniform Licensing Requirements (ULRs) are found at: [https://www.ncsbn.org/NLC\\_ULRs.pdf](https://www.ncsbn.org/NLC_ULRs.pdf)*
- *States currently in the NLC are found at: <https://www.ncsbn.org/nlcmemberstates.pdf>*
- *A list of all state requirements is found at: <https://www.ncsbn.org/14730.htm>*

**Statement for Nursing program (ADN):**

Pursuant to United States Department of Education (US DOE) regulation 34 CFR 668.43 (a) (5) (v), the Mountain Empire Community College Associate Degree in Nursing (ADN) program provides the following information for all prospective and current students:

The Mountain Empire Community College ADN program meets all Virginia Board of Nursing requirements for pre-licensure nursing education programs in the Commonwealth of Virginia. In addition, the Mountain Empire Community College ADN program meets all requirements for nationally recognized accreditation by the Accrediting Commission for Education in Nursing.

The Commonwealth of Virginia participates with multiple (see table) other states in the National Council of State Boards of Nursing (NCSBN) National Licensing Compact (NLC) to allow nurses licensed in one state to provide nursing care across state lines in other compact states. Information listed is current per NCSBN as of July 1, 2020.

Mountain Empire Community College is regionally accredited by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC).

**Clinical Contracts**

Individual contracts are in effect with each affiliate clinical agency and these contracts differ in requirements for students. If students cannot comply with these contractual requirements, they will not be able to participate in clinical activities and will be asked to withdraw from the program. In general, contracts include the following:

1. Clinical agencies reserve the right to dismiss a student from their agency at any time with due cause. This will be done with advance notice except in an emergency.
2. Published policies of the clinical agency must be followed.
3. Students must wear the proper uniform, adhering to program and healthcare agency standards.
4. Students must attend and complete the healthcare agency's orientation program prior to participating in clinical activities.
5. Clinical agencies require that all students have documentation of ability to perform the physical demands required in direct patient care activities.
6. Students must meet health, immunity, and immunization requirements.
7. Student releases clinical agencies, its agents and employees from any liability for any injury or death to self or damage to personal property arising out of the clinical agreement or use of the clinical agency's facilities. Students must sign an Assumption of Risk document that serves to provide a general outline of hazards encountered within nursing. This list includes exposure to infectious, biological, chemical, environmental/mechanical, and psychosocial hazards, as well as, loss of personal property.
8. Student is financially responsible for any medical care required while in the clinical setting.
9. Student must provide current copy of course completion card for American Heart Association CPR BLS for Healthcare Provider.
10. Student must successfully complete HIPAA training as part of nursing orientation.
11. Student must complete a criminal background check and drug screen, which may be repeated during the program. The health care agency may deny a student participation in direct patient care based on results of the criminal background check and drug screen.
12. Demonstration of professional behavior is expected at all clinical learning experiences. Faculty will direct a student to leave the learning environment if unacceptable behaviors are observed.
13. Clinical agencies may require personal health insurance as a condition for student placement.
14. Student must submit required clinical documents with each clinical rotation. A student who does not meet published deadlines for submission forfeits his/her enrollment.
15. If a student is dismissed by a clinical agency, alternate placement (if available) will require disclosure of information related to the dismissal. The student must consent to disclosure through completion of a FERPA form.

**Important Note:** All prospective students are required to be eligible to participate in all clinical facilities where the nursing program is contracted to provide clinical instruction and supervision. Students who are not eligible for rehire in any facility may be excluded from clinical experiences, and thus may forfeit their seats in the nursing program. Students will be asked to disclose, upon admission, if they are current or former employees of any regional healthcare agencies.

## HEALTH SCIENCES (CLINICAL)

### **Course Requirements**

The student is required to complete the sequence of courses as outlined by the curriculum pathway.

- All courses, general education and nursing, must be completed in sequence prior to continuing in the program. Exceptions due to unusual circumstances must be approved by the program coordinator.
- A student must have a "C" or above in theory plus "satisfactory" in clinical performance in all nursing courses to remain in the program. A grade of "C" or above in any related requirements is a prerequisite for continuing in the nursing program.
- The student is required to complete a sequence of courses and learning experiences provided at the college and selected community agencies such as hospitals, nursing homes, clinics, physicians' offices and comparable facilities. The nursing faculty will observe and evaluate the student's suitability for nursing and direct patient care.
- The nursing program faculty reserves the right to recommend, through appropriate channels, the withdrawal of any student who does not exhibit suitable demeanor/attendance.

### **Criminal Background Checks/Barrier Crimes**

The State Board of Nursing has the authority to deny license to any applicant who has violated any of the provisions of 54.1-3007 of the Code of Virginia. Most healthcare organizations are prohibited from hiring persons who have been convicted of certain criminal acts (For a list of crimes under this category refer to the Virginia Board of Nursing webpage under the heading, Practitioner Resources-Guidance Documents. Then choose Licensure/Applicants under the drop-down box and select Article 90-55 "Joint statement of the Department of Health and the Department of Health Professions on Impact of Criminal Convictions on Nursing Licensure or Certification and Employment in Virginia, revised November 2015"). Students with convictions or positive drug tests may be prohibited from clinical practice and may not be able to complete the program requirements.

### **Financial Requirements**

In addition to the usual college tuition and fees, the nursing program requires pre-admission testing and other expenses as identified below. Students are responsible for these costs as well as the cost of transportation to and from the college and health agencies used for clinical experiences.

Pre-Admission Testing (Test of Essential Academic Skills or TEAS)	\$70.00
Uniforms/Shoes/Watch/Stethoscope/Lab Supply Kit	\$400.00
Standardized Progressive Testing Program	\$1340.00
Textbooks/Electronic Resources	\$1800.00
CastleBranch© Criminal Background Check, Drug Screen, Document Manager	\$133.00
Physical Exam, Immunizations, TB test	\$250.00
CPR Certification	\$157.00
Estimated In-state Tuition 56 credit hours @ \$157.00 per credit hour	\$8,792.00
NCLEX-RN Application Fees	\$425.00
Transportation (to and from college and clinical agencies)	Variable

*These costs are estimates and are subject to change without notification to faculty or students.*

### **Core Performance Standards\* for Admission to and Progression through the Nursing Program**

In addition to the nursing program's admission requirements, the nursing program sets forth eligibility requirements by citing the core performance standards. The standards set forth cognitive, sensory, affective and psychomotor performance requirements for every nursing student. Each core performance standard is accompanied by examples of activities nursing students and nurses are required to perform while executing nursing care. Students must be able to demonstrate satisfactory application of these core performance standards in classroom, clinical and laboratory settings, with or without reasonable accommodations, during the course of the nursing program.

Requirement	Performance Standard	Examples
Critical Thinking	Critical thinking ability sufficient for clinical judgment and delivery of safe client care	Identify cause and effect relationships in clinical situations; evaluate effectiveness of nursing interventions; use the scientific method in the development of nursing interventions; prioritize nursing tasks and solve problems

Quantitative Literacy	Quantitative literacy sufficient for clinical judgment and delivery of safe client care	Ability to take measurements; perform arithmetic and numerical operations (such as is necessary for calculating medication dosages and rates); read and record graphical displays of scientific and real-time physiologic data
Professional Relationships	Interpersonal and emotional skills sufficient for professional interactions with individuals, families and groups from a variety of social, emotional, cultural, and intellectual backgrounds	Establish rapport with clients and colleagues; ability to engage in conflict resolution, demonstrate peer accountability; adapt to changing environments/stressors; perform multiple responsibilities concurrently; establish therapeutic boundaries
Communication	Ability for professional interactions with others in verbal, non-verbal and written form	Explain treatment procedures; initiate health teaching; document and interpret nursing actions and client responses; ability to interpret common non-verbal expressions indicating pain, discomfort, anxiety and other behavioral states
Mobility/Endurance	Physical abilities sufficient for movement from room to room and in small spaces; ability to execute movements required to provide care and treatment to clients in all health settings including functioning in emergency situations	Move around in client rooms, work spaces and treatment areas; administer cardiopulmonary resuscitation; walk and/or stand for prolonged periods during a 12 hour shift Perform lifting, as required, up to 50 pounds
Motor Skills	Gross and fine motor abilities sufficient for providing safe, effective nursing care	Ability to bend, squat, kneel, climb stairs, push, pull, reach for extended periods and assist in lifting, transferring, ambulating and positioning clients of all age groups and weights; calibrate and use equipment such as IV pumps; manipulate small equipment and containers such as syringes, vials and medication packages
Hearing	Auditory ability sufficient for monitoring and assessing health needs	Ability to hear alarms and other emergency signals, normal speaking level sounds, cries for help and auscultatory sounds on assessment
Visual	Visual ability sufficient for observation and assessment necessary in client care	Ability to observe client's condition and responses to treatments; ability to discern colors and changes in color shading; ability to read handwritten and printed data such as orders, medication labels, calibrations on syringes; ability to read chart content and interpret data correctly by clearly viewing monitors
Tactile Sense	Tactile ability sufficient for physical assessment	Ability to sufficiently perform physical assessments including palpation, pulses, changes in skin temperature and anatomical appearance

\*Southern Regional Education Board (SREB) Council on Collegiate Education for Nursing

**Student Accommodations Statement**

The nursing program is committed to the policies set forth by the Virginia Community College System regarding disabilities and reasonable accommodations. Students may request academic accommodations for disabilities through the Office of Student Services. That office will evaluate the request and make recommendations for appropriate and reasonable accommodations, which the student will provide to the instructor. Individuals requiring temporary handicapped parking accommodations due to short-term illness should also contact Student Services. All correspondence will be kept confidential.

Visit the Disability Services web page at <https://www.mecc.edu/disabilityservices/>. The Disability Services Counselor should be contacted for an appointment at least 2 weeks prior to the beginning of nursing classes if an accommodation is requested. Success is contingent upon ability to fulfill the core performance standards of the program with or without reasonable accommodations.

**Reapplication/Readmission/Program Progression Process**

All courses in the curriculum, both general education and nursing, must be completed in sequence prior to progressing to the next semester. Students must earn a minimum grade of "C" (80) in all nursing courses, a minimum grade of "C" in all non-nursing courses and maintain a minimum cumulative GPA of 2.0 to remain eligible for continued enrollment in the nursing program. A student may enroll only in the nursing courses listed in his/her current semester in the nursing program. Clinical performance in a course is



## HEALTH SCIENCES (CLINICAL)

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graded as Satisfactory/Unsatisfactory. A student who does not meet the clinical learning outcomes will fail the course. In addition, a Comprehensive Drug Calculation Exam (CDCE) will be administered each semester to verify dosage calculation skills. Students must achieve at least 90 percent of maximum score on each CDCE with no more than three attempts in order to achieve passing grades in each course.

- Students who are not successful in any first semester nursing (NSG) course must reapply to the nursing program. Re-enrollment must occur no later than three years from successful completion of NSG 100 or 115, otherwise the student will have to repeat all nursing courses..
- Any student who drops or withdraws from NSG 106 or NSG 200 must also drop or withdraw from NSG 100 due to the inability to complete clinical requirements.
- A student may continue in NSG 200 regardless of dropping or withdrawing from NSG 100 and/or NSG 106.
- Any student who drops or withdraws from NSG 252 or NSG 270 must withdraw from the other course as they are corequisites.
- A student who has 2 academic failures (grades below a "C") in nursing courses, other than first semester, will be ineligible for re-enrollment in the program.
- A student who wishes to reenter the nursing curriculum at any other level (e.g., NSG 152, 170, 210, 211, 230, 252, 270) must write a letter to the nursing program coordinator requesting readmission in the semester prior to the semester of enrollment. Each student's application for readmission will be considered by the nursing faculty and the decision to readmit will be based on additional requested data, prior performance in the nursing program, and space availability. Based on the course(s) that must be repeated, the student who is readmitted may be required to complete a skills competency course or demonstrate competency in critical nursing skills, including dosage calculation, before progressing to the next level.
- According to the VCCS Policy 5.7.4, "A student will normally be limited to two enrollments in the same credit course." Any exception to this policy must be approved by the nursing program coordinator and the Vice President of Academics and Workforce Solutions.

A student must obtain permission from the nursing program coordinator to continue in the Nursing Program under the following conditions:

- Repeating a course with a grade below "C";
- Withdrawal from a nursing course;
- Cumulative GPA below 2.0.

### **Transfer of Nursing Credit**

Students seeking to transfer credit from nursing programs at other institutions will be considered on an individual basis. Students must meet the admission requirements identified by the college and the nursing program. The student may be asked to provide course descriptions, documentation of completed direct patient care clinical hours, course syllabi, achievement or progressive testing scores, and selected data from the course instructor or program coordinator in order to determine placement in the nursing program. Consideration will be subject to availability of space. Since there frequently are differences among nursing programs, students wishing to transfer should be aware that there may be an interruption in program progression and courses may need to be repeated. Applicants must be in good standing at their previous college with a "C" average or better and must provide documentation of eligibility to return to that nursing program as well as documentation of the number of hours of clinical experience providing direct patient care supervised by a qualified instructor. Nursing courses which are being transferred must have been completed within three (3) years prior to admission to the nursing program.

Decisions on admission offers to transferring applicants will be determined by the nursing program coordinator following official transcript analysis, review of completed nursing course outlines, and space and faculty availability. A transferring student must demonstrate expected level proficiencies by testing including demonstration of competency in critical skills.

## NURSING -TRACK 2: ADVANCED PLACEMENT OPTION FOR LPN TRANSITION PROGRAM OF STUDY

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR SUMMER</b>			
SDV 100	College Success Skills	1	
ENG 111	College Composition I	3	
BIO 141	Human Anatomy & Physiology I	4	
<b>FIRST YEAR FALL</b>			
NUR 135	Drug Dosage Calculations	2	
LBR 105	Library Skills for Research	1	
PSY 230	Developmental Psychology	3	
BIO 142	Human Anatomy & Physiology II	4	BIO 141
<b>FIRST YEAR SPRING</b>			
BIO 150	Introductory Microbiology	4	
<b>SECOND YEAR SUMMER</b>			
NSG 115	Health Care Concepts for Transition	5	Acceptance to the Advanced Placement Option for LPN Transition Program , BIO 141, BIO 142, ENG 111, PSY 230, SDV 100
NSG 200	Health Promotion & Assessment	3	BIO 141
<b>SECOND YEAR FALL</b>			
ENG 112	College Composition II	3	ENG 111
NSG 210	Health Concepts I	5	BIO 150, NSG 152, NSG 170
NSG 211	Health Concepts II	5	BIO 150, NSG 152, NSG 170
<b>SECOND YEAR SPRING</b>			
NSG 230	Advanced Professional Nursing Concepts	2	NSG 210, NSG 211
NSG 252	Complex Health Care Concepts	4	NSG 210, NSG 211
NSG 270	Nursing Capstone	4	NSG 210, NSG 211
	Humanities Elective	3	
<b>GRADUATES ARE ELIGIBLE TO SIT FOR THE NCLEX-RN EXAMINATION AND SUBSEQUENT LICENSURE</b>			
<b>TOTAL PROGRAM CREDITS</b>		<b>56</b>	

### Notes and Additional Curriculum Options

Course substitutions may be available. Please see an advisor for more information.

\*Upon completion of NSG 115 credit will be awarded for NSG 100, 106, 130, 152, 170 (16 credits). These credits will appear on the student's official transcript.

## HEALTH SCIENCES (CLINICAL)

### Associate of Applied Science Degree

## NURSING - TRACK 3: PART-TIME EVENING/WEEKEND (156)

### PURPOSE

The mission of the Associate of Applied Science Degree (AAS) Nursing curriculum is to provide affordable, community access to quality nursing education. The nursing program prepares qualified students to provide safe, competent, entry-level nursing care in 21st century healthcare environments. Students are prepared to meet the ever-increasing complexity of the healthcare needs of the citizens of Virginia. Upon successful completion of the program, qualified graduates have the opportunity to apply to take the National Council Licensure Examination (NCLEX-RN) leading to licensure as a registered nurse.

### PROGRAM LEARNING OUTCOMES

Upon successful completion of the curriculum, students are expected to be able to incorporate competencies that accomplish the following outcomes:

1. Client-Centered Care - Provide client-centered care promoting therapeutic relationships, caring behaviors, and self-determination across the lifespan for diverse populations.
2. Safety - Practice safe nursing care that minimizes risk of harm across systems and client populations.
3. Clinical Judgment - Demonstrate nursing judgment through the use of clinical reasoning, the nursing process, and evidence-based practice in the provision of safe, quality care
4. Professional Behaviors - Practice professional behaviors that encompass the legal/ethical framework while incorporating self-reflection, leadership and a commitment to recognize the value of life-long learning.
5. Quality Improvement - Manage client care through quality improvement processes, information technology, and fiscal responsibility to meet client needs and support organizational outcomes
6. Collaboration - Demonstrate principles of collaborative practice within the nursing and interdisciplinary teams fostering mutual respect and shared decision-making to achieve stated outcomes of care.

### PROGRAM DESCRIPTION

The Associate of Applied Science degree curriculum in Nursing is designed to prepare selected students to qualify as contributing members of the healthcare team, rendering direct patient care as beginning practitioners of nursing in a variety of healthcare settings. The Track 3 Part-time Evening Weekend nursing program is specifically designed for working adults or other adults who are interested in becoming RNs but have other responsibilities that interfere with their abilities to attend the rigorous scheduling of Track 1. General education courses can be completed as night classes or by distance education options such as web-based learning. Nursing classes and clinicals are taught on evenings and weekends. The program is designed at a slower pace to be completed in 4 years.

### EMPLOYMENT OPPORTUNITIES

The occupational objective of nursing graduates is to secure and sustain employment as a registered nurse providing nursing care to individuals, families, communities, and/or populations in a variety of healthcare settings.

### PROGRAM REQUIREMENTS

Students should have English and Mathematics skills assessed. Deficiencies in these areas may be corrected by completing the appropriate developmental studies courses. Admission to the MECC Nursing Program is a selective and competitive process. The program is open to applicants who are free of any physical or mental condition that might adversely affect performance as a member of the nursing profession. In addition to the requirements for admission to the college, the applicant must meet the following requirements:

#### FOR FURTHER INFORMATION, CONTACT:

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- State recognized high school, home school (at least 18 years of age), or GED transcript.
- College students must be in good standing with the most recently attended institution with a minimum GPA of 2.0
- Demonstrated competency in science as evidenced by completion of high school biology (with laboratory) or high school chemistry (with laboratory) or the college equivalents or completion of BIO 141 and BIO 142 with no grade below a “C” prior to application deadline.
- Demonstrated competency in mathematics as evidenced by placement out of MTE 1-5 on the Virginia Placement Test (VPT) or completion of MDE 10. For those who do not meet this requirement, all prescribed developmental work must be completed prior to application deadline.
- Demonstrated competency in English as evidenced by placement into ENG 111. For those who do not meet this requirement, all prescribed developmental work must be completed prior to application deadline.
- Completion of Nursing Application for each academic year interested in being considered for the nursing program.
- Completion of the Test of Essential Academic Skills (TEAS) with a National Percentile Rank score of 45 or above (Total Score of 63.3% or above) within the past 5 years.
- Applicants to Nursing Track 3: Part-time Evening Weekend (PTEW) curriculum must complete 22 credits of general education courses prior to admission to the program: BIO 141, BIO 142, BIO 150, ENG 111, PSY 230, LBR105, NUR 135, and SDV 100.

**NOTE: Applicants who meet the requirements listed above will be ranked for admission using their ATI TEAS National Percentile Rank.**

A 2.5 curricular grade point average (GPA) for the following six general education courses: BIO 141, ENG 111, SDV 100, PSY 230, LBR 105 and NUR 135 is required for the nursing program. These courses must be completed prior to enrollment in any nursing (NSG) courses

Students must not have been enrolled in the first semester of the nursing program (NSG) courses more than one time. After two attempts in first semester NSG courses, students are ineligible for admission consideration unless permission is obtained from the nursing coordinator.

Any student who does not have evidence on file in Enrollment Services by the February 15th deadline indicating that these requirements will be met by the end of the Summer semester will not be considered for the Track 3: Part-time Evening Weekend curriculum. All admission requirements (including English, science and math competencies) must be met and all documents submitted by the February 15 deadline. The Nursing program application is now available online and further details of the application process may be found at <http://www.mecc.edu/forms/>.

Applications are currently being accepted. The application deadline is February 15th of each year, however late applicants may apply for consideration should there be space available.

The number of qualified applicants offered admission to the nursing program is contingent upon space available in the classrooms and nursing laboratories, the program’s access to sufficient clinical placements in the region’s healthcare settings in order to meet the program’s learning outcomes, and the number of qualified nursing faculty to teach students in classrooms, laboratories, and clinical settings. If the number of applicants exceeds the number of available qualified faculty and the amount of enrollment space available in the program, some applicants may not be accepted even if the minimum requirements for admission are met.

The Enrollment Services Office will suspend processing applications if all transcripts are not attached. Transcripts from other Virginia Community Colleges are not required; however, any Virginia Community Colleges attended must be listed on both the Admissions Application and the Nursing Application.

Although applications are welcomed from residents of other jurisdictions, first priority will be given to all qualified applicants who are domiciled residents of Lee, Wise, Scott, and Dickenson Counties and the City of Norton, and to Virginia domiciled residents not having access to a given program at their local community college, provided such students apply for admission to the program prior to registration or by a deadline established by the college and that they meet the minimum admission requirements. A domiciled resident is one who has been a permanent resident in the locality or state for the twelve months before the program application deadline. In addition, residents of localities with which the college has clinical-site affiliation may receive equal consideration for admission. Please contact Enrollment Services immediately upon applying to the program with any questions regarding jurisdiction.

The nursing program is dependent on use of local clinical agencies to meet the experiential or clinical learning needs of its students. In order to protect patients and visitors, as well as students, clinical agencies require that each student have proof of completion of the following:

1. Required Student Forms

## HEALTH SCIENCES (CLINICAL)

2. Annual Student Statement of Health form
3. Student Information, Physical and Immunization forms (must be completed by a healthcare practitioner, MD, PA or CNP).
  - a. Immunizations include Tetanus, Mumps-Measles-Rubella (MMR), Varicella, and Hepatitis B
  - b. Proof of negative two-step TB Skin Test (TST) or proof of negative approved TB screening blood test or if a person has a previously documented positive TB screening test or a documented diagnosis of TB or Latent TB Infection (LTBI) in the past, perform an annual risk assessment/symptom check with your healthcare provider. Chest x-ray is only required if symptoms develop.
  - c. Documentation of ability to perform physical demands required in direct patient care activities.
4. Purchase a background check, drug screen, and Medical Document Package
5. Clearance of criminal background check and drug testing
6. Proof of CPR completion, American Heart Association, "Basic Life Support (BLS) for Healthcare Providers" completed during the summer (May 15-August 15) prior to admission to NSG courses and maintained throughout the program
7. Additional annual immunization requirements: Flu immunizations are required by most healthcare agencies and should be obtained when instructed to do so.
8. Personal health insurance
9. Other mandatory clinical facility requirements including professional responsibilities and patient confidentiality.

Students should not attempt to complete any of these requirements until they have been admitted to the nursing program and attended the mandatory orientation session. The cost of these requirements is the responsibility of the student. Prior to enrollment in any NSG course, the student must provide the required clinical documentation.

### ADDITIONAL INFORMATION

#### **NCLEX-RN Licensure Examination Pass Rates, Program Completion, and Employment Data**

Year of Graduation	VATNP Program Completion	VATNP NCLEX-RN Pass Rate*	National NCLEX-RN Pass Rate All US Graduates*
2015 (N=128)	73%	93.0%	82%
2016 (N=129)	71%	90.7%	81.68%
2017 (N=136)	72%	89.7%	84.24%
2018 (N=190)	77%	90.53%	85.11%
2019 (N= 180)	73%	87.7%	88.18%
2020 (N= 197)	81%	72.54%	82.5%

\*NCLEX National Statistics from [www.NCSBN.org](http://www.NCSBN.org)

\*\*2020 will be the last graduates of the VATNP program at MECC

#### **Accreditation and State Approval**

The nursing program is approved by the Virginia Board of Nursing and accredited by the Accreditation Commission for Education in Nursing (ACEN), 3390 Peachtree Road NE, Suite 1400, Atlanta, GA 30326, 404-975-5000, website: [www.acenursing.org](http://www.acenursing.org)). ACEN is officially recognized as the national accrediting agency for nursing education by the Council on Post-Secondary Accreditation (COPA) and by the U.S. Department of Education.

#### **Licensure Reciprocity**

Licensure	Meets state educational requirements for licensure	Does not meet the state educational requirements for licensure	MECC has not made a determination on licensure reciprocity
RN	AL, AZ, AR, CO, DE, FL, GA, ID, IN, IA, KS, KY, LA, ME, MD, MS, MO, NE, NH, NM, NC, ND, OK, RI, SC, SD, TN, TX, UT, VA, WV, WI, WY	AK, CA, CT, HI, IL, MN, NV, NY, DC, OR, WA	MA, MI, NJ, OH, PA, RI, VT

Sources cited:

- The Uniform Licensing Requirements (ULRs) are found at: [https://www.ncsbn.org/NLC\\_ULRs.pdf](https://www.ncsbn.org/NLC_ULRs.pdf)
- States currently in the NLC are found at: <https://www.ncsbn.org/nlcmemberstates.pdf>
- A list of all state requirements is found at: <https://www.ncsbn.org/14730.htm>

#### **Statement for Nursing program (ADN):**

Pursuant to United States Department of Education (US DOE) regulation 34 CFR 668.43 (a) (5) (v), the Mountain Empire Community

College Associate Degree in Nursing (ADN) program provides the following information for all prospective and current students:

The Mountain Empire Community College ADN program meets all Virginia Board of Nursing requirements for pre-licensure nursing education programs in the Commonwealth of Virginia. In addition, the Mountain Empire Community College ADN program meets all requirements for nationally recognized accreditation by the Accrediting Commission for Education in Nursing.

The Commonwealth of Virginia participates with multiple (see table) other states in the National Council of State Boards of Nursing (NCSBN) National Licensing Compact (NLC) to allow nurses licensed in one state to provide nursing care across state lines in other compact states. Information listed is current per NCSBN as of July 1, 2020.

Mountain Empire Community College is regionally accredited by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC).

### **Clinical Contracts**

Individual contracts are in effect with each affiliate clinical agency and these contracts differ in requirements for students. If students cannot comply with these contractual requirements, they will not be able to participate in clinical activities and will be asked to withdraw from the program. In general, contracts include the following:

1. Clinical agencies reserve the right to dismiss a student from their agency at any time with due cause. This will be done with advance notice except in an emergency.
2. Published policies of the clinical agency must be followed.
3. Students must wear the proper uniform, adhering to program and healthcare agency standards.
4. Students must attend and complete the healthcare agency's orientation program prior to participating in clinical activities.
5. Clinical agencies require that all students have documentation of ability to perform the physical demands required in direct patient care activities.
6. Students must meet health, immunity, and immunization requirements.
7. Student releases clinical agencies, its agents and employees from any liability for any injury or death to self or damage to personal property arising out of the clinical agreement or use of the clinical agency's facilities. Students must sign an Assumption of Risk document that serves to provide a general outline of hazards encountered within nursing. This list includes exposure to infectious, biological, chemical, environmental/mechanical, and psychosocial hazards, as well as, loss of personal property.
8. Student is financially responsible for any medical care required while in the clinical setting.
9. Student must provide current copy of course completion card for American Heart Association CPR BLS for Healthcare Provider.
10. Student must successfully complete HIPAA training as part of nursing orientation.
11. Student must complete a criminal background check and drug screen, which may be repeated during the program. The health care agency may deny a student participation in direct patient care based on results of the criminal background check and drug screen.
12. Demonstration of professional behavior is expected at all clinical learning experiences. Faculty will direct a student to leave the learning environment if unacceptable behaviors are observed.
13. Clinical agencies may require personal health insurance as a condition for student placement.
14. Student must submit required clinical documents with each clinical rotation. A student who does not meet published deadlines for submission forfeits his/her enrollment.
15. If a student is dismissed by a clinical agency, alternate placement (if available) will require disclosure of information related to the dismissal. The student must consent to disclosure through completion of a FERPA form.

**Important Note:** All prospective students are required to be eligible to participate in all clinical facilities where the nursing program is contracted to provide clinical instruction and supervision. Students who are not eligible for rehire in any facility may be excluded from clinical experiences, and thus may forfeit their seats in the nursing program. Students will be asked to disclose, upon admission, if they are current or former employees of any regional healthcare agencies.

### **Course Requirements**

The student is required to complete the sequence of courses as outlined by the curriculum pathway.

- All courses, general education and nursing, must be completed in sequence prior to continuing in the program. Exceptions due to unusual circumstances must be approved by the program coordinator.
- A student must have a "C" or above in theory plus "satisfactory" in clinical performance in all nursing courses to remain in the program. A grade of "C" or above in any related requirements is a prerequisite for continuing in the nursing program.
- The student is required to complete a sequence of courses and learning experiences provided at the college and selected community agencies such as hospitals, nursing homes, clinics, physicians' offices and comparable facilities. The nursing faculty will observe and evaluate the student's suitability for nursing and direct patient care.
- The nursing program faculty reserves the right to recommend, through appropriate channels, the withdrawal of any student who does not exhibit suitable demeanor/attendance.

## HEALTH SCIENCES (CLINICAL)

### **Criminal Background Checks/Barrier Crimes**

The State Board of Nursing has the authority to deny license to any applicant who has violated any of the provisions of 54.1-3007 of the Code of Virginia. Most healthcare organizations are prohibited from hiring persons who have been convicted of certain criminal acts (For a list of crimes under this category refer to the Virginia Board of Nursing webpage under the heading, Practitioner Resources Guidance Documents. Then choose Licensure/Applicants under the drop-down box and select Article 90-55 "Joint statement of the Department of Health and the Department of Health Professions on Impact of Criminal Convictions on Nursing Licensure or Certification and Employment in Virginia, revised November 2015"). Students with convictions or positive drug tests may be prohibited from clinical practice and may not be able to complete the program requirements.

### **Financial Requirements**

In addition to the usual college tuition and fees, the nursing program requires pre-admission testing and other expenses as identified below. Students are responsible for these costs as well as the cost of transportation to and from the college and health agencies used for clinical experiences.

Pre-Admission Testing (Test of Essential Academic Skills or TEAS)	\$70.00
Uniforms/Shoes/Watch/Stethoscope/Lab Supply Kit	\$400.00
Standardized Progressive Testing Program	\$1340.00
Textbooks/Electronic Resources	\$1800.00
CastleBranch© Criminal Background Check, Drug Screen, Document Manager	\$133.00
Physical Exam, Immunizations, TB test	\$250.00
CPR Certification	\$157.00
Estimated In-state Tuition 67 credit hours @ \$157.00 per credit hour	\$10,519.00
NCLEX-RN Application Fees	\$425.00
Transportation (to and from college and clinical agencies)	Variable

These costs are estimates and are subject to change without notification to faculty or students.

### **Core Performance Standards\* for Admission to and Progression through the Nursing Program**

In addition to the nursing program's admission requirements, the nursing program sets forth eligibility requirements by citing the core performance standards. The standards set forth cognitive, sensory, affective and psychomotor performance requirements for every nursing student. Each core performance standard is accompanied by examples of activities nursing students and nurses are required to perform while executing nursing care. Students must be able to demonstrate satisfactory application of these core performance standards in classroom, clinical and laboratory settings, with or without reasonable accommodations, during the course of the nursing program.

Requirement	Performance Standard	Examples
Critical Thinking	Critical thinking ability sufficient for clinical judgment and delivery of safe client care	Identify cause and effect relationships in clinical situations; evaluate effectiveness of nursing interventions; use the scientific method in the development of nursing interventions; prioritize nursing tasks and solve problems
Quantitative Literacy	Quantitative literacy sufficient for clinical judgment and delivery of safe client care	Ability to take measurements; perform arithmetic and numerical operations (such as is necessary for calculating medication dosages and rates); read and record graphical displays of scientific and real-time physiologic data
Professional Relationships	Interpersonal and emotional skills sufficient for professional interactions with individuals, families and groups from a variety of social, emotional, cultural, and intellectual backgrounds	Establish rapport with clients and colleagues; ability to engage in conflict resolution, demonstrate peer accountability; adapt to changing environments/stressors; perform multiple responsibilities concurrently; establish therapeutic boundaries
Communication	Ability for professional interactions with others in verbal, non-verbal and written form	Explain treatment procedures; initiate health teaching; document and interpret nursing actions and client responses; ability to interpret common non-verbal expressions indicating pain, discomfort, anxiety and other behavioral states

Mobility/ Endurance	Physical abilities sufficient for movement from room to room and in small spaces; ability to execute movements required to provide care and treatment to clients in all health settings including functioning in emergency situations	Move around in client rooms, work spaces and treatment areas; administer cardiopulmonary resuscitation; walk and/or stand for prolonged periods during a 12 hour shift Perform lifting, as required, up to 50 pounds
Motor Skills	Gross and fine motor abilities sufficient for providing safe, effective nursing care	Ability to bend, squat, kneel, climb stairs, push, pull, reach for extended periods and assist in lifting, transferring, ambulating and positioning clients of all age groups and weights; calibrate and use equipment such as IV pumps; manipulate small equipment and containers such as syringes, vials and medication packages
Hearing	Auditory ability sufficient for monitoring and assessing health needs	Ability to hear alarms and other emergency signals, normal speaking level sounds, cries for help and auscultatory sounds on assessment
Visual	Visual ability sufficient for observation and assessment necessary in client care	Ability to observe client's condition and responses to treatments; ability to discern colors and changes in color shading; ability to read handwritten and printed data such as orders, medication labels, calibrations on syringes; ability to read chart content and interpret data correctly by clearly viewing monitors
Tactile Sense	Tactile ability sufficient for physical assessment	Ability to sufficiently perform physical assessments including palpation, pulses, changes in skin temperature and anatomical appearance

\*Southern Regional Education Board (SREB) Council on Collegiate Education for Nursing

### **Student Accommodations Statement**

The nursing program is committed to the policies set forth by the Virginia Community College System regarding disabilities and reasonable accommodations. Students may request academic accommodations for disabilities through the Office of Student Services. That office will evaluate the request and make recommendations for appropriate and reasonable accommodations, which the student will provide to the instructor. Individuals requiring temporary handicapped parking accommodations due to short-term illness should also contact Student Services. All correspondence will be kept confidential.

Visit the Disability Services web page at <https://www.mecc.edu/disabilityservices/>. Contact the Disability Services Counselor for an appointment at least 2 weeks prior to the beginning of nursing classes if accommodations are requested. Success is contingent upon ability to fulfill the core performance standards of the program with or without reasonable accommodations.

### **Reapplication/Readmission/Program Progression Process**

All courses in the curriculum, both general education and nursing, must be completed in sequence prior to progressing to the next semester. Students must earn a minimum grade of "C" (80) in all nursing courses, a minimum grade of "C" in all non-nursing courses and maintain a minimum cumulative GPA of 2.0 to remain eligible for continued enrollment in the nursing program. A student may enroll only in the nursing courses listed in his/her current semester in the nursing program. Clinical performance in a course is graded as Satisfactory/Unsatisfactory. A student who does not meet the clinical learning outcomes will fail the course. In addition, a Comprehensive Drug Calculation Exam (CDCE) will be administered each semester to verify dosage calculation skills. Students must achieve at least 90 percent of maximum score on each CDCE with no more than three attempts in order to achieve passing grades in each course.

- Students who are not successful in any first semester nursing (NSG) course must reapply to the nursing program. Re-enrollment must occur no later than three years from successful completion of NSG 100 or 115, otherwise the student will have to repeat all nursing courses.
- Any student who drops or withdraws from NSG 106 or NSG 200 must also drop or withdraw from NSG 100 due to the inability to complete clinical requirements.
- A student may continue in NSG 200 regardless of dropping or withdrawing from NSG 100 and/or NSG 106.
- Any student who drops or withdraws from NSG 252 or NSG 270 must withdraw from the other course as they are corequisites. A student who has 2 academic failures (grades below a "C") in nursing courses will be ineligible for reenrollment in the program.
- A student who wishes to reenter the nursing curriculum at any other level (e.g., NSG 152, 170, 210, 211, 230, 252, 270) must



## HEALTH SCIENCES (CLINICAL)

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write a letter to the nursing program coordinator requesting readmission in the semester prior to the semester of enrollment. Each student's application for readmission will be considered by the nursing faculty and the decision to readmit will be based on additional requested data, prior performance in the nursing program, and space availability. Based on the course(s) that must be repeated, the student who is readmitted may be required to complete a skills competency course or demonstrate competency in critical nursing skills, including dosage calculation, before progressing to the next level.

- According to the VCCS Policy 5.7.4, "A student will normally be limited to two enrollments in the same credit course." Any exception to this policy must be approved by the nursing program director and the Vice President of Academic Affairs and Workforce Solutions.

A student must obtain permission from the nursing program coordinator to continue in the Nursing Program under the following conditions:

- Repeating a course with a grade below "C";
- Withdrawal from a nursing course;
- Cumulative GPA below 2.0.

### **Transfer of Nursing Credit**

Students seeking to transfer credit from nursing programs at other institutions will be considered on an individual basis. Students must meet the admission requirements identified by the college and the nursing program. The student may be asked to provide course descriptions, documentation of completed direct patient care clinical hours, course syllabi, achievement or progressive testing scores, and selected data from the course instructor or program coordinator in order to determine placement in the nursing program. Consideration will be subject to availability of space. Since there frequently are differences among nursing programs, students wishing to transfer should be aware that there may be an interruption in program progression and courses may need to be repeated. Applicants must be in good standing at their previous college with a "C" average or better and must provide documentation of eligibility to return to that nursing program as well as documentation of the number of hours of clinical experience providing direct patient care supervised by a qualified instructor. Nursing courses which are being transferred must have been completed within three (3) years prior to admission to the nursing program.

Decisions on admission offers to transferring applicants will be determined by the nursing program coordinator following official transcript analysis, review of completed nursing course outlines, and space and faculty availability. A transferring student must demonstrate expected level proficiencies by testing including demonstration of competency in critical skills.

**NURSING - TRACK 3: PART-TIME EVENING/WEEKEND PROGRAM OF STUDY**

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL</b>			
SDV 100	College Success Skills	1	
ENG 111	College Composition I	3	
BIO 141	Human Anatomy & Physiology I	4	
<b>FIRST YEAR SPRING</b>			
BIO 142	Human Anatomy & Physiology II	4	BIO 141
NUR 135	Drug Dosage Calculations	2	
LBR 105	Library Skills for Research	1	
<b>FIRST YEAR SUMMER</b>			
BIO 150	Introductory Microbiology	4	
PSY 230	Developmental Psychology	3	
<b>SECOND YEAR FALL</b>			
NSG 106	Competencies for Nursing Practice	2	BIO 141
NSG 130	Professional Nursing Concepts	1	BIO 141
NSG 200	Health Promotion & Assessment	3	BIO 141
<b>SECOND YEAR SPRING</b>			
NSG 100	Introduction to Nursing Concepts	4	BIO 141
NSG 152	Health Care Participant	3	BIO 142, NSG 100, NSG 106, NSG 130, NSG 200
<b>OPTION: AFTER SUCCESSFUL COMPLETION OF NSG 100 (WHICH INCLUDES 45 DIRECT PATIENT CARE HOURS), STUDENTS ARE ELIGIBLE TO CHALLENGE THE CERTIFIED NURSE AIDE EXAM</b>			
<b>THIRD YEAR FALL</b>			
NSG 170	Health/Illness Concepts	6	BIO 142, NSG 100, NSG 106, NSG 130, NSG 200
<b>THIRD YEAR SPRING</b>			
NSG 210	Health Care Concepts I	5	BIO 150, NSG 152, NSG 170
<b>THIRD YEAR SUMMER</b>			
ENG 112	College Composition II	3	ENG 111
	Humanities Elective	3	
<b>FOURTH YEAR FALL</b>			
NSG 211	Health Care Concepts II	5	BIO 150, NSG 152, NSG 170
NSG 230	Advanced Professional Nursing Concepts	2	NSG 210, NSG 211
<b>FOURTH YEAR SPRING</b>			
NSG 252	Complex Health Care Concepts	4	NSG 210, NSG 211
NSG 270	Nursing Capstone	4	NSG 210, NSG 211
<b>GRADUATES ARE ELIGIBLE TO SIT FOR THE NCLEX-RN EXAMINATION AND SUBSEQUENT LICENSURE</b>			
<b>TOTAL PROGRAM CREDITS</b>		<b>67</b>	

**Notes and Additional Curriculum Options**

Course substitutions may be available. Please see an advisor for more information.

## HEALTH SCIENCES (CLINICAL)

### Associate of Applied Science Degree

## NURSING - TRACK 4: PART-TIME EVENING/WEEKEND ADVANCED PLACEMENT OPTION LPN TRANSITION (156)

### PURPOSE

The mission of the Associate of Applied Science Degree (AAS) in Nursing curriculum is to provide affordable, community access to quality nursing education. The nursing program prepares qualified students to provide safe, competent, entry-level nursing care in 21st century healthcare environments. Students are prepared to meet the ever-increasing complexity of the healthcare needs of the citizens of Virginia. Upon successful completion of the program, qualified graduates have the opportunity to apply to take the National Council Licensure Examination (NCLEX-RN) leading to licensure as a registered nurse.

### PROGRAM LEARNING OUTCOMES

Upon successful completion of the curriculum, students are expected to be able to incorporate competencies that accomplish the following outcomes:

1. Client-Centered Care - Provide client-centered care promoting therapeutic relationships, caring behaviors, and self-determination across the lifespan for diverse populations.
2. Safety - Practice safe nursing care that minimizes risk of harm across systems and client populations.
3. Clinical Judgment - Demonstrate nursing judgment through the use of clinical reasoning, the nursing process, and evidence-based practice in the provision of safe, quality care
4. Professional Behaviors - Practice professional behaviors that encompass the legal/ethical framework while incorporating self-reflection, leadership and a commitment to recognize the value of life-long learning.
5. Quality Improvement - Manage client care through quality improvement processes, information technology, and fiscal responsibility to meet client needs and support organizational outcomes
6. Collaboration - Demonstrate principles of collaborative practice within the nursing and interdisciplinary teams fostering mutual respect and shared decision-making to achieve stated outcomes of care.

### PROGRAM DESCRIPTION

The MECC Track 4 Part-time Evening Weekend Advanced Placement Option for LPN Transition curriculum is designed to grant advanced placement to LPNs who have been admitted to the nursing program and meet pre-requisite requirements. If there is sufficient enrollment in the nursing program, students who meet the eligibility requirements for the advanced placement will take a transition course in the fall term and then be eligible to take the sophomore level courses and graduate within two (2) academic years with an AAS Degree in Nursing. The length of this track depends on the amount of time needed to complete the general education classes. The nursing classes can be completed in two years. This option is available for LPNs who work and/or wish to attend part-time. General education courses can be completed as night classes or by distance education options such as web-based learning. Nursing classes and clinicals are taught on evenings and weekends.

### EMPLOYMENT OPPORTUNITIES

The occupational objective of Nursing graduates is to secure and sustain employment as a registered nurse providing nursing care to individuals, families, communities, and/or populations in a variety of health care settings.

### PROGRAM REQUIREMENTS

Students should have English and Mathematics skills assessed. Deficiencies in these areas may be corrected by completing the appropriate developmental studies courses. Admission to the nursing program is a selective and competitive process. The program is open to applicants who are free of any physical or mental condition that might adversely affect performance as a member of the nursing profession. In addition to the requirements for admission to the college, the applicant must meet the following requirements:

#### FOR FURTHER INFORMATION, CONTACT:

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- State recognized high school, home school (at least 18 years of age), or GED transcript.
- College students must be in good standing with the most recently attended institution with a minimum GPA of 2.0
- Demonstrated competency in science as evidenced by completion of high school biology (with laboratory) or high school chemistry (with laboratory) or the college equivalents or completion of BIO 141 and BIO 142 with no grade below a “C” prior to application deadline.
- Demonstrated competency in mathematics as evidenced by placement out of MTE 1-5 on the Virginia Placement Test (VPT) or completion of MDE 10. For those who do not meet this requirement, all prescribed developmental work must be completed prior to application deadline.
- Demonstrated competency in English as evidenced by placement into ENG 111. For those who do not meet this requirement, all prescribed developmental work must be completed prior to application deadline.
- Completion of Nursing Application for each academic year interested in being considered for the nursing program.
- Completion of the Test of Essential Academic Skills (TEAS) with a National Percentile Rank score of 45 or above (Total Score of 63.3% or above) within the past 5 years.
- Be a currently licensed LPN (Copy of LPN license must be provided).
- Must have graduated as an LPN after May 15, 2018 or have at least one year (2000 hours) of full-time LPN work experience in direct patient care during the past three years. (Written documentation must be provided from employer).
- Applicants to Nursing Track 4: Part-time Evening Weekend (PTEW) Advanced Placement Option for LPN Transition Curriculum must complete 22 credits of general education courses: BIO 141, BIO 142, BIO 150, ENG 111, PSY 230, LBR 105, NUR 135, and SDV 100.

**NOTE: Applicants who meet the requirements listed above will be ranked for admission using their ATI TEAS National Percentile Rank.**

Any student who does not have evidence on file in Enrollment Services by the February 15th application deadline indicating that these requirements will be met by the end of the Summer semester will not be considered for the Track 4: Part-time Evening Weekend Advanced Placement Option for LPN Transition program.

A 2.5 curricular grade point average (GPA) for the following six general education courses: BIO 141, ENG 111, SDV 100, PSY 230, LBR 105, and NUR 135 is required for the nursing program. **These courses must be completed prior to enrollment in any nursing (NSG) course.** Students must not have been enrolled in the first semester of the nursing program (NSG) courses more than one time. After two attempts in NSG courses, students are ineligible for admission consideration unless permission is obtained from the nursing program coordinator.

Applications are currently being accepted. The application deadline is February 15th of each year, however late applicants may apply for consideration should there be space available.

The number of qualified applicants offered admission to the nursing program is contingent upon space available in the classrooms and nursing laboratories, the program’s access to sufficient clinical placements in the region’s healthcare settings in order to meet the program’s learning outcomes, and the number of qualified nursing faculty to teach students in classrooms, laboratories, and clinical settings. If the number of applicants exceeds the number of available qualified faculty and the amount of enrollment space available in the program, some applicants may not be accepted even if the minimum requirements for admission are met.

Transcripts from other Virginia Community Colleges are not required; however, any Virginia Community Colleges attended must be listed on both the Admissions Application and the Nursing Application.

The Nursing program application is now available online and further details of the application process may be found at <http://www.mecc.edu/forms/>.

Although applications are welcomed from residents of other jurisdictions, first priority will be given to all qualified applicants who are domiciled residents of Lee, Wise, Scott, and Dickenson Counties and the City of Norton, and to Virginia domiciled residents not having access to a given program at their local community college, provided such students apply for admission to the program prior to registration or by a deadline established by the college and that they meet the minimum admission requirements. A domiciled resident is one who has been a permanent resident in the locality or state for the twelve months before the program application deadline. In addition, residents of localities with which the college has clinical-site affiliation may receive equal consideration for admission. Please contact Enrollment Services immediately upon applying to the program with any questions regarding jurisdiction.

The nursing program is dependent on use of local clinical agencies to meet the experiential or clinical learning needs of its students. In order to protect patients and visitors, as well as students, clinical agencies require that each student have proof of completion of the following:

## HEALTH SCIENCES (CLINICAL)

1. Required Student Forms
2. Annual Student Statement of Health form
3. Student Information, Physical and Immunization forms (must be completed by a healthcare practitioner, MD, PA or CNP).
  - a. Immunizations include Tetanus, Mumps-Measles-Rubella (MMR), Varicella, and Hepatitis B
  - b. Proof of negative two-step TB Skin Test (TST) or proof of negative approved TB screening blood test or if a person has a previously documented positive TB screening test or a documented diagnosis of TB or Latent TB Infection (LTBI) in the past, perform an annual risk assessment/symptom check with your healthcare provider. Chest x-ray is only required if symptoms develop.
  - c. Documentation of ability to perform physical demands required in direct patient care activities.
4. Purchase a background check, drug screen, and Medical Document Package
5. Clearance of criminal background check and drug testing
6. Proof of CPR completion, American Heart Association, "Basic Life Support (BLS) for Healthcare Providers" completed during the summer (May 15-August 15) prior to admission to NSG courses and maintained throughout the program
7. Additional annual immunization requirements: Flu immunizations are required by most healthcare agencies and should be obtained when instructed to do so.
8. Personal health insurance
9. Other mandatory clinical facility requirements including professional responsibilities and patient confidentiality.

Students should not attempt to complete any of these requirements until they have been admitted to the nursing program and attended the mandatory orientation session.

The cost of these requirements is the responsibility of the student. Prior to enrollment in any NSG course, the student must provide the required clinical documentation.

### ADDITIONAL INFORMATION

#### **NCLEX-RN Licensure Examination Pass Rates, Program Completion, and Employment Data**

Year of Graduation	VATNP Program Completion	VATNP NCLEX-RN Pass Rate*	National NCLEX-RN Pass Rate All US Graduates*
2015 (N=128)	73%	93.0%	82%
2016 (N=129)	71%	90.7%	81.68%
2017 (N=136)	72%	89.7%	84.24%
2018 (N=190)	77%	90.53%	85.11%
2019 (N= 180)	73%	87.7%	88.18%
2020 (N= 197)	81%	72.54%	82.5%

\*NCLEX National Statistics from [www.ncsbn.org](http://www.ncsbn.org)

\*\*2020 will be the last graduates of the VATNP program at MECC

#### **Accreditation and State Approval**

The nursing program is approved by the Virginia Board of Nursing and accredited by the Accreditation Commission for Education in Nursing (ACEN), 3390 Peachtree Road NE, Suite 1400, Atlanta, GA 30326, 404-975-5000, website: [www.acenursing.org](http://www.acenursing.org)). ACEN is officially recognized as the national accrediting agency for nursing education by the Council on Post-Secondary Accreditation (COPA) and by the U.S. Department of Education.

#### **Licensure Reciprocity**

Licensure	Meets state educational requirements for licensure	Does not meet the state educational requirements for licensure	MECC has not made a determination on licensure reciprocity
RN	AL, AZ, AR, CO, DE, FL, GA, ID, IN, IA, KS, KY, LA, ME, MD, MS, MO, NE, NH, NM, NC, ND, OK, RI, SC, SD, TN, TX, UT, VA, WV, WI, WY	AK, CA, CT, HI, IL, MN, NV, NY, DC, OR, WA	MA, MI, NJ, OH, PA, RI, VT

Sources cited:

- The Uniform Licensing Requirements (ULRs) are found at: [https://www.ncsbn.org/NLC\\_ULRs.pdf](https://www.ncsbn.org/NLC_ULRs.pdf)
- States currently in the NLC are found at: <https://www.ncsbn.org/nlcmemberstates.pdf>
- A list of all state requirements is found at: <https://www.ncsbn.org/14730.htm>

**Statement for Nursing program (ADN):**

Pursuant to United States Department of Education (US DOE) regulation 34 CFR 668.43 (a) (5) (v), the Mountain Empire Community College Associate Degree in Nursing (ADN) program provides the following information for all prospective and current students:

The Mountain Empire Community College ADN program meets all Virginia Board of Nursing requirements for pre-licensure nursing education programs in the Commonwealth of Virginia. In addition, the Mountain Empire Community College ADN program meets all requirements for nationally recognized accreditation by the Accrediting Commission for Education in Nursing.

The Commonwealth of Virginia participates with multiple (see table) other states in the National Council of State Boards of Nursing (NCSBN) National Licensing Compact (NLC) to allow nurses licensed in one state to provide nursing care across state lines in other compact states. Information listed is current per NCSBN as of July 1, 2020.

Mountain Empire Community College is regionally accredited by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC).

**Clinical Contracts**

Individual contracts are in effect with each affiliate clinical agency and these contracts differ in requirements for students. If students cannot comply with these contractual requirements, they will not be able to participate in clinical activities and will be asked to withdraw from the program. In general, contracts include the following:

1. Clinical agencies reserve the right to dismiss a student from their agency at any time with due cause. This will be done with advance notice except in an emergency.
2. Published policies of the clinical agency must be followed.
3. Students must wear the proper uniform, adhering to program and healthcare agency standards.
4. Students must attend and complete the healthcare agency's orientation program prior to participating in clinical activities.
5. Clinical agencies require that all students have documentation of ability to perform the physical demands required in direct patient care activities.
6. Students must meet health, immunity, and immunization requirements.
7. Student releases clinical agencies, its agents and employees from any liability for any injury or death to self or damage to personal property arising out of the clinical agreement or use of the clinical agency's facilities. Students must sign an Assumption of Risk document that serves to provide a general outline of hazards encountered within nursing. This list includes exposure to infectious, biological, chemical, environmental/mechanical, and psychosocial hazards, as well as, loss of personal property.
8. Student is financially responsible for any medical care required while in the clinical setting.
9. Student must provide current copy of course completion card for American Heart Association CPR BLS for Healthcare Provider.
10. Student must successfully complete HIPAA training as part of nursing orientation.
11. Student must complete a criminal background check and drug screen, which may be repeated during the program. The health care agency may deny a student participation in direct patient care based on results of the criminal background check and drug screen.
12. Demonstration of professional behavior is expected at all clinical learning experiences. Faculty will direct a student to leave the learning environment if unacceptable behaviors are observed.
13. Clinical agencies may require personal health insurance as a condition for student placement.
14. Student must submit required clinical documents with each clinical rotation. A student who does not meet published deadlines for submission forfeits his/her enrollment.
15. If a student is dismissed by a clinical agency, alternate placement (if available) will require disclosure of information related to the dismissal. The student must consent to disclosure through completion of a FERPA form.

**Important Note:** All prospective students are required to be eligible to participate in all clinical facilities where the nursing program is contracted to provide clinical instruction and supervision. Students who are not eligible for rehire in any facility may be excluded from clinical experiences, and thus may forfeit their seats in the nursing program. Students will be asked to disclose, upon admission, if they are current or former employees of any regional healthcare agencies.

**Course Requirements**

The student is required to complete the sequence of courses as outlined by the curriculum pathway.

- All courses, general education and nursing, must be completed in sequence prior to continuing in the program. Exceptions due to unusual circumstances must be approved by the program coordinator.
- A student must have a "C" or above in theory plus "satisfactory" in clinical performance in all nursing courses to remain in the program. A grade of "C" or above in any related requirements is a prerequisite for continuing in the nursing program.
- The student is required to complete a sequence of courses and learning experiences provided at the college and selected community agencies such as hospitals, nursing homes, clinics, physicians' offices and comparable facilities. The nursing faculty will observe and evaluate the student's suitability for nursing and direct patient care.

## HEALTH SCIENCES (CLINICAL)

- The nursing program faculty reserves the right to recommend, through appropriate channels, the withdrawal of any student who does not exhibit suitable demeanor/attendance.

### **Criminal Background Checks/Barrier Crimes**

The State Board of Nursing has the authority to deny license to any applicant who has violated any of the provisions of 54.1-3007 of the Code of Virginia. Most healthcare organizations are prohibited from hiring persons who have been convicted of certain criminal acts (For a list of crimes under this category refer to the Virginia Board of Nursing webpage under the heading, Practitioner Resources>Guidance Documents. Then choose Licensure/Applicants under the drop-down box and select Article 90-55 "Joint statement of the Department of Health and the Department of Health Professions on Impact of Criminal Convictions on Nursing Licensure or Certification and Employment in Virginia, revised November 2015"). Students with convictions or positive drug tests may be prohibited from clinical practice and may not be able to complete the program requirements.

### **Financial Requirements**

In addition to the usual college tuition and fees, the nursing program requires pre-admission testing and other expenses as identified below. Students are responsible for these costs as well as the cost of transportation to and from the college and health agencies used for clinical experiences.

Pre-Admission Testing (Test of Essential Academic Skills or TEAS)	\$70.00
Uniforms/Shoes/Watch/Stethoscope/Lab Supply Kit	\$400.00
Standardized Progressive Testing Program	\$1340.00
Textbooks/Electronic Resources	\$1800.00
CastleBranch© Criminal Background Check, Drug Screen, Document Manager	\$133.00
Physical Exam, Immunizations, TB test	\$250.00
CPR Certification	\$157.00
Estimated In-state Tuition 56 credit hours @ \$157.00 per credit hour	\$8,792.00
NCLEX-RN Application Fees	\$425.00
Transportation (to and from college and clinical agencies)	Variable

These costs are estimates and are subject to change without notification to faculty or students.

### **Core Performance Standards\* for Admission to and Progression through the Nursing Program**

In addition to the nursing program's admission requirements, the nursing program sets forth eligibility requirements by citing the core performance standards. The standards set forth cognitive, sensory, affective and psychomotor performance requirements for every nursing student. Each core performance standard is accompanied by examples of activities nursing students and nurses are required to perform while executing nursing care. Students must be able to demonstrate satisfactory application of these core performance standards in classroom, clinical and laboratory settings, with or without reasonable accommodations, during the course of the nursing program.

Requirement	Performance Standard	Examples
Critical Thinking	Critical thinking ability sufficient for clinical judgment and delivery of safe client care	Identify cause and effect relationships in clinical situations; evaluate effectiveness of nursing interventions; use the scientific method in the development of nursing interventions; prioritize nursing tasks and solve problems
Quantitative Literacy	Quantitative literacy sufficient for clinical judgment and delivery of safe client care	Ability to take measurements; perform arithmetic and numerical operations (such as is necessary for calculating medication dosages and rates); read and record graphical displays of scientific and real-time physiologic data
Professional Relationships	Interpersonal and emotional skills sufficient for professional interactions with individuals, families and groups from a variety of social, emotional, cultural, and intellectual backgrounds	Establish rapport with clients and colleagues; ability to engage in conflict resolution, demonstrate peer accountability; adapt to changing environments/stressors; perform multiple responsibilities concurrently; establish therapeutic boundaries

Communication	Ability for professional interactions with others in verbal, non-verbal and written form	Explain treatment procedures; initiate health teaching; document and interpret nursing actions and client responses; ability to interpret common non-verbal expressions indicating pain, discomfort, anxiety and other behavioral states
Mobility/ Endurance	Physical abilities sufficient for movement from room to room and in small spaces; ability to execute movements required to provide care and treatment to clients in all health settings including functioning in emergency situations	Move around in client rooms, work spaces and treatment areas; administer cardiopulmonary resuscitation; walk and/or stand for prolonged periods during a 12 hour shift Perform lifting, as required, up to 50 pounds
Motor Skills	Gross and fine motor abilities sufficient for providing safe, effective nursing care	Ability to bend, squat, kneel, climb stairs, push, pull, reach for extended periods and assist in lifting, transferring, ambulating and positioning clients of all age groups and weights; calibrate and use equipment such as IV pumps; manipulate small equipment and containers such as syringes, vials and medication packages
Hearing	Auditory ability sufficient for monitoring and assessing health needs	Ability to hear alarms and other emergency signals, normal speaking level sounds, cries for help and auscultatory sounds on assessment
Visual	Visual ability sufficient for observation and assessment necessary in client care	Ability to observe client's condition and responses to treatments; ability to discern colors and changes in color shading; ability to read handwritten and printed data such as orders, medication labels, calibrations on syringes; ability to read chart content and interpret data correctly by clearly viewing monitors
Tactile Sense	Tactile ability sufficient for physical assessment	Ability to sufficiently perform physical assessments including palpation, pulses, changes in skin temperature and anatomical appearance

\*Southern Regional Education Board (SREB) Council on Collegiate Education for Nursing

### **Student Accommodations Statement**

The nursing program is committed to the policies set forth by the Virginia Community College System regarding disabilities and reasonable accommodations. Students may request academic accommodations for disabilities through the Office of Student Services. That office will evaluate the request and make recommendations for appropriate and reasonable accommodations, which the student will provide to the instructor. Individuals requiring temporary handicapped parking accommodations due to short-term illness should also contact Student Services. All correspondence will be kept confidential.

Visit the Disability Services web page at <https://www.mecc.edu/disabilityservices/>. Contact the Disability Services Counselor for an appointment at least 2 weeks prior to the beginning of nursing classes if accommodations are requested. Success is contingent upon ability to fulfill the core performance standards of the program with or without reasonable accommodations.

### **Reapplication/Readmission/Program Progression Process**

All courses in the curriculum, both general education and nursing, must be completed in sequence prior to progressing to the next semester. Students must earn a minimum grade of "C" (80) in all nursing courses, a minimum grade of "C" in all non-nursing courses and maintain a minimum cumulative GPA of 2.0 to remain eligible for continued enrollment in the nursing program. A student may enroll only in the nursing courses listed in his/her current semester in the nursing program.

Clinical performance in a course is graded as Satisfactory/Unsatisfactory. A student who does not meet the clinical learning outcomes will fail the course. In addition, a Comprehensive Drug Calculation Exam (CDCE) will be administered each semester to verify dosage calculation skills. Students must achieve at least 90 percent of maximum score on each CDCE with no more than three attempts in order to achieve passing grades in each course.

- Students who are not successful in any first semester nursing (NSG) course must reapply to the nursing program. Re-enrollment must occur no later than three years from successful completion of NSG 100 or 115, otherwise the student will have to repeat all nursing courses.
- Any student who drops or withdraws from NSG 106 or NSG 200 must also drop or withdraw from NSG 100 due to the inability to complete clinical requirements.



## HEALTH SCIENCES (CLINICAL)

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- A student may continue in NSG 200 regardless of dropping or withdrawing from NSG 100 and/or NSG 106.
- Any student who drops or withdraws from NSG 252 or NSG 270 must withdraw from the other course as they are corequisites.
- A student who has 2 academic failures (grades below a "C") in nursing courses will be ineligible for reenrollment in the program.
- A student who wishes to reenter the nursing curriculum at any other level (e.g., NSG 152, 170, 210, 211, 230, 252, 270) must write a letter to the nursing program coordinator requesting readmission in the semester prior to the semester of enrollment. Each student's application for readmission will be considered by the nursing faculty and the decision to readmit will be based on additional requested data, prior performance in the nursing program, and space availability. Based on the course(s) that must be repeated, the student who is readmitted may be required to complete a skills competency course or demonstrate competency in critical nursing skills, including dosage calculation, before progressing to the next level.
- According to the VCCS Policy 5.7.4, "A student will normally be limited to two enrollments in the same credit course." Any exception to this policy must be approved by the nursing program coordinator and the Vice President of Academic Affairs and Workforce Solutions.

A student must obtain permission from the nursing program coordinator to continue in the Nursing Program under the following conditions:

- Repeating a course with a grade below "C";
- Withdrawal from a nursing course;
- Cumulative GPA below 2.0.

### **Transfer of Nursing Credit**

Students seeking to transfer credit from nursing programs at other institutions will be considered on an individual basis. Students must meet the admission requirements identified by the college and the nursing program. The student may be asked to provide course descriptions, documentation of completed direct patient care clinical hours, course syllabi, achievement or progressive testing scores, and selected data from the course instructor or program coordinator in order to determine placement in the nursing program. Consideration will be subject to availability of space. Since there frequently are differences among nursing programs, students wishing to transfer should be aware that there may be an interruption in program progression and courses may need to be repeated. Applicants must be in good standing at their previous college with a "C" average or better and must provide documentation of eligibility to return to that nursing program as well as documentation of the number of hours of clinical experience providing direct patient care supervised by a qualified instructor. Nursing courses which are being transferred must have been completed within three (3) years prior to admission to the nursing program.

Decisions on admission offers to transferring applicants will be determined by the nursing program coordinator following official transcript analysis, review of completed nursing course outlines, and space and faculty availability. A transferring student must demonstrate expected level proficiencies by testing including demonstration of competency in critical skills.

## NURSING - TRACK 4: PART-TIME EVENING/WEEKEND ADVANCED PLACEMENT OPTION LPN TRANSITION PROGRAM OF STUDY

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL</b>			
SDV 100	College Success Skills	1	
ENG 111	College Composition I	3	
BIO 141	Human Anatomy & Physiology I	4	
<b>FIRST YEAR SPRING</b>			
BIO 142	Human Anatomy & Physiology II	4	BIO 141
NUR 135	Drug Dosage Calculations	2	
LBR 105	Library Skills for Research	1	
PSY 230	Developmental Psychology	3	
<b>FIRST YEAR SUMMER</b>			
BIO 150	Introductory Microbiology	4	
<b>SECOND YEAR FALL</b>			
NSG 115	Health Care Concepts for Transition	5	Acceptance to the Advanced Placement Option for LPN Transition Program, BIO 141, BIO 142, ENG 111, PSY 230, SDV 100
NSG 200	Health Promotion & Assessment	3	BIO 141
<b>SECOND YEAR SPRING</b>			
NSG 210	Health Care Concepts I	5	BIO 150, NSG 152, NSG 170
<b>SECOND YEAR SUMMER</b>			
ENG 112	College Composition II	3	ENG 111
	Humanities Elective	3	
<b>THIRD YEAR FALL</b>			
NSG 211	Health Care Concepts II	5	BIO 150, NSG 152, NSG 170
NSG 230	Advanced Professional Nursing Concepts	2	NSG 210, NSG 211
<b>THIRD YEAR SPRING</b>			
NSG 252	Complex Health Care Concepts	4	NSG 210, NSG 211
NSG 270	Nursing Capstone	4	NSG 210, NSG 211
<b>GRADUATES ARE ELIGIBLE TO SIT FOR THE NCLEX-RN EXAMINATION AND SUBSEQUENT LICENSURE</b>			
<b>TOTAL PROGRAM CREDITS</b>		<b>56</b>	

### Notes and Additional Curriculum Options

Course substitutions may be available. Please see an advisor for more information.

Upon successful completion of NSG 115 credit will be awarded for NSG 100, 106, 130, 152, 170 (16 credits). These credits will appear on the student's official transcript.

## HEALTH SCIENCES (CLINICAL)

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### Associate of Applied Science Degree

## RESPIRATORY THERAPY (181)

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### PURPOSE

The mission of the Mountain Empire Community College Respiratory Therapy Program is to provide competent advanced-level respiratory therapists who demonstrate professionalism while providing excellent care. It will provide the graduates with comprehensive skills to meet the employment needs of the health care providers within the MECC service region, the Commonwealth, and the nation.

### PROGRAM LEARNING OUTCOMES/GOALS

Upon successful completion, students will be able to:

1. Demonstrate the ability to gather, comprehend, evaluate, apply, and problem solve using clinical information relevant to his/her role as a registered respiratory therapist.
2. Demonstrate the ability to perform the clinical technical skills relevant to his/her role as a registered respiratory therapist.
3. Exhibit the personal behaviors consistent with professional standards and employer expectations of a registered respiratory therapist.

### EMPLOYMENT OPPORTUNITIES

Respiratory Therapists have job opportunities in hospitals, home care, rehabilitation agencies, nursing homes, emergency transport teams, sleep centers, pulmonary function laboratories, outpatient clinics, and physician offices. Respiratory Therapists sees a diverse group of patients ranging from newborn and pediatric patients to adults and the elderly.

Job opportunities are very good in this region and nationwide. The United States Bureau of Labor Statistics projects a 21 percent growth in jobs from 2018 to 2028. In May 2018 the U.S. Bureau of Labor Statistics reported the National annual mean wage of respiratory therapists were \$62,500 and Virginia had an average annual mean wage of \$60,200.

### PROGRAM REQUIREMENTS

Students should have English and Mathematics skills assessed. Deficiencies in these areas may be corrected by completing the appropriate developmental studies courses. In addition to the general admission requirements of the College, this program requires a high/home school diploma or GED. High/home school courses must include one unit of algebra 1 and one unit of laboratory science with a C or above. If courses were not completed in high/home school with a C or above, they must be completed in college. The student's high/home school and any college work attempted must reflect a minimum of "C" average.

To apply to the program, please complete the Respiratory Therapy Program Application online. If you are a new student or have not attended classes within the past year, you will also need to complete an Application for Admission to the College. Respiratory Therapy classes begin in the summer semester each year. Applications are accepted from August 16th to May 1st for each class starting in June. A selection process is utilized to choose applicants for each year's program as each class is limited to a maximum of 20 students.

After the class has been filled, the remaining applicants will be placed on an alternate list. Should an admitted student not accept his/her position, applicants on the alternate list will be admitted into the program through the last day of registration for the summer classes.

Applicants who do not meet all the prerequisites will remain on the pre-respiratory list until all prerequisites are documented. Upon completion of the prerequisites, the applicant will be considered for admission to the program. If all the positions are filled, the applicant will be added to the alternate list.

A new Respiratory Therapy Program Application must be submitted for each year you wish to be considered for admission to the Respiratory Therapy program.

### ADDITIONAL INFORMATION

#### Accreditation and State Approval

The Respiratory Therapy Program at Mountain Empire Community College is accredited by the Commission for Accreditation for

#### FOR FURTHER INFORMATION, CONTACT:

Wes Mullins  
jmullins@mecc.edu  
276.523.9017

Roger Thompson  
rthompson@mecc.edu  
276.523.9021

Kim Dorton, Dean, Health Sciences  
kdorton@mecc.edu  
276.523.9014

Respiratory Care (CoARC). Contact CoARC at P O Box 54876, Hurst, TX 76054-4876, <https://coarc.com/Students/Programmatic-Outcomes-Data/>.

### Licensure Reciprocity

Licensure	Meets state educational requirements for licensure	Does not meet the state educational requirements for licensure	MECC has not made a determination on licensure reciprocity
RRT CRT	AL, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY		AK – Currently do not have a state licensure for RT

Further information regarding RT state licensure requirements may be found at: <https://www.aarc.org/advocacy/state-society-resources/state-licensure-contacts/>

### Statement for the Respiratory Therapy program (RT):

Pursuant to United States Department of Education (US DOE) regulation 34 CFR 668.43 (a) (5) (v), the Mountain Empire Community College Associates Degree in Respiratory Therapy (RT) program provides the following information for all prospective and current students:

The Mountain Empire Community College RT program meets all the requirements of the Commission on Accreditation for Respiratory Care (CoARC) and remains in good standing with this national accrediting body. All students upon successful graduation from the program are eligible to sit for their national boards through the National Board for Respiratory Care (NBRC). This program accreditation and national board credentialing will allow graduates to obtain licensure in 49 of the 50 states plus the District of Columbia. Alaska currently does not have a state licensure mandate for RT. But the graduate would still be able to obtain employment in Alaska upon completion of this program.

Licensure endorsement is available in 49 of the 50 states plus the District of Columbia.

Mountain Empire Community College is regionally accredited by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC).

### About Our Program

The Associate of Applied Science degree in Respiratory Therapy is designed to prepare selected students as competent Registered Respiratory Therapists and to serve as members of the health care team.

As a graduate, you are eligible to take the Therapist Multiple Choice (TMC) examination and the Clinical Simulation examination to be credentialed as a Registered Respiratory Therapist (RRT).

### Criminal Background Check/Drug Screening

Background checks for criminal history and sex offender crimes against minors are required for entrance into clinical agencies. Students with convictions may be prohibited from clinical practice and may not complete the program. Clinical agencies may require drug testing prior to placement of students for clinical rotations. Students with positive drug test results may be prohibited from clinical practice and may not complete the program. Cost of criminal background checks and drug testing will be the responsibility of the student. Proper uniform must be worn when participating in clinical activities.

### Physical Demands

Physical demands in this program include duties that frequently require walking, bending, reaching and lifting; pushing and pulling with assistance and occasional carrying. Duties also require constant use of acute sense of sight, hearing, touch, and speech.

### Financial Requirements

In addition to the usual college tuitions and fees, the Respiratory Therapy program requires: uniforms, books, liability insurance, CPR certification, criminal background check, and miscellaneous equipment. Costs for drug screens, if required by clinical facility, are the responsibility of the student. Students are also responsible for transportation to and from the college and health agencies used for clinical experience.

### Opportunities for Advancement

Opportunities for advancement are excellent for those willing to continue their education and training. Individuals who display leadership, team-building skills, self-confidence, motivation, and decisiveness become candidates for promotion.

### Program Progression

Students are required to repeat a RTH or NAS course in which a grade lower than "C" is received before progressing to the next course or graduating from the program. All electives must have a grade of "C" or above.

## HEALTH SCIENCES (CLINICAL)

### Special Consideration

Students accepted into the program are required to submit a health certificate signed by a duly licensed physician, physician's assistant, or registered nurse practitioner and should include: documentation of measles, mumps and rubella (MMR) exposure or inoculations; TB skin testing or chest x-ray for previously positive TB results; and overall general health of the applicant.

## RESPIRATORY THERAPY PROGRAM OF STUDY

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR SUMMER</b>			
SDV 100	College Success Skills	1	
NAS 171	Human Anatomy and Physiology	4	
RTH 102	Integrated Sciences for Respiratory Care	3	
RTH 110	Fund. Theory & Procedures for Respiratory Care	3	
<b>AHA BLS FOR HEALTHCARE PROVIDER CPR CERTIFICATION EARNED; AHA HEARTSAVER OSHA BLOODBORNE PATHOGEN CERTIFICATION EARNED</b>			
	Social Science/Humanities/General Transfer Elective	3	
<b>FIRST YEAR FALL</b>			
ENG 111	College Composition	3	
RTH 111	Anatomy & Physiology of the Cardiopulmonary System	3	
RTH 131	Respiratory Care Theory & Procedures I	4	
RTH 145	Pharmacology for Respiratory	2	
RTH 151	Fundamental Clinical Procedures	4	
<b>FIRST YEAR SPRING</b>			
RTH 112	Pathology of the Cardiopulmonary System	3	
RTH 121	Cardiopulmonary Science	3	
RTH 132	Respiratory Care Theory & Procedures II	4	
RTH 152	Fundamental Clinical Procedures II	4	
<b>SECOND YEAR SUMMER</b>			
RTH 135	Diagnostic & Therapeutic Procedures I	2	
RTH 224	Integrated Respiratory Therapy Skills I	2	
RTH 253	Advanced Clinical Procedures III	3	
	Social Science Elective	3	
	Humanities Elective	3	
<b>SECOND YEAR FALL</b>			
ITE 119	Information Literacy	3	
RTH 226	Theory of Neonatal & Ped. Resp. Care	2	
RTH 254	Advanced Clinical Procedures IV	3	
RTH 227	Integrated Respiratory Therapy Skills II	2	
RTH 267	12-Lead EKG	3	
RTH 265	Current Issues in Respiratory Care	2	
<b>AHA ADVANCED CARDIAC LIFE SUPPORT (ACLS) CERTIFICATION EARNED ELIGIBLE FOR CERTIFICATION TESTING AS A CERTIFIED RESPIRATORY THERAPIST OR A REGISTERED RESPIRATORY THERAPIST</b>			
<b>TOTAL PROGRAM CREDITS</b>		<b>72</b>	

### Notes and Additional Curriculum Options

Course substitutions may be available. Please see an advisor for more information.

## Career Studies Certificate

**3-D DESIGN (221-727-09)****PURPOSE**

Classes offered in the 3D Design Technology program will introduce you to design techniques that will prepare you to work in engineering technology fields. All of the courses taken are in the computer-aided drafting and design curriculum. Students will take courses in related areas only. MECC utilizes CADD operations extensively. 3D software programs are available and used extensively. These programs are the most widely used in industry in our service area. 3D Design classes are available to day and evening students.

**PROGRAM LEARNING OUTCOMES**

Upon successful completion, students will be able to:

1. Practice industry recognized safety practices and guidelines, including the use of personal protective equipment in an industrial operating environment.
2. Demonstrate knowledge of drafting conventions including symbols, linetypes, lineweights, and dimension styles as applicable to the design discipline.
3. Demonstrate the ability to develop and /or interpret 2D and 3D projects to solve common engineering problems.
4. Illustrate the engineering design process from the transformation of an idea or need into a completed project.

**3-D DESIGN PROGRAM OF STUDY**

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL</b>			
DRF 160	Blueprint Reading	3	
DRF 200	Survey of Computer-Aided Drafting	4	
DRF 298	Seminar and Project*	4	
<b>FIRST YEAR SPRING</b>			
DRF 233	Computer-Aided Drafting III	3	
MEC 122	3D Printing for Engineering Design	3	
<b>TOTAL PROGRAM CREDITS</b>		<b>17</b>	

**Notes and Additional Curriculum Options**

\*Please consult with your advisor on the availability of courses and possible prerequisites and course substitutions.

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## MANUFACTURING

### Career Studies Certificate

## CHEMICAL PROCESS OPERATOR (221-845-01)

### PURPOSE

This program is designed to provide basic skills to qualify graduates for entry level jobs as chemical operators.

### PROGRAM LEARNING OUTCOMES

Upon successful completion, students will be able to:

1. Practice industry recognized safety practices and guidelines, including the use of personal protective equipment in an industrial operating environment.
2. Use precision measuring equipment.
3. Operate and Troubleshoot electromechanical and electronic equipment and systems.
4. Compute, analyze, and communicate quantitative data using mathematical and logical methods to solve problems.
5. Demonstrate understanding of scientific concepts, theories, and basic scientific reasoning.

### EMPLOYMENT OPPORTUNITIES

A chemical laboratory technician holds a general scientific position whose tasks vary greatly by organization type; this position is typically found at organizations that conduct scientific research or testing. Chemical laboratory technicians typically are responsible for the day-to-day operations performed by the company. Technicians may perform chemical tests on products and compounds, analyze compounds and chemicals for a variety of qualities and concentrations of substances, and maintain quality across all products. In addition to these tasks, most chemical laboratory technician must perform a variety of housekeeping tasks for their laboratory, ensuring that all facilities and instruments are clean and that any hazardous substances have been removed from the premises.

## CHEMICAL PROCESS OPERATOR PROGRAM OF STUDY

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL</b>			
SAF 126	Principals of Industrial Safety	3	
IND 101	Quality Assurance Tech. I	3	
MTH 111	Basic Technical Math	3	
MEC 205	Piping & Auxiliary Systems	3	
<b>FIRST YEAR SPRING</b>			
SDV 107	Career Exploration	1	
CHM 101	General Chemistry I	4	
PHY 131	Applied Physics I	3	
ELE 140	Basic Electricity & Machinery	4	
<b>TOTAL PROGRAM CREDITS</b>		<b>24</b>	

### Notes and Additional Curriculum Options

Course substitutions may be available. Please see an advisor for more information.

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**Associate of Applied Science Degree****COMPUTER-AIDED DRAFTING AND DESIGN TECHNOLOGY (729)****PURPOSE**

Classes offered in the Computer-Aided Drafting & Design Technology major program will introduce you to architectural and mechanical design that will prepare you to work as a drafts person. Approximately one-half of the courses taken are in drafting and design technology. Students will also take courses in related areas and general education. MECC utilizes CADD operations extensively. Micro-Station PC, AutoCADD, and 3D software programs are available. These programs are the most widely used in industry in our service area. Computer-Aided Drafting & Design Technology major classes are available to evening students.

**PROGRAM LEARNING OUTCOMES**

**Upon successful completion, students will be able to:**

1. Demonstrate knowledge of drafting conventions including symbols, linetypes, lineweights, and dimension styles as applicable to the design discipline.
2. Perform and support estimating functions including quantity, types, costs, labor requirements, equipment, and scheduling functions.
3. Demonstrate the ability to develop and/or interpret 2D and 3D projects to solve common engineering problems.
4. Illustrate the engineering design process from the transformation of an idea or need into a completed project.
5. Develop quantitative reasoning skills useful in working in industry.
6. Collaborate with team members to identify and evaluate solutions to engineering problems.

**EMPLOYMENT OPPORTUNITIES**

Successful completion of the Associate of Applied Science degree in the Computer-Aided Drafting & Design Technology major will prepare you for employment in areas in drafting and design including: mechanical, architectural, structural steel, and civil engineering.

**PROGRAM REQUIREMENTS**

Students should have English and Mathematics skills assessed. Deficiencies in these areas may be corrected by completing the appropriate developmental studies courses.

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**COMPUTER-AIDED DRAFTING AND DESIGN TECHNOLOGY PROGRAM OF STUDY**

<b>Course #</b>	<b>Course Title</b>	<b>Credit</b>	<b>Pre-Requisite Courses (if applicable)</b>
<b>FIRST YEAR FALL</b>			
GIS 200	Geographical Info. Systems I	3	
DRF 160	Machine Blueprint Reading	3	
DRF 200	Survey of Computer-Aided Drafting (CAD)	4	
MTH 111	Basic Technical Math	3	
UMS 107	sUAS Remote Pilot School	3	
SDV 100	College Success Skills	1	
<b>FIRST YEAR SPRING</b>			
DRF 233	Computer-Aided Drafting III	3	
GIS 201	Geographical Info. Systems II	3	
DRF 201	Computer-Aided Drafting and Design I	3	DRF 200
PE/HLT	Personal Development Elective	1	
	Technical Elective	3	
MEC 122	3D Printing for Engineering Design	3	
<b>SECOND YEAR FALL</b>			
ENG 111	College Composition	3	
CIV 171	Surveying I	3	MTH 103 or Ready for 111
DRF 231	Computer-Aided Drafting I	2	
GIS 205	GIS 3-D Dimension Analysis	3	
PHY 131	Applied Physics	3	
	Social Science Elective	3	See approved Social Science list
<b>SECOND YEAR SPRING</b>			
BLD 110	Intro to Construction	3	
	Humanities Elective	3	
GIS 210	Understanding Geographic Data	3	
CIV 172	Surveying II	3	
DRF 232	Computer-Aided Drafting and Design II	2	DRF 231
DRF 298 or DRF 290	Seminar and Project in Drafting or Coordinated Internship	4	
<b>TOTAL PROGRAM CREDITS</b>		<b>68</b>	

**Notes and Additional Curriculum Options**

Course substitutions may be available. Please see an advisor for more information.

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Associate of Applied Science Degree

## COMPUTERIZED MANUFACTURING TECHNOLOGY (726)

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### PURPOSE

The Manufacturing Technology major is a broad-based curriculum that prepares students for a variety of technical positions within a manufacturing company. The company that hires the graduate, teaches the special skills and knowledge needed to be successful within the company.

### PROGRAM LEARNING OUTCOMES

Upon successful completion, students will be able to:

1. Practice industry recognized safety practices and guidelines, including the use of personal protective equipment in an industrial operating environment.
2. Interpret drawings, schematics, and specifications for industrial equipment.
3. Use precision measuring equipment.
4. Troubleshoot and repair mechanical and electronic equipment and systems.
5. Modify, install, maintain, and program automated systems.
6. Work as an effective member of a work group.

### EMPLOYMENT OPPORTUNITIES

This major prepares graduates for growth in the automated manufacturing industry with each graduate expected to receive multiple job offerings.

### PROGRAM REQUIREMENTS

Students should have English and Mathematics skills assessed. Deficiencies in these areas may be corrected by completing the appropriate developmental studies courses.

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**MANUFACTURING**
**COMPUTERIZED MANUFACTURING TECHNOLOGY PROGRAM OF STUDY**

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL</b>			
DRF 160	Machine Blueprint Reading	3	
ELE 140	Basic Electricity & Machinery	4	
SAF 126	Industrial Safety	3	
<b>STUDENTS ARE ELIGIBLE FOR NCCER CONSTRUCTION CORE &amp; ELECTRICAL LEVEL 1</b>			
MEC 120	Principles of Machines Technology	3	
MTH 111	Basic Technical Math	3	
SDV 100	College Success Skills	1	
<b>FIRST YEAR SPRING</b>			
ELE 156	Electrical Control Systems	3	ELE 140
ENG 111	College Composition I	3	
ITE 119	Information Literacy	3	
MEC 113	Materials and Processes of Industry I	4	
MEC 266	Fluid Mechanics	3	
<b>SECOND YEAR FALL</b>			
DRF 200	Survey of Computer-Aided Design	4	
PHY 131	Applied Physics	3	MTH 106 or MTH 103
HLT 105	CPR	1	
IND 101	Quality Assurance Tech	3	
IND 160	Introduction to Robotics	3	
MEC 118	Automated Manufacturing Tech	3	
<b>SECOND YEAR SPRING</b>			
ELE 239	Programmable Controllers	3	ELE 140, ELE 156
	Humanities Elective	3	
IND 137	Team Concepts & Problem Solving	3	
	Social Science Elective	3	
IND 250	Intro to Basic Computer Integrated Manufacturing	3	
<b>TOTAL PROGRAM CREDITS</b>		<b>65</b>	

**Notes and Additional Curriculum Options**

Course substitutions may be available. Please see an advisor for more information.

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Associate of Applied Science Degree

## CMT - ELECTROMECHANICAL TECHNOLOGY SPECIALIZATION (726-01)

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### PURPOSE

The Electromechanical Technology Specialization of the Computerized Manufacturing Technology program trains students in various electrical, electronic, and mechanical components of systems and upon successful completion, awards the Associate of Applied Science Degree. Emphasis is on programmable logic controllers, motor controls, piping systems, valves, and related components, and process controllers. Computer skills and teamwork are also emphasized.

The electromechanical program will provide students with the knowledge and skills necessary to assume employment as competent electromechanical technicians. The program was developed in cooperation with Eastman Chemical Company. After the first year of the program, students have the opportunity for a one-year internship with Eastman after which they will return to MECC to finish the AAS degree.

### PROGRAM LEARNING OUTCOMES

Upon successful completion, students will be able to:

1. Practice industry recognized safety practices and guidelines, including the use of personal protective equipment in an industrial operating environment.
2. Interpret drawings, schematics, and specifications for industrial equipment.
3. Use precision measuring equipment.
4. Troubleshoot and repair electromechanical and electronic equipment and systems.
5. Modify, install, maintain, and program electronic and electromechanical systems.
6. Modify, install, and maintain hydraulic and pneumatic systems.
7. Work as an effective member of a workgroup.

### EMPLOYMENT OPPORTUNITIES

Companies need competent electromechanical technicians. The electromechanical program was designed to meet this increasing need. The skills developed in this program will prepare students for jobs in chemical processing, coal mining, power plants and manufacturing. Jobs are available as electromechanical technicians, quality assurance technicians, and maintenance technicians.

### PROGRAM REQUIREMENTS

Students should have English and Mathematics skills assessed. Deficiencies in these areas may be corrected by completing the appropriate developmental studies courses.

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**COMPUTERIZED MANUFACTURING TECHNOLOGY -  
ELECTROMECHANICAL TECHNOLOGY SPECIALIZATION PROGRAM OF STUDY**

<b>Course #</b>	<b>Course Title</b>	<b>Credit</b>	<b>Pre-Requisite Courses (if applicable)</b>
<b>FIRST YEAR FALL</b>			
DRF 160	Machine Blueprint Reading	3	
SAF 126	Industrial Safety	3	
ELE 140	Basic Electricity & Machinery	4	
<b>ELIGIBLE FOR NCCER CONSTRUCTION CORE &amp; LEVEL 1 ELECTRICAL CERTIFICATION</b>			
MEC 154	Mechanical Maintenance I	3	
MTH 111	Basic Technical Math	3	
SDV 100	College Success Skills	1	
<b>FIRST YEAR SPRING</b>			
ELE 156	Electrical Control Systems	3	ELE 140, ETR 143 (co-req)
ETR 143	Devices and Applications I	3	ELE 140 (co-req)
IND 125	Installation and Preventive Maintenance	3	
MEC 113	Materials and Processes of Industry I	4	
ITE 102	Computers and Information Systems	1	
MTH 111	Basic Technical Mathematics	3	MTH 103
<b>SECOND YEAR FALL</b>			
ELE 239	Programmable Controllers	3	ELE 156
MEC 205	Piping & Auxiliary Systems	3	
IND 101	Quality Assurance Technology	3	
PHY 131	Applied Physics	3	MTH 111
HLT 105	CPR	1	
	Humanities Elective	3	
<b>SECOND YEAR SPRING</b>			
IND 137	Team Concepts & Problem Solving	3	
MEC 266	Fluid Mechanics	3	
ETR 218	Ind. Electronics Circuits	4	ELE 239
	Social Science Elective	3	
	Welding Elective	3	
<b>TOTAL PROGRAM CREDITS</b>		<b>65</b>	

**Notes and Additional Curriculum Options**

Course substitutions may be available. Please see an advisor for more information.

**Certificate****INDUSTRIAL MAINTENANCE (990)****PURPOSE**

The Industrial Maintenance Certificate Program is intended to meet the increasingly sophisticated maintenance needs of institutions, businesses, and industries. As systems become more computerized and complex, new maintenance skills are needed to keep machines at peak performance. With a broad-based approach touching on a cross-section of technical skills, the Industrial Maintenance Certificate Program provides entry level skills for these emerging industry needs. The Certificate Program can also provide significant retraining skills for individuals who have a technical background but want additional employment opportunities.

**PROGRAM LEARNING OUTCOMES**

**Upon successful completion, students will be able to:**

1. Practice industry recognized safety practices and guidelines, including the use of personal protective equipment in an industrial operating environment.
2. Interpret drawings, schematics, and specifications for industrial equipment.
3. Use precision measuring equipment.
4. Troubleshoot and repair electromechanical and electronic equipment and systems.
5. Modify, install, and maintain industrial systems.
6. Modify, install, and maintain hydraulic and pneumatic systems.
7. Work as an effective member of a work group.

**EMPLOYMENT OPPORTUNITIES**

With the successful completion of the industrial Maintenance Certificate Program, graduates should be prepared for a wide variety of entry level maintenance positions in health care institutions, schools, businesses, mining and manufacturing industries.

**PROGRAM REQUIREMENTS**

Students should have English and Mathematics skills assessed. Deficiencies in these areas may be corrected by completing the appropriate developmental studies courses.

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**MANUFACTURING****INDUSTRIAL MAINTENANCE PROGRAM OF STUDY**

<b>Course #</b>	<b>Course Title</b>	<b>Credit</b>	<b>Pre-Requisite Courses (if applicable)</b>
<b>FIRST YEAR FALL</b>			
DRF 160	Machine Blueprint Reading	3	
ELE 140	Basic Electricity & Machinery	4	
SAF 126	Industrial Safety	3	
<b><i>ELIGIBLE FOR NCCER CONSTRUCTION CORE &amp; LEVEL 1 ELECTRICAL CERTIFICATION</i></b>			
MTH 111	Basic Technical Math	3	
SDV 100	College Success Skills	1	
<b>FIRST YEAR SPRING</b>			
WEL 198	Seminar & Project	3	
ELE 156	Electrical Control Systems	3	ELE 140
MEC 266	Fluid Mechanics	3	
IND 137	Team Concepts & Problem Solving	3	
<b>FIRST YEAR SUMMER/FALL</b>			
ELE 239	Programmable Controllers	3	ELE 140, ELE 156
MEC 205	Piping & Auxiliary Systems	3	
IND 125	Installation & Preventive Maint.	3	
	Social Science Elective	3	
ENG 111	College Composition I	3	
<b>TOTAL PROGRAM CREDITS</b>		<b>41</b>	

**Notes and Additional Curriculum Options**

Course substitutions may be available. Please see an advisor for more information.

## Career Studies Certificate

**MACHINERY MAINTENANCE (221-985-52)****PURPOSE**

The Machinery Maintenance career studies program is designed to provide the job skills necessary for employment as an entry level industrial Maintenance.

**PROGRAM LEARNING OUTCOMES**

Upon successful completion, students will be able to:

1. Practice industry recognized safety practices and guidelines, including the use of personal protective equipment in an industrial operating environment.
2. Interpret drawings, schematics, and specifications for industrial equipment.
3. Modify, install, and maintain mechanical systems.
4. Modify, install, and maintain hydraulic and pneumatic systems.
5. Work as an effective member of a work group.

**EMPLOYMENT OPPORTUNITIES**

This program is designed to be flexible and meet industry needs as they arise.

**MACHINERY MAINTENANCE PROGRAM OF STUDY**

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL</b>			
DRF 160	Machine Blueprint Reading	3	
SAF 126	Industrial Safety	3	
ELE 140	Basic Electricity and Machinery	4	
<b>ELIGIBLE FOR NCCER CONSTRUCTION CORE &amp; LEVEL 1 ELECTRICAL CERTIFICATION</b>			
MEC 154	Mechanical Maintenance I	3	
IND 101	Quality Assurance Technology	3	
<b>TOTAL PROGRAM CREDITS</b>		<b>16</b>	

**Notes and Additional Curriculum Options**

Course substitutions may be available. Please see an advisor for more information.

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## MANUFACTURING

### Career Studies Certificate

## MECHATRONICS TECHNOLOGY (TBD)

### PURPOSE

The Mechatronics Technology career studies program is designed to provide the job skills necessary for employment as an entry level mechatronics technician.

### PROGRAM LEARNING OUTCOMES

Upon successful completion, students will be able to:

1. Practice industry recognized safety practices and guidelines, including the use of personal protective equipment in an industrial operating environment.
2. Interpret drawings, schematics, and specifications for industrial equipment.
3. Troubleshoot and repair electromechanical and electronic equipment and systems
4. Perform routine, preventative maintenance on electromechanical systems.
5. Work as an effective member of a work group.

### EMPLOYMENT OPPORTUNITIES

This program is designed to be flexible and meet industry needs as they arise.

## MECHATRONICS TECHNOLOGY PROGRAM OF STUDY

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL</b>			
ELE 156	Electrical Control Systems	3	
ETR 143	Devices and Applications I	3	
MEC 266	Applications of Fluid Mechanics	3	
IND 125	Installation and Preventive Maintenance	3	
MEC 113	Materials and Processes of Industry I	4	
<b>TOTAL PROGRAM CREDITS</b>		<b>16</b>	

### Notes and Additional Curriculum Options

Course substitutions may be available. Please see an advisor for more information.

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**Associate of Applied Science Degree****WELDING (718-02)**

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**PURPOSE**

Graduates of the Technical Studies Welding program are trained in the job skills necessary to enter employment as apprentice welders immediately upon completion of the curriculum. Course work includes a strong emphasis in welding technology with related courses in computer applications, quality control, teamwork, and communication.

**PROGRAM LEARNING OUTCOMES**

**Upon successful completion, students will be able to:**

1. Follow industry safety practices.
2. Cut metals using (oxyfuel and plasma arc) cutting processes .
3. Weld in (flat, horizontal, vertical and overhead positions) using the basic welding processes of SMAW, GMAW, FCAW and GTAW..
4. Apply basic math and measurement.
5. Read and interpret basic blueprints and welding symbols to fabricate components.
6. Know the basic fundamentals of welding processes and applications, metallurgy.
7. Demonstrates professional and ethical work behavior.

**EMPLOYMENT OPPORTUNITIES**

Graduates can expect to find employment as welders in a variety of industries including mining, manufacturing and construction.

**PROGRAM REQUIREMENTS**

Students should have English and Mathematics skills assessed. Deficiencies in these areas may be corrected by completing the appropriate developmental studies courses.

**ADDITIONAL INFORMATION**

Up to 15 hours credit may be given for documented previous work experience and certifications. Although the program is designed to educate and train welders entering the industry, the program offers increased skill levels and knowledge for experienced welders as well. Welders seeking a degree or desiring promotion to upper level managerial positions should also take advantage of this excellent opportunity.

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**MANUFACTURING**
**WELDING PROGRAM OF STUDY**

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL</b>			
WEL 110	Welding Process	3	
WEL 100	Fundamentals of Welding	3	
WEL 115	Arc and Gas Welding	3	
WEL 123	Arc Welding I	3	
IND 101	Quality Assurance Tech	3	
SDV 100	College Success Skills	1	
<b>FIRST YEAR SPRING</b>			
WEL 198	Seminar and Project	3	
WEL 153	Layout and Fitting for Welders	3	
DRF 160	Machine Blueprint Reading	3	
WEL 130	Inert Gas Welding	3	
WEL 160	Semi-Automatic Welding	3	
	Personal Development Elective	1	
<b>SUMMER</b>			
WEL 129	Pipefitting & Fabrication	3	
WEL 126	Pipe Welding	3	
<b>SECOND YEAR FALL</b>			
ITE 119	Information Literacy	3	
	Humanities Elective	3	
DRF 200	Survey of Computer-Aided Drafting	4	
	Social Science Elective	3	
ENG 111	College Composition I	3	
<b>SECOND YEAR SPRING</b>			
	Math/Science Elective	3	
IND 137	Team Concepts	3	
	Social Science Elective	3	
ENG 115	Technical Writing	3	
<b>ELIGIBLE FOR NCCER WELDING LEVEL 1 CERTIFICATION</b>			
<b>TOTAL PROGRAM CREDITS</b>		<b>66</b>	

**Notes and Additional Curriculum Options**

Course substitutions may be available. Please see an advisor for more information.

**Certificate****WELDING (995)****PURPOSE**

The Certificate in Welding is designed to prepare students for employment as apprentice welders immediately upon completion of the curriculum. Technical courses and shop experience comprise the majority of the program. The remaining courses are in related subjects and general education.

**PROGRAM LEARNING OUTCOMES**

**Upon successful completion, students will be able to:**

1. Follow industry safety practices.
2. Cut metals using (oxyfuel and plasma arc) cutting processes.
3. Weld in (flat, horizontal, vertical and overhead positions) using the basic welding processes of SMAW, GMAW, FCAW and GTAW.
4. Apply basic math and measurement.
5. Read and interpret basic blueprints and welding symbols to fabricate components.

**EMPLOYMENT OPPORTUNITIES**

The Certificate in Welding will prepare students for the occupational goal of welder.

**PROGRAM REQUIREMENTS**

Students should have English and Mathematics skills assessed. Deficiencies in these areas may be corrected by completing the appropriate developmental studies courses.

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**WELDING PROGRAM OF STUDY**

<b>Course #</b>	<b>Course Title</b>	<b>Credit</b>	<b>Pre-Requisite Courses (if applicable)</b>
<b>FIRST YEAR FALL</b>			
MTH 111	Basic Technical Math	3	
SDV 100	College Success Skills	1	
WEL 100	Fundamentals of Welding	3	
WEL 110	Welding Process	3	
WEL 115	Arc and Gas Welding	3	
WEL 123	Arc Welding I	3	
<b>FIRST YEAR SPRING</b>			
ENG 111	College Composition I	3	
WEL 124	Arc Welding II	3	
WEL 130	Inert Gas Welding	3	
WEL 141	Welder Qualification Tests	3	
WEL 198	Seminar and Project	3	
	Social Science Elective	3	
<b>FIRST YEAR SUMMER</b>			
WEL 126	Pipe Welding I	3	
WEL 160	Semi-Automatic Welding	3	
WEL 129	Pipefitting & Fabrication	3	
<b>STUDENTS ARE ELIGIBLE FOR NCCER CONSTRUCTION CORE AND WELDING LEVEL ONE CERTIFICATION</b>			
<b>TOTAL PROGRAM CREDITS</b>		<b>43</b>	

**Notes and Additional Curriculum Options**

Course substitutions may be available. Please see an advisor for more information.

## Career Studies Certificate

**WELDING OPERATOR I (221-995-01)****PURPOSE**

The Welding Operator I career studies certificate is designed to prepare students for employment as apprentice welders immediately upon completion of the curriculum. Technical courses and shop experience comprise the program.

**PROGRAM LEARNING OUTCOMES**

Upon successful completion, students will be able to:

1. Follow industry safety practices.
2. Cut metals using oxyfuel and plasma arc cutting processes.
3. Weld in flat, horizontal, vertical and overhead positions using the basic welding processes of SMAW and GTAW.
4. Read and interpret basic blueprints and welding symbols to fabricate components.

**EMPLOYMENT OPPORTUNITIES**

The Career Studies Certificate in Welding Operator I will prepare students for the occupational goal of an entry level welder.

**PROGRAM REQUIREMENTS**

Articulation course credits may be earned by the validation of welding skills learned in a vocational school or on-the-job experience.

**WELDING OPERATOR I PROGRAM OF STUDY**

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL</b>			
WEL 110	Welding Processes	3	
WEL 115	Arc and Gas Welding	3	
WEL 100	Fundamentals of Welding	3	
WEL 123	Arc Welding I	3	
BLD 110	Introduction to Construction	3	
SDV 100	College Success Skills	1	
<b>ELIGIBLE FOR NCCER CORE AND WELDING LEVEL ONE CERTIFICATION</b>			
<b>TOTAL PROGRAM CREDITS</b>		<b>16</b>	

**Notes and Additional Curriculum Options**

Course substitutions may be available. Please see an advisor for more information.

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## MANUFACTURING

### Career Studies Certificate

## WELDING OPERATOR II (221-995-02)

### PURPOSE

The Welding Operator II career studies certificate is designed to prepare students for employment as apprentice welders immediately upon completion of the curriculum. Technical courses and shop experience comprise the program.

### PROGRAM LEARNING OUTCOMES

Upon successful completion, students will be able to:

1. Follow industry safety practices.
2. Cut metals using oxyfuel and plasma arc cutting processes.
3. Weld in flat, horizontal, vertical and overhead positions using the basic welding processes of GMAW and FCAW.
4. Read and interpret basic blueprints and welding symbols to fabricate components.

### EMPLOYMENT OPPORTUNITIES

The Career Studies Certificate in Welding Operator II will prepare students for the occupational goal of an entry level welder.

### PROGRAM REQUIREMENTS

Articulation course credits may be earned by the validation of welding skills learned in a vocational school or on-the-job experience.

## WELDING OPERATOR II PROGRAM OF STUDY

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL</b>			
HLT 105	CPR	1	
DRF 160	Machine Blueprint Reading	3	
WEL 160	Semi Automatic Process	3	
WEL 153	Layout and Fitting for Welders	3	
WEL 130	Inert Gas Welding	3	
WEL 198	Seminar and Project	3	
<b>ELIGIBLE FOR NCCER WELDING LEVEL TWO CERTIFICATION WITH COMPLETION OF LEVEL ONE</b>			
<b>TOTAL PROGRAM CREDITS</b>		<b>16</b>	

### Notes and Additional Curriculum Options

Course substitutions may be available. Please see an advisor for more information.

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**Certificate****ADMINISTRATION OF JUSTICE - CORRECTIONS OPTION (406-01)****PURPOSE**

The Administration of Justice Certificate is to prepare individuals for careers in the criminal justice and related occupations. It is not designed to train for any specialty, but rather to provide a broad foundation, which will prepare students to enter any of the many criminal justice fields.

**PROGRAM LEARNING OUTCOMES**

Upon successful completion, students will be able to:

1. Demonstrate proficiency in discussing current Criminal Justice Issues.
2. Perform job within the legal/constitutional framework.
3. Demonstrate proficiency in proper procedures of Criminal Investigation techniques.
4. Identify, exhibit and apply ethical behavior on the job.
5. Demonstrate appropriate workplace behavior and exhibit appropriate interpersonal communication skills.

**EMPLOYMENT OPPORTUNITIES**

Areas of employment enhanced by this curriculum are commercial and industrial security officer, local, state, and federal law enforcement officer, or corrections personnel.

**PROGRAM REQUIREMENTS**

Students should have English and Mathematics skills assessed. Deficiencies in these areas may be corrected by completing the appropriate developmental studies courses.

**ADJ - CORRECTIONS OPTION PROGRAM OF STUDY**

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL</b>			
ADJ 100	Survey of Criminal Justice	3	
ADJ 105	Juvenile Justice	3	
ADJ 140	Introduction to Corrections	3	
ADJ 107	Survey of Criminology	3	
ENG 111	College Composition I	3	
SDV 100	College Success Skills	1	
<b>FIRST YEAR SPRING</b>			
ADJ 146	Adult Correction Institutions	3	
ITE 119	Information Literacy	3	
	Social Science Elective	3	
<b>SECOND YEAR FALL</b>			
ADJ 296	On-Site Training Criminal Justice	3	
ADJ 241	Correctional Law I	3	
ADJ 246	Correctional Counseling	3	
<b>TOTAL PROGRAM CREDITS</b>		<b>34</b>	

**Notes and Additional Curriculum Options**

Course substitutions may be available. Please see an advisor for more information.

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## PUBLIC SAFETY

### Certificate

## ADMINISTRATION OF JUSTICE - LAW ENFORCEMENT OPTION (406-02)

### PURPOSE

The Administration of Justice Certificate is to prepare individuals for careers in the criminal justice and related occupations. It is not designed to train for any specialty, but rather to provide a broad foundation, which will prepare students to enter any of the many criminal justice fields.

### PROGRAM LEARNING OUTCOMES

Upon successful completion, students will be able to:

1. Demonstrate proficiency in discussing current Criminal Justice Issues.
2. Perform job within the legal/constitutional framework.
3. Demonstrate proficiency in proper procedures of Criminal Investigation techniques.
4. Identify, exhibit and apply ethical behavior on the job.
5. Demonstrate appropriate workplace behavior and exhibit appropriate interpersonal communication skills.

### EMPLOYMENT OPPORTUNITIES

Areas of employment enhanced by this curriculum are commercial and industrial security officer, local, state, and federal law enforcement officer, or corrections personnel.

### PROGRAM REQUIREMENTS

Students should have English and Mathematics skills assessed. Deficiencies in these areas may be corrected by completing the appropriate developmental studies courses.

## ADJ - LAW ENFORCEMENT OPTION PROGRAM OF STUDY

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL</b>			
ADJ 100	Survey of Criminal Justice	3	
ADJ 131	Legal Evidence	3	
ADJ 107	Survey of Criminology	3	
ENG 111	College Composition I	3	
SDV 100	College Success Skills	1	
ADJ 130	Introduction to Criminal Law	3	
<b>FIRST YEAR SPRING</b>			
ITE 119	Information Literacy	3	
ADJ 111	Law Enforcement Organization and Administration	3	
ADJ 236	Principles of Criminal Investigation	3	
	Social Science Elective	3	
ADJ 227	Constitutional Law for Justice Personnel	3	
ADJ 296	On-Site Training Crim. Justice	3	
<b>TOTAL PROGRAM CREDITS</b>		<b>34</b>	

### Notes and Additional Curriculum Options

Course substitutions may be available. Please see an advisor for more information.

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**Associate of Applied Science Degree****CORRECTIONAL SERVICES (462)****PURPOSE**

The Associate of Applied Science degree in Correctional Services is to prepare individuals for careers in the criminal justice and Corrections occupations. It is not designed to train for any specialty, but rather to provide a broad foundation, which will prepare students to enter any of the many criminal justice fields.

**PROGRAM LEARNING OUTCOMES**

**Upon successful completion, students will be able to:**

1. Demonstrate proficiency in discussing current Criminal Justice Issues.
2. Perform job within the legal/constitutional framework.
3. Demonstrate proficiency in proper procedures of Criminal Investigation techniques.
4. Identify, exhibit and apply ethical behavior on the job.
5. Demonstrate appropriate workplace behavior and exhibit appropriate interpersonal communication skills.

**EMPLOYMENT OPPORTUNITIES**

Job openings are available in the law enforcement and the protective services fields with positions open in public law enforcement agencies, private security firms, as well as state and federal agencies.

**PROGRAM REQUIREMENTS**

Students should have English and Mathematics skills assessed. Deficiencies in these areas may be corrected by completing the appropriate developmental studies courses.

Each applicant must meet with the College's Protective Services faculty for a personal interview. Applicants not already employed in criminal justice are cautioned as to the qualifications usually required for criminal justice agency employment: 1) Excellent moral character, no felony convictions or any crime involving moral turpitude, nor an excessive number of traffic citations. 2) A background investigation is normally conducted by the employing agency to confirm these conditions.

**FOR FURTHER INFORMATION, CONTACT:**

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## CORRECTIONAL SERVICES PROGRAM OF STUDY

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL</b>			
ADJ 100	Survey of Criminal Justice	3	
ADJ 140	Introduction to Corrections	3	
ADJ 171	Forensic Science I or Science Elective	4	
ENG 111	College Composition	3	
	HLT, PED, ADJ 127, or ADJ 138	1	
SDV 100	College Success Skills	1	
<b>FIRST YEAR SPRING</b>			
ADJ 146	Adult Corrections Institutions	3	
ADJ 172	Forensic Science II or Science Elective	4	
	Humanities Elective	3	
ADJ 245 or ADJ 248	Management of Correctional Facilities or Probation, Parole, and Treatment	3	
ADJ 107	Survey of Criminology	3	
<b>SECOND YEAR FALL</b>			
ADJ 241	Correctional Law	3	
ADJ 246	Correctional Counseling	3	
ITE 119	Information Literacy	3	
MTH 154	Quantitative Reasoning	3	
SOC 200 or PSY 200	Principles of Sociology or Principles of Psychology	3	
	Elective	3	
<b>SECOND YEAR SPRING</b>			
ADJ 296 or ADJ 295	On-Site Training in Criminal Justice or Seminar and Project	3	
ADJ 227	Constitutional Law for Justice Personnel	3	
ADJ 105	Juvenile Justice	3	
SOC 200 or PSY 200	Principles of Sociology or Principles of Psychology	3	
CST 105	Oral Communication	3	
	Elective	3	
<b>TOTAL PROGRAM CREDITS</b>		<b>67</b>	

### Notes and Additional Curriculum Options

Course substitutions may be available. Please see an advisor for more information.

## Career Studies Certificate

**CORRECTIONS MANAGEMENT AND SUPERVISION (221-462-88)****PURPOSE**

The career studies certificate in Corrections Management and Supervision is designed for individuals in management and leadership positions in criminal justice and Corrections occupations. It focuses on critical problem solving and ethics and leadership skills.

**PROGRAM LEARNING OUTCOMES**

Upon successful completion, students will be able to:

1. Identifies and analyzes problems; weighs relevance and accuracy of information; generates and evaluates alternative solutions; makes recommendations.
2. Treats others with courtesy, and respect. Considers and responds appropriately to the needs and feelings of different people in different situations.
3. Identify, exhibit and apply ethical behavior on the job.
4. Demonstrate appropriate workplace behavior and exhibit appropriate interpersonal communication skills.

**PROGRAM REQUIREMENTS**

Division approval is required for admission.

**CORRECTIONS MANAGEMENT AND SUPERVISION PROGRAM OF STUDY**

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL</b>			
ADJ 133	Ethics and the Criminal Justice Professional	3	
ADJ 198	Seminar and Project in Corrections	4	
ADJ 241	Correctional law	3	
ADJ 245	Management of Correctional Facilities	3	
ADJ 246	Correctional Counseling	3	
<b>TOTAL PROGRAM CREDITS</b>		<b>16</b>	

**Notes and Additional Curriculum Options**

Course substitutions may be available. Please see an advisor for more information.

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## PUBLIC SAFETY

### Career Studies Certificate

## LAW ENFORCEMENT MANAGEMENT AND SUPERVISION (221-463-89)

### PURPOSE

The career studies certificate in Law Enforcement Management and Supervision is designed for individuals in management and leadership positions in criminal justice and Law Enforcement occupations. It focuses on critical problem solving and ethics and leadership skills.

### PROGRAM LEARNING OUTCOMES

Upon successful completion, students will be able to:

1. Identifies and analyzes problems; weighs relevance and accuracy of information; generates and evaluates alternative solutions; makes recommendations.
2. Treats others with courtesy, and respect. Considers and responds appropriately to the needs and feelings of different people in different situations.
3. Identify, exhibit and apply ethical behavior on the job.
4. Demonstrate appropriate workplace behavior and exhibit appropriate interpersonal communication skills.

### PROGRAM REQUIREMENTS

Division approval is required for admission.

## LAW ENFORCEMENT MANAGEMENT AND SUPERVISION PROGRAM OF STUDY

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL</b>			
ADJ 111	Law Enforcement Organization	3	
ADJ 112	Law Enforcement Organization & Administration II	3	
ADJ 133	Ethics and the Criminal Justice Professional	3	
ADJ 198	Seminar and Project in Law Enforcement	4	
ADJ 227	Constitutional Law for Justice Personnel	3	
<b>TOTAL PROGRAM CREDITS</b>		<b>16</b>	

### Notes and Additional Curriculum Options

Course substitutions may be available. Please see an advisor for more information.

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**Associate of Applied Science Degree****POLICE SCIENCE (464)**

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**PURPOSE**

The Police Science degree is to prepare individuals for careers in the criminal justice and related occupations. It is not designed to train for any specialty, but rather to provide a broad foundation, which will prepare students to enter any of the many criminal justice fields.

**PROGRAM LEARNING OUTCOMES**

**Upon successful completion, students will be able to:**

1. Demonstrate proficiency in discussing current Criminal Justice Issues.
2. Perform job within the legal/constitutional framework.
3. Demonstrate proficiency in proper procedures of Criminal Investigation techniques.
4. Identify, exhibit and apply ethical behavior on the job.
5. Demonstrate appropriate workplace behavior and exhibit appropriate interpersonal communication skills

**EMPLOYMENT OPPORTUNITIES**

Job openings are available in the law enforcement and the protective services fields with positions open in public law enforcement agencies, private security firms, as well as state and federal agencies.

**PROGRAM REQUIREMENTS**

Students should have English and Mathematics skills assessed. Deficiencies in these areas may be corrected by completing the appropriate developmental studies courses.

Each applicant must meet with the College's Protective Services faculty for a personal interview. Applicants not already employed in criminal justice are cautioned as to the qualifications usually required for criminal justice agency employment: 1) Excellent moral character, no felony convictions or any crime involving moral turpitude, nor an excessive number of traffic citations. 2) A background investigation is normally conducted by the employing agency to confirm these conditions.

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## POLICE SCIENCE PROGRAM OF STUDY

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL</b>			
ADJ 100	Survey of Criminal Justice	3	
ADJ 131	Legal Evidence	3	
ADJ 171	Forensic Science I or Science Elective	4	
ENG 111	College Composition	3	
ITE 119	Information Literacy	3	
SDV 100	College Success Skills	1	
<b>FIRST YEAR SPRING</b>			
ADJ 107	Survey of Criminology	3	
ADJ 130	Intro to Criminal Law	3	
ADJ 236	Principles of Criminal Investigation	3	
	HLT, PED, or ADJ 138/127	1	
ADJ 172	Forensic Science II or Science Elective	4	
	Elective	3	
<b>SECOND YEAR FALL</b>			
ADJ 105	Juvenile Justice System	3	
ADJ 111	Law Enforcement Organization	3	
ADJ 133	Ethics and Criminal Justice Professional	3	
	Humanities Elective	3	
MTH 154	Quantitative Reasoning	3	
SOC 200 or PSY 200	Principles of Sociology or Principles of Psychology	3	
<b>SECOND YEAR SPRING</b>			
ADJ 296 or ADJ 295	On-Site Training in Criminal Justice or Seminar and Project	3	
ADJ 227	Constitutional Law for Justice Personnel	3	
SOC 200 or PSY 200	Principles of Sociology or Principles of Psychology	3	
CST 105	Oral Communication	3	
	Elective	3	
<b>TOTAL PROGRAM CREDITS</b>		<b>67</b>	

### Notes and Additional Curriculum Options

Course substitutions may be available. Please see an advisor for more information.

**Associate of Applied Science Degree****COMPUTER NETWORKING TECHNOLOGY (732)****PURPOSE**

The Computer Networking Technology student will take coursework in network infrastructure and Internet-working devices, network operating systems and network management.

**PROGRAM LEARNING OUTCOMES**

**Upon successful completion, students will be able to:**

1. Analyze, design and document computer network specifications to meet client needs.
2. Install and troubleshoot desktop, server, and infrastructure hardware.
3. Install, configure, and troubleshoot desktop, server, and infrastructure operating systems.
4. Use proper computer system and networking terminology; perform help desk functions to address end user needs.
5. Troubleshoot/debug, maintain, and upgrade server, client, and infrastructure systems.
6. Implement Local Area Networks using both static and dynamic IP addressing & sub-netting.
7. Install, configure, and maintain domain-based Local Area Network hardware and software.
8. Use computer systems and networks in a responsible and ethical manner.
9. Work as an effective member of a work group.

**EMPLOYMENT OPPORTUNITIES**

The Associate of Applied Science degree program in Computer Network Technology is designed to prepare students to work in a wide range of employment areas as network installers, network technicians, network administrators, network planners, and network managers.

**PROGRAM REQUIREMENTS**

Students should have English and Mathematics skills assessed. Deficiencies in these areas may be corrected by completing the appropriate developmental studies courses.

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## COMPUTER NETWORKING TECHNOLOGY PROGRAM OF STUDY

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL</b>			
ITN 154	Network Fundamentals - Cisco	4	
ITN 110	Client Operating Systems	3	
ITN 107	Personal Computer Hardware & Troubleshooting	3	
<b>ELIGIBLE FOR COMPTIA A+ CERTIFICATION UPON COMPLETION OF ITN 107</b>			
ITE 119	Information Literacy	3	
MTH 111	Basic Technical Math	3	
SDV 100	College Success Skills	1	
<b>FIRST YEAR SPRING</b>			
ITN 155	Switching, Wireless, and WAN Technologies (ICDN2)- Cisco	4	ITN 154
ITN 111	Server Administration	3	
IND 137	Team Concepts and Problem Solving	3	
ENG 111 or ENG 115	English Composition I or Technical Writing	3	
	Humanities Elective	3	
<b>ELIGIBLE FOR CISCO CCENT/ICND1 (CISCO CERTIFIED ENTRY NETWORKING TECHNICIAN 640-822)</b>			
<b>SECOND YEAR FALL</b>			
ITN 156	Basic Switching and Routing-Cisco III	4	ITN 155
ITN 113	Active Directory	3	ITN 111
ITN 260	Network Security Basics	3	ITN 111
<b>ELIGIBLE FOR COMPTIA SECURITY+ CERTIFICATION</b>			
	Social Science Elective	3	
ITN 171	UNIX I	3	
SDV 106	Preparation for Employment	1	
<b>ELIGIBLE FOR MCSA (MICROSOFT CERTIFIED SOLUTIONS ASSOCIATE) 410 INSTALLING AND CONFIGURING WINDOWS SERVER 2012</b>			
<b>SECOND YEAR SPRING</b>			
ITN 157	WAN Technologies-Cisco	4	ITN 156
ITN 112	Networking Infrastructure	3	ITN 111; and ITN 154 or 101
ITN 214	Messaging Server Administration	3	ITN 111, ITN 113
ITE 290	Coordinated Internship	3	
<b>ELIGIBLE FOR CAREER READINESS CERTIFICATIONS WHILE ENROLLED IN ITE 290</b>			
	Social Science or Humanities Elective	3	
<b>ELIGIBLE FOR CISCO CCNA (CERTIFIED NETWORK ASSOCIATE) 640-802 AND 640-816</b>			
<b>TOTAL PROGRAM CREDITS</b>		<b>66</b>	

### Notes and Additional Curriculum Options

Course substitutions may be available. Please see an advisor for more information.

**Associate of Applied Science Degree****COMPUTER SOFTWARE SPECIALIST (222)****PURPOSE**

The Associate of Applied Science degree program in Computer Software Specialist is designed to prepare students to enter the workforce as computer professionals trained in a variety of cutting-edge software packages. General and specialized computer courses with an emphasis in programming and database applications are complemented by general education courses. Students will participate in a comprehensive program that includes both classroom and lab instruction, along with a work-based learning experience or a comprehensive computer project.

**PROGRAM LEARNING OUTCOMES**

**Upon successful completion, students will be able to:**

1. Write application software that makes efficient and secure use of operating system services.
2. Develop an information system using accepted software development processes.
3. Produce user applications using a specialized technology that builds upon fundamental software development practices.
4. Analyze a problem and identify the appropriate data, hardware components and/or software requirements to develop a feasible solution.
5. Use current tools and practices that support the software documentation process.
6. Document system requirements and/or develop materials for clients in the proper use of hardware or software.
7. Work cooperatively and effectively in teams to accomplish a shared goal.
8. Analyze local and global information technology (IT) trends, while recognizing the influences of IT on cultural, economic, ethical, and legal issues and responsibilities.
9. Support the management of information systems.
10. Use logical and mathematical reasoning to analyze, organize, and interpret data.

**EMPLOYMENT OPPORTUNITIES**

Job opportunities in the immediate area and throughout the nation abound for students trained in computers. According to the Bureau of Labor Statistics' website, employment of software developers is projected to grow 24% from 2016 to 2026, which is much faster than the average for all occupations. Software developers will be needed to respond to an increased demand for computer software. Students completing the Computer Software Specialist AAS will be qualified for the following positions: Computer Software Specialist, Software Developer, Computer Lab Assistant, Help-Desk Technician, Database Operator/Manager, Software Consultant, Programmer, Software Tester/Analyst.

Opportunities for advancement are excellent for those students willing to continue their education and training. Students may wish to enhance their advancement opportunities by pursuing certifications available from various software vendors. Students also may want to couple their degree with the Cybersecurity Career Studies Certificate or the Mobile Applications Development Career Studies Certificate.

**PROGRAM REQUIREMENTS**

Students should have English and Mathematics skills assessed. Deficiencies in these areas may be corrected by completing the appropriate developmental studies courses.

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## COMPUTER SOFTWARE SPECIALIST PROGRAM OF STUDY

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL</b>			
ITE 131	Survey of Internet Services	1	
ITD 110	Web Page Design I	3	
ITE 119	Information Literacy	3	
ITN 260	Network Security Basics	3	
ITN 101	Introduction to Network Concepts	3	
ITN 171	Unix I	3	
<b>ELIGIBLE FOR HTML5 APPLICATION DEVELOPMENT FUNDAMENTALS CERTIFICATION, DATABASE FUNDAMENTALS CERTIFICATION, AND SOFTWARE DEVELOPMENT I CAREER STUDIES CERTIFICATE</b>			
<b>FIRST YEAR SPRING</b>			
ITP 100	Software Design	3	
ITP 140	Client Side Scripting	3	ITD 110 co-requisite
ITD 132	Structured Query Languages	3	
ITP 270	Programming in Cybersecurity	3	
ITN 262	Network Communication, Security & Authentication	3	
SDV 100	College Success Skills	1	
<b>SECOND YEAR FALL</b>			
ENG 111	College Composition I	3	
ITP 132	C++ Programming I	3	ITP 100 or MTH 163
ITE 150	Desktop Database Software	3	ITE 119
	Social Science or Humanities Elective	3	
PED/HLT	Physical Education Elective/Health Elective	1	
ITP 225	Web Scripting Languages	3	ITD 110 co-requisite
<b>SECOND YEAR SPRING</b>			
ITP 232	C++ Programming II	3	ITP 132
	Humanities Elective	3	
ITN 261	Network Attacks, Computer Crime & Hacking	3	
	Social Science Elective	3	
MTH 111	Basic Technical Math	3	
ITP 298	Capstone/Project Integration	3	
<b>TOTAL PROGRAM CREDITS</b>		<b>66</b>	

### Notes and Additional Curriculum Options

Course substitutions may be available. Please see an advisor for more information.

## Career Studies Certificate

**CSS - MOBILE APPLICATION DEVELOPMENT (221-299-00)****PURPOSE**

The Computer Software Specialist - Mobile Application Development Career Studies Certificate is designed to prepare students to enter the workforce as mobile application developers who can create and test business-oriented software applications. The curriculum consists of general and specialized computer courses with an emphasis in mobile applications programming.

**PROGRAM LEARNING OUTCOMES**

Upon successful completion, students will be able to:

1. Write application software that makes efficient and secure use of operating system services.
2. Develop an information system using accepted software development processes.
3. Produce user applications using a specialized technology that builds upon fundamental software development practices.
4. Analyze a problem and identify the appropriate data, hardware components and/or software requirements to develop a feasible solution.
5. Use current tools and practices that support the software documentation process.
6. Document system requirements and/or develop materials for clients in the proper use of hardware or software.
7. Work cooperatively and effectively in teams to accomplish a shared goal.
8. Analyze local and global information technology (IT) trends, while recognizing the influences of IT on cultural, economic, ethical, and legal issues and responsibilities.
9. Support the management of information systems.
10. Use logical and mathematical reasoning to analyze, organize, and interpret data.

**EMPLOYMENT OPPORTUNITIES**

Job opportunities in the immediate area and throughout the nation abound for students trained in computers. According to the Bureau of Labor Statistics' website, employment of software developers is projected to grow 24% from 2016 to 2026, which is much faster than the average for all occupations. Software developers will be needed to respond to an increased demand for computer software.

**CSS - MOBILE APPLICATION DEVELOPMENT PROGRAM OF STUDY**

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL</b>			
ITD 110	Web Page Design I	3	
ITD 210	Web Page Design II	3	
<b>FIRST YEAR SPRING</b>			
ITP 100	Software Design	3	
ITP 140	Client Side Scripting	3	
<b>SECOND YEAR FALL</b>			
ITP 225	Web Scripting Languages	3	
ITP 247	Native Mobile Programming	3	ITP 220
<b>SECOND YEAR SPRING</b>			
ITP 270	Programming for Cybersecurity	3	
<b>TOTAL PROGRAM CREDITS</b>		<b>21</b>	

**Notes and Additional Curriculum Options**

Course substitutions may be available. Please see an advisor for more information.

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## TECHNOLOGY

### Career Studies Certificate

## CYBERSECURITY (221-732-09)

### PURPOSE

The Cybersecurity Career Studies Certificate is designed to prepare students to enter the workforce with essential cybersecurity training to help plan and implement an organization's information security, install security hardware and software, monitor networks for security breaches, respond to cyber-attacks, and gather evidence to be used in prosecuting cyber-crime. The training focuses on the strategies, techniques, and defense mechanisms required to mitigate global cyber threats. This certificate includes both classroom and lab instruction.

### PROGRAM LEARNING OUTCOMES

Upon successful completion, students will be able to:

1. Analyze, design and document computer network specifications to meet client needs.
2. Understand computer systems, networking, and information security terminology.
3. Install, configure, and troubleshoot workstations, servers, and network infrastructure.
4. Use computer systems and network security in a responsible and ethical manner.
5. Ensure the implementation of the five security keys: confidentiality, integrity, availability, accountability and auditability when creating security policies and procedures.
6. Understand different hacking attacks and defense methodologies.
7. Analyze local and global information technology (IT) and security trends, while recognizing the influences of IT on culture, economic, ethical, and legal issues and responsibilities.
8. Gain the ability for computer forensic investigation by collecting computer-related evidence at the physical layer from a variety of digital media.
9. Secure communication protocols from hacking attacks by highlighting protocol weaknesses that include Internet architecture, routing, addressing, topology, fragmentation and protocol analysis.

### EMPLOYMENT OPPORTUNITIES

The Cybersecurity Career Studies Certificate program will prepare students for a wide range of careers in fields such as computer forensics, information security, and systems administration. As cybersecurity job growth in Virginia continues to trend upwards, the certificate will enable students to be a part of this trend and remain competitive as the region's economy continues to evolve.

## CYBERSECURITY PROGRAM OF STUDY

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL</b>			
ITE 105	Careers and Cyber Ethics	2	
ITN 101	Intro. to Network Concepts	3	
ITN 260	Network Security Basics	3	ITN 101 or ITN 154
ITN 171	Unix I	3	
BUS 106	Sec. Awareness for Managers	3	
<b>FIRST YEAR SPRING</b>			
ITN 111	Server Administration	3	
ITN 112	Network Infrastructure	3	ITN 101 or ITN 154
ITN 261	Network Attacks, Computer Crime and Hacking	3	ITN 101 or ITN 154
ITN 275	Incident Response and Computer Forensics	3	ITN 260; ITN 101 or ITN 154
ITN 262	Network Communication, Security and Authentication	3	ITN 101 or ITN 154
<b>TOTAL PROGRAM CREDITS</b>		<b>29</b>	

### Notes and Additional Curriculum Options

Course substitutions may be available. Please see an advisor for more information.

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**Career Studies Certificate****HELP DESK SUPPORT (221-299-09)****PURPOSE**

The Help Desk Support Career Studies Certificate prepares students to fill entry-level information technology positions which require the employee to provide technical assistance and support related to computer systems, software, and hardware in person, over the web, and/or over the phone.

**PROGRAM LEARNING OUTCOMES**

Upon successful completion, students will be able to:

1. Perform help desk functions to address end-user needs.
2. Use proper computer system and networking terminology. Install, configure, and deploy desktop operating systems.
3. Troubleshoot/debug, maintain, repair and upgrade client desktop systems.
4. Use proper help desk support principles and practices while interacting with customers.
5. Document actions taken to resolve customer problems and or issues.
6. Use computer systems and networks in a responsible and ethical manner.
7. Work as an effective member of a work group.

**EMPLOYMENT OPPORTUNITIES**

Opportunities for employment in the immediate area and throughout the nation abound for students trained in computers. Students who complete the certificate will be qualified to work as Help Desk Technicians in a variety of businesses and organizations.

## HELP DESK SUPPORT PROGRAM OF STUDY

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR</b>			
ITE 140	Spreadsheet Software	3	
ITN 110	Client Operating System	3	
ITN 171	Unix	3	
ITE 150	Desktop Database Software	3	
ITN 101	Intro. to Network Concepts	3	
BUS 106	Sec. Awareness for Managers	3	
ITN 107	Personal Computer Hardware & Troubleshooting	3	
ITE 182	User Support/Help Desk Principles	3	
<b>TOTAL PROGRAM CREDITS</b>		<b>24</b>	

**Notes and Additional Curriculum Options**

Course substitutions may be available. Please see an advisor for more information.

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## TECHNOLOGY

### Career Studies Certificate

## INFORMATION TECHNOLOGY READINESS (221-299-08)

### PURPOSE

This Information Technology Readiness Career Studies Certificate equips students with the essential technology skills required in today's workplace. The curriculum addresses specific workforce needs and is offered in a cohort format as demand warrants.

### PROGRAM LEARNING OUTCOMES

Upon successful completion, students will be able to:

1. Demonstrate basic keyboarding skills.
2. Demonstrate a working knowledge of basic computer skills.
3. Utilize word processing software to create documents.
4. Work as an effective member of a work group.

### EMPLOYMENT OPPORTUNITIES

The Information Technology Readiness Career Studies Certificate prepares students to enter the workforce equipped with the basic computer skills necessary to successfully function in today's business environment.

## INFORMATION TECHNOLOGY READINESS PROGRAM OF STUDY

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR</b>			
AST 101	Keyboarding I	3	
AST 132	Word Processing I	1	
AST 133	Word Processing II	1	
ITE 100	Intro. to Information Systems	3	
SDV 100	College Success Skills	1	
SDV 107	Career Education	3	
ENG 100	Basic Occupational Communication	3	
BUS 121	Business Mathematics I	3	
ITD 110	Web Page Design I	3	
ITE 298	Seminar & Project	3	
<b>TOTAL PROGRAM CREDITS</b>		<b>24</b>	

### Notes and Additional Curriculum Options

Course substitutions may be available. Please see an advisor for more information.

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**Career Studies Certificate****SMART FARMING I (TBD)****PURPOSE**

The Smart Farming Career studies I is designed to improve the regions agriculture productivity by introducing agricultural producers to IoT technologies, such as drones and remote sensors, and by training them to better understand the environmental factors that influence plant growth and soil fertility.

**PROGRAM LEARNING OUTCOMES**

**Upon successful completion, students will be able to:**

1. Demonstrate a working knowledge of applicable regulations relating to small unmanned aircraft system rating privileges, limitations, and flight operations
2. Identify requirements for small UAS registration, markings, and condition
3. Explain the United States airspace classification, operating requirements, and flight restrictions affecting small unmanned aircraft operation
4. Identify procedures for requesting a waiver for eligible requirements in sUAS
5. Demonstrate the ability to distinguish between aviation weather sources and effects of weather on small unmanned aircraft performance
6. Explain small unmanned aircraft loading
7. Demonstrate a working knowledge of emergency procedures
8. Define and apply crew resource management
9. Understand radio communication procedures
10. Determine the performance of small unmanned aircraft
11. Explain the FAA aeromedical factors
12. Define and apply aeronautical decision making and judgment
13. Explain airport operations
14. Demonstrate the ability to self-certify themselves and others as sUAS pilot and crew members
15. Demonstrate a working knowledge of maintenance and preflight inspection procedures
16. Demonstrate the ability to record and report required FAA documents pertinent to accidents, maintenance, flight paths, and other situations as required
17. List the elements that make up small Unmanned Aircraft Systems and discuss the functionality of each
18. Demonstrate knowledge of small Unmanned Aircraft Systems design and payloads
19. Perform basic maintenance on small Unmanned Aircraft Systems
20. Design strategies and risk assessments for sUAS missions
21. Identify and enumerate factors that affect flight plans/missions
22. Plan and perform manual and autonomous flights of small Unmanned Aircraft Systems
23. Demonstrate a working knowledge of the types of sUAS products and sensors
24. Plan and carry out sUAS data processing workflows
25. Select the proper sUAS-based Geospatial Mapping System for a particular mission
26. Choose an appropriate geospatial application for sUAS data processing
27. Use software to create mapping products such as orthomosaics and digital elevation models
28. Demonstrate a knowledge of sUAS safety, cyber-security and privacy issues
29. Obtain a Part 107 Remote Pilot Certification

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**TECHNOLOGY****SMART FARMING I PROGRAM OF STUDY**

<b>Course #</b>	<b>Course Title</b>	<b>Credit</b>	<b>Pre-Requisite Courses (if applicable)</b>
<b>FIRST YEAR</b>			
UMS 107	sUAS Remote Pilot Ground School	3	
UMS 111	Small Unmanned Aircraft Systems I	3	
ENV 235	Soil Conservation & Spoils	3	
SCT 111	Intro to Environmental & Science Technology I	4	
AGR 205	Soil Fertility Management	3	
SDV 100	College Success Skills	1	
<b>TOTAL PROGRAM CREDITS</b>		<b>17</b>	

**Notes and Additional Curriculum Options**

Course substitutions may be available. Please see an advisor for more information.

## Career Studies Certificate

**SMART FARMING II (TBD)****PURPOSE**

The Smart Farming Career Studies II is designed to further improve the region's agricultural productivity by preparing agricultural producers to implement the use of drones, robots, and/or remote sensors. Enabling them to obtain data for better controlling crop growth, preventing losses caused by adverse weather conditions or infectious pests and thus, facilitating the return on investments.

**PROGRAM LEARNING OUTCOMES**

**Upon successful completion, students will be able to:**

1. Professionally meet with prospective clients in order to present an overview of the services and outcomes that can be provided through aerial sensing.
2. Visit prospective client's locations and evaluate the site for mission readiness, fly-ability, and safety.
3. Determine the proper sUAS aircraft and sensor payload to efficiently collect the data needed to provide the client with the desired outcome.
4. Determine the proper mission parameters to use to collect the data such as, flight altitude, speed, forward and side overlap, data storage media, etc.
5. Properly load, balance, and configure sUAS sensor packages and other payloads to carry out the mission.
6. Test sensor packages and other payloads for mission readiness.
7. Practice, perform, and document all preflight Remote Pilot due diligences.
8. Program the mission into the sUAS if mission is to be performed autonomously or if not simulate the mission mentally.
9. Perform preflight inspection procedures to assure airworthiness of sUAS and readiness of sensor packages before the mission.
10. Brief the crew, if any, on their responsibilities and duties before the mission and use checklists as often as possible to avoid mistakes.
11. Properly perform FAA required recording and reporting pertinent to maintenance, flight paths, accidents, and other situations as required.
12. Perform post mission inspections, maintenance, and safe storage procedures on all mission equipment and collected data.
13. Process the collected data to produce the client's desired outcome/s.
14. Deliver and review the mission outcomes with the client.
15. Plan a data collection mission, equip the drone to carry out the mission, fly the mission and acquire data, process the data, and develop a plan of action based on the results of the processed data.
16. Learn to ground truth the assumptions that you made developing the plan of action.
17. Set up and prepare an agricultural drone for soil/plant health intervention missions.
18. Plan and carry out a waypoint based mission to apply fertilize/pesticide/herbicide/seed to a field.
19. Plan and carry out an A-B point mission to apply fertilize/pesticide/herbicide to a field.
20. Plan and carry out a pre-mapped mission to apply fertilize/pesticide/herbicide/seed to a field.
21. Perform post mission inspections, maintenance, and safe storage procedures on all mission equipment and collected data.
22. Practice collecting data, processing data, developing action plans, and performing corrective/interactive missions on various row and field crops.
23. Attempt to accurately predict the yield of crops from data collect mid-growing season and near end growing season.
24. Practice fixed wing flight for missions that require large field (100's of acres) data acquisition.

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**SMART FARMING II PROGRAM OF STUDY**

<b>Course #</b>	<b>Course Title</b>	<b>Credit</b>	<b>Pre-Requisite Courses (if applicable)</b>
<b>FIRST YEAR</b>			
UMS 290	Internship in sUAS	3	
UMS 296	sUAS On-Site Training <sup>1</sup>	3	
GIS 200	Geographical Information Systems	3	
SCT 112	Intro to Environmental & Science Technology II	4	
HRT 137	Environmental Factors in Plant Growth	3	
AGR 208	Insect Control	3	
<b>TOTAL PROGRAM CREDITS</b>		<b>19</b>	

**Notes and Additional Curriculum Options**

Course substitutions may be available. Please see an advisor for more information.

<sup>1</sup>UMS 296 must be taken in the summer semester due to matching the course content to the region's growing cycle.

## Career Studies Certificate

**SOFTWARE DEVELOPMENT I (221-299-01)****PURPOSE**

The Software Development I Career Studies Certificate is designed to prepare students to enter the workforce as software developers who can create and test business-oriented software applications. The curriculum includes general and specialized computer courses focusing on programming and database applications. This certificate includes both classroom and lab instruction.

**PROGRAM LEARNING OUTCOMES**

Upon successful completion, students will be able to:

1. Write application software that makes efficient and secure use of operating system services.
2. Analyze a problem and identify the appropriate data, hardware components and/or software requirements to develop a feasible solution.
3. Use current tools and practices that support the software documentation process.
4. Document system requirements and/or develop materials for clients in the proper use of hardware or software.
5. Work cooperatively and effectively in teams to accomplish a shared goal.
6. Analyze local and global information technology (IT) trends, while recognizing the influences of IT on cultural, economic, ethical, and legal issues and responsibilities.
7. Use logical and mathematical reasoning to analyze, organize, and interpret data.

**EMPLOYMENT OPPORTUNITIES**

Job opportunities in the immediate area and throughout the nation abound for students trained in computers. According to the Bureau of Labor Statistics' website, employment of software developers is projected to grow 24% from 2016 to 2026, which is much faster than the average for all occupations. Software developers will be needed to respond to an increased demand for computer software.

**SOFTWARE DEVELOPMENT I PROGRAM OF STUDY**

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR</b>			
ITD 110	Web Page Design I	3	
ITE 131	Survey of Internet Services	1	
ITE 119	Information Literacy	3	
ITN 101	Introduction to Network Concepts	3	
ITN 171	UNIX I	3	
ITN 260	Network Security Basics	3	
<b>TOTAL PROGRAM CREDITS</b>		<b>16</b>	

**Notes and Additional Curriculum Options**

Course substitutions may be available. Please see an advisor for more information.

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## TECHNOLOGY

### Career Studies Certificate

## SOFTWARE DEVELOPMENT II (221-299-02)

### PURPOSE

The Software Development II Career Studies Certificate is designed to prepare students to enter the workforce as software developers who can create and test business-oriented software applications. The curriculum includes general and specialized computer courses focusing on programming and database applications. This certificate includes both classroom and lab instruction.

### PROGRAM LEARNING OUTCOMES

Upon successful completion, students will be able to:

1. Write application software that makes efficient and secure use of operating system services.
2. Analyze a problem and identify the appropriate data, hardware components and/or software requirements to develop a feasible solution.
3. Use current tools and practices that support the software documentation process.
4. Document system requirements and/or develop materials for clients in the proper use of hardware or software.
5. Work cooperatively and effectively in teams to accomplish a shared goal.
6. Analyze local and global information technology (IT) trends, while recognizing the influences of IT on cultural, economic, ethical, and legal issues and responsibilities.
7. Use logical and mathematical reasoning to analyze, organize, and interpret data.

### EMPLOYMENT OPPORTUNITIES

Job opportunities in the immediate area and throughout the nation abound for students trained in computers. According to the Bureau of Labor Statistics' website, employment of software developers is projected to grow 24% from 2016 to 2026, which is much faster than the average for all occupations. Software developers will be needed to respond to an increased demand for computer software.

## SOFTWARE DEVELOPMENT II PROGRAM OF STUDY

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR</b>			
ITP 100	Software Design	3	
ITP 140	Client Side Scripting	3	ITD 110 co-requisite
ITD 132	Structured Query Languages (ORACLE)	3	
ITP 270	Programming in Cybersecurity (Python)	3	
ITN 262	Network Communication, Security and Authentication	3	
SDV 100	College Success Skills	1	
<b>TOTAL PROGRAM CREDITS</b>		<b>16</b>	

### Notes and Additional Curriculum Options

Course substitutions may be available. Please see an advisor for more information.

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**Associate of Applied Science Degree****sUAS OPERATIONS TECHNICIAN TECHNICAL STUDIES (TBA)****PURPOSE**

Develop a highly trained and skilled drone-operator workforce to support the emerging drone industry in the counties served by Mountain Empire Community College by providing industry driven and developed Unmanned System's training targeted directly toward the nascent industry adopters: Police, EMS, Agriculture, Infrastructure Inspection, Emergency Response, Real Estate, Tourism/Videography, and Delivery.

**PROGRAM LEARNING OUTCOMES**

Upon successful completion, students will be able to:

1. Obtain FAA Remote Pilot Certification
2. Properly apply FAA operations and safety regulations to UAS Ops
3. Choose proper UAS for a specific task/mission/data collection
4. Build, configure, maintain, troubleshoot, and repair small Unmanned Systems
5. Properly inspect UAS and Ground Systems/Radios before flight
6. Plan and carry out safe and successful live flight UMS missions
7. Plan and carry out safe and successful autonomous UMS missions
8. Supervise a UMS flight crew in accomplishing a mission
9. Understand controlled airspace and obtain the necessary authorization to fly there
10. Understand weather and its effects on flight
11. Choose, mount, and configure the proper sensor(s) for mission data collection and retrieval
12. Understand and implement data security for all customer data
13. Process collected data to produce meaningful reports for customers
14. Properly inspect UAS and Ground Systems/Radios after mission
15. Maintain all flight and maintenance logs for UMS equipment

**EMPLOYMENT OPPORTUNITIES**

By 2021 the FAA estimates there could be as many as 1.6 million small drones in commercial use. FAA Administrator Michael Huerta said in a recent speech at AUVSI Xponential Dallas Texas, "The only limitation seems to be: How quickly we - all of us, across the industry - can make it happen, safely." The MECC region boasts 94 aviation related companies focusing on aerospace product, manufacturing, air transportation, and aviation support activities located within 100 miles; 32 within 50 miles; and three companies within 25 miles of Wise County. Currently Glassdoor ([www.glassdoor.com](http://www.glassdoor.com)) lists 1056 open jobs for UAV pilots. The U.S. Military (all branches) are currently in desperate need of qualified UAV pilots, all branches are reporting 100's of open positions. The Bureau of Labor Statistics predicts 11% - 20% growth each year for the next 10 years. The FAA estimates small, hobbyist UAS purchases may grow from 1.9 million in 2016 to as many as 4.3 million by 2020. Sales of UAS for commercial purposes are expected to grow from 600,000 in 2016 to 2.7 million by 2020. Combined total hobbyist and commercial UAS sales are expected to rise from 2.5 million in 2016 to 7 million in 2020. Industries already being transformed by drone piloting skills:

- Utilities: Using drones to inspect power lines, telephone towers and wind turbines without needing to employ several people, cranes and cherry pickers.
- Mining: Drones are already commonplace and are used to measure stock piles of minerals in hours, rather than days. Also used for surveying work and environmental impact research.
- Fast Food Delivery: Big companies such as Domino's Pizza will be looking to invest in drones for pizza delivery in the future.
- Package Delivery: Australia Post and Amazon are already investing in drone technology as a way of delivering packages.
- Trades: Being able to inspect things from a height, such as a solar panel output, leaking roofs and guttering.
- Real Estate: Panoramic aerial footage of properties to show investors new opportunities or create marketing videos.
- Wedding photography: Aerial videography of weddings is set to become the next big thing and will allow couples to capture diverse and creative footage of their special day.

**PROGRAM REQUIREMENTS**

Students should have English and Mathematics skills assessed. Deficiencies in these area may be corrected by completed the appropriate developmental studies courses.

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## TECHNOLOGY

### ADDITIONAL INFORMATION

Virginia is gifted with a unique geography that provides extensive, open, and diverse training and testing locations that enable manufacturers and developers to demonstrate proof-of-concepts, acquire the data needed for Federal Aviation Administration (FAA) certifications and approvals, and to push the envelope of automated vehicles capabilities in a controlled, data-focused method. Coupled with the advanced educational opportunities targeted to the UMS industry and boasting one of only seven FAA designated test sites in the nation through the Mid-Atlantic Aviation Partnership (MAAP) at Virginia Tech, Virginia's students, current and future workforce, can be well-trained and capable of taking on the biggest challenges in the Unmanned Systems field

### sUAS OPERATIONS TECHNICIAN TECHNICAL STUDIES PROGRAM OF STUDY

Course #	Course Title	Credit	Pre-Requisite Courses (if applicable)
<b>FIRST YEAR FALL</b>			
ENG 111	College Composition I	3	
SDV 100	College Success Skills	1	
IND 101	Quality Assurance Technology I	3	
ITN 101	Introduction to Network Concepts	3	
MEC 120	Principles of Machine Technology	3	
UMS 107	sUAS Remote Pilot School	3	
<b>ELIGIBLE FOR FAA PART 107 REMOTE DRONE PILOT LICENSE CERTIFICATION</b>			
<b>FIRST YEAR SPRING</b>			
PSY 120	Human Relations	3	
ENG 115	Technical Writing	3	
NAS 125	Meteorology	4	
UMS 111	Small Unmanned Aircraft Systems I	3	
ITE 119	Information Literacy	3	
<b>SECOND YEAR FALL</b>			
ETR 218	Industrial Electronics Circuits	4	
GIS 200	Geographic Information Systems	3	
DRF 200	Survey of Computer Aided Drafting	4	
UMS 177	sUAS Components and Maintenance	3	
PLS 135	U.S. Government and Politics	3	
<b>SECOND YEAR SPRING</b>			
	PED or HLT Elective	2 or 3	
	Humanities Elective	3	
IND 137	Team Concepts & Problem Solving	3	
UMS 211	Small Unmanned Aircraft Systems II	3	UMS 111
UMS 290	Internship in sUAS	3	Should be completed during student's last semester
UMS 296	sUAS On-Site Training	3	Should be completed during student's last semester
<b>TOTAL PROGRAM CREDITS</b>		<b>66/67</b>	

### Notes and Additional Curriculum Options

Course substitutions may be available. Please see an advisor for more information.

# Course Descriptions

## Course Numbers

Courses numbered 1-9 are Developmental courses. The credits earned in these courses are not applicable toward associate degree programs. Courses numbered 10-99 are applicable toward certificate programs but are not applicable toward an associate degree. Courses numbered 100-199 are freshman courses which may be applicable toward an associate degree or certificate program. Courses numbered 200-299 are sophomore courses which may be applicable toward an associate degree or certificate program.

## Course Credits

The credit for each course must be indicated after the title in the course description. One credit is equivalent to one collegiate semester-hour credit. Each semester hour of credit given for a course is based on the “academic hour,” which is 50 minutes of formalized, structured instructional time in a particular course weekly for fifteen weeks. This is a total of 750 minutes of instruction. In addition to this instructional time, appropriate evaluation will be required. If this evaluation is a final examination, a minimum of 50 minutes of evaluation time shall be scheduled for each course, not to exceed a total of 150 minutes per course. Any exception must have prior approval by the requestor’s Chief Academic Officer or designee. Credits may be assigned to the activities as follows:

- Lecture – One academic hour of lecture (including lecture, seminar, discussion, or other similar activities) per week, generally for 15 weeks, plus the evaluation or examination period, equals one collegiate semester-hour credit.
- Laboratory – Two to five academic hours, depending on the discipline, of laboratory, clinical training, supervised work experience, coordinated internship, or other similar activities per week, generally for 15 weeks, plus the evaluation or examination period, equals one collegiate semester-hour credit.
- Asynchronous Distance Learning Courses – In the case of asynchronous distance learning course offerings or hybrid courses that employ a mix of traditional contact hours and learning activities with students and faculty separated by time and place, colleges must demonstrate through faculty peer review that content and competency coverage and student outcomes are equivalent to those of traditional sections of the same class. In the event the only section of the course being taught in the VCCS is an asynchronous or hybrid course, faculty peer review will be employed to confirm that content and competency coverage and student outcomes are appropriate for the course credits awarded.
- General Usage Courses – Variable academic hours from one to five credits for general usage courses.
- Variable Credits – A college may request that a course vary from the existing credit value, but by no more than one credit. Existing variable credit ranges may not be extended. Credit variability will not be approved for purposes of deleting laboratory hours or of making laboratory hours optional.

## Course Hours

The number of lecture hours in class each week (including lecture, seminar, discussion, and other similar activities) and/or the number of laboratory, supervised study, coordinated internship, and other similar activities are indicated for each course in the course description. The numbers of lecture and laboratory hours required each week are called “contact” hours. Distance learning courses must include the same content and deliver the same student outcomes as do the same courses taught in the classroom. Although contact hours for distance learning courses may not refer to seat time, they do still indicate the amount of course time devoted to lecture and laboratory instruction.

## Course Prerequisites and Co-requisites

If any prerequisites are required before enrolling in a course, these prerequisites will be identified in the course description. The prerequisites or their equivalent must be completed satisfactorily before enrolling in a course. Courses in special sequences (usually identified by the numerals I-II) require that prior courses or their equivalent be completed before enrolling in the advanced courses in the sequence unless otherwise specified. When co-requisites are required for a course, usually the co-requisite must be taken at the same time. Students who register for a class without meeting prerequisites may be dropped from the class during the first two weeks of classes.



## Reading and Writing Level Requisites

**Table E: Student English Course Placement**

If a student has...		The student may enroll in...
6 or more years since high school graduation		Informed Self-Placement (See Advisor)
<b>High School Grade Point Average (HS GPA) for English Placement*</b>		
Less than 2.0 HS GPA		EDE 10
2.0 to 2.99 HS GPA		EDE 11 + ENG 111 ENG 115
3.0+ HS GPA		ENG 111 ENG 115
<b>Course</b>		
<b>Course</b>		<b>Minimum Placement Requirement**</b>
EDE 10		1.99 or lower HS GPA
EDE 11 + ENG 111		2.0 to 2.99 HS GPA
ENG 111		3.0+ HS GPA
ENG 115		2.0+ HS GPA
<b>SAT/ACT/GED Scores for English Placement***</b>		
<b>Test</b>	<b>Student Score</b>	<b>The student may enroll in...</b>
SAT-ERW Evidence Based Reading & Writing	480 or above	ENG 111
	400-470	ENG 111 + EDE 11
ACT Subject Area Tests: English & Reading	18 or above	ENG 111
	15-17	ENG 111 + EDE 11
	14 and below	EDE 10
GED English	165 or above	ENG 111
*High School Grade Point Average (HS GPA) is valid for five (5) years after the date of high school graduation. Students who completed high school six (6) or more years ago will be enrolled based on self-informed placement.		
**Minimum placement requirements apply to students who completed high school five (5) or less years ago.		
***SAT, ACT, and GED scores are valid for five (5) years after the date of the test.		

## General Usage Courses

### 90, 190 & 290 Coordinated Practice (1-5 CR.)

Includes supervised practice in selected health agencies coordinated by the College. Credit/Practice ratio maximum 1:5 hours. May be repeated for credit. Variable hours.

### 90, 190, & 290 Coordinated Internship (1-5 CR.)

Supervises on-the-job training in selected business, industrial, or service firms coordinated by the College. Credit/Practice ratio maximum 1:5 hours. May be repeated for credit. Variable hours.

### 95, 195, & 295 Topics in (1-5 CR.)

Provides an opportunity to explore topical areas of interest to or needed by students. May be used also for special honors courses. May be repeated for credit. Variable hours.

### 96, 196, & 296 On-Site Training (1-5 CR.)

Specializes in career orientation and training program without pay in selected businesses and industry, supervised and coordinated by the College. Credit/Work ratio not to exceed 1:5 hours. May be repeated for credit. Variable hours.

### 97, 197 & 297 Cooperative Education (1-5 CR.)

Supervises in on-the-job training for pay in approved business, industrial and service firms coordinated by the College's cooperative education office. Is applicable to all occupational-technical curricula at the discretion of the College. Credit/Work ratio not to exceed 1:5 hours. May be repeated for credit. Variable hours.

### 98, 198 & 298 Seminar and Project (1-5 CR.)

Requires completion of a project or research report related to the student's occupational objective and a study of approaches to the selection and pursuit of career opportunities in the field. May be repeated for credit. Variable hours.

## **ACCOUNTING (ACC)**

### **ACC 105 - OFFICE ACCOUNTING (3 CR.)**

Presents practical accounting. Covers the accounting cycle—journals, ledgers, working papers, closing of books—payrolls, financial statements, accounting forms and practical procedures. Lecture 3 hours per week.

### **ACC 111 - ACCOUNTING I (3-4 CR.)**

Presents fundamental accounting concepts and principles governing the accounting cycle, journals, ledgers, working papers, and preparation of financial statements for sole proprietorships. A laboratory co-requisite (ACC 113) may be required as identified by the college. Lecture 3-4 hours per week.”

### **ACC 112 - ACCOUNTING II (3-4 CR.)**

Covers fundamental accounting concepts and principles governing the accounting cycle, journals, ledgers, working papers, and preparation of financial statements for sole proprietorships. A laboratory co-requisite (ACC 114) may be required as identified by the college. Lecture 3-4 hours per week.”

### **ACC 115 - APPLIED ACCOUNTING (3 CR.)**

Presents practical accounting procedures for retail stores, professional individuals in firms, and personal service occupations. Covers the accounting cycle, journals, ledgers, preparation of financial statements and payrolls, and checking account management. Lecture 3-4 hours per week.

### **ACC 124 - PAYROLL ACCOUNTING (3 CR.)**

Presents accounting systems and methods used in computing and recording payroll to include payroll taxes and compliance with federal and state legislation. Lecture 3 hours per week.

### **ACC 134 - SMALL BUSINESS TAXES (3 CR.)**

Introduces taxes most frequently encountered in business. Includes payroll, sales, property, and income tax. Lecture 3 hours per week.

### **ACC 211 - PRINCIPLES OF ACCOUNTING I (3 CR.)**

Introduces accounting principles with respect to financial reporting. Demonstrates how decision makers use accounting information for reporting purposes. Focuses on the preparation of accounting information and its use in the operation of organizations, as well as methods of analysis and interpretation of accounting information. Lecture 3-4 hours per week. Total 3 - 4 hours per week. A laboratory co-requisite (ACC 213) may be required as identified by the college.

### **ACC 212 - PRINCIPLES OF ACCOUNTING II (3 CR.)**

Introduces accounting principles with respect to cost and managerial accounting. Focuses on the application of accounting information with respect to product costing, as well as its use within the organization to provide direction and to judge performance. Lecture 3-4 hours per week. Total Contact Hours - 3-4 per week. Pre-requisite: ACC 211; A laboratory co-requisite (ACC 214) may be required as identified by the college.

### **ACC 215 - COMPUTERIZED ACCOUNTING (3-4 CR.)**

Introduces the computer in solving accounting problems. Focuses on operation of computers. Presents the accounting cycle and financial statement preparation in a computerized system and other applications for financial and managerial accounting. Prerequisite or co-requisite ACC 212 or equivalent. Lecture 3-4 hours per week.

### **ACC 219 - GOVERNMENTAL AND NOT-FOR-PROFIT ACCOUNTING (3 CR.)**

Introduces fund accounting as used by governmental and nonprofit entities. Stresses differences between accounting principles for for-profit and not-for-profit organizations. Prerequisite ACC 212 or equivalent. Lecture 3 hours per week.

### **ACC 221 - INTERMEDIATE ACCOUNTING I (3-4 CR.)**

Covers accounting principles and theory, including a review of the accounting cycle and accounting for current assets, current liabilities, and investments. Introduces various accounting approaches and demonstrates the effect of these approaches on the financial statement users. Prerequisite ACC 212 or equivalent. Lecture 3-4 hours per week.

### **ACC 222 - INTERMEDIATE ACCOUNTING II (3-4 CR.)**

Continues accounting principles and theory with emphasis on accounting for fixed assets, intangibles, corporate capital structure, long-term liabilities, and investments. Prerequisite ACC 221 or equivalent. Lecture 3-4 hours per week.

### **ACC 231 - COST ACCOUNTING I (3 CR.)**

Studies cost accounting methods and reporting as applied to job order, process, and standard cost accounting systems. Includes cost control and other topics. Prerequisite ACC 212 or equivalent. Lecture 3-4 hours per week.”

### **ACC 261 PRINCIPLES OF FEDERAL TAXATION I (3 CR.)**

Presents the study of federal taxation as it relates to individuals and related entities. Includes tax planning, compliance and reporting. Must be taken in sequence. Lecture 3 hours per week.

### **ACC 290 - COORDINATED INTERNSHIP IN ACCOUNTING (3 CR.)**

Supervises on-the-job training in selected business, industrial or service firms coordinated by the college. Credit/practice ratio not to exceed 1:5 hours. May be repeated for credit. Variable hours. 1-5 credits

### **ACC 298 - SEMINAR AND PROJECT (3 CR.)**

Requires completion of a project or research report related to the students occupational objective and a study of approaches to the selection and pursuit of career opportunities in the field. May be repeated for credit. Variable hours.

## **ADMINISTRATION OF JUSTICE (ADJ)**

### **ADJ 100 - SURVEY OF CRIMINAL JUSTICE (3 CR.)**

Presents an overview of the United States criminal justice system; introduces the major system components—law enforcement, judiciary, and corrections. Reading Level Requisite EDE 10. Lecture 3 hours per week.

### **ADJ 105 - THE JUVENILE JUSTICE SYSTEM (3 CR.)**

Presents the evolution, philosophy, structures and processes of the American juvenile delinquency system; surveys the rights of juveniles, dispositional alternatives, rehabilitation methods and current trends. Reading Level Requisite EDE 10. Lecture 3 hours per week.

### **ADJ 107 - SURVEY OF CRIMINOLOGY (3 CR.)**

Surveys the volume and scope of crime; considers a variety of theories developed to explain the causation of crime and criminality. Reading Level Requisite EDE 10. Lecture 3 hours per week.

### **ADJ 111 - LAW ENFORCEMENT ORGANIZATION & ADMINISTRATION I (3 CR.)**

Teaches the principles of organization and administration of law enforcement agencies. Studies the management of line operations, staff and auxiliary services, investigative and juvenile units. Introduces the concept of data processing; examines policies, procedures, rules, and regulations pertaining to crime prevention. Surveys concepts of protection of life and property, detection of offenses, and apprehension of offenders. Prerequisite for ADJ 112, divisional approval or ADJ 111. Reading Level Requisite EDE 10. Lecture 3 hours per week.

### **ADJ 112 - LAW ENFORCEMENT ORGANIZATION & ADMINISTRATION II (3 CR.)**

Teaches the principles of organization and administration of law enforcement agencies. Studies the management of line operations, staff and auxiliary services, investigative and juvenile units. Introduces the concept of data processing; examines policies, procedures, rules, and regulations pertaining to crime prevention. Surveys concepts of protection of life and property, detection of offenses, and apprehension of offenders. Prerequisite for ADJ 112, divisional approval or ADJ 111. Reading Level Requisite EDE 10. May be taken out of sequence. Lecture 3 hours per week.

### **ADJ 127 - FIREARMS AND MARKSMANSHIP (3 CR.)**

Surveys lethal weapons in current usage and current views on weapon types and ammunition design. Examines the legal guidelines as to use of deadly force, safety in handling of weaponry, and weapon care and cleaning; marksmanship instruction under standard range conditions. Prerequisite permission of instructor. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

### **ADJ 130 - INTRODUCTION TO CRIMINAL LAW (3 CR.)**

Surveys the general principles of American criminal law, the elements of major crimes, and the basic steps of prosecution procedure. Reading Level Requisite EDE 10. Lecture 3 hours per week.

### **ADJ 131 - LEGAL EVIDENCE I (3 CR.)**

Surveys the identification, degrees, and admissibility of evidence for criminal prosecution; examines pretrial and trial procedures as they pertain to the rules of evidence. Reading Level Requisite EDE 10. Must be completed in sequence. Lecture 3 hours per week.

### **ADJ 133 - ETHICS AND THE CRIMINAL JUSTICE PROFESSIONAL (3 CR.)(3 CR.)**

Examines ethical dilemmas pertaining to the criminal justice system, including those in policing, courts, and corrections. Focuses on some of the specific ethical choices that must be made by the criminal justice professional. Lecture 3 hours per week.

### **ADJ 138 - DEFENSIVE TACTICS (2 CR.)**

Surveys and demonstrates the various types of non-lethal force tools and tactics for use by criminal justice personnel in self-defense, arrest, search, restraint and transport of those in custody. Lecture 2 hours per week.

### **ADJ 140 - INTRODUCTION TO CORRECTIONS (3 CR.)**

Focuses on societal responses to the offender. Traces the evolution of practices based on philos-

ophies of retribution, deterrence, and rehabilitation. Reviews contemporary correctional activities and their relationships to other aspects of the criminal justice system. Reading Level Requirement EDE 10. Lecture 3 hours per week.

**ADJ 146 - ADULT CORRECTIONAL INSTITUTIONS (3 CR.)**

Describes the structures, functions, and goals of state and federal correctional institutions (prisons, farms, community-based units, etc.) for adult inmates. Lecture 3 hours per week.

**ADJ 152 - UNARMED SECURITY OFFICERS - DUTIES AND RESPONSIBILITIES (1 CR.)**

Surveys the theory and practice of un-armed private security personnel duties and responsibilities. Prepares student for licensing and professionalism. Lecture 1 hour per week.

**ADJ 153 - ARMED SECURITY OFFICERS - DUTIES AND RESPONSIBILITIES (1 CR.)**

Surveys the theory and practice of armed private security personnel duties and responsibilities; prepares student for licensing and professionalism. Lecture 1 hour per week.

**ADJ 171 - FORENSIC SCIENCE I (4 CR.)**

Introduces students to crime scene technology, procedures for sketching, diagramming and using casting materials. Surveys the concepts of forensic chemistry, fingerprint classification/identification and latent techniques, drug identification, hair and fiber evidence, death investigation techniques, thin-layer chromatographic methods, and arson materials examination. Reading Level Requirement EDE 10. May be completed out of sequence. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

**ADJ 172 - FORENSIC SCIENCE II (4 CR.)**

Introduces students to crime scene technology, procedures for sketching, diagramming and using casting materials. Surveys the concepts of forensic chemistry, fingerprint classification/identification and latent techniques, drug identification, hair and fiber evidence, death investigation techniques, thin-layer chromatographic methods, and arson materials examination. Reading Level Requirement EDE 10. May be completed out of sequence. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

**ADJ 195 - CONCEALED WEAPONS PERMIT (1 CR.)**

Discusses and explores safe firearms handling, laws, and procedures to acquire a concealed weapons permit.

**ADJ 198 - SEMINAR AND PROJECT IN CRIMINAL JUSTICE AGENCY MANAGEMENT (3 CR.)**

The course will consist of an independent study in the comparison of Criminal Justice Agency Missions and Management.

**ADJ 198 - SEMINAR AND PROJECT (3 CR.)**

This course is an independent study for criminal justice students who do not take ADJ 296 - On-site training in Criminal Justice. The student will complete a major research project in any area relative to the criminal justice field. Variable hours per week.

**ADJ 227 - CONSTITUTIONAL LAW FOR JUSTICE PERSONNEL (3 CR.)**

Surveys the basic guarantees of liberty described in the U. S. Constitution and the historical development of these restrictions on government power, primarily through U. S. Supreme Court decisions. Reviews rights of free speech, press, assembly, as well as criminal procedure guarantees (to counsel, jury trial, habeas corpus, etc.) as they apply to the activities of those in the criminal justice system. Reading Level Requirement EDE 10. Lecture 3 hours per week.

**ADJ 234 - TERRORISM/COUNTER TERRORISM (3 CR.)**

Surveys the historical and current practices of terrorism that are national, transnational, or domestic in origin. Includes biological, chemical, nuclear, and cyber-terrorism. Teaches the identification and classification of terrorist organizations, violent political groups and issue-oriented militant movements. Examines investigative methods and procedures utilized in counter terrorist efforts domestically and internationally. Lecture 3 hours per week. Reading Level of EDE 10.

**ADJ 236 - PRINCIPLES OF CRIMINAL INVESTIGATION (3 CR.)**

Surveys the fundamentals of criminal investigation procedures and techniques. Examines crime scene search, collecting, handling, and preserving of evidence. Reading Level Requirement EDE 10. Lecture 3 hours per week.

**ADJ 241 - CORRECTIONAL LAW I (3 CR.)**

Studies the legal rights & obligations of the convict-probationer, inmate, and parolee. Surveys methods of enforcing both rights & obligations & the responsibilities of corrections agencies & personnel under correctional law (constitutional, statutory, and regulatory provisions). Reading Level Requirement EDE 102. Lecture 3 hours per week.

**ADJ 245 - MANAGEMENT OF CORRECTIONAL FACILITIES (3 CR.)**

Describes management options and operational implications for staffing, security, safety, and

treatment. Considers impact of changes in public policy on corrections. Reading English Level of EDE 11. Lecture 3 hours per week.

**ADJ 246 - CORRECTIONAL COUNSELING (3 CR.)**

Presents concepts and principles of interviewing and counseling as applied in the correctional setting. English Level Requirement EDE 10. Lecture 3 hours per week.

**ADJ 295 - COMPARATIVE STUDIES IN CRIMINAL JUSTICE (3 CR.)**

In order to apply criminal justice theory to practice, and to explore the mission and goals of agencies within the Criminal Justice System, this course will allow the student to participate in an on-site criminal justice learning experience in a variety of criminal justice agencies. Appropriate tours will be with police departments, sheriff's departments, juvenile and adult probation departments, correctional institutions, and departments of social services. Variable hours per week.

**ADJ 296 - ON-SITE TRAINING IN CRIMINAL JUSTICE (3 CR.)**

In order to apply criminal justice theory to practice, this course will allow the student to participate in an on-site criminal justice learning experience in a variety of criminal justice agencies. Appropriate placements will be with police departments, sheriff's departments, juvenile and adult probation departments, correctional institutions, and departments of social services. Other placements will be evaluated on a case by case basis. Variable hours per week.

**ADMINISTRATIVE SUPPORT TECHNOLOGY (AST)**

**AST 101 - KEYBOARDING I (2 CR.)**

Teaches the alpha/numeric keyboard with emphasis on correct techniques, speed, and accuracy. Teaches formatting of basic personal and business correspondence, reports, and tabulation. Lecture 3 hours per week.

**AST 102 - KEYBOARDING II (3 CR.)**

Develops keyboarding and document production skills with emphasis on preparation of specialized business documents. Continues skill-building for speed and accuracy. Prerequisite AST 101. A laboratory co-requisite (AST 104) may be required. Lecture 2-4 hours per week.

**AST 107 - EDITING/PROOFREADING SKILLS (3 CR.)**

Develops skills essential to creating and editing business documents. Covers spelling, grammar, dictation and punctuation, capitalization, and other usage problems. Lecture 3 hours per week.

**AST 108 - TELEPHONE TECHNIQUES (1 CR.)**

Provides guidelines and techniques for communicating effectively on the telephone and for handling telephone problems efficiently, pleasantly, and constructively. Lecture 1 hour per week.

**AST 117 - KEYBOARDING FOR COMPUTER USE (1 CR.)**

Teaches the alphabetic keyboard and 10-key pad. Develops correct keying techniques. Lecture 1 hour per week.

**AST 132 - WORD PROCESSING I (SPECIFY SOFTWARE) (1 CR.)**

Introduces students to a word processing program to create, edit, save and print documents. Lecture 1 hour per week.

**AST 133 - WORD PROCESSING II (MICROSOFT WORD) (1 CR.)**

Presents formatting and editing features of Microsoft Word. Lecture 1 hour per week.

**AST 137 - RECORDS MANAGEMENT (3 CR.)**

Teaches filing procedures for hard copy, electronic, and micrographic systems. Identifies equipment, supplies, and solutions to records management problems. Lecture 3 hours per week.

**AST 141 - WORD PROCESSING I (WP FOR WINDOWS) (3 CR.)**

Teaches creating and editing documents, including line and page layouts, columns, fonts, search/replace, cut/paste, spell/thesaurus, and advanced editing and formatting features of word processing software. Prerequisite - Basic keyboarding skills. A laboratory co-requisite (AST 144) may be required. Lecture 3 hours per week.

**AST 150 - DESKTOP PUBLISHING I (SPECIFY SOFTWARE) (1 CR.)**

Presents desktop publishing features including page layout and design, font selection, and use of graphic images. Lecture 1 hour per week. Students must have the Microsoft Office Suite loaded on their computer.

**AST 154 - INTRODUCTION TO VOICE RECOGNITION SOFTWARE (1 CR.)**

Teaches the computer user to use the voice as an input device to compose documents and to give commands directly to the computer. Since this new technology is being used in many business, medical, and legal offices, students should be prepared to use this input device. Prerequisite AST 141. Lecture 1 hour per week.

**AST 155 - INTRODUCTION TO DESKTOP INFORMATION MANAGEMENT (OUTLOOK) (1 CR.)**

Teaches desktop information management to organize schedules through the calendar. Students learn how to manage electronic messages, appointments, contacts, tasks, and files. Students prepare for Core Microsoft Outlook MOUS Exam. Software used will be Microsoft Outlook 2010. ENF 2 Requisite. Lecture 1 hour per week.

**AST 160 - LEARNING THE INTERNET FOR BUSINESS (1 CR.)**

Introduces students to basic Internet terminology and services including e-mail, www browsing, search engines, and other services. Provides an introduction to electronic commerce in an office environment. ENF 2 Requisite. Lecture 1 hour per week.

**AST 205 - BUSINESS COMMUNICATIONS (3 CR.)**

Teaches techniques of oral and written communications. Emphasizes writing and presenting business-related materials. Lecture 3 hours per week.

**AST 206 - PROFESSIONAL DEVELOPMENT (3 CR.)**

Develops professional awareness in handling business and social situations. Emphasis on goal setting and decision making. Lecture 3 hours per week.

**AST 215 - MEDICAL KEYBOARDING (3 CR.)**

Develops decision-making skills, speed, and accuracy in preparation of medical documents with emphasis on meeting office requirements. Prerequisite AST 102 or AST 141. A laboratory co-requisite (AST 216) may be required. Lecture 2-4 hours per week.

**AST 236 - SPECIALIZED SOFTWARE APPLICATIONS (3 CR.)**

Teaches specialized integrated software applications on the microcomputer. Emphasizes document production to meet business and industry standards. Prerequisite AST 101 or equivalent. A laboratory co-requisite (AST 237) may be required. Lecture 3 hours per week.

**AST 238 - WORD PROCESSING ADVANCED OPERATIONS (3 CR.)**

Teaches advanced word processing features including working with merge files, macros, and graphics; develops competence in the production of complex documents. A laboratory co-requisite (AST 239) may be required. Lecture 3 hours per week.

**AST 240 - MACHINE TRANSCRIPTION (3 CR.)**

Develops proficiency in the use of transcribing equipment to produce business documents. Emphasizes listening techniques, business English, and proper formatting. Includes production rate and mailable copy requirements. A laboratory co-requisite (AST 241) may be required. Co-requisite AST 112 or equivalent. Lecture 3 hours per week.

**AST 243 - OFFICE ADMINISTRATION I (3 CR.)**

Develops an understanding of the administrative support role and the skills necessary to provide organizational and technical support in a contemporary office setting. Emphasizes the development of critical thinking, problem-solving, and job performance skills in a business office environment. Prerequisite AST 101. Lecture 3 hours per week.

**AST 244 - OFFICE ADMINISTRATION II (3 CR.)**

Enhances skills necessary to provide organizational and technical support in a contemporary office setting. Emphasizes administrative and supervisory role of the office professional. Includes travel and meeting planning, office budgeting and financial procedures, international issues, and career development. Prerequisite AST 243 or equivalent. Lecture 3 hours per week.

**AST 253 - ADVANCED DESKTOP PUBLISHING I (SPECIFY SOFTWARE) (2-4 CR.)**

Introduces specific desktop publishing software. Teaches document layout and design, fonts, type styles, style sheets, and graphics. Prerequisite AST 101 or equivalent and experience in using a word processing package. A laboratory co-requisite (AST 255) may be required. Lecture 2-4 hours per week.

**AST 260 - PRESENTATION SOFTWARE (3 CR.)**

Teaches creation of slides including use of text, clip art, and graphs. Includes techniques for enhancing presentations with on-screen slide show as well as printing to transparencies and handouts. Incorporates use of sound and video clips. A laboratory co-requisite (AST 261) may be required. Lecture 3 hours per week.

**AST 265 - LEGAL OFFICE PROCEDURES I (3 CR.)**

Introduces general office procedures used in law offices and courts. Pre-requisite ENG 111, AST 141. Lecture 3 hours per week.

**AST 271 - MEDICAL OFFICE PROCEDURES I (3 CR.)**

Covers medical office procedures, records management, preparation of medical reports, and other medical documents. Co-requisite AST 112 or equivalent. Lecture 3 hours per week.

**AST 290 - INTERNSHIP IN ADMINISTRATIVE SUPPORT TECHNOLOGY (1-5 CR.)**

Supervises on-the-job training in selected business, industrial, or service firms coordinated by the college. Credit/practice ratio maximum 1-5. Variable hours.

**AGRICULTURE (AGR)****AGR 205 - SOIL FERTILITY AND MANAGEMENT (3 CR.)**

Studies the factors influencing soil productivity with emphasis upon fertilizer materials from production to application. Discusses time, sources, and soil acidity. Presents soil testing techniques, interpretation of soil tests, and the addition of nutrients to correct or prevent deficiencies. English Level Requisite EDE 10. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

**AGR 208 - INSECT CONTROL (3 CR.)**

Examines principles and current trends in insect control. Studies biology and identification of economically important insects and related pests. English Level Requisite EDE 10. Lecture 2-3 hours. Laboratory 2 hours. Total 4-5 hours per week.

**AIR CONDITIONING AND REFRIGERATION (AIR)****AIR 111 - AIR CONDITIONING AND REFRIGERATION CONTROLS I (3 CR.)**

Presents electron theory, magnetism, Ohm's Law, resistance, current flow, instruments for electrical measurement, A.C. motors, power distribution controls and their application. May be completed out of sequence. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

**AIR 112 - AIR CONDITIONING AND REFRIGERATION CONTROLS II (3 CR.)**

Presents electron theory, magnetism, Ohm's Law, resistance, current flow, instruments for electrical measurement, A.C. motors, power distribution controls and their application. May be completed out of sequence. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

**AIR 116 - DUCT CONSTRUCTION AND MAINTENANCE (2 CR.)**

Presents duct materials including sheet metal, aluminum, and fiber glass. Explains development of duct systems, layout methods, safety hand tools, cutting and shaping machines, fasteners and fabrication practices. Includes duct fittings, dampers and regulators, diffusers, heater and air washers, fans, insulation, and ventilating hoods. Lecture 1 hours. Laboratory 2 hours. Total 3 hours per week.

**AIR 121 - AIR CONDITIONING & REFRIGERATION I-II (4 CR.)**

Studies refrigeration theory, characteristics of refrigerants, temperature, and pressure, tools and equipment, soldering, brazing, refrigeration systems, system components, compressors, evaporators, metering devices. Presents charging and evaluation of systems and leak detection. Explores servicing the basic system. Explains use and care of oils and additives and troubleshooting of small commercial systems. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

**AIR 154 - HEATING SYSTEMS I (3 CR.)**

Introduces types of fuels and their characteristics of combustion; types, components and characteristics of burners, and burner efficiency analyzers. Studies forced air heating systems including troubleshooting, preventive maintenance and servicing. Lecture 2 hour. Laboratory 2 hours. Total 4 hours per week.

**AIR 205 - HYDRONICS AND ZONING (4 CR.)**

Presents installation, servicing, troubleshooting, and repair of hydronic systems for heating and cooling. Includes hot water and chilled water systems using forced circulation as the transfer medium. Lecture 2-3 hours. Laboratory 2-3 hours. Total 4-6 hours per week.

**AIR 281 - ENERGY MANAGEMENT I (3 CR.)**

Introduces methodology for residential audits covering heat flow analysis, construction methods and materials. Discusses effects of life styles on energy consumption, conservation and practices, renewable energy sources, calculating cost and savings, interviewing and education techniques. Introduces commercial and industrial energy audits, methodology for the performance of audits covering heat flow analysis, construction methods and materials. Part I of II. Lecture 1-2 hours. Laboratory 2-4 hours. Total 3-6 hours per week.

**AIR 282 - ENERGY MANAGEMENT II (2 CR.)**

Introduces methodology for residential audits covering heat flow analysis, construction methods and materials. Discusses effects of life styles on energy consumption, conservation and practices, renewable energy sources, calculating cost and savings, interviewing and education techniques. Introduces commercial and industrial energy audits, methodology for the performance of audits covering heat flow analysis, construction methods and materials. Part II of II. Lecture 1-2 hours. Laboratory 2-4 hours. Total 3-6 hours per week.

**AMERICAN SIGN LANGUAGE (ASL)****ASL 101 - AMERICAN SIGN LANGUAGE I (3 CR.)**

Introduces the fundamentals of American Sign Language (ASL) used by the Deaf Community, including basic vocabulary, syntax, fingerspelling, and grammatical non-manual signals. Focuses on

communicative competence. Introduces cultural knowledge and increases understanding of the Deaf Community. Part 1 of 2. Lecture 3-4 hours. Laboratory 0-2 hours. Total 3-5 hours per week.

### **ASL 102 - AMERICAN SIGN LANGUAGE II (3 CR.)**

Introduces the fundamentals of American Sign Language (ASL) used by the Deaf Community, including basic vocabulary, syntax, fingerspelling, and grammatical non-manual signals. Focuses on communicative competence. Introduces cultural knowledge and increases understanding of the Deaf Community. Part 2 of 2. Lecture 3-4 hours. Laboratory 0-2 hours. Total 3-5 hours per week.

### **ASL 125 - HISTORY & CULTURE OF THE DEAF COMMUNITY (3 CR.)**

Presents an overview of various aspects of Deaf Culture, including educational and legal issues. Lecture 3 hours per week.

### **ASL 201 - AMERICAN SIGN LANGUAGE III (3 CR.)**

Develops vocabulary, conversational competence, and grammatical knowledge with a total immersion approach. Introduces increasingly complex grammatical aspects including those unique to ASL. Discusses culture and literature. Encourages contact with the Deaf Community to enhance linguistic and cultural knowledge. Lecture 3-4 hours. Laboratory 0-2 hours. Total 3-5 hours per week.

## **ARABIC (ARA)**

### **ARA 101 - BEGINNING ARABIC I**

Introduces understanding, speaking, reading, and writing skills and emphasizes basic Arabic sentence structure. Discusses the diversity of cultures in the Arab world. Part I of II.

## **ARCHITECTURE (ARC)**

### **ARC 121 - ARCHITECTURAL DRAFTING I (3 CR.)**

Introduces techniques of architectural drafting, including lettering, dimensioning, and symbols. Requires production of plans, sections, and elevations of a simple building. Studies use of common reference material and the organization of architectural working drawings. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

## **ARTS (ART)**

### **ART 100 - ART APPRECIATION (3 CR.)**

Introduces art from prehistoric times to the present day. Describes architectural styles, sculpture, photography, printmaking, and painting techniques. Highlights major artists and key contributions from global and Western culture. Covers content chronologically and/or thematically. Readiness for ENG 111. Lecture 3 hours per week.

### **ART 101 - HISTORY AND APPRECIATION OF ART I (3 CR.)**

Presents the history and interpretation of architecture, sculpture, and painting. Begins with prehistoric art and follows the development of western civilization to the present. This is a Passport Transfer course. Readiness for ENG 111. May be taken out of sequence. Lecture 3 hours per week.

### **ART 102 - HISTORY AND APPRECIATION OF ART II (3 CR.)**

Presents the history and interpretation of architecture, sculpture, and painting. Begins with prehistoric art and follows the development of western civilization to the present. This is a Passport Transfer course. Readiness for ENG 111. May be taken out of sequence. Lecture 3 hours per week.

### **ART 121 - DRAWING I (3 CR.)**

Develops basic drawing skills and understanding of visual language through studio instruction/lecture. Introduces concepts such as proportion, space, perspective, tone and composition as applied to still life, landscape and the figure. Uses drawing media such as pencil, charcoal, ink wash and color media. Includes field trips and gallery assignments as appropriate. EDE 10 Requisite. Variable hours per week.

### **ART 122 - DRAWING II (3 CR.)**

Develops basic drawing skills and understanding of visual language through studio instruction/lecture. Introduces concepts such as proportion, space, perspective, tone and composition as applied to still life, landscape and the figure. Uses drawing media such as pencil, charcoal, ink wash and color media. Includes field trips and gallery assignments as appropriate. Prerequisite: ART 121.

### **ART 125 - INTRODUCTION TO PAINTING (3 CR.)**

Introduces study of color, composition and painting techniques. Places emphasis on experimentation and enjoyment of oil and/or acrylic paints and the fundamentals of tools and materials. EDE 10 Requisite. Lecture 2 hours. Studio instruction 3 hours. Total 5 hours per week.

### **ART 131 - TWO-DIMENSIONAL DESIGN (3 CR.)**

Introduces the elements and principles of design as applied to two-dimensional studio projects. Introduces two-dimensional media, techniques, compositional strategies, and color concepts and interactions. Supports conceptual development through introduction to historical and contemporary practices and critical analysis. May include field trips as required.

### **ART 180 - INTRODUCTION TO COMPUTER GRAPHICS (3 CR.)**

Provides a working introduction to computer-based electronic technology used by visual artists and designers. Presents the basics of operating platforms and standard industry software. Introduces problems in which students can explore creative potential of the new electronic media environment. Readiness for ENG 111. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

### **ART 203 - ANIMATION I (3 CR.)**

Introduces the student to the basic techniques of animation, combining traditional and computer-generated skills. Teaches theoretical elements of the aesthetics of sequential imagery. Provides practical experience in two-dimensional and/or three-dimensional animation. Exposes the student to a variety of animation techniques. Readiness for ENG 111. (3-4 Cr) Lecture 2 hours, Lab 2-4 hours. Total 4-6 hours per week.

### **ART 241 - PAINTING I (3 CR.)**

Introduces abstract and representational painting in acrylic and/or oil with emphasis on color composition and value. Readiness for ENG 111. Pre-requisite ART 122 or divisional approval.

### **ART 242 - PAINTING II (3 CR.)**

Introduces abstract and representational painting in acrylic and/or oil with emphasis on color composition and value. ART 241 Pre-requisite.

## **AVIATION (AVI)**

### **AVI 295 - SMALL UAS REMOTE PILOT CERTIFICATE CLASS (3 CR.)**

Presents the fundamental principles of unmanned aerial vehicle flight including theory of flight, UAS standards and specifications, basic UAV construction, weight and balance, navigation, meteorology, principles of radio communication, safety, and FAA regulations. Prepares students for the FAA Part 107 Remote Pilot Certificate with a small UAS rating examination.

## **BIOLOGY (BIO)**

### **BIO 1 - FOUNDATIONS OF BIOLOGY (4 CR.)**

Develops a basic understanding of plant and animal form, function, and relationships. Prepares students who have a deficiency in high school biology May be repeated for credit. Readiness for ENG 111. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

### **BIO 101 - GENERAL BIOLOGY I (4 CR.)**

Focuses on foundations in cellular structure, metabolism, and genetics in an evolutionary context. Explores the core concepts of evolution; structure and function; information flow, storage and exchange; pathways and transformations of energy and matter; and systems biology. Emphasizes process of science, interdisciplinary approach, and relevance of biology to society. Part I of a two-course sequence. Readiness for ENG 111 & MDE 60 or college level mathematics. This is a Passport Transfer course. Lecture 3 hours. Recitation and laboratory 3 hours. Total 6 hours per week.

### **BIO 102 - GENERAL BIOLOGY II (4 CR.)**

Focuses on the diversity of life, anatomy and physiology of organisms, and ecosystem organization and processes in an evolutionary context. Explores the core concepts of evolution; structure and function; information flow, storage and exchange; pathways and transformation of energy and matter; and systems biology. Emphasizes process of science, interdisciplinary approach, and relevance of biology to society. Part II of a two-course sequence. Prerequisite is BIO 101. Lecture 3 hours. Recitation and Laboratory 3 hours. Total 6 hours per week.

### **BIO 141 - HUMAN ANATOMY AND PHYSIOLOGY I (4 CR.)**

Integrates anatomy and physiology of cells, tissues, organs, and systems of the human body. Integrates concepts of chemistry, physics, and pathology. Readiness for ENG 111. Must be taken in sequence Lecture 3 hours. Laboratory 3 hours per week. Total 6 hours per week.

### **BIO 142 - HUMAN ANATOMY AND PHYSIOLOGY II (4 CR.)**

Integrates anatomy and physiology of cells, tissues, organs, and systems of the human body. Integrates concepts of chemistry, physics, and pathology. BIO 141 Pre-Requisite. Must be taken in sequence Lecture 3 hours. Laboratory 3 hours per week. Total 6 hours per week.

### **BIO 145 - HUMAN ANATOMY AND PHYSIOLOGY FOR THE HEALTH SCIENCES (4 CR.)**

Introduces human anatomy and physiology. Covers basic chemical concepts, cellular physiology, as well as the anatomy and physiology of human organ systems. EDE 10 Requisite. Lecture 3-4 hours. Laboratory 3 hours. Total 6-7 hours per week.

### **BIO 150 - INTRODUCTORY MICROBIOLOGY (4 CR.)**

Studies the general characteristics of microorganisms. Emphasizes their relationships to individual and community health. Readiness for ENG 111. Lecture 3 hours. Recitation and laboratory 3 hours. Total 6 hours per week.

### **BIO 205 - GENERAL MICROBIOLOGY (4 CR.)**

Examines morphology, genetics, physiology, ecology, and control of microorganisms. Emphasizes

application of microbiological techniques to selected fields. Prerequisites: BIO 102 and CHM 112 or divisional approval. Lecture 3 hours. Recitation and laboratory 3 hours. Total 6 hours per week.

#### **BIO 231 - HUMAN ANATOMY AND PHYSIOLOGY I (4 CR.)**

Integrates the study of gross and microscopic anatomy with physiology, emphasizing the analysis and interpretation of physiological data. Prerequisites one year of college biology and one year of college chemistry or divisional approval. ENG 111 Requisite. BIO 102 Pre-Requisite. Must be taken in sequence. Lecture 3 hours. Recitation and laboratory 3 hours. Total 6 hours per week.

#### **BIO 232 - HUMAN ANATOMY AND PHYSIOLOGY II (4 CR.)**

Integrates the study of gross and microscopic anatomy with physiology, emphasizing the analysis and interpretation of physiological data. Prerequisites one year of college biology and one year of college chemistry or divisional approval. BIO 231 Pre-Requisite. Must be taken in sequence. Lecture 3 hours. Recitation and laboratory 3 hours. Total 6 hours per week.

### **BUILDING (BLD)**

#### **BLD 105 - SHOP PRACTICES AND PROCEDURES (2-3 CR.)**

Introduces basic hand and power tools with emphasis on proper care and safety practices. Introduces materials used in building trades including metals, plastics, and woods with stress placed on the processing techniques of each. Emphasizes fasteners such as screws, rivets, and glues as well as brazed, soldered, and welded joints. Lecture 1-2 hours. Laboratory 2-3 hours. Total 3-5 hours per week.

#### **BLD 110 - INTRODUCTION TO CONSTRUCTION (3 CR.)**

Covers basic knowledge and requirements needed in the construction trades. Introduces use of tools and equipment, with emphasis on construction safety, including personal and tool safety. Provides a working introduction to basic blueprint reading and fundamentals of construction mathematics. Lecture 3 hours per week.

#### **BLD 195 - TOPICS IN CONSTRUCTION - COMMUNICATION AND EMPLOYABILITY (1CR.)**

Presents techniques for communicating effectively with co-workers and supervisors including examples that emphasize the importance of verbal and written communication on the job. Topics include defining the roles of individuals and companies in the construction industry providing an introduction to critical thinking and problem solving skills. Also reviews effective relationship skills, effective self-presentation, and key workplace issues such as sexual harassment, stress, and substance abuse. Lecture 1 hour per week.

#### **BLD 195 - TOPICS IN CONSTRUCTION (3 CR.)**

#### **BLD 295 - TOPICS IN CONSTRUCTION (3 CR.)**

### **BUSINESS ADMINISTRATION AND MANAGEMENT (BUS)**

#### **BUS 100 - INTRODUCTION TO BUSINESS (3 CR.)**

Presents a broad introduction to the functioning of business enterprise within the U.S. economic framework. Introduces economic systems, essential elements of business organization, finance, marketing, production, and risk and human resource management. Lecture 3 hours per week.

#### **BUS 106 - SECURITY AWARENESS FOR MANAGERS (3 CR.)**

Covers concepts and terminology related to information security and risk assessment. Topics cover perspective from a manager and end-user's point of view and will include the identification of security threats, types of hardware/software solutions available and identifying policies and procedures to reduce the severity of security attacks. Includes the completion of a risk assessment and security plan for an organization and/or department. Lecture 3 hours per week.

#### **BUS 111 PRINCIPLES OF SUPERVISION I (3-4 CR.)**

Teaches the fundamentals of supervision, including the primary responsibilities of the supervisor. Introduces factors relating to the work of supervisor and subordinates. Covers aspects of leadership, job management, work improvement, training and orientation, performance evaluation, and effective employee/supervisor relationships. Lecture 3-4 hours per week.

#### **BUS 117 - LEADERSHIP DEVELOPMENT**

Covers interpersonal relations in hierarchical structures. Examines the dynamics of teamwork, motivation, handling change and conflict and how to achieve positive results through others.

#### **BUS 149 - WORKPLACE ETHICS (1 CR.)**

Provides a broad overview of ethics in the modern day business world including workforce skill building and self awareness through group discussions. Discusses workplace topics such as diversity, substance abuse, hiring and firing and workplace practices, appropriate dress, communication, business ethics, and interviewing. Lecture 1 hour per week.

#### **BUS 165 SMALL BUSINESS MANAGEMENT (3 CR.)**

Identifies management concerns unique to small businesses. Introduces the requirements necessary to initiate a small business, and identifies the elements comprising a business plan.

Presents information establishing financial and administrative controls, developing a marketing strategy, managing business operations, and the legal and government relationships specific to small businesses. Lecture 3 hours per week.

#### **BUS 195 - ENTREPRENEURSHIP (4 CR.)**

Presents the various steps considered necessary when going into business. Includes areas such as product-service analysis, market research evaluation, setting up books, ways to finance startup, operations of the business, development of business plans, buyouts versus starting from scratch, along with franchising. Presents the development of the marketing mix for a small business. Includes areas such as product development, pricing, promotion, salesmanship, customer relations, and consumer behavior. Uses problems and cases to demonstrate implementation of these techniques.

#### **BUS 195 - MATH FOR BUSINESS & CONSUMERS (3 CR.)**

Applies mathematical operations to business processes and problems. Reviews operations, fractions, percents, sales and property taxes, insurance, simple/compound interest, markup and markdown, checkbook and cash records, wage and payroll computations, consumer credit and mortgages.

#### **BUS 200 PRINCIPLES OF MANAGEMENT (3 CR.)**

Teaches management and the management functions of planning, organizing, directing and controlling. Focuses on application of management principles to realistic situations managers encounter as they attempt to achieve organizational objectives. Lecture 3 hours per week.

#### **BUS 202 APPLIED MANAGEMENT PRINCIPLES (3 CR.)**

Focuses on management practices and issues. May use case studies and/or management decision models to analyze and develop solutions to management problems. Lecture 3 hours per week.

#### **BUS 205 HUMAN RESOURCE MANAGEMENT (3 CR.)**

Introduces employment, selection, and placement of personnel, usage levels and methods, job descriptions, training methods and programs, and employee evaluation systems, compensation and labor relations. Includes procedures for management of human resources and uses case studies and problems to demonstrate implementation of these techniques. Lecture 3 hours per week.

#### **BUS 236 - COMMUNICATION IN MANAGEMENT (3 CR.)**

Introduces the functions of communication in management with emphasis on gathering, organizing, and transmitting facts and ideas. Teaches the basic techniques of effective oral and written communication. Lecture 3 hours per week.

#### **BUS 241 - BUSINESS LAW I (3 CR.)**

Develops a basic understanding of the US business legal environment. Introduces property and contract law, agency and partnership liability, and government regulatory law. Students will be able to apply these legal principles to landlord/tenant disputes, consumer rights issues, employment relationships, and other business transactions. Requisite – EDE 11 or permission. Lecture 3 hours per week.

#### **BUS 242 - BUSINESS LAW II (3 CR.)**

Focuses on business organization and dissolution, bankruptcy and Uniform Commercial Code. Introduces international law and the emerging fields of E-Commerce and Internet Law. Prerequisite BUS 241 or divisional approval. Requisite EDE 11 or Permission. Lecture 3 hours per week.

#### **BUS 265 - ETHICAL ISSUES IN MANAGEMENT (3 CR.)**

Examines the legal, ethical, and social responsibilities of management. May use cases to develop the ability to think and act responsibly. Lecture 3 hours per week.

#### **BUS 285 CURRENT ISSUES IN MANAGEMENT (3 CR.)**

Designed as a capstone course for Management Majors, the course is designed to provide an integrated perspective of the current issues and trends in business management. Contemporary issues will be explored in a highly participatory class environment. Lecture 3 hours per week.

#### **BUS 290 - COORDINATED INTERNSHIP (CR.1-5)**

Supervises on-the-job training in selected business, industrial or service firms coordinated by the college. Credit/practice ratio not to exceed 1:5 hours. May be repeated for credit. Variable hours.

#### **BUS 295 - PRESIDENT'S LEADERSHIP INSTITUTE (1 CR.)**

The Mountain Empire Community College President's Institute program is for eligible MECC faculty and staff who are interested in personal development and improving their knowledge of the Virginia Community College System and the operations and functions of MECC. The program will help participants better perform the tasks associated with their respective positions by developing a greater appreciation of their personal skills and attributes plus a greater understanding of the College's mission and its multiple roles in the community. The program will also provide a foundation for understanding and addressing key issues impacting the College. As a part of this 15-hour program, participants have the opportunity to complete four hours of job shadowing with a college administrator in a leadership role.

### **BUS 295 - ENTREPRENEURSHIP & REGIONAL TOURISM (3 CR.)**

Presents the various steps considered necessary when going into business. Includes areas such as product-service analysis, market research evaluation, setting up books, ways to finance start-up, operations of the business, development of business plans, buyouts versus starting from scratch, along with franchising. Includes areas such as marketing mix, product development, pricing, promotion, salesmanship, customer relations, and consumer behavior. Uses problems and cases to demonstrate implementation of these techniques. Students will explore the knowledge and skills necessary to become familiar with local entrepreneurs and how they interact with tourism. This course includes national and local history, regional geography, architecture, government and political history, museums, flora and fauna, local personalities, and tours of major sites of tourist interest.

### **BUS 295 - REGIONAL TOURISM (4 CR.)**

Students will explore the knowledge and skills necessary to become familiar with local entrepreneurs and how they interact with tourism. The course will cover the practical elements of tour guiding including regulations, licensing procedures, and marketing as well as the information necessary to give tours in the regional area. This includes national and local history, regional geography, architecture, government and political history, museums, flora and fauna, local personalities, and major sites of tourist interest.

## **CHEMISTRY (CHM)**

### **CHM 5 - DEVELOPMENTAL CHEMISTRY FOR ALLIED HEALTH SCIENCES (4 CR.)**

Introduces basic principles of inorganic, organic, and biological chemistry. Emphasizes applications to the health sciences. Readiness for ENG 111 or divisional approval. Lecture 3 hours per week. Laboratory 3 hours per week.

### **CHM 101 - INTRODUCTORY CHEMISTRY I (4 CR.)**

Explores the experimental and theoretical concepts of general chemistry while emphasizing scientific reasoning, critical and analytical thinking. Designed for the non-science major. This is a Passport Transfer course. Readiness for ENG 111 & MDE 60. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

### **CHM 110 - SURVEY OF CHEMISTRY (3 CR.)**

Introduces the basic concepts of general, organic, and biochemistry with emphasis on their applications to other disciplines. No previous chemistry background required. Lecture 3 hours per week.

### **CHM 111 - GENERAL CHEMISTRY I (4 CR.)**

Explores the fundamental laws, theories, and mathematical concepts of chemistry. Designed primarily for science and engineering majors. Requires a strong background in mathematics. This is a Passport Transfer course. Readiness for ENG 111 & MTH 161 or divisional approval. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

### **CHM 112 - GENERAL CHEMISTRY II (4 CR.)**

Explores the fundamental laws, theories, and mathematical concepts of chemistry. Designed primarily for science and engineering majors. Requires a strong background in mathematics. CHM 111 Pre-Requisite. Must be taken in sequence. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

### **CHM 241/242 - ORGANIC CHEMISTRY I-II (3 CR.)**

Introduces fundamental chemistry of carbon compounds, including structures, physical properties, syntheses, and typical reactions. Emphasizes reaction mechanisms. Prerequisite for 241 is CHM 112 with a grade of C or better; For 242 is CHM 241 with a grade of C or better. Lecture 3 hours per week.

### **CHM 245/246 - ORGANIC CHEMISTRY LABORATORY I-II (2 CR.)**

Introduces various methods and procedures used in present day organic laboratories. Covers the general techniques, organic synthesis, and the use of common spectroscopic instrumentation; synthesizing a variety of compounds; and analyzing the products through physical properties and spectroscopy. Is taken concurrently with CHM 241 and CHM 242 by chemistry and chemical engineering majors. Co-requisite CHM 241. CHM 245 as a prerequisite for CHM 246. Laboratory 3 hours per week.

## **CHILD DEVELOPMENT (CHD)**

### **CHD 118 - Language Arts for Young Children (3 CR.)**

Emphasizes the early development of children's language and literacy skills. Presents techniques and methods for supporting all aspects of early literacy. Surveys children's literature, and examines elements of promoting oral literacy, print awareness, phonological awareness, alphabetic principle, quality storytelling and story reading. Addresses strategies for intervention and support for exceptional children and English Language Learners. EDE 10 requisite. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

### **CHD 120 - INTRODUCTION TO EARLY CHILDHOOD EDUCATION (3 CR.)**

Introduces early childhood development through activities and experiences in nursery, pre-kindergarten, kindergarten, and primary programs. Investigates classroom organization and procedures, and use of classroom time and materials, approaches to education for young children, professionalism, and curricular procedures. Requisite EDE 10. Lecture 3 hours per week.

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### **CHD 125 - CREATIVE ACTIVITIES FOR CHILDREN (3 CR.)**

Prepares individuals to work with young children in the arts and other creative age-appropriate activities. Investigates affective classroom experiences and open-ended activities. Reading Level Requisite EDE 10. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

### **CHD 126 - SCIENCE & MATH CONCEPTS FOR CHILDREN (3 CR.)**

Covers the selection of appropriate developmental learning materials for developing activities to stimulate the logical thinking skills in children. Reading Level Requisite EDE 10. Lecture 2-3 hours. Laboratory 1-3 hours. Total 3-4 hours per week.

### **CHD 145 - TEACHING, ART, MUSIC, AND MOVEMENT TO CHILDREN (3 CR.)**

Focuses on children's exploration, play, and creative expression in the areas of art, music, and movement. Emphasis will be on developing strategies for using various open-ended media representing a range of approaches in creative thinking. Addresses strategies for intervention and support for exceptional children and English Language Learners. EDE 10 requisite. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

### **CHD 164 - WORKING WITH INFANTS AND TODDLERS IN INCLUSIVE SETTINGS (3 CR.)**

Examines developmental and behavioral principles and practices and how these provide the most developmentally suitable curriculum and learning environment for very young children. Includes working with very young children with typical development, as well as those who are gifted, or have developmental delays or disabilities. EDE 10 requisite. Lecture 3 hours per week.

### **CHD 165 - OBSERVATION AND PARTICIPATION IN EARLY CHILDHOOD/PRIMARY SETTINGS (3 CR.)**

Focuses on observation as the primary method for gathering information about children in early childhood settings. Emphasizes development of skills in the implementation of a range of observation techniques. May be taken again for credit. EDE 10 requisite. Includes 40 hours of field placement in early learning setting. Seminar 2 hours. Field placement 2 hours. Total 4 hours per week.

### **CHD 166 - INFANT AND TODDLER PROGRAMS (3 CR.)**

Examines child growth and development from birth to 36 months. Focuses on development in the physical, cognitive, social, emotional, and language domains. Emphasizes the importance of the environment and relationships for healthy brain development during the child's first three years of life. Investigates regulatory standards for infant/toddler care giving. EDE 10 requisite. Lecture 3 hours per week.

### **CHD 205 - GUIDING THE BEHAVIOR OF CHILDREN (3 CR.)**

Explores the role of the early childhood educator in supporting emotional and social development of children, and in fostering a sense of community. Presents practical strategies for encouraging prosocial behavior, conflict resolution and problem solving. Emphasizes basic skills and techniques in child guidance. EDE 10 requisite. Lecture 3 hours per week.

### **CHD 215 - MODELS OF EARLY CHILDHOOD EDUCATION PROGRAMS (3 CR.)**

Studies and discusses the various models and theories of early childhood education programs including current trends and issues. Presents state licensing and staff requirements. Reading Level Requisite EDE 10. Lecture 3 hours per week.

## **CHINESE (CHI)**

### **CHI 101 - BEGINNING CHINESE I (5 CR.)**

Introduces understanding, speaking, reading, and writing skills; emphasizes basic Chinese sentence structure. Part I of II. Lecture 5 hours per week.

### **CHI 102 - BEGINNING CHINESE II (5 Cr)**

Introduces understanding, speaking, reading, and writing skills; emphasizes basic Chinese sentence structure. Prerequisite: CHI 101 for CHI 102. Part II of II. Lecture 5 hours per week.

### **CHI 201 - CONVERSATIONAL CHINESE (MANDARIN) I (4 CR.)**

Offers intensive practice in comprehending and speaking Chinese, with emphasis on developing structure and fluency. Prerequisite CHI 102. Part I of II. Lecture 3-4 hours per week.

## **CIVIL ENGINEERING TECHNOLOGY (CIV)**

### **CIV 171 - SURVEYING I (3 CR.)**

Introduces surveying equipment, procedures, and computations including adjustment of instruments, distance measurement, leveling, angle measurement, traversing, traverse adjustments, area computation and introduction to topography. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

### **CIV 172 - SURVEYING II (3 CR.)**

Introduces surveys for transportation systems including the preparation and analysis of topographic maps, horizontal and vertical curves, earthwork and other topics related to transportation construction. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

### **CIV 240 - FLUID MECHANICS AND HYDRAULICS (3 CR.)**

Introduces the principles of fluid flow and development of practical hydraulics resulting from study of fluid statics, flow of real fluid in pipes, multiple pipe lines, liquid flow in open channels, and fluid measurement techniques. Prerequisite: Statics or divisional approval. Lecture 3 hours per week.

### **CIV 246 - WATER RESOURCES TECHNOLOGY (3 CR.)**

This course introduces the elements of hydrology and hydraulic systems. ENF 2 Requisite. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

## **COMMUNICATION STUDIES AND THEATER (CST)**

### **CST 100 - PRINCIPLES OF PUBLIC SPEAKING (3 CR.)**

Applies theory and principles of public address with emphasis on preparation and delivery. Readiness for ENG 111. Lecture 3 hours per week.

### **CST 105 - ORAL COMMUNICATION (3 CR.)**

Studies effective communication with emphasis on speaking and listening. Readiness for ENG 111. Lecture 3 hours per week.

### **CST 110 - INTRODUCTION TO COMMUNICATION (3 CR.)**

Examines the elements affecting speech communication at the individual, small group, and public communication levels with emphasis on practice of communication at each level. Readiness for ENG 111. Lecture 3 hours per week.

### **CST 130 - INTRODUCTION TO THEATRE (3 CR.)**

Develops personal resources and explores performance skills through such activities as theatre games, role playing, improvisation, work on basic script units, and performance of scenes. Readiness for ENG 111. Lecture 3 hours per week.

### **CST 131 - ACTING I (3 CR.)**

Develops personal resources and explores performance skills through such activities as theatre games, role playing, improvisation, work on basic script units, and performance of scenes. Readiness for ENG 111. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week. Must be taken in sequence.

### **CST 132 - ACTING II (3 CR.)**

Develops personal resources and explores performance skills through such activities as theatre games, role playing, improvisation, work on basic script units, and performance of scenes. Prerequisite CST 131. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week. Must be taken in sequence.

### **CST 141 - THEATRE APPRECIATION I (3 CR.)**

Aims to increase knowledge and enjoyment of theatre. Considers process, style, organization, written drama, and performed drama. Readiness of ENG 111. Part I of II. Lecture 3 hours per week.

### **CST 229 - INTERCULTURAL COMMUNICATION (3 CR.)**

Emphasizes the influence of culture on the communication process including differences in values, message systems, and communication rules. Readiness for ENG 111. Lecture 3 hours per week.

## **DENTAL ASSISTANT (DNA)**

### **DNA 103 - INTRODUCTION TO ORAL HEALTH (1 CR.)**

Teaches anatomy of the head and neck, the oral cavity hard and soft tissues, as well as tooth morphology. Includes dental terminology, deciduous and permanent dentition as well as pathology. Lecture 1 hour per week.

### **DNA 108 - DENTAL SCIENCE I (3 CR.)**

Studies head and neck anatomy, tooth morphology, pathological conditions of the oral cavity, disease processes, and microbiology. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

### **DNA 109 - PRACTICAL INFECTION CONTROL (3 CR.)**

Studies principles of management of disease producing microorganisms and associated diseases. Emphasizes sterilization, asepsis, and disinfection techniques applicable in the dental office. Lecture 1-2 hours. Laboratory 2-3 hours. Total 3-5 hours per week.

### **DNA 110 - DENTAL MATERIALS (3 CR.)**

Studies the materials utilized in the laboratory aspect of dentistry as support in treatment. Emphasis is placed on the characteristics, manipulation, economical control, storage, and delivery of materials. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

### **DNA 113 - CHAIRSIDE ASSISTING I (3 CR.)**

Provides instruction on the principles of clinical chair side dental assisting, dental equipment use and maintenance, safety, instrument identification, tray set-ups by procedures, and patient data collection. Emphasis on patient management during restorative procedures. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

### **DNA 114 - CHAIRSIDE ASSISTING II (4 CR.)**

Introduces the student to the various dental specialties including oral surgery, orthodontics, periodontic, prosthodontics, endodontics, and pediatric dentistry. Integrates and applies previous course content to operative dental procedures. Lecture 2 hours. Laboratory 6 hours. Total 8 hours per week.

### **DNA 130 - DENTAL OFFICE MANAGEMENT (2 CR.)**

Exposes students to and provides practical experience in the legal aspects of dental office management with regard to ethics, jurisprudence, appointment control, recall systems, reception techniques, telephone techniques, accounts receivable and payable, payroll, insurance claims, inventory control, and professional conduct in a dental office. Lecture 1-2 hours. Laboratory 1-3 hours. Total 2-5 hours per week.

### **DNA 135 - DENTAL RADIATION SAFETY (2 CR.)**

Studies techniques and devices used for protection from ionizing radiation. Teaches biological effects, cell sensitivity and genetic effects of ionizing radiation. Includes practice of bisection and parallel techniques on manikins. Prepares employed dental staff to meet the Virginia Board of Dentistry's regulations for certification in dental radiation safety hygiene. Lecture 1 hour. Laboratory 3 hours. Total 4 hours per week.

## **DRAFTING (DRF)**

### **DRF 151 - ENGINEERING DRAWING FUNDAMENTALS I (3 CR.)**

Introduces technical drafting from the fundamentals through advanced drafting practices. Includes lettering, geometric construction, technical sketching, orthographic projection, sections, intersections, development, fasteners. Teaches theory and application of dimensioning and tolerances, pictorial drawing, and preparation of drawings. ENF 2 Requisite. Must be taken in sequence. Lecture 1 hour. Laboratory 4 hours. Total 5 hours per week.

### **DRF 160 - MACHINE BLUEPRINT READING (3 CR.)**

Introduces interpreting of various blueprints and working drawings. Applies basic principles and techniques such as visualization of an object, orthographic projection, technical sketching and drafting terminology. Requires outside preparation. Lecture 3 hours per week.

### **DRF 195 - ENGINEERING DESIGN I (4 CR.)**

Focuses on training students in the contemporary techniques of Design Engineering. Introduces students to 3D modeling, rendering, animation and rapid prototyping and their roles in the process. Enables the student to create computer generated 3D solid models for architectural, mechanical, and civil product design. Uses computer animation to produce walk-throughs and fly-overs for presenting innovative designs. I of II

### **DRF 200 - SURVEY OF COMPUTER AIDED DRAFTING (3-4 CR.)**

Surveys computer-aided drafting equipment and concepts. Develops general understanding of components, operations and use of a typical CADD system. Variable hours per week.

### **DRF 201 - COMPUTER AIDED DRAFTING & DESIGN I (3 CR.)**

Teaches computer-aided drafting concepts and equipment designed to develop a general understanding of components of a typical CAD system and its operation. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

### **DRF 231 - COMPUTER AIDED DRAFTING I (2-3 CR.)**

Teaches computer aided drafting concepts and equipment designed to develop a general understanding of components and operate a typical CAD system. Prerequisite DRF 111 or DRF 160 or divisional approval. Lecture 1-2 hours. Laboratory 2-3 hours. Total 3-5 hours per week.

### **DRF 232 - COMPUTER AIDED DRAFTING II (2-3 CR.)**

Teaches advanced operation in computer-aided drafting. Prerequisite DRF 231. Lecture 1-2 hours. Laboratory 2-3 hours. Total 3-5 hours per week.

### **DRF 233 - COMPUTER AIDED DRAFTING III (3 CR.)**

Exposes a student to 3-D and modeling. Focuses on proficiency in Production drawing using a CAD system. Lecture 1 hour. Laboratory 3 hours. Total 4 hours per week.

### **DRF 295 - ENGINEERING DESIGN II (4 CR.)**

Focuses on training students in the contemporary techniques of Design Engineering. Introduc-



es students to 3D modeling, rendering, animation and rapid prototyping and their roles in the process. Enables the student to create computer generated 3D solid models for architectural, mechanical, and civil product design. Uses computer animation to produce walk-throughs and fly-overs for presenting innovative designs. II of II

#### **DRF 295 - ADVANCED TECHNICAL DRAFTING II (3 CR.)**

Teaches concepts of sheet metal fabrication including radii, fillets and tolerances, electrical and electronics symbols and drawing, and advanced design drafting techniques. Lecture 2 hours. Laboratory 2-3 hours. Total 4-5 hours per week.

#### **DRF 298 - SEMINAR AND PROJECT IN DRAFTING (4 CR.)**

Requires completion of a project or research report related to the student's occupational objective and a study of approaches to the selection and pursuit of career opportunities in the field. Lecture 2 hours. Laboratory 6 hours. Total 8 hours per week.

### **ECONOMICS (ECO)**

#### **ECO 150 - ECONOMIC ESSENTIALS: THEORY AND APPLICATION (3 CR.)**

Presents a broad overview of microeconomic and macroeconomic theory with application to current economic situations. Introduces concepts, policies, and theories in addition to models of domestic and global economies. Readiness for ENG 111. Lecture 3 hours. Total 3 hours per week.

#### **ECO 201 - PRINCIPLES OF MACROECONOMICS (3 CR.)**

Presents the fundamental macroeconomic concepts, theories, and issues including the study of scarcity and opportunity cost, supply and demand, national economic growth, inflation, recession, unemployment, fiscal and monetary policies, and international trade. Develops an appreciation of how these economic concepts apply to consumer, business, and government decisions, and their effect on the overall economy. This is a Passport Transfer course. Readiness for ENG 111. Lecture 3 hours per week.

#### **ECO 202 - PRINCIPLES OF MICROECONOMICS (3 CR.)**

Presents the fundamental microeconomic concepts, theories, and issues including the study of scarcity and opportunity cost, supply and demand, elasticities, marginal revenues and costs, profits, production and distribution. Develops an appreciation of how these economic concepts apply to consumer and business decisions, and their effect on the individual. Readiness for ENG 111. Lecture 3 hours.

### **EDUCATION (EDU)**

#### **EDU 195 - TOPICS IN ADJUNCT FACULTY ORIENTATION (1 CR.)**

This course is designed to provide information and resources to assist adjunct faculty members in fulfilling their duties and contributing to student success.

#### **EDU 195 - CAREER INVESTIGATIONS (3 CR.)**

Provides an opportunity to explore topical areas of interest to or needed by students. May be used also for special honors courses. May be repeated for credit. This course will provide an overview and hands on instruction in various technical areas of the college. The Career Investigation course will inform students about available career pathways, postsecondary options, and workplace trends."

#### **EDU 200 - INTRODUCTION TO TEACHING AS A PROFESSION (3 CR.)**

Provides an orientation to the teaching profession in Virginia, including historical perspectives, current issues, and future trends in education on the national and state levels. Emphasizes information about teacher licensure examinations, steps to certification, teacher preparation and induction programs, and attention to critical shortage areas in Virginia. Includes supervised field placement (recommended: 40 clock hours) in a K-12 school. Successful completion of 24 credits of transfer courses or departmental approval for students accepted into Virginia's Teachers for Tomorrow program. ENG 111 Requisite. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

#### **EDU 235 - HEALTH, SAFETY, AND NUTRITION EDUCATION (3 CR.)**

Focuses on the health and developmental needs of children and the methods by which these needs are met. Emphasizes positive health, hygiene, nutrition and feeding routines, childhood diseases, and safety issues. Emphasizes supporting the mental and physical well being of children, as well as procedures for reporting child abuse. Lecture 3 hours. Total 3 hours per week.

#### **EDU 280 - TECHNOLOGY STANDARDS FOR TEACHERS (3 CR.)**

Provides K-12 classroom teachers with the knowledge and skills needed to fulfill the Commonwealth of Virginia's Technology Standards for Instructional Personnel. Certification is dependent on the supervisor's or employer's approval. Pre-requisite of ITE 115 or instructor approval. Lecture 3 hours per week.

#### **EDU 295 - DESIGNING AND IMPLEMENTING TECHNOLOGY FOR EDUCATORS (3 CR.)**

This class will provide a unique opportunity for teachers to learn about the use and integration of leading edge technologies and to apply technology to support learning in a classroom environment. Teachers will create projects that benefit students in a cooperative learning environment. Teachers will use various software and technologies to produce quality educational products. At

the end of the course, teachers will evaluate and reflect on their own implementation of educational technologies to support student learning.

### **ELECTRICAL TECHNOLOGY (ELE)**

#### **ELE 110 - HOME ELECTRIC POWER (3 CR.)**

Covers the fundamentals of residential power distribution, circuits, panels, fuse boxes, breakers, transformers. Includes study of the National Electrical Code, purpose, and interpretation. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

#### **ELE 131 - NATIONAL ELECTRICAL CODE I (3-4 CR.)**

Provides comprehensive study of the purpose and interpretations of the National Electric Code as well as familiarization and implementation of various charts, code rulings and wiring methods including state and local regulations. Must be taken in sequence. Lecture 2-3 hours. Laboratory 0-3 hours. Total 3-6 hours per week.

#### **ELE 132 - NATIONAL ELECTRICAL CODE II 3-4 CR.)**

Provides comprehensive study of the purpose and interpretations of the National Electric Code as well as familiarization and implementation of various charts, code rulings and wiring methods including state and local regulations. Must be taken in sequence. Lecture 2-3 hours. Laboratory 0-3 hours. Total 3-6 hours per week.

#### **ELE 140 - BASIC ELECTRICITY AND MACHINERY (4 CR.)**

Studies direct and alternating current principles, resistors, magnetism, capacitors, protection systems, switches, controls and power distribution for industrial machine shops. Emphasizes test procedures and safety. Lecture 3 hours. Laboratory 2 hours. Total 5 hours per week.

#### **ELE 148 - POWER DISTRIBUTION SYSTEMS (3 CR.)**

Introduces transmission and distribution of electrical power. Includes application of transformers, distribution and over-current protection devices, substations, switchboards, feeders, busways, motor control centers, generators, motors, and troubleshooting techniques associated with these systems and devices. Credits 3. Lecture 2 hours. Lab 2 hours. Total 4 hours per week.

#### **ELE 156 - ELECTRICAL CONTROL SYSTEMS (3 CR.)**

Includes troubleshooting and servicing electrical controls, electric motors, motor controls, motor starters, relays, overloads, instruments and control circuits. May include preparation of a report as an out-of-class activity. Pre-requisite: ELE 140, Co-requisite ETR 143. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

#### **ELE 239 - PROGRAMMABLE CONTROLLERS (2-3 CR.)**

Examines installation, programming, interfacing, and concepts of troubleshooting programmable controllers. Pre-requisite: ELE 156 or ETR 143 or AIR 112. Lecture 2-3 hours. Laboratory 0-3 hours per week. Total 2-6 hours per week.

#### **ELE 290 - COORDINATED INTERNSHIP IN ELE (3 CR.)**

Supervises on-the-job training in selected business, industrial or service firms coordinated by the college. Credit/practice ratio not to exceed 1:5 hours. May be repeated for credit. Variable hours.

#### **ELE 298 - SEMINAR AND PROJECT (3 CR.)**

Requires completion of a project related to the student's occupational objectives and a study of approaches to the selection and pursuit of career opportunities in the field. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week. Please limit enrollment for this course to one (1) student.

### **ELECTRONICS TECHNOLOGY (ETR)**

#### **ETR 143 DEVICES AND APPLICATIONS I (3 CR.)**

Teaches theory of active devices and circuits such as diodes, power supplies, transistors (BJT, MOS), amplifiers and their parameters, FETs, and op amps. May include UJT'S, oscillators, RF amplifiers, thermionic devices, and others. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

#### **ETR 168 - DIGITAL CIRCUIT FUNDAMENTALS (3 CR.)**

Covers the fundamentals of digital logic and the study of digital circuits and their applications. ENF 2 Requisite. Lecture 3 hours per week.

#### **ETR 218 - INDUSTRIAL ELECTRONICS CIRCUITS (4 CR.)**

Introduces the principles of industrial measurements and control: electrical, electronic, mechanical, thermal, and optical measuring and records, and actuators, electronic instrumentation control devices and circuits. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

### **EMERGENCY MEDICAL SERVICES TECHNOLOGY (EMS)**

#### **EMS 100 - CPR FOR HEALTHCARE PROVIDERS (1 CR.)**

Provides instruction in Cardiopulmonary Resuscitation that meets current Emergency Cardiac Care (ECC) guidelines for Cardiopulmonary Resuscitation education for Healthcare Providers. Lecture: 1 hour per week. Total 1 hour per week.

**EMS 111 - EMERGENCY MEDICAL TECHNICIAN-BASIC (7 CR.)**

Prepares student for certification as a Virginia and National Registry EMT-Basic. Includes all aspects of pre-hospital basic life support as defined by the Virginia Office of Emergency Medical Services curriculum for Emergency Medicine Technician Basic. Prerequisite: CPR certification at the Health Care Provider level. Co-requisite: EMS-120. Lecture: 4 hours. Lab: 4 hours. Total 8 hours per week.

**EMS 112 - EMERGENCY MEDICAL TECHNICIAN-BASIC I (4 CR.)**

Prepares student for certification as a Virginia and/or National Registry EMT-Basic. Focuses on all aspects of pre-hospital basic life support as defined by the Virginia office of Emergency Medical Services curriculum for Emergency Medicine Technician Basic. Lecture 3 hours. Laboratory 2 hours. Total 5 hours per week.

**EMS 113 - EMERGENCY MEDICAL TECHNICIAN-BASIC II (3 CR.)**

Continues preparation of student for certification as a Virginia and/or National Registry EMT-Basic. Includes all aspects of pre-hospital basic life support as defined by the Virginia Office of Emergency Medical Services curriculum for Emergency Medicine Technician Basic. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

**EMS 120 - EMERGENCY MEDICAL TECHNICIAN-BASIC CLINICAL (1 CR.)**

Provides supervised direct patient contact introducing the student to the assessment and emergency care of sick and injured patients. This course is a co-requisite of either EMS-111 or EMS-113, depending upon the program in which the student is participating. Laboratory 2 hours. Total 2 hours per week.

**EMS 121 - PREPARATORY FOUNDATIONS (2 CR.)**

Introduces fundamental concepts established by the National Emergency Medical Service Education Standards (NEMSES) for advanced EMT and Paramedic curricula. Includes EMS systems, introduction to research, workforce safety and wellness, EMS system communications, introduction to public health, legal and ethical issues. Lecture 2 hours. Total 2 hours per week.

**EMS 123 - EMS CLINICAL PREPARATION (1 CR.)**

Introduces the student to local clinical agencies and prepares the student for clinical activities above the level of EMT. Includes prerequisites required by clinical affiliates, therapeutic communication, primary assessment, history taking, secondary assessment, reassessment, monitoring devices and documentation. Laboratory 2 hours. Total 2 hours per week.

**EMS 125 - BASIC PHARMACOLOGY (1 CR.)**

Prepares students to demonstrate competency concerning basic principles of pharmacology, drug dosage calculations and medication administration. Introduces medications listed in the Advanced EMT (AEMT) scope of practice. Lecture 1 hour. Total 1 hour per week.

**EMS 126 - BASIC PHARMACOLOGY LAB (1 CR.)**

Focuses on the safe administration of medications in the emergency setting. Includes drug dose calculation and covers multiple routes of administration including oral, intramuscular, subcutaneous, intravenous, and intraosseous and other methods within the scope of practice for the emergency care provider. Laboratory 2 hours. Total 2 hours per week.

**EMS 127 - AIRWAY, SHOCK, AND RESUSCITATION (1 CR.)**

Introduces concepts associated with pre-hospital emergency care of the individual experiencing airway difficulty or in need of resuscitation or shock management. Lecture 1 hour per week. Total 1 hour per week.

**EMS 128 - AIRWAY, SHOCK, AND RESUSCITATION LAB (1 CR.)**

Focuses on specific skills related to airway, resuscitation and shock management. Laboratory 2 hour per week. Total 2 hours per week.

**EMS 135 - EMERGENCY MEDICAL CARE (2 CR.)**

Prepares the student to assess and manage patients with common medical emergencies. Lecture 2 hours. Total 2 hours per week.

**EMS 136 - EMERGENCY MEDICAL CARE LAB (1 CR.)**

Focuses on specific skills related to the assessment and management of common medical emergencies. Laboratory 2 hours. Total 2 hours per week.

**EMS 137 - TRAUMA CARE (1 CR.)**

Prepares the student to assess and manage injured patients, developing his/her problem-solving ability in the treatment of trauma involving various body systems. Lecture 1 hour. Total 1 hour per week.

**EMS 138 - TRAUMA CARE LAB (1 CR.)**

Focuses on the skills required for the assessment and management of patients with traumatic injury. Laboratory 2 hours. Total 2 hours per week.

**EMS 139 - SPECIAL POPULATIONS (1 CR.)**

Focuses on the pre-hospital assessment and management of patients in a specific population including pediatrics, geriatrics, obstetrics/gynecology (OB/GYN), bariatric, abuse, sexual assault and special needs. Lecture 1 hour. Total 1 hour per week.

**EMS 140 - SPECIAL POPULATIONS LAB (1 CR.)**

Develops skills related to the assessment and management of patients in a specific population including pediatrics, geriatrics, obstetrics/gynecology (OB/GYN), bariatric, abuse, sexual assault and special needs. Laboratory 2 hours. Total 2 hours per week.

**EMS 141 - CARDIOVASCULAR CARE (2 CR.)**

Focuses on assessment and management of cardiac-related emergencies. Covers basic dysrhythmia recognition and relates it to overall cardiac patient care. Lecture 2 hours. Total 2 hours per week.

**EMS 142 - CARDIOVASCULAR CARE LAB (1 CR.)**

Focuses on skills involved in the assessment and management of cardiac-related emergencies. Develops competency in basic dysrhythmia recognition and overall cardiac patient care. Laboratory 2 hours. Total 2 hours per week.

**EMS 151 - INTRODUCTION TO ADVANCED LIFE SUPPORT (4 CR.)**

Prepares the student for Virginia Enhanced certification eligibility and begins the sequence for National Registry Intermediate and/or Paramedic certification. Includes the theory and application of the following: foundations, human systems, pharmacology, overview of shock, venous access, airway management, patient assessment, respiratory emergencies, allergic reaction, and assessment based management. Conforms to the Virginia Office of Emergency Medical Services curriculum. Co-requisite: EMS-170 Clinical and Field Internship. Lecture: 3 hours. Lab: 2 hours. Total 5 hours per week

**EMS 152 - ADVANCED EMT COMPLETION (2 CR.)**

Continues the Virginia Office of Emergency Medical Services Advanced, Intermediate and/or Paramedic curricula. Includes patient assessment, differential diagnosis and management of multiple complaints. Includes, but are not limited to conditions relating to diabetic, neurological, abdominal pain, environmental, behavioral, gynecology, and toxicological disease conditions. Also includes Advanced EMT level cardiac, trauma and special population topics.

**EMS 163 - PREHOSPITAL TRAUMA LIFE SUPPORT (PHTLS) (1CR.)**

Prepares for certification as an Prehospital Trauma Life Support provider as defined by the American College of Surgeons. Prerequisites: EMS 111 or equivalent. Lecture: 1 hours. Total 1 hours.

**EMS 164 - ADVANCED MEDICAL LIFE SUPPORT (1 CR.)**

Covers current topics of care for adult patients suffering extensive medical conditions and emergencies, and offers certification as an Advanced Medical Life Support (AMLS) as defined by the National Association of Emergency Medical Technicians (NAEMT). Lecture 1 hour. Total 1 hour per week.

**EMS 165 - ADVANCED CARDIAC LIFE SUPPORT (ACLS) (1 CR.)**

Prepares for certification as an Advanced Cardiac Life provider. Follows course as defined by the American Heart Association. Prerequisites: EMS 100, 153 or equivalent. Lecture 1 hour per week.

**EMS 167 - EMERGENCY PEDIATRICS COURSE (EPC) (1 CR.)**

Provides a unique approach to pediatric medical care, offering assessment techniques that can help EMS practitioners rapidly and accurately assess pediatric patients to determine which situations may be life threatening and require immediate intervention. Offers certification as defined by the National Association of Emergency Medical Technicians (NAEMT). Lecture 1 hour. Total 1 hour per week.

**EMS 168 - EMERGENCY PEDIATRIC CARE - PEPP (1 CR.)**

Prepares the student for certification as a prehospital pediatric care provider as defined by the American Academy of Pediatrics. Covers primary assessment and emergency care of infants and children. Lecture: 1 hour per week. Total 1 hour per week.

**EMS 169- Pediatric Advanced Life Support (PALS) (1 CR.)**

Prepares the student for certification as a pediatric advanced life support provider as defined by the American Heart Association. Covers primary assessment and emergency care of infants and children. Lecture 1 hour per week.

**EMS 170 - ALS INTERNSHIP I (1 CR.)**

The first in a series of clinical experiences providing supervised direct patient contact in appropriate patient care facilities in and out of hospitals. Includes but not limited to patient care units such as the Emergency Department, Critical Care units, Pediatric, Labor and Delivery, Operating Room, Trauma Centers and various advanced life support units. Lab: 3 hours per week. Total 48 hours.

**EMS 175 - PARAMEDIC CLINICAL EXPERIENCE I (2 CR.)**

Introduces students to live patient assessment and management in the clinical setting. Begins a continuum of learning involving live patients that leads to entry-level competence at the paramedic level. Internship 6 hours. Total 6 hours per week.

**EMS 195 - TOPICS IN EMERGENCY MEDICAL SERVICES (4 CR.)**

Provides information and focuses on the concepts and fundamentals of emergency pre-hospital care. Provides career exploration information for various healthcare careers.

**EMS 201 - EMS PROFESSIONAL DEVELOPMENT (2 CR.)**

Prepares students for Paramedic certification at the National Registry Level by fulfilling community activism, personal wellness, resource management, ethical considerations in leadership and research objectives in the Virginia Office of Emergency Medical Services Paramedic curriculum. Lecture: 2 hour per week. Total 2 hours per week.

**EMS 202 - PARAMEDIC PHARMACOLOGY (2 CR.)**

Focuses on advanced pharmacological interventions, medications and their effects. Lecture 2 hours. Total 2 hours per week.

**EMS 203 - ADVANCED PATIENT CARE (2 CR.)**

Focuses on the comprehensive assessment and management of patients in out-of-hospital and inter-facility scenarios. Content is centered on problem-solving through integration of didactic, psychomotor and affective curricula. Lecture 2 hours. Total 2 hours per week.

**EMS 204 - ADVANCED PATIENT CARE LAB (2 CR.)**

Focuses on the comprehensive assessment and management of out-of-hospital and inter-facility patients using scenario-based learning. Laboratory 4 hours. Total 4 hour per week.

**EMS 206 - PATHOPHYSIOLOGY FOR HEALTH PROFESSIONALS (3 CR.)**

Focuses on the pathological processes of disease with emphasis on the anatomical and physiological alterations of the human body systems. Includes diagnosis and management appropriate to the advanced health care provider in and out of the hospital environment. Lecture 3 hours. Total 3 hours per week.

**EMS 207 - ADVANCED PATIENT ASSESSMENT (3 CR.)**

Focuses on the principles of normal and abnormal physical exam. Emphasizes the analysis and interpretation of physiological data to assist in patient assessment and management. Applies principles during the assessment and management of trauma, medical, and specialty patients in laboratory environment. Lecture: 2 hours per week. Lab: 2 hours per week. Total 4 hours per week.

**EMS 210 - EMS OPERATIONS (1 CR.)**

Focuses on matters related to Emergency Medical Services (EMS) operations, incident and scene safety and awareness, triage, multiple and mass casualty incident operations and medical incident management (command and control of EMS incidents). Laboratory 2 hours. Total 2 hours per week.

**EMS 211 - OPERATIONS (2 CR.)**

Prepares the student in the theory and application of the following: medical incident command, rescue awareness and operations, hazardous materials incidents, and crime scene awareness. (Conforms to the current Virginia Office of Emergency Medical Services curriculum for EMT-Paramedics.) Lecture: 1 hour per week. Lab: 2 hours per week. Total 3 hours per week.

**EMS 212 - LEADERSHIP AND PROFESSIONAL DEVELOPMENT (1 CR.)**

Focuses on the development of leadership within the field of Emergency Medical Services (EMS), topics include civic engagement, personal wellness, resource management, ethical considerations in leadership and research. Lecture 1 hour. Total 1 hour per week.

**EMS 213 - ALS SKILLS DEVELOPMENT (1-2 CR.)**

This course may be utilized to reinforce and remediate additional advanced life support skills, as needed. Lab: 2-4 hours per week. Total 2-4 hours per week.

**EMS 216 - PARAMEDIC REVIEW (1 CR.)**

Provides the student with intensive review for the practical and written portions of the National Registry Paramedic exam. May be repeated once, for credit. Laboratory 2 hours. Total 2 hour per week.

**EMS 244 - ALS CLINICAL INTERNSHIP IV (1 CR.)**

The fourth in a series of clinical experiences providing supervised direct patient contact in appropriate patient care facilities in and out of hospitals. Includes but not limited to patient care units such as the Emergency Department, Critical Care units, Pediatric, Labor and Delivery, Operating Room and Trauma Centers. One credit course, may be repeated as necessary. Lab: 3 hours per week. Total 48 hours

**EMS 245 - ALS FIELD INTERNSHIP IV (1 CR.)**

The fourth in a series of field experiences providing supervised direct patient care in out-of-hospital advanced life support units. One credit course, may be repeated as necessary. Lab: 3 hours per week. Total 48 hours.

pital advanced life support units. One credit course, may be repeated as necessary. Lab: 3 hours per week. Total 48 hours.

**EMS 247 - PARAMEDICAL CLINICAL EXPERIENCE II (1 CR.)**

Continues the student experience with live patient assessment and management in the clinical setting. It is the second step in a continuum of learning involving live patients that leads to entry-level competence at the paramedic level. Internship 6 hours per week.

**EMS 248 - PARAMEDIC COMPREHENSIVE FIELD EXPERIENCE (2 CR.)**

Expands the student experience with live patient assessment and management into the field setting. It is the third step in a continuum of learning involving live patients that leads to entry-level competence at the paramedic level. Internship 6 hours. Total 6 hours per week.

**EMS 249 - PARAMEDIC CAPSTONE INTERNSHIP (2 CR.)**

Provides summative evaluation of the Paramedic student in the cognitive, psychomotor, and affective domains. Internship 6 hours per week.

**ENGINEERING (EGR)****EGR 115 - ENGINEERING GRAPHICS (2-3 CR.)**

Applies principles of orthographic projection, and multi-view drawings. Teaches descriptive geometry including relationships of points, lines, planes and solids. Introduces sectioning, dimensioning and computer graphic techniques. Includes instruction in Computer Aided Drafting. Lecture 1-2 hours. Laboratory 3 hours. Total 4-5 hours per week.

**EGR 120 - INTRODUCTION TO ENGINEERING (2 CR.)**

Introduces the engineering profession, professional concepts, ethics, and responsibility. Reviews hand calculators, number systems, and unit conversions. Introduces the personal computer and operating systems. Includes engineering problem solving techniques using computer software. Lecture 0-2 hours. Laboratory 0-3 hours. Total 1-4 hours per week.

**EGR 121 - FOUNDATIONS OF ENGINEERING (2 CR.)**

Introduces the engineering profession and its impact on society and the environment, including engineering problem solving, the engineering design process, and professional practices. Covers fundamental engineering calculations, descriptive statistics, basic spreadsheet and mathematical scripting language applications, professional ethics, teamwork, and communication. Readiness for ENG 111. Lecture 2 hours per week. Prerequisites: MTH 162 or MTH 167, or equivalent or departmental approval.

**EGR 122 - ENGINEERING DESIGN (3 CR.)**

Applies engineering methods to a semester-long team design project with an emphasis on engineering software involving 2D and 3D computer aided design; data modeling and analysis; and iterative programming solutions. Covers design drawings and dimensioning; spreadsheet software usage; mathematical scripting language; and professional practices. Lecture 2 hours per week; lab 2 hours per week; total 4 hours per week. Prerequisite: EGR 121 or departmental approval.

**EGR 125 - INTRODUCTION TO ENGINEERING METHODS (3 CR.)**

Applies problem-solving techniques to engineering problems utilizing computer programming and algorithms in a higher level computer language such as FORTRAN, PASCAL, or C++. Lecture 3 hours. Laboratory 0-2 hours. Total 3-5 hours per week.

**EGR 127 - INTRODUCTION TO COMPUTER PROGRAMMING (3 CR.)**

Introduces programming in a higher level language such as FORTRAN, BASIC or PASCAL, or C++ on the microcomputer. Uses the operating system, packaged software and peripheral devices. Emphasizes engineering program problem solving. Lecture 1-2 hours. Laboratory 0-2 hours. Total 2-4 hours per week.

**EGR 140 - ENGINEERING MECHANICS STATICS (3 CR.)**

Introduces mechanics of vector forces and space, scalar mass and time, including S.I. and U.S. customary units. Teaches equilibrium, free-body diagrams, moments, couples, distributed forces, centroids, moments of inertia analysis of two-force and multi-force members and friction and internal forces. Lecture 3 hours per week.

**EGR 206 - ENGINEERING ECONOMICS (3 CR.)**

Presents economic analysis of engineering alternatives. Studies economic and cost concepts, calculation of economic equivalence, comparison of alternatives, replacement economy, economic optimization in design and operation, depreciation, and after tax analysis. Lecture 3 hours.

**EGR 245 - ENGINEERING MECHANICS - DYNAMICS (3 CR.)**

Presents approach to kinematics of particles in linear and curvilinear motion. Includes kinematics of rigid bodies in plane motion. Teaches Newton's second law, work-energy and power, impulse and momentum, and problem solving using computers. Lecture 3 hours.

**EGR 246 - MECHANICS OF MATERIALS (3 CR.)**

Teaches concepts of stress, strain, deformation, internal equilibrium, and basic properties of en-

engineering materials. Analyzes axial loads, torsion, bending, shear and combined loading. Studies stress transformation and principle stresses, column analysis and energy principles. Lecture 3 hours.

#### **EGR 251 - BASIC ELECTRIC CIRCUITS I (3 CR.)**

Teaches fundamentals of electric circuits. Includes circuit quantities of charge, current, potential, power and energy. Teaches resistive circuit analysis; Ohm's and Kirchoff's laws; nodal and mesh analysis; network theorems; RC, RL and RLC circuit transient response with constant forcing functions. Teaches AC steady-state analysis, power, three-phase circuits. Presents frequency domain analysis, resonance, Fourier series, inductively coupled circuits, Laplace transform applications, and circuit transfer functions. Introduces problem solving using computers. Part I of II. Lecture 3 hours per week.

### **ENERGY (ENE)**

#### **ENE 105 - SOLAR THERMAL ACTIVE AND PASSIVE TECHNOLOGY (4 CR.)**

Provides a comprehensive study of thermal technology as it applies to collector types and ratings, open-loop versus closed-loop and system sizing. Introduces hydronics, hot water, and pool heating applications. Provides an introduction to fluid dynamics and chemistry as it applies to system installation and maintenance. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

#### **ENE 110 - SOLAR POWER INSTALLATIONS (4 CR.)**

Covers wiring, control, conversion, and ties to established power systems. Studies use of inverters, batteries, and charging systems. Prerequisite: ELE 157 or equivalent. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

#### **ENE 230 - GEOTHERMAL APPLICATIONS (4 CR.)**

Studies the use of geothermal energy for large and small scale production. Covers the feasibility of heat pump applications for local use on an individual basis. Prerequisite: ELE 157. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

### **ENGLISH (ENG)**

#### **ENG 111 - COLLEGE COMPOSITION I (3 CR.)**

Introduces students to critical thinking and the fundamentals of academic writing. Through the writing process, students refine topics: develop and support ideas; investigate, evaluate, and incorporate appropriate resources; edit for effective style and usage; and determine appropriate approaches for a variety of contexts, audiences, and purposes. Writing activities will include exposition and argumentation with at least one researched essay. This is a Passport Transfer course. Lecture 3 hours per week. See Table E for placement information.

#### **ENG 112 - COLLEGE COMPOSITION II (3 CR.)**

Continues to develop college writing with increased emphasis on critical essays, argumentation, and research, developing these competencies through the examination of a range of texts about the human experience. Requires students to locate, evaluate, integrate, and document sources and effectively edit for style and usage. Pre-requisite: ENG 111 or its equivalent, and must be able to use word processing software. Lecture 3 hours per week.

#### **ENG 115 - TECHNICAL WRITING (3 CR.)**

Develops ability in technical writing through extensive practice in composing technical reports and other documents. Guides students in achieving voice, tone, style, and content in formatting, editing, and graphics. Introduces students to technical discourse through selected reading. ENG 111 Requisite. Lecture 3 hours per week.

#### **ENG 211 - CREATIVE WRITING I (3 CR.)**

Introduces the student to the fundamentals of writing imaginatively. Students write in forms to be selected from poetry, fiction, drama, and essays. Prerequisite ENG 112 or Division Approval. Lecture 3 hours per week.

#### **ENG 212 - CREATIVE WRITING II (3 CR.)**

Introduces the student to the fundamentals of writing imaginatively. Students write in forms to be selected from poetry, fiction, drama, and essays. Prerequisite ENG 112 or Division Approval. Lecture 3 hours per week.

#### **ENG 236 - INTRODUCTION TO THE SHORT STORY (3 CR.)**

Examines selected short stories emphasizing the history of the genre. Involves critical reading and writing. Prerequisite ENG 112 or divisional approval. Lecture 3 hours.

#### **ENG 241 - SURVEY OF AMERICAN LITERATURE I (3 CR.)**

Examines American literary works from colonial times to the present, emphasizing the ideas and characteristics of our national literature. Involves critical reading and writing. Prerequisite ENG 112 or division approval. Part I of II. Lecture 3 hours per week.

#### **ENG 242 - SURVEY OF AMERICAN LITERATURE II (3 CR.)**

Examines American literary works from colonial times to the present, emphasizing the ideas and characteristics of our national literature. Involves critical reading and writing. Prerequisite ENG

112 or division approval. Part II of II. Lecture 3 hours per week.

#### **ENG 243 - SURVEY OF ENGLISH LITERATURE I (3 CR.)**

Studies major English works from the Anglo-Saxon period to the present, emphasizing ideas and characteristics of the British literary tradition. Involves critical reading and writing. Prerequisite ENG 112 or division approval. Part I of II. Lecture 3 hours per week.

#### **ENG 244 - SURVEY OF ENGLISH LITERATURE II (3 CR.)**

Studies major English works from the Anglo-Saxon period to the present, emphasizing ideas and characteristics of the British literary tradition. Involves critical reading and writing. Prerequisite ENG 112 or division approval. Part II of II. Lecture 3 hours per week.

#### **ENG 251 - SURVEY OF WORLD LITERATURE I (3 CR.)**

Examines major works of world literature. Involves critical reading and writing. Prerequisite ENG 112 or division approval. Part I of II. Lecture 3 hours per week.

#### **ENG 252 - SURVEY OF WORLD LITERATURE II (3 CR.)**

Examines major works of world literature. Involves critical reading and writing. Prerequisite ENG 112 or divisional approval. Lecture 3 hours per week. May be taken out of sequence.

#### **ENG 253 - SURVEY OF AFRICAN-AMERICAN LITERATURE I (3 CR.)**

Examines selected works by Black American writers from the colonial period to the present. Involves critical reading and writing. Prerequisite ENG 112 or divisional approval. Part I of II. Lecture 3 hours per week. 3 credits

#### **ENG 256 - LITERATURE OF SCIENCE FICTION (3 CR.)**

Examines the literary and social aspects of science fiction, emphasizing development of ideas and techniques through the history of the genre. Involves critical reading and writing. Prerequisite is ENG 112. Lecture 3 hours per week.

#### **ENG 278 - APPALACHIAN LITERATURE (3 CR.)**

Examines selected works of outstanding authors of the Appalachian region. Involves critical reading and writing. Prerequisite ENG 112 or divisional approval. Divisional approval will be granted with the completion of ENG 111. Lecture 3 hours per week.

### **ENGLISH DIRECT ENROLLMENT (EDE)**

#### **EDE 10 - ENGLISH COMPOSITION PREPARATION (3 CR.)**

Provides academic skills and support for introductory composition. Students will identify and apply academic skills including critical reading, writing, thinking, and research. Upon successful completion of EDE 10, Instructors recommend enrollment in EDE 11/ENG 111 or ENG 111 or ENG 115. Lecture 3 hours. Total 3 hours per week.

#### **EDE 11 - ENGLISH COMPOSITION READINESS (3 CR.)**

Provides academic support for successful completion of ENG 111. Students will identify and apply academic skills including critical reading, writing, thinking, and introductory research. Lecture 3 hours per week. Total 3 hours per week. Co-Requisite: ENG 111

### **ENVIRONMENTAL SCIENCE (ENV)**

#### **ENV 100 - BASIC ENVIRONMENTAL SCIENCE (3 CR.)**

Presents and discusses basic scientific, health-related, ethical, economic, social and political aspects of environmental activities, policies/decisions. Emphasizes the multidisciplinary nature of environmental problems and their potential solutions. Lecture 3 hours per week.

#### **ENV 108 - ENVIRONMENTAL MICROBIOLOGY (3 CR.)**

Studies characteristics and activities of microorganisms, showing their essential relation to diagnosis, treatment, and prevention of disease. Explores fundamentals of bacteriology, mycology, and parasitology, emphasizing their relationships to community health. Includes soil, water, wastewater, and industrial microbiology. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

#### **ENV 110 - INTRODUCTION TO WATER AND WASTEWATER TREATMENT TECH (3 CR.)**

Provides entry-level students with a general overview of the entire water supply, treatment, and disposal system. Traces water supply from raw state through treatment, storage, distribution, use, waste collection, and discharge back to the environment. Covers aspects of water supply and wastewater treatment. Lecture 1-3 hours. Laboratory 0-6 hours. Total 1-7 hours per week.

#### **ENV 115 - WATER PURIFICATION (3 CR.)**

Explores principles of water purification including sedimentation, rapid sand filtration, chlorination, treatment, and prevention of disease. Studies fundamentals of bacteriology, mycology, and parasitology, emphasizing their relationships to community health. Includes soil, water, wastewater, and industrial microbiology. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

**ENV 148 - MATH FOR WATER AND WASTEWATER OPERATIONS (3 CR.)**

Introduces students to basic math calculations relating to water and wastewater concepts and operations. Prepares students for Waterworks and Wastewater Works Operators certification exam. Lecture 3 hours per week.

**ENV 149 - WASTEWATER TREATMENT PLANT OPERATION (3 CR.)**

Teaches principles, practices and desired function and operation of a variety of wastewater treatment unit processes. Evaluates the operation of processes by determination of the information and testing required for evaluation and performing the subsequent necessary calculations. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

**ENV 195 - TOPICS IN ENVIRONMENTAL SCIENCE (3 CR.)**

Presents and discusses basic scientific, health-related, ethical, economic, social and political aspects of environmental activities, policies/decisions. Emphasizes the multidisciplinary nature of environmental problems and their potential solutions. Lecture 3 hours per week.

**ENV 195 - TOPICS IN WASTEWATER TREATMENT RENEWAL I (1 CR.)**

Covers basic wastewater treatment processes, such as racks, screens, comminutors, trickling filters and sedimentation and flotation. This class is created specifically for renewal of wastewater operator license Class IV.

**ENV 195 - TOPICS IN ENVIRONMENTAL SCIENCE I (3 CR.)**

Explores fundamental components and interactions that make up the natural systems of the earth. Introduces the basic science concepts in the discipline of biological, chemical, and earth sciences that are necessary to understand and address environmental issues.

**ENV 195 - TOPICS IN ENVIRONMENTAL SCIENCE: RESEARCH METHODS IN ENVIRONMENTAL SCIENCE (3 CR.)**

Presents and discusses scientific and research methods in environmental science; provides students with hands-on experience with water, soil, and vegetation sampling techniques and introduces statistical analytical techniques for field research conducted during the course. Lecture 3 hours per week.

**ENV 195 - TOPICS IN WATER TREATMENT RESIDUALS I (1 CR.)**

This course covers the types of residuals produced from treating source water as well as the handling and disposal of these residuals.

**ENV 195 - TOPICS IN THE ACTIVATED SLUDGE PROCESS I (1 CR.)**

This course provides a wastewater treatment plant operator with introductory information about the group of biological treatment systems known as activated sludge.

**ENV 195 - TOPICS IN WATER TREATMENT BASICS I (1 CR.)**

This course covers an overview of water treatment, including the filtration process, pressure filters, backwashing, and water quality analysis.

**ENV 195 - TOPICS IN WASTEWATER TREATMENT BASICS I (1 CR.)**

This course covers a basic overview of the wastewater treatment process, including the wastewater purification process, collection systems, preliminary, primary and secondary treatment. This course is for licensure renewal only.

**ENV 195 - TOPICS IN DISINFECTION FOR SMALL WATER UTILITIES (1 CR.)**

This course covers every aspect of disinfection for small water utilities from water sources to treatment and the math associated for proper dosage. Troubleshooting of small systems is also included to help determine issues within the system.

**ENV 195 - TOPICS IN WATER PURIFICATION I (1 CR.)**

This course explores principles of water purification including pretreatment, aeration, coagulation, flocculation, sedimentation, filtration, disinfection, and corrosion control. This course is specifically for water license renewal and awards 15 CPEs.

**ENV 211 - SANITARY BIOLOGY AND CHEMISTRY I (3 CR.)**

Teaches theory and laboratory techniques for control tests of water purification including bacteriology, color, turbidity, pH, alkalinity, hardness, coagulations, chlorides, fluorides, iron, manganese, detergents, bactericides, and nitrates. Includes in-plant studies at nearby plants. Studies theory and laboratory techniques for the determination of solids, dissolved oxygen, oxygen consumed, relative stability, bacteria, biochemical oxygen demand, organic nitrogen, volatile acids, toxic metals. Must be taken in sequence. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

**ENV 220 - ENVIRONMENTAL PROBLEMS (3 CR.)**

Studies the relationship of man to his environment; ecological principles, population dynamics, topics of current importance including air, water, and noise pollution; poisoning and toxicity, radiation, conservation and management of natural resources. Lecture 3 hours per week.

**ENV 227 - ENVIRONMENTAL LAW (3CR.)**

Introduces environmental law including the history of environmental laws, the National Environment Policy Act, state environmental acts, hazardous wastes, endangered species, pollution, and surface mine reclamation. Lecture 2-3 hours per week.

**ENV 230 - GIS APPLICATIONS IN ENVIRONMENTAL SCIENCE (3 CR.)**

Introduces Global Positioning Systems(GPS) and Geographic Information Systems (GIS) hardware and software and applies the principles of GPS and GIS to Forest Science and Environmental Science. Includes: Natural Disasters; Pest Control; Water Quality; Prescribed Burning; Identifying Sources of Pollution. Prerequisite GIS 200. [This course covers the same content as GIS 230. Credit will not be granted for both courses]. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

**ENV 235 - SOIL CONSERVATION AND SPOILS MANAGEMENT (3 CR.)**

Teaches principles of soil conservation, erosion and sediment processes, spoils placement, both mechanical and natural methods of stabilization, and impacts of not practicing prudent soil conservation methods. Lecture 3 hours per week.

**ENV 290 - COORDINATED INTERNSHIP IN ENVIRONMENT (4 CR.)**

Supervises on-the-job training in selected business, industrial or service firms coordinated by the college. Variable hours.

**ENV 295 - TOPICS IN ENVIRONMENTAL SCIENCE II (3 CR.)** - Explores fundamental components and interactions that make up the natural systems of the earth. Introduces the basic science concepts in the discipline of biological, chemical, and earth sciences that are necessary to understand and address environmental issues.

**ENV 295 - MICROBIOLOGY OF WELL AND SPRING WATER II (2 CR.)**

Studies characteristics and activities of microorganisms, showing their essential relation to diagnosis, treatment, and prevention of disease. You will also learn techniques for identifying some microbes using descriptions and dichotomous keys. You will also learn other components that may be in well and spring water that must be tested periodically for maintenance. This course is equivalent to 30 CPE's for licensing renewal.

**ENV 295 - TOPICS IN WATER TREATMENT RESIDUALS II (2 CR.)**

This course covers the type, amount and characteristics of residuals produced by water treatment processes as well as regulations for handling and disposal of the residuals. This course also contains 5 hours of Workplace Hazard instruction.

**ENV 295 - TOPICS IN THE ACTIVATED SLUDGE PROCESS II (2 CR.)**

This course focuses on process control calculations and methods to identify causes and determine appropriate corrective actions for common operational problems in the wastewater plant.

**ENV 295 - TOPICS IN WATER TREATMENT BASICS II (2 CR.)**

This course covers an overview of water treatment, including the filtration process, water quality analysis, chemicals and feed points, and EPA requirements.

**ENV 295 - TOPICS IN WASTEWATER TREATMENT BASICS II (2 CR.)**

This course covers a basic overview of the wastewater treatment process, including collection systems, trickling filters, RBCs, activated sludge, disinfection, flow measurement and sludge treatment. This course is for licensure renewal only

**ENV 295 - TOPICS IN DISINFECTION FOR LARGE WATER UTILITIES (2 CR.)**

This course covers every aspect of disinfection for large water utilities from water sources to different types of treatment that can be used and the math associated for each method. Troubleshooting of large systems is also included to help determine issues within the system.

**ENV 298 - SEMINAR AND PROJECT IN FOREST SCIENCE AND ENVIRONMENTAL SCIENCE (4 CR.)**

Requires completion of a project or research report related to student's occupational objective. Variable hours per week.

**FINANCE (FIN)****FIN 107 - PERSONAL FINANCE (3 CR.)**

Presents a framework of personal money management concepts, including establishing values and goals, determining sources of income, managing income, preparing a budget, developing consumer buying ability, using credit, understanding savings and insurance, providing for adequate retirement, and estate planning. Lecture 3 hours per week.

**FORESTRY (FOR)****FOR 100 - INTRODUCTION TO FORESTRY (3-4 CR.)**

Develops the general concepts of forestry and forest resource use in the United States. Laboratory sessions introduce the student to the protection, management, and use of forest resource. Lecture 2-3 hours. Laboratory 3 hours. Total 5-6 hours per week.

### **FOR 115 - DENDROLOGY (4 CR.)**

Studies trees and shrubs botanically and commercially important to the forests of Eastern United States. Emphasizes field characteristics of trees and common shrubs of the Eastern United States. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

### **FOR 201 - FOREST MENSURATION I (4 CR.)**

Teaches principles of forest measurements including basic elements of property boundary, location, forest mapping, techniques of tree measurement, and saw log and pulp wood scaling. Prerequisites FOR 115, MTH 113-114. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

### **FOR 215 - APPLIED SILVICULTURE (4 CR.)**

Focuses on theory and practices involved in controlling the forest establishment, composition and growth. Laboratory emphasizes observation and application of various silvicultural procedures including site preparation, regeneration, and intermediate treatments. Prerequisites FOR 115. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

### **FOR 237 - WILDLIFE ECOLOGY (3 CR.)**

Studies wildlife communities and their environmental relationships. Lecture 3 hours per week.

### **FOR 245 - FOREST PRODUCTS I (2 CR.)**

Introduces forest products. Lecture 2 hours per week.

### **FOR 290 - COORDINATED INTERNSHIP IN FORESTRY (4 CR.)**

Supervises on-the-job training in selected business, industrial or service firms coordinated by the college. Variable hours.

## **FRENCH (FRE)**

### **FRE 101 - BEGINNING FRENCH I (4-5 CR.)**

Introduces understanding, speaking, reading, and writing skills and emphasizes basic French sentence structure. ENG 111 Requisite. Lecture 4 hours per week. May include one additional hour of oral practice per week. Must be taken in sequence.

### **FRE 102 - BEGINNING FRENCH II (4-5 CR.)**

Introduces understanding, speaking, reading, and writing skills and emphasizes basic French sentence structure. FRE 101 Pre-Requisite. Must be taken in sequence. Lecture 4 hours per week. May include one additional hour of oral practice per week.

## **GEOGRAPHICAL INFORMATION SYSTEMS (GIS)**

### **GIS 200 - GEOGRAPHICAL INFORMATION SYSTEMS I (3 CR.)**

Provides hands-on introduction to a dynamic desktop GIS (Geographic Information System). Introduces the components of a desktop GIS and their functionality. Emphasizes manipulation of data for the purpose of analysis, presentation, and decision-making. Prerequisite: ITE 115 or ITE 119 or equivalent. Lecture 2 hours. Laboratory 2 hours. Total 5 hours per week.

### **GIS 201 - GEOGRAPHICAL INFORMATION SYSTEMS II (3 CR.)**

Provides a continuation of GIS 200, with emphasis on advanced topics in problem solving, decision-making, modeling, programming, and data management. Covers map projections and data formats, and methods for solving the problems they create. Prerequisite: GIS 200. Lecture 2-3 hours. Laboratory 2 hours. Total 4-5 hours per week.

### **GIS 205 - GIS 3 DIMENSIONAL ANALYSIS (3 CR.)**

Introduces GIS 3D (three-dimensional) concepts and practices with a concentration on displaying, creating and analyzing spatial GIS data using 3D. Covers 3D shape files, 3D data formats such as TIN's, DEM's, grids and controlling the perspective and scale of 3D data through rotating, panning and zooming. Pre-requisite: GIS 201. Lecture 2 hours. Laboratory 2 hours. Total 5 hours per week.

### **GIS 210 - UNDERSTANDING GEOGRAPHIC DATA (3 CR.)**

Provides the student an introduction to geographic data and the principles behind their construction. Introduces the concepts for measuring locations and characteristics of entities in the real world. Exposes the student to the limitations and common characteristics of geographic data. Pre-requisite: GIS 201. Lecture 2 hours. Laboratory 2 hours. Total 5 hours per week.

## **GEOGRAPHY (GEO)**

### **GEO 210 - PEOPLE AND THE LAND (3 CR.)**

Focuses on the relationship between culture and geography. Presents a survey of modern demographics, landscape modification, material and non-material culture, language, race and ethnicity, religion, politics, and economic activities. Introduces the student to types and uses of maps. Readiness for ENG 111 Requisite. Lecture 3 hours per week.

## **GEOLOGY (GOL)**

### **GOL 105 - PHYSICAL GEOLOGY (4 CR.)**

Introduces the science of physical geology through a comprehensive systems-based examination

of Earth's structure, composition, rocks and minerals, landforms, geomorphology, and agents responsible for shaping and modifying its environments. Explores the origin and evolution of Earth's topographic and bathymetric features, geologic phenomena, and geologic hazards, resulting from plate tectonics. Lecture 3 hours. Readiness for ENG 111. Laboratory 3 hours. Total 6 hours per week.

### **GOL 111 - OCEANOGRAPHY I (4 CR.)**

Examines the dynamics of the oceans and ocean basins. Applies the principles of physical, chemical, biological and geological oceanography. Readiness for ENG 111. Lecture 3 hours, laboratory 3 hours. Total 6 hours per week.

### **GOL 112 - OCEANOGRAPHY II (4 CR.)**

Examines the dynamics of the oceans and ocean basins. Applies the principles of physical, chemical, biological, and geological oceanography. Readiness for ENG 111.

## **GERMAN (GER)**

### **GER 101 - BEGINNING GERMAN I (5 CR.)**

Introduces understanding, speaking, reading, and writing skills and emphasizes basic German sentence structures. Part I of II.

### **GER 102 - BEGINNING GERMAN II (5 CR.)**

Introduces understanding, speaking, reading, and writing skills and emphasizes basic German sentence structures. Part II of II.

## **GOVERNMENT (SEE POLITICAL SCIENCE)**

## **HEALTH (HLT)**

### **HLT 100 - FIRST AID AND CARDIOPULMONARY RESUSCITATION (3 CR.)**

Focuses on the principles and techniques of safety, first aid, and cardiopulmonary resuscitation.

### **HLT 105 - CARDIOPULMONARY RESUSCITATION (1 CR.)**

Provides training in coordinated mouth-to-mouth artificial ventilation and chest compression, choking, life-threatening emergencies, and sudden illness. Lecture 1 hour per week.

### **HLT 106 - FIRST AID AND SAFETY (2 CR.)**

Focuses on the principles and techniques of safety and first aid. Lecture 2 hours per week.

### **HLT 110 - CONCEPTS OF PERSONAL AND COMMUNITY HEALTH (3 CR.)**

Studies the concepts related to the maintenance of health, safety, and the prevention of illness at the personal and community level. Readiness for ENG 111. Lecture 3 hours per week.

### **HLT 116 - INTRODUCTION TO PERSONAL WELLNESS CONCEPTS (2 CR.)**

Introduces students to the dimensions of wellness including the physical, emotional, environmental, spiritual, occupational, and social components. EDE 10 requisite. Lecture 2-3 hours per week.

### **HLT 121 - INTRODUCTION TO DRUG USE AND ABUSE (3 CR.)**

Explores the use and abuse of drugs in contemporary society with emphasis upon sociological, physiological, and psychological effects of drugs. Lecture 3 hours per week.

### **HLT 125 - ANATOMY & PHYSIOLOGY FOR EXERCISE SCIENCE (3 CR.)**

Presents basic principles of human anatomy and physiology including the body structure, systems and functions. The course provides a foundation to build and apply concepts in the study of Exercise Science, Group Fitness, Personal Training, and related fitness studies. 3 hours lecture, 3 contact hours.

### **HLT 130 - NUTRITION AND DIET THERAPY (1-2 CR.)**

Studies nutrients, sources, functions, and requirements with an introduction to diet therapy. Reading Level Requisite ENG 4. Lecture 1 hour per week.

### **HLT 135 - CHILD HEALTH AND NUTRITION (3 CR.)**

Focuses on the physical needs of the preschool child and the methods by which these are met. Emphasizes health routines, hygiene, nutrition, feeding and clothing habits, childhood diseases, and safety as related to health growth and development. EDE 10 requisite level. Lecture 3 hours per week.

### **HLT 138 - PRINCIPLES OF NUTRITION (1 CR.)**

Studies nutrient components of food, including carbohydrates, fats, proteins, vitamins, minerals and water. Provides a behavioral approach to nutrient guidelines for the development and maintenance of optimum wellness. EDE 10 requisite level. Lecture 1-2 hour per week.

### **HLT 140 - ORIENTATION TO HEALTH RELATED PROFESSIONS (2 CR.)**

Explores the interrelated roles and functions of various members of the health team. Lecture 1-2 hours. Total 1-2 hours per week.

**HLT 141 - INTRODUCTION TO MEDICAL TERMINOLOGY (1 CR.)**

Focuses on medical terminology for students preparing for careers in the health professions. Lecture 1-2 hours per week.

**HLT 145 - ETHICS FOR HEALTH CARE PERSONNEL (2 CR.)**

Focuses on ethical concepts of health care. Emphasizes confidentiality, maintaining patient records, personal appearance, professionalism with patients/clients, associates, and an awareness of health care facilities. Lecture 2 hours per week.

**HLT 156 - HEALTH CARE FOR ATHLETIC INJURIES (3 CR.)**

Teaches prevention and care of athletic injuries, recognition and management of head and spinal injuries, fractures, strains, sprains, as well as cardiac emergencies. Discusses taping, protective equipment, and medical referral. Lecture 2-3 hours per week.

**HLT 235 - DIAGNOSTIC CARDIOGRAPHY (4 CR.)**

Prepares students for a certification test as a Certified Cardiographic Technician. Focuses on electrocardiograms (ECGs), stress tests, ambulatory monitoring and rhythm analysis. Lecture 3 hours, Laboratory 3 hours, Total 6 hours per week.

**HLT 261 - BASIC PHARMACY I (3 CR.)**

Explores the basics of general pharmacy, reading prescriptions, symbols, packages, pharmacy calculations. Teaches measuring compounds of drugs, dosage forms, drug laws, and drug classifications. EDE 10 and MDE 10 requisites. Lecture 3 hours per week.

**HLT 262 - BASIC PHARMACY II (3 CR.)**

Explores the basics of general pharmacy, reading prescriptions, symbols, packages, pharmacy calculations. Teaches measuring compounds of drugs, dosage forms, drug laws, and drug classifications. Lecture 3 hours per week.

**HEALTHCARE TECHNOLOGY (HCT)****HCT 101 - HEALTH CARE TECHNICIAN I (3-4 CR.)**

Teaches basic care skills with emphasis on physical, social, emotional, and spiritual needs of patients. Covers procedures, communications and interpersonal relations; observation, charting and reporting; care planning, safety and infection control; anatomy and physiology, nutrition and patient feeding; ethics, death and dying. Prepares multi-skilled health care workers to care for patients of various ages with special emphasis on geriatric nursing, home health, long and short term care facilities. Lecture 3-4 hours per week

**HCT 102 - HEALTH CARE TECHNICIAN II (3-4 CR.)**

Applies theory through laboratory experience for health care technicians to work in home health, long and short term facilities. Prerequisite: HCT 101 Lecture 1-2 hours. Laboratory 2-6 hours. Total 4- hours per week.

**HCT 115 - MEDICATION ADMINISTRATION TRAINING (2-3 CR.)**

Prepares students to safely administer, or to assist in client self-administration of medications in specific settings. Includes practice. Meets curriculum requirements of the State Board of Nursing. Lecture 1-2 hours. Laboratory 2-6 hours. Total 4-8 hours per week.

**HEALTH INFORMATION MANAGEMENT (HIM)****HIM 101 - HEALTH INFORMATION TECHNOLOGY I (4 CR.)**

Introduces values, uses, and content of the medical record. Defines numbering, filing, and retention policies and practices. Lecture 3 hours per week. Laboratory 3 hours per week. Total 6 hours per week.

**HIM 111 - MEDICAL TERMINOLOGY I (3 CR.)**

Introduces the student to the language used in the health record. Includes a system-by-system review of anatomic disease, and operative terms, abbreviations, radiology procedures, laboratory tests, and pharmacology terms. EDE 10 Requisite. Lecture 3 hours per week.

**HIM 112 - MEDICAL TERMINOLOGY II (3 CR.)**

Continues with focus on the language used in the health record. Includes a system-by-system review of anatomic disease, and operative terms, abbreviations, radiography procedures, laboratory tests, and pharmacology terms. EDE 10 Requisite. Lecture 3 hours per week.

**HIM 113 - MEDICAL TERMINOLOGY & DISEASE PROCESSES I (3 CR.)**

Includes the study of prefixes, suffixes, stem words, and technical terms; puts emphasis on the causes and treatment of selected disease processes. Part I of II. EDE 10 Requisite. Lecture 3 hours per week.

**HIM 114 - MEDICAL TERMINOLOGY AND DISEASES PROCESSES II (3 CR.)**

Continues the study of prefixes, suffixes, stem words, and technical terms; puts emphasis on the causes and treatment of selected disease processes. Part II of II. Lecture 3 hours per week.

**HIM 130 - HEALTHCARE INFORMATION SYSTEMS (3 CR.)**

Teaches basic concepts of microcomputer software (to include operating systems, word processing, spreadsheets, and database applications.) Focuses on microcomputer applications and information systems in the healthcare environment. Provides a working introduction to electronic health information systems for allied health, teaching students how the adoption of electronic health records affects them as future healthcare professionals. Lecture 3 hours per week.

**HIM 149 - INTRODUCTION TO MEDICAL PRACTICE MANAGEMENT (2 CR.)**

Introduces principles of administrative practice management. Examines patient scheduling, records management, financial systems and other systems/procedures. Focuses on the development of organizations and decision making skills utilized by the practice manager. Lecture 2 hours per week.

**HIM 150 - HEALTH RECORDS MANAGEMENT (3 CR.)**

Presents documentation format and content of the medical record relevant to the coding function. Introduces application of standard techniques for filing, maintenance, and acquisition of health information. Examines the processes of collecting, computing, analyzing, interpreting, and presenting data related to health care services. Includes legal and regulatory guidelines for the control and use of health information data. Lecture 3 hours per week.

**HIM 151 - REIMBURSEMENT ISSUES IN MEDICAL PRACTICE MANAGEMENT (2 CR.)**

Introduces major reimbursement systems in the United States. Focuses on prospective payment systems, managed care, and documentation necessary for appropriate reimbursement. Emphasizes management of practice to avoid fraud. Lecture 2 hours per week.

**HIM 220 - HEALTH STATISTICS (3 CR.)**

Introduces the student to basic statistical principles and calculations as applied in the health care environment, procedures for collection and reporting vital statistics, and basic quality control basics. Lecture 3 hours per week.

**HIM 226 - LEGAL ASPECTS OF HEALTH RECORD DOCUMENTATION (2 CR.)**

Presents the legal requirements associated with health record documentation. Emphasizes the policies and procedures concerning the protection of the confidentiality of patient's health records. Lecture 2 hours per week.

**HIM 229 - PERFORMANCE IMPROVEMENT IN HEALTH CARE SETTINGS (2 CR.)**

Focuses on concepts of facility wide performance improvement, resource management and risk management. Applies tools for data collection and analysis. Lecture 1 hour. Laboratory 2 hours. Total 3 hours per week."

**HIM 230 - INFORMATION SYSTEMS AND TECHNOLOGY IN HEALTH CARE (3 CR.)**

Explores computer technology and system application in health care. Introduces the information systems life cycle. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

**HIM 233 - ELECTRONIC HEALTH RECORDS MANAGEMENT (3 CR.)**

Studies new trends in management and processing of health information with emphasis on the electronic health record (EHR). Covers the definition, benefits, standards, functionality, confidentiality and security, and impact of the EHR in the healthcare environment. Explores implementation of the EHR including infrastructure required, project management techniques, information technology systems, workflow processes and redesign in various health care settings. Discusses legal issues created by implementation of the EHR. Prerequisites: HIM 130 and HIM 230.

**HIM 249 - SUPERVISION AND MANAGEMENT PRACTICES FOR HIM (3 CR.)**

Introduces supervision and management principles with emphasis on the application of these principles in the health information setting. Lecture 3 hours per week.

**HIM 251 - CLINICAL PRACTICE I (3 CR.)**

Prepares the Health Information Technology student to perform all functions commonly allocated to health record services. Gives practice in various settings under the supervision of a clinical practice supervisor. Laboratory 6 hours per week.

**HIM 252 - CLINICAL PRACTICE II (3 CR.)**

Prepares the Health Information Technology student to perform all functions commonly allocated to health record services. Gives practice in various settings under the supervision of a clinical practice supervisor. Clinical practice 6 hours per week.

**HIM 253 - HEALTH RECORDS CODING (4-5 CR.)**

Examines the development of coding classification systems. Introduces ICD-9-CM coding classification system, its format and conventions. Stresses basic coding steps and guidelines according to body systems. Provides actual coding exercises in relation to each system covered. Lecture 3-4 hours. Laboratory 0-3 hours. Total 3-7 hours per week.

**HIM 254 - ADVANCED CODING & REIMBURSEMENT (4 CR.)**

Focuses on the applications and evaluation of advanced coding skills through practical exercises using actual healthcare data; while examining the components of DRGs, APCs, and APGs and other prospective payment in the healthcare environment. Utilizes current coding standards in identifying payment methodologies, revenue cycle management and reimbursement. Lecture 3-4 hours per week.

**HIM 260 - PHARMACOLOGY FOR HEALTH INFORMATION TECHNOLOGY (2-3 CR.)**

Emphasizes general pharmacology for Health Information professionals; covers general principles of drug actions/reactions, major drug classes, specific agents within each class, and routine mathematical calculation needed to determine desired dosages. Lecture 2-3 hours per week.

**HIM 265 - FACILITY BASED MEDICAL CODING (3 CR.)**

Students will learn to accurately assign CPT, ICD-9 Level 1, 2 and 3, in addition to HCPCS codes for inpatient, outpatient facility, and ambulatory surgical centers according to guidelines and rules set forth by the cooperating parties. Students will apply the theory and regulations concerning prospective payments systems (in and out of the facility setting) APC and DRG assignment. Lecture 3 hours per week.

**HIM 280 - HIM CAPSTONE (1 CR.)**

Integrates and applies knowledge and skills learned in prior HIM courses, focusing on those required to prepare for national certification in American Health Information Management Association's Domains, Sub-domains and Tasks. Includes a capstone project in which students apply principles of good practice in health information management. Lecture 1 hour per week.

**HIM 290 - COORDINATED INTERNSHIP (2 CR.)**

The Coordinated Internship is designed to provide the HIM student with an opportunity to experience a supervised internship in Health Information Management with selected Health Information Management related functions coordinated by the student, Program Director and the internship host for a minimum of 40 hour, The 40 hour internship meets the CAHIM requirement for Professional Practice Experience for Internship. The purpose of the internship is to provide a real world HIM experience for the student not currently working in the HIM field. Should the student work in HIM, the internship cannot be completed in your current job role. Accommodations must be provided in another job function(s). For example, if you are currently working in Patient Registration, your internship must be an area such as cancer registry or release of information or a combination of roles and/or functions. The HIM 290 Coordinated Internship also consist RHIT Domain I-VI Case Studies and RHIT Test Prep. In addition, there are 3 modules of resume building, cover letter and interviewing exercises to assist the student in obtaining an entry level position in Health Information Management.

**HIM 295 - RHIT TEST PREP (1 CR.)**

The course is designed to integrate and apply knowledge and skills learned in prior Health Information Management (HIM) courses, focusing on specific domains and requirements to prepare for national certification of American Health Information Management Association's RHIT (Registered Health Information Technician) Certification. This course is designed to prepare the HIM student who has completed the required course work in the HIM program to sit for the AHIMA RHIT Certification Exam. Note: The RHIT Certification Exam is bundled with RHIT Exam Prep Textbook."

**HEALTH INFORMATION TECHNOLOGY (HIT)****HIT 130 - INTRODUCTION TO COMPUTERS IN HEALTH CARE (3 CR.)**

Introduces students to computers in health care. Provides a basic overview of computer architecture, common software applications and their use in health care, electronic data management, adoption of the electronic health record (EHR), and privacy and security. Lecture 2 hours per week. Lab 3 hours per week. Total 5 hours per week.

**HISTORY (HIS)****HIS 101 - WESTERN CIVILIZATIONS PRE-1600 CE (3 CR.)**

Examines the development of western civilization from ancient times to 1600 CE. Readiness for ENG 111 Lecture 3 hours per week.

**HIS 102 - HISTORY WESTERN CIVILIZATIONS II (3 CR.)**

Examines the development of western civilization from 1600 CE to present. Readiness for ENG 111. Lecture 3 hours per week.

**HIS 111 - WORLD CIVILIZATIONS PRE-1500 CE (3 CR.)**

Surveys the history of Asia, Africa, the Americas, and Europe from antiquity to approximately 1500. This is a Passport Transfer course. Readiness for ENG 111. Lecture 3 hours per week.

**HIS 112 - WORLD CIVILIZATIONS POST-1500 CE (3 CR.)**

Surveys the history of Asia, Africa, Europe, and the Americas from approximately 1500 CE through the present. This is a Passport Transfer course.

**HIS 121 - UNITED STATES HISTORY UNTIL 1877 (3 CR.)**

Introduces the history of the United States from its origins to 1877. Includes the European exploration, development of the American colonies and their institutions, the Revolution, major political, social and economic developments, geographical expansion, the Civil War, and Reconstruction. This is a Passport Transfer course. Readiness for ENG 111. Lecture 3 hours per week. 3 credits.

**HIS 122 - UNITED STATES HISTORY SINCE 1865 (3 CR.)**

Introduces the history of the United States from 1865 to present. Includes major political, social and economic developments since 1865, overseas expansion, the two world wars, the Cold War and the post-Cold War era. This is a Passport Transfer course. Readiness for ENG 111. Lecture 3 hours per week.

**HIS 127 - WOMEN IN AMERICAN HISTORY**

Studies the role of women and attitudes toward women in American society from colonial times to the present. Lecture 3 hours per week."

**HIS 205 - LOCAL HISTORY (3 CR.)**

Studies the history of the local community and/or region. Readiness for ENG 111. Lecture 3 hours per week.

**HIS 231 - INTRODUCTION TO LATIN AMERICAN HISTORY (3 CR.)**

Examines the development of Latin American civilizations from the pre-Columbian era to the present. Readiness for ENG 111. Lecture 3 hours per week.

**HIS 262 - AMERICAN HISTORY THROUGH FILM (3 CR.)**

Examines selected topics in the United States history which shaped the American experience, presented in film. Readiness for ENG 111. HIS 121 or 122 preferred (or Instructor Approval). Lecture 3 hours per week.

**HIS 269 - CIVIL WAR AND RECONSTRUCTION (3 CR.)**

Studies factors that led to the division between the States. Examines the war, the home fronts, and the era of Reconstruction. Readiness for ENG 111. Lecture 3 hours per week.

**HIS 270 - AMERICA IN THE GILDED AGE (3 CR.)**

Studies in detail American history during the years from 1870-1900 - The Gilded Age, emphasizing the relationships between various aspects of American life and identifying themes that helped define the era. Readiness for ENG 111. Lecture 3 hours per week.

**HIS 281 - HISTORY OF VIRGINIA I (3 CR.)**

Examines the cultural, political, and economic history of the Commonwealth from its beginning to the present. Part I of II. Lecture 3 hours per week.

**HUMAN SERVICES (HMS)****HMS 100 - INTRODUCTION TO HUMAN SERVICES (3 CR.)**

Introduces human service agencies, roles and careers. Presents an historical perspective of the field as it relates to human services today. Additional topics include values clarification and needs of target populations. Lecture 3 hours per week.

**HORTICULTURE (HRT)****HRT 137 - ENVIRONMENTAL FACTORS IN PLANT GROWTH (3 CR.)**

Explores environmental factors which affect plant growth, including rainfall, humidity, wind, temperature, sunlight, irrigation, heating, and shading. Examines methods of inducing and breeding dormancy, lighting, and shading systems, and the relationship between day length and flowering. Reading Level Requisite ENG 4. Lecture 3 hours per week.

**HUMANITIES (HUM)****HUM 100 - SURVEY OF THE HUMANITIES (3 CR.)**

Introduces the humanities through the art, literature, music and philosophy of various cultures and historical periods. Readiness for ENG 111. Lecture 3 hours per week.

**HUM 111 - GREAT BOOKS I (3 CR.)**

Introduces selected great works of philosophy and literature, with emphasis on close analysis of the text. Lecture 3 hours per week. Readiness for ENG 111. May be taken out of sequence.

**HUM 112 - GREAT BOOKS II (3 CR.)**

Introduces selected great works of philosophy and literature, with emphasis on close analysis of the text. Lecture 3 hours per week. Readiness for ENG 111. May be taken out of sequence.

**HUM 153 - INTRODUCTION TO APPALACHIAN STUDIES (3 CR.)**

Explores the Appalachian region from a cross-disciplinary perspective, with readings on Appalachia drawn primarily from the humanities. Considers the historical, environmental, political and economic contexts that shape Appalachia. Readiness ENG 111. Lecture 3 hours. Total 3 hours per week.



**HUM 165 - CONTROVERSIAL ISSUES IN CONTEMPORARY AMERICAN CULTURE (3 CR.)**

Introduces students to selected issues in contemporary American culture. Includes topic areas ranging from welfare reform, economic development, privacy, environmental protection and conservation, evolution vs. creation, to family values, and special interest lobbying in our state and national governments. Focuses on the development of the student's critical thinking skills by analyzing, evaluating, and reflecting on opposing sides of the same issue as expressed by public leaders, special interest groups and academicians. Readiness ENG 111. Lecture 3 hours per week.

**HUM 202- MODERN HUMANITIES (3CR.)**

Examines the values and expression of ideas of selected western and non-western cultures from the 1300s until 1900s, integrating the visual arts, literature, religion, music and philosophy within the context of history. The assignments in this course require college-level reading, analysis of scholarly studies, and coherent communication through properly cited and formatted written reports.

**HUM 212 - SURVEY OF AMERICAN CULTURE II (3 CR.)**

Examines elements of our national culture as they evolved from the first European explorations through colonization and independence to the present day. Part II of II. Readiness for ENG 111. Lecture 3 hours per week.

**HUM 259 - GREEK MYTHOLOGY (3 CR.)**

Surveys and analyzes major stories from Greek Mythology. Explores psychological, anthropological, and historical interpretations of the myths. Acquaints students with recurring mythological themes in language, art, music, and literature. Readiness ENG 111.

**HUM 260 - SURVEY OF TWENTIETH-CENTURY CULTURE (3 CR.)**

Explores literature, visual arts, philosophy, music, and history of our time from an interdisciplinary perspective. Readiness ENG 111. Lecture 3 hours per week.

**INDUSTRIAL ENGINEERING TECHNOLOGY (IND)****IND 101 - QUALITY ASSURANCE TECHNOLOGY I (3 CR.)**

Studies principles and techniques of quality engineering for the management, design engineering economics, production, and assurance of quality. Emphasizes fundamentals of total quality assurance for product and process control. May include design review, fundamentals of statistics procurement control, sampling and control chart systems, quality reporting, process capability analysis, tool and gauge control, document control, or troubleshooting quality control. Lecture 3 hours per week.

**IND 125 - INSTALLATION AND PREVENTIVE MAINTENANCE (3 CR.)**

Studies practices in the installation of machinery, including mounting, grouting, leveling, and alignment. Examines methods of preventive maintenance including inspection, scheduled maintenance, controls, record keeping, repair parts stocking, and safety considerations. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

**IND 137 - TEAM CONCEPTS AND PROBLEM SOLVING (3 CR.)**

Provides instruction in the tools and methods for improving processes. Includes team organization and tools to gather, analyze, and display data. Lecture 3 hours per week.

**IND 149 - WORKPLACE ETHICS (1 CR.)**

Provides a broad overview of ethics in the modern day business world including workforce skill building and self awareness through group discussions. Discusses workplace topics such as diversity, substance abuse, hiring and firing and workplace practices, appropriate dress, communication, business ethics, and interviewing. Lecture 1 hour per week.

**IND 160 - INTRODUCTION TO ROBOTICS (3 CR.)**

Studies evolution and history of robotics with an emphasis on automated and flexible manufacturing. Presents advantages and limitations of present robot systems. Reading Level Requisite ENG 5. Lecture 3 hours per week.

**IND 190 - COORDINATED INTERNSHIP (1-5 CR.)**

Supervises on-the-job training in selected business, industrial or service firms coordinated by the college. Credit/practice ratio not to exceed 1:5 hours. May be repeated for credit. Variable hours.

**IND 290 - COORDINATED INTERNSHIP**

Supervises on-the-job training in selected business, industrial or service firms coordinated by the college. Credit/practice ratio not to exceed 1:5 hours. May be repeated for credit. Variable hours.

**IND 295 - COMPUTER INTEGRATED PROJECTS I (3 CR.)****INFORMATION TECHNOLOGY DATABASE (ITD)****ITD 110 - WEB PAGE DESIGN I (3 CR.)**

Stresses a working knowledge of web site designs, construction, and management using HTML or XHTML. Course content includes headings, lists, links, images, image maps, tables, forms, and frames.

**ITD 132 - STRUCTURED QUERY LANGUAGE (3 CR.)**

Incorporates a working introduction to commands, functions and operators used in SQL for extracting data from standard databases. Lecture 3-4 hours per week.

**ITD 210 - WEB PAGE DESIGN II (3 CR.)**

Incorporates advanced techniques in web site planning, design, usability, accessibility, advanced site management, and maintenance utilizing web editor software.

**INFORMATION TECHNOLOGY ESSENTIALS (ITE)****ITE 100 - INTRODUCTION TO INFORMATION SYSTEMS (3 CR.)**

Covers the fundamentals of computers and computing and topics which include impact of computers on society, ethical issues, and terminology. This course provides discussion about available hardware and software as well as their application.

**ITE 102 - COMPUTERS AND INFORMATION SYSTEMS (1-2 CR.)**

Introduces terminology, concepts, and methods of using computers in information systems. This course teaches computer literacy, not intended for Information Technology majors. Lecture 1-2 hours per week.

**ITE 105 - CAREERS AND CYBER ETHICS (2 CR.)**

Career paths in Information Technology will be explored to help the student determine the appropriate degree plan. Career paths will include but not be limited to software development, computer science, database, networking, system administration and operations, end user support, web design, and management. The student will learn ethical concerns in business and information technology including the ACM Code of Ethics. Lecture 2 hours per week.

**ITE 115 - INTRODUCTION TO COMPUTER APPLICATIONS & CONCEPTS (3 CR.)**

Covers computer concepts and internet skills, and uses a software suite which includes word processing, spreadsheet, database, and presentation software to demonstrate skills. Recommended prerequisite keyboarding skills.

**ITE 119 - INFORMATION LITERACY (3 CR.)**

Presents the information literacy core competencies focusing on the use of information technology skills. Skills and knowledge will be developed in database searching, computer applications, information security and privacy, and intellectual property issues. Lecture 3 hours per week.

**ITE 131 - SURVEY OF INTERNET SERVICES (1 CR.)**

Introduces students to basic Internet terminology and services including email, WWW browsing, search engines, ftp telnet, and other services. Lecture 1-2 hours per week.

**ITE 140 - SPREADSHEET SOFTWARE (3 CR.)**

Covers the use of spreadsheet software to create spreadsheets with formatted cells and cell ranges, control pages, multiple sheets, charts, and macros. Topics will include: type and edit text in a cell, enter data on multiple worksheets, work with formulas and functions, create charts, pivot tables, and styles, insert headers and footers, and filter data. This course covers MOS Excel objectives.

**ITE 150 - DESKTOP DATABASE SOFTWARE (3 CR.)**

Incorporates instruction in planning, defining, and using a database; performing queries; producing reports; working with multiple files; and concepts of database programming. Includes database concepts, principles of table design and table relationships, entering data, creating and using forms, using data from different sources, filtering, creating mailing labels. This course covers MOS Access certifications objectives. Lecture 3-4 hours per week.

**ITE 170 - MULTIMEDIA SOFTWARE (3 CR.)**

Explores technical fundamentals of creating multimedia projects with related hardware and software. Students will learn to manage resources required for multimedia production and evaluation and techniques for selection of graphics and multimedia software.

**ITE 195 - TOPICS IN EXCEL, WORD, POWERPOINT (MOS) CERTIFICATIONS (3 CR.)**

Prepares students to sit for MOS core certification exams in Excel, Word and PowerPoint.

**ITE 199 - SUPERVISED STUDY IN CYBERSECURITY (4 CR.)**

Provides instruction in network security basics; introduces students to the CyberPatriot National Youth Cyber Defense Competition; requires participation in interactive lab activities related to cyber security.

**ITE 270 - ADVANCED MULTIMEDIA DEVELOPMENT (3 CR.)**

Refines multimedia skills, focusing on project development using digital media; video clips, still images, and audio (sounds, music, and narration). Prerequisite: ITE 170. Lecture 3 hours per week."

**ITE 290 - INTERNSHIP IN ITE (3 CR.)**

Supervises on-the-job training in selected business, industrial or service firms coordinated by the college. Credit/practice ratio not to exceed 1:5 hours. May be repeated for credit. Variable hours."

**ITE 295 - INFORMATION LITERACY USING CANVAS (3 CR.)**

Presents the information literacy core competencies focusing on the use of information technology skills. Skills and knowledge will be developed in database searching, computer applications, information security and privacy, and intellectual property issues.

**ITE 298 - SEMINAR & PROJECT (3 CR.)**

Requires completion of a project or research report related to the student's occupational objectives and a study of approaches to the selection and pursuit of career opportunities in the field. May be repeated for credit. Variable hours.

**INFORMATION TECHNOLOGY NETWORKING (ITN)****ITN 101 - INTRODUCTION TO NETWORK CONCEPTS (3 CR.)**

Provides instruction in networking media, physical and logical topologies, common networking standards and popular networking protocols. Course content emphasizes the TCP/IP protocol suite and related IP addressing schemes, including CIDR. Course content also includes selected topics in network implementation, support and LAN/WAN connectivity. Lecture 3-4 hours per week

**ITN 107 - PERSONAL COMPUTER HARDWARE AND TROUBLESHOOTING (3 CR.)**

Includes specially designed instruction to give a student a basic knowledge of hardware and software configurations. Includes the installation of various peripheral devices as well as basic system hardware components. Writing level requisite ENG 3. Reading Level requisite ENG 4. Lecture 3-4 hours per week.

**ITN 110 - CLIENT OPERATING SYSTEM (XP PRO) (3 CR.)**

Introduces an overview of instruction in installation, configuration, administration, and troubleshooting of Windows 2000 Professional as a desktop operating system in a networked data communications environment. Writing level requisite ENG 3. Reading Level requisite ENG 4. Lecture 3-4 hours per week.

**ITN 111 - SERVER ADMINISTRATION (SERVER 2008) (3 CR.)**

Covers basic instruction in various network protocols, name resolution services, remote access, security, and print installation, configuration, administration, monitoring, and troubleshooting of Windows 2000 Server in an Active Directory domain environment. Writing level requisite ENG 3. Reading Level requisite ENG 4. Lecture 3-4 hours per week.

**ITN 112 - NETWORK INFRASTRUCTURE (3 CR.)**

Provides extensive instruction for the technical knowledge required for installation, configuration, administration, monitoring, and troubleshooting of Windows 2000 Server services such as NDS, DHCP, WINS, RRAS, NAT, and Certificate Authority to support the network infrastructure. Writing level requisite ENG 3. Reading Level requisite ENG 4. Lecture 3-4 hours per week.

**ITN 113 - ACTIVE DIRECTORY (SERVER 2008) (3 CR.)**

Emphasizes instruction in installation, configuration, and administration, monitoring, and troubleshooting of Windows 2000 Active Directory components, DNS, Group Policy objects, RIS, and security. Writing level requisite ENG 3. Reading Level requisite ENG 4. Lecture 3-4 hours per week.

**ITN 154 - NETWORKING FUNDAMENTALS - CISCO (4 CR.)**

Provides introduction to networking using the OSI reference model. Course content includes data encapsulations, TCP/IP suite, routing, IP addressing, and structured cabling design and implementation.

**ITN 155 - INTRODUCTORY ROUTING - CISCO (4 CR.)**

Features an introduction to basic router and configuration using CISCO IOS software. Course content includes system components, interface configuration, IP network design, troubleshooting techniques, configuration and verification of IP addresses, and router protocols.

**ITN 156 - BASIC SWITCHING AND ROUTING - CISCO (4 CR.)**

Centers instruction in LAN segmentation using bridges, routers, and switches. Course content includes fast Ethernet, access lists, routing protocols, spanning tree protocol, virtual LANs, and network management.

**ITN 157 - WAN TECHNOLOGIES - CISCO (4 CR.)**

Concentrates on an introduction to Wide Area Networking (WANs). Course content includes WAN design, LAPB, Frame Relay, ISDN, HDLC, and PPP.

**ITN 171 - UNIX 1 (3 CR.)**

Provides an introduction to UNIX operating systems. Teaches login procedures, file creation, UNIX file structure, input/output control, and the UNIX shell. Lecture 3-4 hours.

**ITN 195 - INTRODUCTION TO NETWORKING & CYBERSECURITY (3 CR.)**

This course provides instruction in networking media, physical and logical topologies, common networking standards and popular networking protocols. The course covers selected topics in network security and implementation. This includes basics of network security, security objectives, security architecture, security models and security layers, risk management, network security policy, and security training. The course covers major security keys, confidentiality integrity, availability, accountability and auditability. Students demonstrate workplace readiness skills such as personal qualities, people skills, professional knowledge and examine all aspects of the industry.

**ITN 214 - MESSAGING SERVER ADMINISTRATION (EXCHANGE 2007) (3 CR.)**

Provides instruction in planning, creating, configuring, administering, maintaining, optimizing, and troubleshooting Windows Exchange Server. Writing level requisite ENG 3. Reading Level requisite ENG 4. Lecture 3-4 hours per week.

**ITN 260 - NETWORK SECURITY BASICS (3 CR.)**

Provides instruction in the basics of network security in depth. Includes security objectives, security architecture, security models and security layers; risk management, network security policy, and security training. Includes the five security keys, confidentiality integrity, availability, accountability and auditability. Lecture 3-4 hours per week.

**ITN 261 - NETWORK ATTACKS, COMPUTER CRIME AND HACKING (3 CR.)**

Encompasses in-depth exploration of various methods for attacking and defending a network. Explores network security concepts from the viewpoint hackers and their attack methodologies. Includes topics about hackers, attacks, Intrusion Detection Systems (IDS) malicious code, computer crime and industrial espionage. Lecture 3-4 hours per week.

**ITN 262 - NETWORK COMMUNICATION, SECURITY AND AUTHENTICATION (3 CR.)**

Covers an in-depth exploration of various communication protocols with a concentration on TCP/IP. Explores communication protocols from the point of view of the hacker in order to highlight protocol weaknesses. Includes Internet architecture, routing, addressing, topology, fragmentation and protocol analysis, and the use of various utilities to explore TCP/IP. Lecture 3-4 hours per week.

**ITN 275 - INCIDENT RESPONSE AND COMPUTER FORENSICS (3 CR.)**

Prepares the student for a role on an organizational IT support staff where the need for resolving computer incidents is becoming increasingly common. Includes legal and ethical issues of search and seizure of computer and peripheral storage media leading to laboratory exercises examining computers configured with mix of both simulated criminal and other activities which are not criminal in nature, but do violate scenario-driven organizational policy. Requires the student to make choices/recommendations for further pursuit of forensics evidence gathering and analysis. Students will select and gather the utilities and procedures necessary for a court-acceptable forensics toolkit which will then be used to gather and examine specially configured desktop computers. Students will then participate in a mock court proceeding using the collected evidence. Credit will be given to either ITN 275 or ITN 276 and ITN 277, but not all three courses. Lecture 2-3 hours. Laboratory 2 hours. Total 4-5 hours per week.

**INFORMATION TECHNOLOGY PROGRAMMING (ITP)****ITP 100 - SOFTWARE DESIGN (3 CR.)**

Introduces principles and practices of software development. Includes instruction in critical thinking, problem solving skills, and essential programming logic in structured and object-oriented design using contemporary tools. Lecture 3-4 hours per week.

**ITP 120 - JAVA PROGRAMMING I (3 CR.)**

Provides Instruction in fundamentals of object-oriented programming using JAVA. Emphasizes program construction, algorithm development, coding, debugging, and documentation of console and graphical user interface applications. Lecture 3-4 hours per week.

**ITP 132 - C++ PROGRAMMING I (3 CR.)**

Centers instruction in fundamentals of object-oriented programming and design using C++. Emphasizes program construction, algorithm development, coding, debugging, and documentation of C++ applications. Lecture 3-4 hours per week.

**ITP 140 - CLIENT SIDE SCRIPTING (3 CR.)**

Provides instruction in fundamentals of Internet application design, development, and deployment using client side scripting language's. Pre-requisites: Recommended ITP 100, ITD 110 and a programming language or equivalent experience. Lecture 3-4 hours per week.

**ITP 193 - STUDIES IN PHP/MYSQL (3 CR.)**

Covers new content not covered in existing courses in the discipline. Allows instructor to explore content and instructional methods to assess the course's viability as a permanent offering. Pre-Requisite: ITD 110. Meets three hours per week.

### **ITP 214 - WINDOWS MOBILE DEVELOPMENT (3 CR.)**

Provides skills for creating mobile enterprise solutions by using the Smart Device Extensions for Microsoft Visual Studio .NET and the Microsoft .NET Compact Framework for wireless devices. Develops systems including mobile phones and a range of rich hand-held devices such as PDAs using applications utilizing the .NET Compact Framework. Covers Enterprise business applications and game applications. Lecture 3-4 hours per week.

### **ITP 220 - JAVA PROGRAMMING II (3 CR.)**

Imparts instruction in application of advanced object-oriented techniques to application development using Java. Emphasizes database connectivity, inner classes, collection classes, networking, and threads. Lecture 3-4 hours per week.

### **ITP 225 - WEB SCRIPTING LANGUAGES (3 CR.)**

Introduces students to the principles, systems, and tools used to implement Web applications. Provides students with a comprehensive introduction to the programming tools and skills required to build and maintain interactive Web sites. Students will develop Web applications utilizing client-side and server-side scripting languages along with auxiliary tools needed for complete applications. Prerequisites: ITD 110, ITP 100. Lecture 3-4 hours per week.

### **ITP 232 - C++ PROGRAMMING II (3 CR.)**

Presents in-depth instruction of advanced object-oriented techniques for using C++. Lecture 3-4 hours per week. Pre-requisite: ITP 132, C++ I.

### **ITP 251 - SYSTEMS ANALYSIS AND DESIGN (3 CR.)**

Focuses on application of information technologies (IT) to system life cycle methodology, systems analysis, systems design, and system implementation practices. Methodologies related to identification of information requirements, feasibility in the areas of economic, technical and social requirements, and related issues are included in course content. Software applications may be used to enhance student skills.

### **ITP 270 - PROGRAMMING FOR CYBERSECURITY (3 CR.)**

Teaches scripting techniques for automating security tasks such as network monitoring and penetration testing using a high-level programming language common to cybersecurity professionals. Includes how to write custom tools and the basics of developing software exploits. Lecture 3-4 hours per week. Prerequisite: ITP 100.

### **ITP 298 - SEMINAR AND PROJECT (1-5 CR.)**

Requires completion of a project or research report related to the student's occupational objectives and a study of approaches to the selection and pursuit of career opportunities in the field. May be repeated for credit. Variable hours.

## **JAPANESE (JPN)**

### **JPN 101 - BEGINNING JAPANESE I (5 CR.)**

Develops the understanding, speaking, reading, and writing of Japanese, and emphasizes the structure of the language. Part I of II.

## **LEGAL ADMINISTRATION (LGL)**

### **LGL 110 - INTRODUCTION TO LAW AND THE LEGAL ASSISTANT (3 CR.)**

Introduces various areas of law in which a legal assistant will be working. Includes intense study of court system (Virginia and federal) as well as a brief overview of criminal law, torts, domestic relations, evidence, ethics, the role of the legal assistant and other areas of interest. Requisite EDE 10 or permission. Lecture 3 hours per week.

### **LGL 115 - REAL ESTATE LAW FOR LEGAL ASSISTANTS (3 CR.)**

Studies law of real property, and gives in-depth survey of more common types of real estate transactions and conveyances such as deeds, contracts, leases, and deeds of trust. Focuses on drafting problems involving these various instruments. Includes research projects, and studies the system of recording and search of public documents. Requisite EDE 10 or permission. Lecture 3 hours per week.

### **LGL 117 - FAMILY LAW (3 CR.)**

Studies elements of a valid marriage, grounds for divorce and annulment, separation, defense, custody, support, adoptions, and applicable tax consequences. Includes property settlement, pre- and antenuptial agreements, pleadings, and rules of procedure. May include specific federal and Virginia consumer laws. Requisite EDE 10 or permission. Lecture 3 hours per week.

### **LGL 120 - LEGAL TERMINOLOGY (3 CR.)**

Provides an understanding of legal terminology with emphasis on developing an understanding of legal terminology in different ways rather than relying solely on learning through rote memorization. Designed to aid students preparing for certification. Requisite EDE 10 or permission. Lecture 3 hours per week.

### **LGL 125 - LEGAL RESEARCH (3 CR.)**

Provides an understanding of various components of a law library, and emphasizes research skills through the use of digests, encyclopedias, reporter systems, codes, Shepards, ALR and other research tools. Requisite EDE 10 or permission. Lecture 3 hours per week.

### **LGL 126 - LEGAL WRITING (3 CR.)**

Studies proper preparation of various legal documents, including legal memoranda, letters, and pleadings. Involves practical applications. May include case and appellate briefs. Requisite EDE 10 or permission of instructor. Lecture 3 hours per week.

### **LGL 127 - LEGAL RESEARCH AND WRITING (3 CR.)**

Provides a basic understanding of legal research and the proper preparation of legal documents, including brief writing. Requisite EDE 11 or permission of division. Lecture 3 hours per week.

### **LGL 195 - Topics In Paralegal Studies(1-5 CR.)**

Provides an opportunity to explore topical areas of interest to or needed by students. May be used also for special honors courses. May be repeated for credit. Variable hours.

### **LGL 200 - ETHICS FOR THE PARALEGAL (1 CR.)**

Examines general principles of ethical conduct applicable to paralegals. Includes the application of rules of ethics to the practicing paralegal. Requisite EDE 10 or permission of division Lecture 1 hour. Total 1 hour per week.

### **LGL 216 - TRIAL PREPARATION AND DISCOVERY PRACTICE (3 CR.)**

Examines the trial process, including the preparation of a trial notebook, pretrial motions, and orders. May include preparation of interrogatories, depositions, and other discovery tools used in assembling evidence in preparation for the trial or an administrative hearing. Pre-requisite ENG 111. Lecture 3 hours per week.

### **LGL 218 - CRIMINAL LAW (3 CR.)**

Focuses on major crimes, including their classification, elements of proof, intent, conspiracy, responsibility, parties, and defenses. Emphasizes Virginia law. May include general principles of applicable constitutional law and criminal procedure. Requisite EDE 10 or permission. Lecture 3 hours per week.

### **LGL 225 - ESTATE PLANNING AND PROBATE (3 CR.)**

Introduces various devices used to plan an estate, including wills, trusts, joint ownership and insurance. Considers various plans in light of family situations and estate objectives. Focuses on practices involving administration of an estate including taxes and preparation of forms. Requisite EDE 10 or permission. Lecture 3 hours per week.

### **LGL 230 - LEGAL TRANSACTIONS (3 CR.)**

Presents an in-depth study of general contract law, including formation, breach, enforcement, and remedies. May include an overview of UCC sales, commercial paper, and collections. Pre-requisite ENG 111. Lecture 3 hours per week.

### **LGL 290 - COOPERATIVE INTERNSHIP IN LEGAL ASSISTING (3 CR.)**

Supervises on-the-job training in selected business, industrial, or service firms coordinated by the college. Prerequisite - ENG 111, Co-requisites - LGL 225, 230, & AST 265. Credit-practice ratio not to exceed 1:5 hours. May be repeated for credit. Variable hours.

## **LIBRARY (LBR)**

### **LBR 105 - LIBRARY SKILLS FOR RESEARCH (1 CR.)**

Introduces students to accessing, retrieving, evaluating, and applying a variety of digital and print information resources. Develops an understanding of the type of information provided in each of the information formats presented: reference, cataloged materials, magazines/journals, newspapers, and Internet sites. Provides background information, available resources, search techniques, sample searches, evaluation guides, and exams in each of the course units. Lecture 1 hour per week.

## **MARKETING (MKT)**

### **MKT 100 - PRINCIPLES OF MARKETING (3 CR.)**

Presents principles, methods and problems involved in the distribution and marketing of goods and services to industrial and ultimate consumers. Introduces various marketing middlemen: wholesaler, retailer, broker, agent including cooperative and trade association, shippers, stores and facilitators. Discusses present-day problems and associations, shippers, stores, and facilitators. Discusses present-day problems and policies connected with distribution and sale of products, pricing, promotion, and buyer motivation. Examines variations of the marketing mix and market research, plus legal, social and ethical considerations in marketing. Lecture 3 hours per week.

### **MKT 110 - PRINCIPLES OF SELLING (3 CR.)**

Presents fundamental aspects of personal selling, sales, ethics, and selling methods. Emphasizes

professional sales techniques. Examines organization necessary for a well coordinated sales effort, including the training of sales personnel for maximum efficiency in selling and organization of the sales division within the business enterprise. Introduces sales management in planning, organizing, directing and controlling the total sales effort. Lecture 3 hours per week.

**MKT 170 - CUSTOMER SERVICE (1 CR.)**

Introduces students to the concepts of marketing as they relate to customer service. Teaches development of customer service training and implementation of strategies to improve customer relations and service. Includes lecture, role-playing, and case studies. Lecture 1-2 hours per week.

**MKT 201 - INTRODUCTION TO MARKETING (3 CR.)**

Introduces students to the discipline of marketing and the need to create customer value and relationships in the marketplace. Presents an overview of the marketing principles and management strategies, along with the analytical tools used by organizations in the creation of a marketing plan. Lecture 3 hours per week.

**MKT 260 - CUSTOMER SERVICE MANAGEMENT (3 CR.)**

Examines the role of customer service in achieving a firm's long-term goals; discusses the basic principles of effective customer service; explores the tasks and responsibilities of a customer service manager. Includes such topics as purpose of customer service; establishment of customer service goals and policies; recruitment, selection and training of customer service employees motivation techniques; empowering employees for better decision making; and evaluation of customer service employees and program. Lecture 3 hours per week.

**MKT 284 - SOCIAL MEDIA MARKETING (3 CR.)**

Surveys the use of social networks and online communities such as blogs, wikis, virtual events that allow companies to expand their interaction with customers and develop relationships with collaborative communities. Emphasizes the ongoing transformation of the way companies adjust their marketing plans to improve interaction with customers online. Lecture Hours per week.



**Table M: Student Math Course Placement**

If a student has . . .	The student may enroll in . . .
6+ years since high school graduation	Informed Self-Placement (See Advisor)
<b>High School Grade Point Average (HS GPA) for Math Placement*</b>	
Less than 2.0 HS GPA	MDE 10
2.0-2.99 HS GPA without HS Algebra 2*	MTH 111 MTH 132 MTH 133 MTH 154 + MDE 54 MTH 155 + MDE 55 MDE 60
2.0-2.99 HS GPA with HS Algebra 2*	MTH 111 MTH 132 MTH 133 MTH 154 + MDE 54 MTH 155 + MDE 55 MTH 161 + MDE 61
3.0+ HS GPA without HS Algebra 2*	MTH 111 MTH 132 MTH 133 MTH 154 MTH 155 MDE 60
3.0+ HS GPA with HS Algebra 2*	MTH 111 MTH 132 MTH 133 MTH 154 MTH 155 MDE 161
2.7+ HS GPA with a grade of C or better in Math Analysis/Pre-Calculus without trigonometry*	MTH 261
2.7+ HS GPA with a grade of B or better in Math Analysis/Pre-Calculus with trigonometry*	MTH 263
<i>*High school GPA is valid for five (5) years after the date of high school graduation</i>	
Course	Minimum Placement Requirement**
MDE 10	1.99 or lower HS GPA
MDE 60	2.0+ HS GPA without HS Algebra 2
MTH 111	2.0+ HS GPA without HS Algebra 2
MTH 132	2.0+ HS GPA without HS Algebra 2
MTH 133	2.0+ HS GPA without HS Algebra 2
MTH 154 + MDE 54	2.0 – 2.99 HS GPA with HS Algebra 2
MTH 154	3.0+ HS GPA without HS Algebra 2
MTH 155 + MDE 55	2.0 – 2.99 HS GPA with HS Algebra 2
MTH 155	3.0+ HS GPA without HS Algebra 2
MTH 161 + MDE 61	2.0 – 2.99 HS GPA with HS Algebra 2
MTH 161	3.0+ HS GPA with HS Algebra 2
MTH 261	2.7+ HS GPA with a grade of C or better in Math Analysis/Pre-Calculus without trigonometry*
MTH 263	2.7+ HS GPA with a grade of B or better in Math Analysis/Pre-Calculus with trigonometry*
<i>**Minimum placement requirements noted above apply to student who completed high school five or less years ago. High school GPA (HSGPA) is valid for five (5) years after the date of high school graduation. Students who completed high school 6 or more years ago may be placed through informed self-placement.</i>	

SAT/ACT/GED Scores for Math Placement***		
SAT – Math	500 or above	MTH 111 MTH 132 MTH 133 MTH 154 MTH 155 MDE 161
	470-490 range	MTH 111 MTH 132 MTH 133 MTH 154 MTH 155 MDE 161 +MDE 61
ACT – Subject Area Test Math	18 or above	MTH 111 MTH 132 MTH 133 MTH 154 MTH 155 MDE 161
	17	MTH 111 MTH 132 MTH 133 MTH 154 MTH 155 MDE 161 +MDE 61
GED – Math	165 or above	MTH 111 MTH 132 MTH 133 MTH 154 MTH 155 MDE 161 +MDE 61
	155-164 range	MTH 111 MTH 132 MTH 133 MTH 154 + MDE 54 MTH 155 + MDE 55 MDE 60
	154 or below	MDE 10

\*\*\*SAT, ACT and GED Test scores are valid for five (5) years after the date of the test.

## MATH DIRECT ENROLLMENT (MDE)

### MDE 10 - INTRODUCTION TO ALGEBRA (3 CR.)

Covers topics in arithmetic through introduction to variables and equations. See Table M for placement information. Lecture 3 hours. Total 3 hours per week.

### MDE 54 - LEARNING SUPPORTS FOR QUANTITATIVE REASONING (3 CR.)

Provides support to ensure success for students co-enrolled in Quantitative Reasoning (MTH 154). Course will review foundational topics through direct instruction, guided practice, and individualized support. Lecture 3 hours per week. Total 3 hours per week. Co-Requisite: MTH 154 See Table M for placement information.

### MDE 55 - LEARNING SUPPORT FOR STATISTICAL REASONING (3 CR.)

Provides support to ensure success for students co-enrolled in Statistical Reasoning (MTH 155). Course will review foundational topics through direct instruction, guided practice, and individualized support. Lecture 3 hours per week. Total 3 hours per week. Co-Requisite: MTH 155. See Table M for placement information.

### MDE 60 - INTERMEDIATE ALGEBRA (3 CR.)

Covers topics in algebra. Prepares students for enrollment into MTH 161 with co-requisite. Lecture 3 hours per week. Total 3 hours per week. See Table M for placement information.

### MDE 61 - LEARNING SUPPORTS FOR PRE-CALCULUS (3 CR.)

Provides support to ensure success for students co-enrolled in Pre-Calculus (MTH 161). Course will review foundational topics through direct instruction, guided practice, and individualized support. Lecture 3 hours per week. Total 3 hours per week. Co-Requisite: MTH 161. See Table M for placement information.

## MATHEMATICS (MTH)

### MTH 95 - TOPICS IN ALGEBRA (3 CR.)

Fundamental arithmetic operations; basic algebraic processes; linear equations in one and two unknowns; polynomials; factoring trinomials; solutions of quadratic equations.

### MTH 111 - BASIC TECHNICAL MATHEMATICS (3 CR.)

Provides a foundation in mathematics with emphasis in arithmetic, unit conversion, basic algebra, geometry and trigonometry. This course is intended for CTE programs. Lecture 3 hours. Total 3 hours per week. Prerequisites See Table M for placement information.

### MTH 132 - BUSINESS MATHEMATICS (3 CR.)

Provides instruction, review, and drill in percentage, cash and trade discounts, mark-up, payroll, sales, property and other taxes, simple and compound interest, bank discounts, loans, investments, and annuities. This course is intended for occupational/technical programs. Lecture 3 hours. Total 3 hours per week. Prerequisite See Table M for placement information.

### MTH 133 - MATHEMATICS FOR HEALTH PROFESSIONS (3 CR.)

Presents in context the arithmetic of fractions and decimals, the metric system and dimensional analysis, percents, ratio and proportion, linear equations, topics in statistics, topics in geometry, logarithms, topics in health professions including dosages, dilutions and IV flow rates. This course is intended for programs in the Health Professions. Lecture 3 hours. Total 3 hours per week. Prerequisite See Table M for placement information.

### MTH 154 - QUANTITATIVE REASONING (3 CR.)

Presents topics in proportional reasoning, modeling, financial literacy and validity studies (logic and set theory). Focuses on the process of taking a real-world situation, identifying the mathematical foundation needed to address the problem, solving the problem and applying what is

learned to the original situation. This is a Passport Transfer course. Lecture 3 hours. Total 3 hours per week. Pre-requisite See Table M for placement information.

#### **MTH 155 - STATISTICAL REASONING (3 CR.)**

Presents elementary statistical methods and concepts including visual data presentation, descriptive statistics, probability, estimation, hypothesis testing, correlation and linear regression. Emphasis is placed on the development of statistical thinking, simulation, and the use of statistical software. This is a Passport Transfer course. Lecture 3 hours, Total 3 hours per week. Prerequisite See Table M for placement information.

#### **MTH 161 - PRE-CALCULUS I (3 CR.)**

Presents topics in power, polynomial, rational, exponential, and logarithmic functions, and systems of equations and inequalities. Credit will not be awarded for both MTH 161: Pre-calculus I and MTH 167: Pre-calculus with Trigonometry or equivalent. This is a Passport Transfer course. Lecture 3 hours. Total 3 hours per week. Prerequisite See Table M for placement information.

#### **MTH 162 - PRE-CALCULUS II (3 CR.)**

Presents trigonometry, trigonometric applications including Law of Sines and Cosines and an introduction to conics. Credit will not be awarded for both MTH 162: Pre-calculus II and MTH 167: Pre-calculus with Trigonometry or equivalent. This is a Passport Transfer course. Lecture 3 hours. Total 3 hours per week. Prerequisite(s): Placement or completion of MTH 161: Pre-calculus I or equivalent with a grade of C or better.

#### **MTH 245 - STATISTICS I (3 CR.)**

Presents an overview of statistics, including descriptive statistics, elementary probability, probability distributions, estimation, hypothesis testing, correlation, and linear regression. Credit will not be awarded for both MTH 155: Statistical Reasoning and MTH 245: Statistics I or equivalent. This is a Passport Transfer course. Lecture 3 hours. Total 3 hours per week. Prerequisite: Completion of MTH 154 or MTH 161 or equivalent with a grade of C or better.

#### **MTH 246 - STATISTICS II (3 CR.)**

Completion of MTH 245: Statistics I or equivalent with a grade of C or better. Lecture 3 hours. Total 3 hours per week. Prerequisite: Completion of MTH 245 or equivalent with a grade of C or better.

#### **MTH 261 - APPLIED CALCULUS I (3 CR.)**

Introduces limits, continuity, differentiation and integration of algebraic, exponential and logarithmic functions, and techniques of integration with an emphasis on applications in business, social sciences and life sciences. This is a Passport Transfer course. Lecture 3 hours. Total 3 hours per week. Pre-requisite: Completion of MTH 161 or equivalent with a grade of C or better. See Table M for placement information.

#### **MTH 263 - CALCULUS I (4 CR.)**

Presents concepts of limits, derivatives, differentiation of various types of functions and use of differentiation rules, application of differentiation, antiderivatives, integrals and applications of integration. This is a Passport Transfer course. Lecture 4 hours. Total 4 hours per week. Pre-requisite: Completion of MTH 167 or MTH 161/162 or equivalent with a grade of C or better. See Table M for placement information.

#### **MTH 264 - CALCULUS II (4 CR.)**

Continues the study of calculus of algebraic and transcendental functions including rectangular, polar, and parametric graphing, indefinite and definite integrals, methods of integration, and power series along with applications. Features instruction for mathematical, physical and engineering science programs. This is a Passport Transfer course. Lecture 4 hours. Total 4 hours per week. Pre-requisite: Completion of MTH 263 or equivalent with a grade of C or better.

#### **MTH 265 - CALCULUS III (4 CR.)**

Focuses on extending the concepts of function, limit, continuity, derivative, integral and vector from the plane to the three dimensional space. Covers topics including vector functions, multivariate functions, partial derivatives, multiple integrals and an introduction to vector calculus. Features instruction for mathematical, physical and engineering science programs. Lecture 4 hours. Total 4 hours per week. Completion of MTH 264: Calculus II or equivalent with a grade of C or better.

#### **MTH 266 - LINEAR ALGEBRA (3 CR.)**

Covers matrices, vector spaces, determinants, solutions of systems of linear equations, basis and dimension, eigenvalues, and eigenvectors. Features instruction for mathematical, physical and engineering science programs. Lecture 3 hours. Total 3 hours per week. Prerequisite: Completion of MTH 263 or equivalent with a grade of B or better or MTH 264 or equivalent with a grade of C or better.

#### **MTH 267 - DIFFERENTIAL EQUATIONS (3 CR.)**

Introduces ordinary differential equations. Includes first order differential equations, second and higher order ordinary differential equations with applications and numerical methods. Lecture 3 hours. Total 3 hours per week. Prerequisite: Completion of MTH 264 or equivalent with a grade of C or better.

## **MECHANICAL ENGINEERING TECHNOLOGY (MEC)**

#### **MEC 101 - INTRODUCTION TO ENGINEERING TECHNOLOGY I (2 CR.)**

Introduces engineering technology. Provides historical background. Covers such topics as professional ethics; problem solving techniques involving forces, structures, materials, fluids, energy, and electricity and U.S. Customary and S.I. units, and unit conversions. Part I of II. Lecture 2 hours per week.

#### **MEC 113- MATERIALS AND PROCESSES OF INDUSTRY (4 CR.)**

Studies industrial/engineering materials and accompanying industrial processes. Investigates nature of materials structure and properties from a design standpoint, leading to a more intelligent selection of a materials, as well as the processes themselves to ensure a logical and systematic procedure for selection of materials. Reading Level Requisite ENG 4. Lecture 4 hours per week.

#### **MEC 120 - PRINCIPLES OF MACHINE TECHNOLOGY (2-3 CR.)**

Studies fundamental machine operations and practices, including layout, measuring devices, hand tools, drilling, reaming, turning between centers, cutting tapers and threads, and milling; fabrication of mechanical parts on drill press, lathe and mill. Lecture 2 hours. Laboratory 0-3 hours. Total 5 hours per week.

#### **MEC 122 - 3D PRINTING FOR ENGINEERING DESIGN (3 CR.)**

Provides an overview of rapid technologies in Additive Manufacturing that are high productivity tools designed to cut lead times, reduce time to market, increase the quality of the product, and improve collaboration within the organization. Lecture 2 hours, Laboratory 3 hours, Total 5 hours per week.

#### **MEC 154 - MECHANICAL MAINTENANCE I (3 CR.)**

Provides an overview of basic maintenance techniques and processes for industrial mechanics and technicians who are installing and maintaining industrial mechanical and power transmission components. Lecture 2-3 hours. Laboratory 1-2 hours. Total 3-4 hours per week.

#### **MEC 205 - PIPING AND AUXILIARY SYSTEMS (3 CR.)**

Studies threaded pipe, welded pipe, isometric pipe sketching and layout, gaskets, packing, industrial hoses and tubing, basic steam system operation, automatic and manual valves, and positive displacement pumps. Lecture 2 hours, lab 2 hours. Total 4 hours per week.

#### **MEC 266 - FLUID MECHANICS (3-4 CR.)**

Teaches theory of hydraulic and pneumatic circuits including motors, controls, actuators, valves, plumbing, accumulators, reservoirs, pumps, compressors, and filters. Lecture 3-4 hours per week.

## **MEDICAL LABORATORY (MDL)**

#### **MDL 105 - PHLEBOTOMY (3-4 CR.)**

Introduces basic medical terminology, anatomy, physiology, components of health care delivery and clinical laboratory structure. Teaches techniques of specimen collection, specimen handling, and patient interactions. EDE 10 requisite. Lecture 2 hours. Laboratory 3-6 hours. Total 5-8 hours per week.

#### **MDL 106 - CLINICAL PHLEBOTOMY (4 CR.)**

Focuses on obtaining blood specimens, processing specimens, managing assignments, assisting with and/or performing specified tests, performing clerical duties and maintaining professional communication. Provides supervised learning in college laboratory/and or cooperating agencies. Lecture 2 hours. Laboratory 6 hours.

## **MUSIC (MUS)**

#### **MUS 111 - MUSIC THEORY I (4 CR.)**

Discusses elements of musical construction of scales, intervals, triads, and chord progressions. Develops ability to sing at sight and write from dictation. Introduces the analysis of the Bach chorale style. Expands facility with harmonic dictation and enables the student to use these techniques at the keyboard. Part I of II. Lecture 3 hours. Laboratory 2 hours. Total 5 hours per week.

#### **MUS 121 - MUSIC APPRECIATION I (3 CR.)**

Increases the variety and depth of the student's interest, knowledge, and involvement in music and related cultural activities. Acquaints the student with traditional and twentieth century music literature, emphasizing the relationship music has as an art form with man and society. Increases the student's awareness of the composers and performers of all eras through listening and concert experiences. Readiness for ENG 111. Lecture 3 hours per week.

#### **MUS 133 - RECORDING SYSTEMS SERVICES I (3 CR.)**

Introduces the principles of recording systems and recording system designs. Provides the student with theoretical and practical site locations. Includes the study of sound studio design and construction, production costs, and retail distribution. Part I of II. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

#### **MUS 139 - SHAPE NOTE SINGING (3 CR.)**

An introductory level course on the history and performance of shape note singing in the central Appalachian region. Classroom instruction will include lecture, demonstrations, assignments,

reports, and quizzes. Student practice will be required outside of classroom hours. Lecture 2 hours, Laboratory 2 hours per week.

#### **MUS 150 - OLD TIME STRING BAND (3 CR.)**

An introductory level course on the history and performance of traditional old time string band music of the central Appalachian region. Prerequisite: MUS 168 or MUS 169: MUS 170, MUS 171, or MUS 172; or divisional approval. Lecture 2 hours, Laboratory 2 hours per week.

#### **MUS 163 - GUITAR THEORY AND PRACTICE I (3 CR.)**

Studies the fundamentals of sound production, music theory, and harmony as they apply to guitar. Builds proficiency in both the techniques of playing the guitar and in the application of music fundamentals to these techniques. Presents different types of guitars and related instruments. Emphasizes music as entertainment and as a communication skill. Part I of II. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

#### **MUS 164 - GUITAR THEORY AND PRACTICE II (3 CR.)**

Studies the fundamentals of sound production, music theory, and harmony as they apply to guitar. Builds proficiency in both the techniques of playing the guitar and in the application of music fundamentals to these techniques. Presents different types of guitars and related instruments. Emphasizes music as entertainment and as a communication skill. Prerequisite: MUS 163 or divisional approval. Part II of II. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

#### **MUS 167 - BEGINNING APPALACHIAN DULCIMER (3 CR.)**

An introductory level course on the history of the Appalachian dulcimer, regional. Lecture 2 hours, Laboratory 2 hours per week.

#### **MUS 168 - BEGINNING CLAWHAMMER BANJO (3 CR.)**

An introductory level course on the history of the banjo, regional musicians, influences, and performance with emphasis on the old time, clawhammer style found in the central Appalachian region. 3 credits Lecture 2 hours, Laboratory 2 hours per week. ts different types of guitars and related instruments. Emphasizes music as entertainment and as a communication skill. Part II of II. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

#### **MUS 167 - BEGINNING APPALACHIAN DULCIMER (3 CR.)**

An introductory level course on the history of the Appalachian dulcimer, regional. Lecture 2 hours, Laboratory 2 hours per week.

#### **MUS 168 - BEGINNING CLAWHAMMER BANJO (3 CR.)**

Introduces the student to the history of the banjo, regional musicians, influences, and performance with emphasis on the old time, clawhammer style found in the central Appalachian region. Lecture 2 hours, Laboratory 2 hours per week.

#### **MUS 169 - BEGINNING FIDDLE (3 CR.)**

An introductory level course on the history of the fiddle, regional musicians, influences, and performance with emphasis on the old time styles found in the central Appalachian region. Lecture 2 hours, Laboratory 2 hours per week.

#### **MUS 170 - BEGINNING RHYTHM GUITAR (3 CR.)**

An introductory level course on the history of rhythm guitar, regional musicians. Lecture 2 hours, Laboratory 2 hours per week.

#### **MUS 171 - BEGINNING MANDOLIN (3 CR.)**

An introductory level course on the history of the mandolin, regional musicians, and performance. Lecture 2 hours, Laboratory 2 hours per week.

#### **MUS 172 - BEGINNING UPRIGHT BASS (3 CR.)**

An introductory level course on the history of the upright bass, regional musicians, influences, and performance with emphasis on the old time style found in the central Appalachian region. Lecture 2 hours, Laboratory 2 hours per week.

#### **MUS 195 - BEGINNING AUTOHARP (3 CR.)**

An introductory level course on the history, regional musicians, and performance of the autoharp. Lecture 2 hours, Laboratory 2 hours per week.

#### **MUS 195 - BEGINNING LEAD GUITAR (3 CR.)**

An introductory level course on the history and performance of acoustic lead guitar. Prerequisite: MUS 170 or divisional approval based upon performance level. Lecture 2 hours, Laboratory 2 hours per week.

#### **MUS 195 - BEGINNING BLUEGRASS BANJO (3 CR.)**

An introductory level course on the history and performance of three-finger picking or Scruggs style of five-string banjo. Lecture 2 hours, Laboratory 2 hours per week.

#### **MUS 195 BLUEGRASS AND HARMONY BAND I (3 CR)**

Introductory course that focuses on the history and performance of the Bluegrass music genre from traditional styles. Bluegrass instrumentation and vocal harmony will be studied and applied in the arrangements of a stage-ready song repertoire for scheduled performances. Prerequisite: MUS 169, MUS 170, MUS 171, or MUS 172; or divisional approval. Additional Prerequisite: Banjoists wishing to enroll are required to be able to play basic arrangements of popular three-finger style banjo tunes. Lecture 2 hours, Laboratory 2 hours per week. Class Delivery Notes: Online asynchronous lectures covering history and arrangements of songs will be held during odd weeks of semester. On-campus face-to-face meetings will be held during even weeks of the semester.

#### **MUS 195 - INTERMEDIATE FIDDLE (3 CR.)**

An intermediate level course on the history and performance of the fiddle, regional. Prerequisite: MUS 169 or divisional approval based upon performance level. Lecture 2 hours, Laboratory 2 hours per week.

#### **MUS 195 - INTERMEDIATE APPALACHIAN DULCIMER (3 CR.)**

An intermediate level course on the history and performance of the Appalachian dulcimer, regional. Prerequisite: MUS 167 or divisional approval based upon performance level. Lecture 2 hours, Laboratory 2 hours per week.

#### **MUS 195 - INTERMEDIATE MANDOLIN (3 CR.)**

An intermediate level course which continues to explore the history of the mandolin, regional musicians, influences and performance with emphasis on the old time styles found in the central Appalachian region. Prerequisite: MUS 171 or divisional approval based upon performance level. Lecture 2 hours, Laboratory 2 hours per week.

#### **MUS 195 TRADITIONAL CHRISTMAS CAROLS IN APPALACHIA - THE FOLKLORE, HISTORY, AND PERFORMANCE: (3 CR)**

An introductory level course on the history of traditional Christmas carols, particularly those found in the central Appalachian region and performance style of these carols. Students will learn about the folklore and history of some popular carols as sung in the old countries and brought to the central Appalachian Region by early settlers. Classroom instruction will include lecture, demonstrations, discussion board postings. A written personal narrative report, and vocal performance of Christmas carols. Student reading and practice will be required outside of classroom hours. Lecture 2 hours per week. Lab 2 hours per week. Course Credits 3. Class Delivery Notes: Online asynchronous lectures covering folklore and history will be held daily. On-campus face-to-face performance labs will be held on twice each week.

#### **MUS 218 - TRADITIONAL MUSIC AND MUSICIANS OF CENTRAL APPALACHIA (3 CR.)**

Introduces students to the traditional music and musicians, historical and contemporary, of the central Appalachian region. Explore influences of the music of various cultures, both within and outside the region, on the musical styles. Prerequisite: Readiness for ENG 111. Lecture 3 hours. Total 3 hours per week.

#### **MUS 225 - THE HISTORY OF JAZZ (3 CR.)**

Studies the underlying elements of jazz, concentrating on the socio-cultural and historical development from earliest stages to the present. Explores key figures and significant works instrumental in the development and evolution of jazz. Lecture 3 hours per week.

#### **MUS 290 - COORDINATED INTERNSHIP (1-5 CR.)**

Supervises on-the-job training in selected business, industrial or service firms coordinated by the college. Prerequisite: Readiness for ENG 111. Credit/practice ratio not to exceed 1:5 hours. May be repeated for credit. Variable hours.

#### **MUS 295 BLUEGRASS BAND AND HARMONY II (3 CR)**

Course that focuses on the history and performance of the Bluegrass music genre from progressive styles. Bluegrass instrumentation and vocal harmony will be studied and applied in the arrangements of a stage-ready song repertoire for scheduled performances. Prerequisite: MUS 195 – Bluegrass Band and Harmony I or divisional approval. Additional Prerequisite: Banjoists wishing to enroll are required to be able to play intermediate/advanced three-finger style techniques. Lecture 2 hours, Laboratory 2 hours per week. Class Delivery Notes: Online asynchronous lectures covering history and arrangements of songs will be held during odd weeks of semester. On-campus face-to-face meetings will be held during even weeks of the semester.

#### **MUS 295 - BLUES GUITAR (3 CR.)**

An advanced level course on the history of blues guitar, regional musicians and performance with emphasis on the central Appalachian region. Students will be introduced to various scales, patterns, and chord structure in relation with lead notes, arpeggios, and picking techniques. Course will cover ear training, note reading, tablature, performance and skills necessary to apply lead guitar to blues performance. Prerequisite MUS 164 or divisional approval based upon performance level. Lecture 2 hours, Laboratory 2 hours per week.



### **MUS 295 - BUILDING AND PLAYING AN ELECTRIC GUITAR (3 CR.)**

This course will introduce the student to electric guitar assembly, decorative art for music instruments, music history and theory, and performance. Students in this class will first build an electric guitar in the style of their choice from a kit in the first half of the semester, then learn basic performing techniques to play some songs from various electric guitar styles. Prerequisite: MUS 164 or divisional approval based upon performance level. Lecture 2 hours, Laboratory 2 hours per week.

### **MUS 295 CELTIC MANDOLIN: (3 CREDITS)**

An advanced level mandolin performance course that focuses on building a repertoire of Celtic tunes on the mandolin. Prerequisite: MUS 171 Beginning Mandolin and MUS 195 Special Topics in Music: Intermediate Mandolin; or divisional approval.

### **MUS 295 - CHORD MELODY FOR JAZZ GUITAR (3 CR.)**

Introduces advanced guitar students to chord structures and resultant melody framing commonly found in jazz music. Students will develop melody lines for standard acoustic jazz guitar songs with jazz-styled chords and their inversions. Prerequisite: MUS 295 Topics in Music: Acoustic Blues Guitar. Lecture 2 hours, Laboratory 2 hours per week.

### **MUS 295 FINGERPICKING GUITAR: (3 CR.)**

An intermediate level guitar performance class that focuses on the right hand playing technique of picking individual strings with the performers fingers to form a rhythmic pattern on the guitar. This guitar performance style is specifically dedicated to playing an accompaniment supporting rhythm for lead vocal or instrumentation, although the style can be used for lead guitar. Prerequisite: MUS 170 and Beginning Lead Guitar; or divisional approval. On-campus face-to-face meetings will be held weekly.

## **NATURAL SCIENCE (NAS)**

### **NAS 106 - CONSERVATION OF NATURAL RESOURCES (3 CR.)**

Describes the management of natural resources, balance of nature, and the human impact on the environment. Reading Level Requisite ENG 4. Lecture 3 hours per week.

### **NAS 125 - METEOROLOGY (4 CR.)**

Presents a non-technical survey of fundamentals meteorology. Focuses on the effects of weather and climate on humans and their activities. Serves for endorsement or recertification of earth science teachers. Readiness for ENG 111. Lecture 3 hours per week. Recitation and laboratory 2 hours per week. Total 5 hours per week.

### **NAS 131 - ASTRONOMY I (4 CR.)**

Studies the major and minor bodies of the solar system, stars and nebulae of the milky way, and extragalactic objects. Examines life and death of stars, origin of the universe, history of astronomy, and instruments and techniques of observation. This course is cross-listed with PHY 141/PHY 142. Credit will not be awarded for both. Readiness for ENG 111. Lecture 3 hours per week. Recitation and the laboratory 3 hours per week. Total 6 hours per week.

### **NAS 132 - ASTRONOMY II (4 CR.)**

Studies the major and minor bodies of the solar system, stars and nebulae of the milky way, and extragalactic objects. Examines life and death of stars, origin of the universe, history of astronomy, and instruments and techniques of observation. This course is cross-listed with PHY 141/PHY 142. Credit will not be awarded for both. Readiness for ENG 111. Lecture 3 hours per week. Recitation and the laboratory 3 hours per week. Total 6 hours per week.

### **NAS 171 - HUMAN ANATOMY AND PHYSIOLOGY I (4 CR.)**

Presents the human organ systems and their functions as they relate to allied health science. Lecture 3 hours per week. Recitation and laboratory 3 hours per week. Total 6 hours per week.

## **NURSING (NSG)**

### **NSG 100 - INTRODUCTION TO NURSING CONCEPTS (4 CR.)**

Introduces concepts of nursing practice and conceptual learning. Focuses on basic nursing concepts with an emphasis on safe nursing practice and the development of the nursing process. Provides supervised learning experiences in college nursing laboratories, clinical/community settings, and/or simulated environments. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week. Prerequisite(s): BIO 141 or BIO 231 or NAS 161.

### **NSG 106 - COMPETENCIES FOR NURSING PRACTICE (2 CR.)**

Focuses on the application of concepts through clinical skill development. Emphasizes the use of clinical judgment in skill acquisition. Includes principles of safety, evidence-based practice, informatics and math computational skills. Prepares students to demonstrate competency in specific skills and drug dosage calculation including the integration of skills in the care of clients in simulated settings. Provides supervised learning experiences in college nursing laboratories, clinical/community settings, and/or simulated environments. Lecture 0-1 hour. Laboratory 3-6 hours. Total 4-6 hours per week. Prerequisite(s): MTE 1-5 and BIO 141 (or BIO 231 or NAS 161). Pre-Requisites: BIO 141 and eligible for MTH 154.

### **NSG 115 - HEALTH CARE CONCEPTS FOR TRANSITION (5 CR.)**

Focuses on role transition from Licensed Practical Nurse to Registered professional nurse. Incorporates concepts of nursing practice and conceptual learning to promote health and wellness across the lifespan. Uses the nursing process to explore care delivery for selected diverse populations with common and predictable illness. Emphasizes the use of clinical judgement in skill acquisition. Lecture 3 hours. Laboratory 3-6 hours. Total 6-9 hours per week. Prerequisites: BIO 141 & BIO 142: Anatomy and Physiology I & II, ENG 111, PSY 230, SDV 100; Acceptance to the Transition Program; Co-requisites: NSG 200 Health Promotion and Assessment; BIO 150, Microbiology.

### **NSG 130 - PROFESSIONAL NURSING CONCEPTS (1 CR.)**

Introduces the role of the professional nurse and fundamental concepts in professional development. Focuses on professional identity, legal/ethical issues and contemporary trends in professional nursing. Lecture 1 hour. Total 1 hour per week. Prerequisite(s): BIO 141 or BIO 231 or NAS 161

### **NSG 152 - HEALTH CARE PARTICIPANT (3 CR.)**

Focuses on the health and wellness of diverse individuals, families, and the community throughout the lifespan. Covers concepts that focus on client attributes and preferences regarding healthcare. Emphasizes population-focused care. Provides supervised learning experiences in college nursing laboratories, clinical/community settings, and/or cooperating agencies, and/or simulated environments. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week. Prerequisite(s): BIO 142 (or BIO 232 or NAS 162), NSG 100, NSG 106, NSG 130 and NSG 200.

### **NSG 170 - HEALTH/ILLNESS CONCEPTS (6 CR.)**

Focuses on the nursing care of individuals and/or families throughout the lifespan with an emphasis on common and predictable illnesses. Provides supervised learning experiences in college nursing laboratories, clinical/community settings, and/or simulated environments. Lecture 4 hours, Laboratory 6 hours. Total 10 hours per week. Prerequisite(s): BIO 142 (or BIO 232 or NAS 162), NSG 100, NSG 106, NSG 130 and NSG 200"

### **NSG 200 - HEALTH PROMOTION AND ASSESSMENT (3 CR.)**

Introduces assessment and health promotion for the individual and family. Includes assessment of infants, children, adults, geriatric clients and pregnant females. Emphasizes health history and the acquisition of physical assessment skills with underlying concepts of development, communication, and health promotion. Prepares students to demonstrate competency in the assessment of clients across the lifespan. Provides supervised learning experiences in college nursing laboratories, clinical/community settings, and/or simulated environments. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week. Prerequisite(s): BIO 141 (or BIO 231 or NAS 161).

### **NSG 210 - HEALTH CARE CONCEPTS I (5 CR.)**

Focuses on care of clients across the lifespan in multiple settings including concepts related to psychological and physiological health alterations. Emphasizes the nursing process in the development of clinical judgment for clients with multiple needs. Provides supervised learning experiences in college nursing laboratories, clinical/community settings, and/or simulated environments. Part II of II. Lecture 3 hours. Laboratory 6 hours. Total 9 hours per week. Prerequisite(s): BIO 150 (or BIO 205), NSG 152 and NSG 170.

### **NSG 211 - HEALTH CARE CONCEPTS II (5 CR.)**

Focuses on care of clients across the lifespan in multiple settings including concepts related to psychological and physiological health alterations. Emphasizes the nursing process in the development of clinical judgment for clients with multiple needs. Provides supervised learning experiences in college nursing laboratories, clinical/community settings, and/or simulated environments. Part II of II. Lecture 3 hours. Laboratory 6 hours. Total 9 hours per week. Prerequisite(s): BIO 150 (or BIO 205), NSG 152 and NSG 170.

### **NSG 230 - ADVANCED PROFESSIONAL NURSING CONCEPTS (2 CR.)**

Develops the role of the professional nurse in the healthcare environment in preparation for practice as a registered nurse. Introduces leadership and management concepts and focuses on the integration of professional behaviors in a variety of healthcare settings. Lecture 2 hours. Total 2 hours per week. Prerequisite(s): NSG 210 and NSG 211.

### **NSG 252 - COMPLEX HEALTH CARE CONCEPTS (2 CR.)**

Focuses on nursing care of diverse individuals and families integrating complex health concepts. Emphasizes clinical judgment, patient-centered care and collaboration. Lecture 4 hours. Total 4 hours per week. Prerequisite(s): NSG 210 and NSG 211.

### **NSG 270 - NURSING CONCEPTS (4 CR.)**

Provides students with the opportunity to comprehensively apply and integrate learned concepts from previous nursing courses into a capstone experience. Emphasizes the mastery of patient-centered care, safety, nursing judgment, professional behaviors, informatics, quality improvement, and collaboration in the achievement of optimal outcomes of care. Provides supervised learning experiences in faculty and/or preceptor-guided college nursing laboratories, clinical/community settings, and/or simulated environments. Laboratory 12 hours. Total 12 hours per week. Prerequisite(s): NSG 210 and NSG 211.

## **NURSING (NUR)**

### **NUR 135 - DRUG DOSAGE CALCULATIONS (1-2 CR.)**

Focuses on apothecary, metric, household conversion in medication dosage calculation for adult and pediatric clients. Provides a practical approach to learning to calculate and prepare medications and solutions. Includes calculating intravenous flow rates. Lecture 1-2 hours per week.

## **PHILOSOPHY (PHI)**

### **PHI 220 - ETHICS (3 CR.)**

Provides a systematic study of representative ethical systems. Prerequisite: Readiness for ENG 111. Lecture 3 hours per week.

## **PHOTOGRAPHY (PHT)**

### **PHT 101 - PHOTOGRAPHY I (3 CR.)**

Teaches principles of photography and fundamental camera techniques. Requires outside shooting and lab work. EDE 10 requisite level. Lecture 1 hour. Laboratory 4 hours. Total 5 hours per week. Must be taken in sequence.

## **PHYSICAL EDUCATION AND RECREATION (PED)**

### **PED 116 - Lifetime Fitness and Wellness: (1-4 CR.)**

Provides a study of fitness and wellness and their relationship to a healthy lifestyle. Defines fitness and wellness, evaluates the student's level of fitness and wellness, and motivates the student to incorporate physical fitness and wellness into daily living. Lecture 0-1 hours. Laboratory 2-4 hours. Total 2-4 hours per week.

### **PED 137 - MARTIAL ARTS I (2 CR.)**

Emphasizes forms, styles, and techniques of body control, physical and mental discipline, and physical fitness. Presents a brief history of development of martial arts theory and practice. Part I of II. Lecture 0-1 hours. Laboratory 2-4 hours. Total 2-4 hours per week.

### **PED 195 - FUNDAMENTALS OF WEIGHT TRAINING (1 CR.)**

Description: Focuses on muscular strength and endurance training through workout programs. Teaches appropriate use of weight training equipment and proper technique when using free weights.

### **PED 195 - BEGINNING YOGA (1 CR.)**

Focuses on the forms or Yoga and Training.

### **PED 195 - FITNESS WALKING FOR LIFE (1 CR.)**

Teaches content and skills needed to design, implement, and evaluate an individualized program of walking, based upon fitness level. Laboratory 2 hours per week.

### **PED 195 - OLD TIME DANCE (1 CR.)**

## **PHYSICS (PHY)**

### **PHY 121 - PRINCIPLES OF PHYSICS 1 (4 CR.)**

Covers fundamental principles of physics. Includes mechanics, thermodynamics, wave phenomena, electricity and magnetism, and selected topics from modern physics. Readiness for ENG 111. Two units of high school algebra and one unit of high school geometry or equivalent. Part I of II. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week. Must be taken in sequence.

### **PHY 122 - PRINCIPLES OF PHYSICS II (4 CR.)**

Covers fundamental principles of physics. Includes mechanics, thermodynamics, wave phenomena, electricity and magnetism, and selected topics from modern physics. Prerequisite: PHY 121. Laboratory 3 hours. Total 6 hours per week.

### **PHY 131 - APPLIED PHYSICS I (3 CR.)**

Emphasizes application of topics such as precision measurement, statics, dynamics, energy, momentum, properties of matter, heat, sound, optics, and electricity and magnetism. Prerequisites high school algebra, geometry and trigonometry, or equivalent or divisional approval. Part I of II. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

### **PHY 201 - GENERAL COLLEGE PHYSICS I (4 CR.)**

Teaches fundamental principles of physics. Covers mechanics, thermodynamics, wave phenomena, electricity and magnetism, and selected topics in modern physics. Prerequisite MTH 161 or equivalent. Reading Level Requisite ENG 111. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

### **PHY 202 GENERAL COLLEGE PHYSICS II (4 CR.)**

Teaches fundamental principles of physics. Covers mechanics, thermodynamics, wave phenomena, electricity and magnetism, and selected topics in modern physics. Part II of II. Prerequisite MTH 161. MTH 162 Recommended. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week. Must be taken in sequence.

### **PHY 241 - UNIVERSITY PHYSICS I (4 CR.)**

Teaches principles of classical and modern physics. Includes mechanics, wave phenomena, heat, electricity, magnetism, relativity, and nuclear physics. ENG 111 Requisite. Prerequisite MTH 263 or 261 or divisional approval. Must be taken in sequence. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

### **PHY 242 - UNIVERSITY PHYSICS II (4 CR.)**

Teaches principles of classical and modern physics. Includes mechanics, wave phenomena, heat, electricity, magnetism, relativity, and nuclear physics. Pre-Requisite PHY 241 and MTH 264 or 262 or divisional approval. Part II of II. Must be taken in sequence. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

## **POLITICAL SCIENCE (PLS)**

### **PLS 135 - U.S. GOVERNMENT AND POLITICS (3 CR.)**

Teaches the political structure, processes, institutions, and policymaking of the US national government. Focuses on the three branches of government, their interrelationships, and how they shape policy. Addresses federalism; civil liberties and civil rights; political socialization and participation; public opinion, the media; interest groups; political parties; elections; and policymaking. The assignments in the course require college-level reading fluency and coherent communication through written reports. Readiness for ENG 111. This is a Passport Transfer course. Lecture 3 hours per week.

### **PLS 136 - STATE AND LOCAL GOVERNMENT AND POLITICS (3 CR.)**

Teaches structure, powers, and functions of state and local government in the United States as related to federalism; constitutionalism; elections; powers of legislative, executive, and judicial; powers of state of local government; state-local-federal relations; fiscal matters; metropolitan issues; and policy issues, like health, education, criminal justice and welfare. The assignments in the course require college-level reading fluency and coherent communication through written reports. Readiness for ENG 111. Lecture 3 hours per week.

### **PLS 211 - U.S. GOVERNMENT I (3 CR.)**

Teaches structure, operation, and process of national, state, and local governments. Includes in-depth study of the three branches of the government and of public policy. ENG 111 Requisite. Lecture 3 hours per week.

### **PLS 212 - U.S. GOVERNMENT II (3 CR.)**

Teaches structure, operation, and process of national, state, and local governments. Includes in-depth study of the three branches of the government and of public policy. Reading Level Requisite ENG 111. Lecture 3 hours per week.

## **PRACTICAL NURSING (PNE)**

*Prerequisite for all courses in this department is current enrollment in the Practical Nursing Plan.*

### **PNE 132 - CARE OF MATERNAL AND NEWBORN CLIENTS (2 CR.)**

Studies normal pregnancy, childbirth, post-partum, and the neonate along with complications associated with each phase using a family-centered approach. Lecture 2 hours. Total 2 hours per week.

### **PNE 143 - APPLIED NURSING SKILLS (1 CR.)**

Applies principles and procedures essential to the basic nursing care of patients. Laboratory 3 hours per week.

### **PNE 145- TRENDS IN PRACTICAL NURSING (1 CR.)**

Studies the role of the Licensed Practical Nurse. Covers legal aspects, organizations, and opportunities in practical nursing. Assists students in preparation for employment. Lecture 1 hour per week.

### **PNE 155 - BODY STRUCTURE AND FUNCTION (3 CR.)**

Studies the structure and function of the body. Lecture 3 hours per week.

### **PNE 158 - MENTAL HEALTH AND PSYCHIATRIC NURSING (1 CR.)**

Recognizes emotional needs of patients. Provides knowledge of the role that emotions play. Enables students to understand their own behavior as well as patient behavior. Lecture 1 hour per week.

### **PNE 159 - CARE OF PEDIATRIC CLIENTS (2 CR.)**

Studies normal and abnormal variations in children from infancy to adolescence. Covers milestones in all aspects of growth, development and common childhood disorders using the family-centered approach. Lecture 2 hours. Total 2 hours per week.

### **PNE 161 - NURSING IN HEALTH CHANGES I (6 CR.)**

Focuses on nursing situations and procedures necessary to assist individuals in meeting special needs related to human functions. Lecture 4 hours. Laboratory 6 hours. Total 10 hours per week.

### **PNE 162 - NURSING IN HEALTH CHANGES II (10 CR.)**

Continues the focus on nursing situations and procedures necessary to assist individuals in meeting special needs related to human functions. Lecture 4-6 hours. Laboratory 12-21 hours. Total 18-25 hours per week.

**PNE 164 - NURSING IN HEALTH CHANGES IV (10 CR.)**

Continues the focus on nursing situations and procedures necessary to assist individuals in meeting special needs related to human functions. Lecture 4-6 hours. Laboratory 12-21 hours. Total 18-25 hours per week.

**PNE 173 - PHARMACOLOGY FOR PRACTICAL NURSES (2 CR.)**

Studies history, classification, sources, effects, uses and legalities of drugs. Teaches problem solving skills used in medication administrations. Emphasizes major drug classes and specific agents within each class. Lecture 1-2 hours per week.

**PNE 195 - CARE OF MATERNAL AND NEWBORN CLIENTS (2 CR.)**

Uses family centered approach; studies the normal and common complications in pre-pregnancy, pregnancy, childbirth, post-partum and the neonate.

**PNE 295 - CARE OF CHILDREN (2 CR.)**

Uses a family centered approach; studies the normal and common complications of infants, children, and adolescents.

**PSYCHOLOGY (PSY)****PSY 116 - PSYCHOLOGY OF DEATH AND DYING (3 CR.)**

Focuses on psychological aspects of death and dying. Teaches the meaning of death and ways of handling its personal and social implications. Includes psychological, sociological, cultural, and religious views of death. Readiness for ENG 111. Lecture 3 hours per week.

**PSY 120 - HUMAN RELATIONS (3 CR.)**

Introduces the theory and practice of effective human relations. Increases understanding of self and others and interpersonal skills needed to be a competent and cooperative communicator. EDE 10 Requisite. Lecture 3 hours per week.

**PSY 200 - PRINCIPLES OF PSYCHOLOGY (3 CR.)**

Surveys the basic concepts of psychology. Covers the scientific study of behavior and mental processes, research methods, biological bases of behavior, sensation and perception, developmental psychology, learning, memory, thinking, intelligence, personality, social psychology, and psychological disorders and treatment. The assignments in the course require college-level reading.

**PSY 215 - ABNORMAL PSYCHOLOGY (3 CR.)**

Explores historical views and current perspectives of abnormal behavior. Emphasizes major diagnostic categories and criteria, individual and social factors of maladaptive behavior, and types of therapy. Includes methods of clinical assessment and research strategies. PSY 200 Requisite. Lecture 3 hours per week.

**PSY 230 - DEVELOPMENTAL PSYCHOLOGY (3 CR.)**

Studies the development of the individual from conception to death. Follows a life-span perspective on the development of the person's physical, cognitive, and psychosocial growth. Readiness for ENG 111. Lecture 3 hours per week.

**PSY 235 - CHILD PSYCHOLOGY (3 CR.)**

Studies development of the child from conception to adolescence. Investigates physical, intellectual, social and emotional factors involved in the child's growth. Readiness for ENG 111. Lecture 3 hours per week.

**PSY 236 - ADOLESCENT PSYCHOLOGY (3 CR.)**

Studies development of the adolescent. Investigates physical, intellectual, social, and emotional factors of the individual from late childhood to early adulthood. Readiness for ENG 111. Lecture 3 hours per week.

**REAL ESTATE (REA)****REA 100 - PRINCIPLES OF REAL ESTATE (4 CR.)**

Examines practical applications of real estate principles. Includes a study of titles, estates, land descriptions, contracts, legal instruments, financing and management of real estate. Reading Level Requisite ENG 4. Lecture 4 hours per week.

**RELIGION (REL)****REL 100 - INTRODUCTION TO THE STUDY OF RELIGION (3 CR.)**

Explores various religious perspectives and ways of thinking about religious themes and religious experience. Readiness for ENG 111. Lecture 3 hours per week.

**REL 200 - SURVEY OF THE OLD TESTAMENT (3 CR.)**

Surveys books of the Old Testament, with emphasis on prophetic historical books. Examines the historical and geographical setting and place of the Israelites in the ancient Middle East as background to the writings. Readiness for ENG 111 Lecture 3 hours per week.

**REL 210 - SURVEY OF THE NEW TESTAMENT (3 CR.)**

Surveys books of the New Testament, with special attention upon placing the writings within their historical and geographical setting. Readiness for ENG 111. Lecture 3 hours per week.

**REL 230 - RELIGIONS OF THE WORLD (3 CR.)**

Introduces the religions of the world with attention to origin, history, and doctrine. Readiness for ENG 111. Lecture 3 hours per week.

**REL 240 - RELIGIONS IN AMERICA (3 CR.)**

Surveys various manifestations of religion in the American experience. Emphasizes concepts, problems, and issues of religious pluralism and character of American religious life. Readiness for ENG 111. Lecture 3 hours per week.

**RESPIRATORY THERAPY (RTH)**

*Prerequisite for all courses in this department is current enrollment in the Respiratory Therapy Plan.*

**RTH 102 - INTEGRATED SCIENCES FOR RESPIRATORY CARE (3 CR.)**

Integrates the concepts of mathematics, chemistry, physics, microbiology, and computer technology as these sciences apply to the practices of respiratory care. Lecture 3 hours per week.

**RTH 110 - FUNDAMENTAL THEORY AND PROCEDURES FOR RESPIRATORY CARE (4 CR.)**

Focuses on the development of basic respiratory care skills necessary to enter the hospital environment. Lecture 2 hours. Laboratory 6 hours. Total 8 hours per week.

**RTH 111 - ANATOMY & PHYSIOLOGY OF THE CARDIOPULMONARY SYSTEM (3 CR.)**

Concentrates on anatomy and physiology of the cardiopulmonary system. Lecture 3 hours per week.

**RTH 112 - PATHOLOGY OF THE CARDIOPULMONARY SYSTEM (3 CR.)**

Presents pathophysiology of medical and surgical diseases with emphasis upon diseases of cardiopulmonary system. Lecture 3 hours per week.

**RTH 121 - CARDIOPULMONARY SCIENCE I (3 CR.)**

Focuses on pathophysiology, assessment, treatment, and evaluation of patients with cardiopulmonary disease. Explores cardiopulmonary and neuromuscular physiology and pathophysiology. Lecture 3 hours per week.

**RTH 131 - RESPIRATORY CARE THEORY AND PROCEDURES I (4 CR.)**

Presents theory of equipment and procedures and related concepts used for patients requiring general and critical cardiopulmonary care. Part I of II. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

**RTH 132 - RESPIRATORY CARE THEORY AND PROCEDURES II (4 CR.)**

Presents theory of equipment and procedures and related concepts used for patients requiring general and critical cardiopulmonary care. Part II of II. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

**RTH 135 - DIAGNOSTIC AND THERAPEUTIC PROCEDURES I (2 CR.)**

Focuses on purpose, implementation and evaluation of equipment, and procedures used in the diagnosis and therapeutic management of patients with cardiopulmonary disease. Lecture 2 hours per week.

**RTH 145 - PHARMACOLOGY FOR RESPIRATORY CARE I (2 CR.)**

Presents selection criteria for the use of, and detailed information on pharmacologic agents used in pulmonary care. Lecture 2 hours per week.

**RTH 151 - FUNDAMENTAL CLINICAL PROCEDURES I (4 CR.)**

Offers clinical instruction in basic patient care practices. Lecture 2 hour. Laboratory 6 hours. Total 8 hours per week.

**RTH 152 - FUNDAMENTAL CLINICAL PROCEDURES II (4 CR.)**

Offers clinical instruction in basic patient care practices. Lecture 2 hour. Laboratory 6 hours. Total 8 hours per week.

**RTH 224 - INTEGRATED RESPIRATORY THERAPY SKILLS I (2 CR.)**

Presents intensive correlation of all major respiratory therapy subject areas reflecting the entry-level and advanced practitioner matrices. Emphasizes assessment, implementation, and modification of therapy to patient response. Lecture 2 hours per week.

**RTH 226 - THEORY OF NEONATAL AND PEDIATRIC RESPIRATORY CARE (2 CR.)**

Focuses on cardiopulmonary physiology and pathology of the newborn and pediatric patient. Lecture 2 hours per week.

**RTH 227 - INTEGRATED RESPIRATORY THERAPY SKILLS II (2 CR.)**

Presents intensive correlation of all major respiratory therapy subject areas reflecting the entry-level and advanced practitioner matrices. Emphasizes assessment, implementation, and modification of therapy to patient response. Lecture 2 hours per week.

**RTH 253 - ADVANCED CLINICAL PROCEDURES III (3-4 CR.)**

Offers clinical instruction in advanced patient care practices. Clinical 15-20 hours per week.

**RTH 254 - ADVANCED CLINICAL PROCEDURES IV (3-4 CR.)**

Offers clinical instruction in advanced patient care practices. Clinical 15-20 hours per week.

**RTH 265 - CURRENT ISSUES IN RESPIRATORY CARE (2-3 CR.)**

Explores current issues affecting the profession of respiratory care. Lecture 2-3 hours per week.

**RTH 267 - LEAD ELECTROCARDIOGRAPHIC DIAGNOSTICS (3 CR.)**

Presents a basic review of cardiac anatomy and physiology, and fundamental EKG's including the dysrhythmias. The focus on the remainder of the course is 12-lead diagnostics, including bundle branch blocks; hemiblocks; digitalis effects; myocardial ischemia, injury and infarction and related wave changes. Lecture 3 hours per week.

**SAFETY (SAF)****SAF 126 - PRINCIPLES OF INDUSTRIAL SAFETY (3 CR.)**

Teaches principles and practices of accident prevention, analysis of accident causes, mechanical safeguards, fire prevention, housekeeping, occupational diseases, first aid, safety organization, protection equipment and general safety principles and promotion. Lecture 3 hours per week.

**SAF 130 - INDUSTRIAL SAFETY - OSHA 10 (1 CR)**

Presents an introduction to occupational health and safety and its application in the workplace. Emphasizes safety standards and the Occupational Safety and Health Act (OSHA), its rules and regulations (OSHA 10). Lecture 1 hour per week.

**SCIENCE TECHNOLOGY (SCT)****SCT 111 - INTRODUCTION TO ENVIRONMENTAL AND SCIENCE TECHNOLOGY I (4 CR.)**

Introduces the basic sciences which describe our physical environment. Includes the fundamentals of geology, meteorology, physics, chemistry, and biology. Describes basic scientific principles and relates them to natural phenomena and the activities of man. Emphasizes field experiences including techniques and data gathering. Reading Level Requisite ENG 4. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week. Must be taken in sequence.

**SCT 112 - INTRODUCTION TO ENVIRONMENTAL AND SCIENCE TECHNOLOGY II (4 CR.)**

Introduces the basic sciences which describe our physical environment. Includes the fundamentals of geology, meteorology, physics, chemistry, and biology. Describes basic scientific principles and relates them to natural phenomena and the activities of man. Emphasizes field experiences including techniques and data gathering. Reading Level Requisite ENG 4. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week. Must be taken in sequence.

**SOCIOLOGY (SOC)****SOC 200 - PRINCIPLES OF SOCIOLOGY (3 CR.)**

Introduces fundamentals of social life. Presents significant research and theory in areas such as culture, social structure, socialization, deviance, social stratification, and social institutions. Readiness for ENG 111. Lecture 3 hours per week.

**SOC 211 - PRINCIPLES OF ANTHROPOLOGY I (3 CR.)**

Inquires into the origins, development, and diversification of human biology and human cultures. Includes fossil records, physical origins of human development, human population genetics, linguistics, cultures' origins and variation, and historical and contemporary analysis of human societies. Part I of II. This is a Passport Transfer course. Lecture 3 hours per week. 3 credits

**SOC 215 - SOCIOLOGY OF THE FAMILY (3 CR.)**

Studies topics such as marriage and family in social and cultural context. Addresses the single scene, dating and marriage styles, child-rearing, husband and wife interaction, single parent families, alternative life-styles. Readiness for ENG 111. Lecture 3 hours per week.

**SOC 268 - SOCIAL PROBLEMS (3 CR.)**

Applies sociological concepts and methods to analysis of current social problems. Includes delinquency and crime, mental illness, drug addiction, alcoholism, sexual behavior, population crisis, race relations, family and community disorganization, poverty, automation, wars, and disarmament. Readiness for ENG 111. Lecture 3 hours per week.

**SPANISH (SPA)****SPA 101 - BEGINNING SPANISH I (4 CR.)**

Introduces understanding, speaking, reading, and writing skills and emphasizes basic Spanish

sentence structure. May include an additional hour of oral drill and practice per week. ENG 111 Requisite. Must be taken in sequence. Lecture 4 hours per week.

**SPA 102 - BEGINNING SPANISH II (4 CR.)**

Introduces understanding, speaking, reading, and writing skills and emphasizes basic Spanish sentence structure. May include an additional hour of oral drill and practice per week. SPA 101 Pre-Requisite. Must be taken in sequence. Lecture 4 hours per week.

**STUDENT DEVELOPMENT (SDV)****SDV 100 - COLLEGE SUCCESS SKILLS (1 CR.)**

Assists students in transition to college. Provides overviews of college policies, procedures, curricular offerings. Encourages contacts with other students and staff. Assists students toward college success through information regarding effective study habits, career and academic planning, financial literacy and other college resources available to students. Strongly recommended for beginning students. REQUIRED FOR GRADUATION. EDE 10 Requisite. Lecture 1 hour per week.

**SDV 106 - PREPARATION FOR EMPLOYMENT (1 CR.)**

Provides experience in resume writing, preparation of applications, letters of application, and successfully preparing for completing the job interview. Assists students in identifying their marketable skills and aptitudes. Develops strategies for successful employment search. Assists students in understanding effective human relations techniques and communication skills in job search. Requisite Readiness for ENG 111. Lecture 1 hour per week.

**SDV 107 - CAREER EDUCATION (1-3 CR.)**

Surveys career options available to students. Stresses career development and assists in the understanding of self in the world of work. Assists students in applying decision-making to career choice. Lecture 1-3 hours per week.

**SDV 108 - COLLEGE SURVIVAL SKILLS (2 CR.)**

Provides an orientation to the college. Introduces study skills, career and life planning. Offers an opportunity to engage in activities aimed at self-discovery. Emphasizes development of "Coping Skills" such as listening, interpersonal relations, competence, and improved self-concept. EDE 10 Requisite. Lecture 1-3 hours per week.

**SDV 195 - TOPICS IN WORK ETHIC CERTIFICATION (1-3 CR.)**

Essential work ethic values will be explored with the goal of assisting students in successfully transitioning to employment or in continuing their education.

**SDV 195 - STUDY SKILLS, CAREERS AND YOU (1 CR.)**

The focus of this course will be on study skills, career exploration, and how topics studied in the course apply to students' career and educational goals.

**TRAVEL (TRV)****TRV 195 - TOPICS IN EVENT PLANNING AND MANAGEMENT (3 CR.)**

Focuses on the detailed aspects of how to produce, stage, script, and manage special events within the context of achieving organizational goals. Emphasizes the five critical stages in planning and managing successful special events: research needs and make goal assessments; design events to meet organizational purposes; planning the effective event; coordination and on-site management; and post-event evaluation. Lecture 3 hours per week.

**TRV 295 - TOPICS IN CULTURAL HERITAGE TOURISM EVENT PLANNING AND MANAGEMENT (3 CR.)**

This course explores the core principles of event planning and management as it specifically relates to cultural heritage tourism, demonstrating the principles through the case study of three existing cultural heritage festivals.

**UNMANNED SYSTEMS (UMS)****UMS 107 - SMALL UNMANNED AIRCRAFT SYSTEMS (SUAS) REMOTE PILOT GROUND SCHOOL (3 CR.)**

Presents the aeronautical knowledge required for FAA approved commercial operations as a Remote Pilot with small Unmanned Aircraft Systems (sUAS) rating. Covers the regulations applicable to small UAS operations, loading and performance, emergency procedures, crew resource management, determining the performance of the small unmanned aircraft, and maintenance/inspection procedures. Prepares students for the FAA written examination required to obtain the Remote Pilot certificate.

**UMS 111 - SMALL UNMANNED AIRCRAFT SYSTEMS (SUAS) I (3 CR.)**

Description: Introduces students to the history of small Unmanned Aerial Systems (sUAS), surveys current platforms, applications, components, and sensors. Covers the theory of flight, operations, manual flight, maintenance, and required record keeping. Introduces mission planning, crew management, and autonomous control. Emphasizes the ethical, legal, and safe use of sUAS.

**UMS 177 - SMALL UNMANNED AIRCRAFT SYSTEMS (SUAS) COMPONENTS AND MAINTENANCE (3 CR.)**

Provides an introduction to the basic equipment and techniques used in maintaining, repairing, and upgrading sUAS to assure airworthiness and proper operation of the other components. Emphasizes safe practices in repair and handling of components and develops fundamental skills in troubleshooting/repair of the circuits, subsystems and components typically found in the complete sUAS. Covers payload sensor mounting, power management and security threat management. Lecture 2 Hours. Laboratory 4-5 Hours.

**UMS 211 - SMALL UNMANNED AIRCRAFT SYSTEMS (SUAS) II - (3 CR.)**

Focuses on advanced Unmanned Aircraft System (UAS) mission planning and operation of small Unmanned Aerial Systems (sUAS). Covers mission planning, operations, communications, autonomous flights, ground control station operations, crew management, emergency procedures, safety/air vehicle pilot checklist procedures, sensor selection, data collection and analysis. Examines advanced coverage of maintenance, operations support, and introduces geospatial product workflow. Emphasizes the ethical, legal, and safe use of sUAS. Lecture 2 hours. Laboratory 2-3 hours. Total 4-5 hours per week. Prerequisite: UMS 111.

**UMS 290 - COORDINATED INTERNSHIP IN SUAS (3 CR.)**

In order to apply basic UAV data collection and processing theory to the actual job site, this cooperative venture will allow students to conduct actual UAV data collection missions, to process RGB, multispectral, and thermal data, and to provide an end product to the customer. Variable hours per week.

**UMS 296 - ON-SITE TRAINING IN UNMANNED SYSTEMS (3 CR.)**

Actual job site training on applying intermediate and advanced UAV mission planning, execution, recovery, data collection, processing, and documentation techniques to fulfill varied customer needs and requirements supervised and coordinated by the college. Variable hours per week.

**WELDING (WEL)****WEL 100 - FUNDAMENTALS OF WELDING (3 CR.)**

Introduces electric and gas welding and cutting. Provides fundamental principles of joining ferrous and nonferrous metals, welding and cutting processes, equipment operation, and safety procedures with emphasis upon welding and cutting procedures. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

**WEL 110 - WELDING PROCESSES (3 CR.)**

Introduces types of welding, their advantages and disadvantages. Points out effects of welds on metals to be machined. Provides practice and demonstration in welding. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

**WEL 115 - ARC AND GAS WELDING (3 CR.)**

Presents arc and gas welding practices. Discusses safety, general welding practices and effects of welding on metals. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

**WEL 123 - ARC WELDING I (3-4 CR.)**

Teaches operation of AC transformers and DC motor generator arc welding sets, welding polarities, heats and electrodes for use in joining various metal alloys by the arc welding process; deals with running beads, butt, and fillet welds in all positions. Emphasizes safety procedures. Variable hours per week.

**WEL 124 - ARC WELDING II (3-4 CR.)**

Teaches operation of AC transformers and DC motor generator arc welding sets, welding polarities, heats and electrodes for use in joining various metal alloys by the arc welding process; deals with running beads, butt, and fillet welds in all positions. Emphasizes safety procedures. Variable hours per week.

**WEL 126 - PIPE WELDING I (3 CR.)**

Teaches metal arc welding processes including the welding of pressure piping in the horizontal, vertical, and horizontal-fixed positions in accordance with section IX of the ASME Code. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

**WEL 129 - PIPEFITTING AND FABRICATION (3 CR.)**

Reviews basic mathematical skills necessary for the pipefitting trade. Teaches basic methods for fabricating piping offsets, miter-turn fittings, tees, odd angle elbows, 90 degree elbows, and the use of pipefitting and layout tools. May be taken with WEL 126. Lecture 3 hours per week.

**WEL 130 - INERT GAS WELDING (3 CR.)**

Introduces practical operations in the uses of inert-gas-shield arc welding. Discusses equipment, safety operations, welding practice in the various applications, manual and semiautomatic welding. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

**WEL 141 - WELDER QUALIFICATION TESTS I-II (3 CR.)**

Studies techniques and practices of testing welded joints through destructive and non-destructive testing. Part I of II. Lecture 2 hours. Laboratory 3-6 hours. Total 5-8 hours per week.

**WEL 153 - LAYOUT AND FITTING FOR WELDERS (3 CR.)**

Covers the application of formulas and calculations to the proper layout and fitting of metals in welding projects. Emphasizes the use of jigs, fixtures, and hand tools in metal fabrication and assembly along with fabrication and safety procedures for hands-on and workplace projects. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week. Prerequisite: WEL 120 or approval of the program head.

**WEL 160 - SEMIAUTOMATIC WELDING PROCESSES (3 CR.)**

Introduces semiautomatic welding processes with emphasis on practical application. Includes the study of filler wires, fluxes, and gases. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

**WEL 195 - TOPICS: WELDING PROCESSES (3 CR.)**

Introduces types of welding, their advantages and disadvantages. Points out effects of welds on metals to be machined. Provides practice and demonstration in welding. Also teaches basic pipe fitting and all position open butt welds in pipe. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

**WEL 195 - TOPICS IN FLUX CORE ARC WELDING (1-5 CR.)**

Introduces semi-automatic welding processes with emphasis on practical application. Includes the study of filler wires, fluxes and gases. Also teaches basic pipe fitting and all position open butt welds in pipe. Laboratory 3 hours, lecture 2 hours, total of 5 hours for 3 credit class.

**WEL 195 - TOPICS IN GAS METAL ARC WELDING (1-5 CR.)**

Introduces practical operations in the uses of inert-gas-shield arc welding. Discusses equipment, safety operations, welding practice in the various applications, manual and semi-automatic welding. Also teaches basic pipe fitting and all position open butt welds in pipe. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

**WEL 198 - SEMINAR AND PROJECT IN WELDING (3 CR.)**

Completion of a project or research report related to the student's occupational objective and a study of approaches to the selection and pursuit of career opportunities in the field. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

**WEL 295 - TOPICS IN ARC WELDING II (3 CR.)**

Teaches operation of AC transformer and DC motor generator arc welding sets, welding polarities, heats and electrodes for use in joining various metal alloys by the arc welding process; deals with running beads, butt, and fillet welds in all positions. Also teaches basic pipe fitting and all position open butt welds in pipe. Emphasizes safety procedures. Lecture 2 hours, lab 3 hours. Total 5 hours per week.

**WEL 295 - TOPICS: INERT GAS WELDING (3 CR.)**

Introduces practical operations in the uses of inert-gas-shield arc welding. Discusses equipment, safety operations, welding practice in the various applications, manual and semi-automatic welding. Also teaches basic pipe fitting and all position open butt welds in pipe. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

**WEL 295 - TOPICS IN ARC & GAS WELDING (3 CR.)**

Present arc and gas welding practices. Discusses safety, general welding practices and effects of welding on metals. Also teaches basic pipe fitting and all position open butt welds in pipe. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

**WEL 295 - TOPICS IN WELDING PROCESSES II (3 CR.)**

Teaches operation of AC transformer and DC motor generator arc welding sets, welding polarities, heats and electrodes for use in joining various metal alloys by the arc welding process; deals with running beads, butt, and fillet welds in all positions. Also teaches basic pipe fitting and all position open butt welds in pipe. Emphasizes safety procedures. Lecture 2 hours, lab 3 hours. Total 5 hours per week.

**WEL 295 - TOPICS: SEMI-AUTOMATIC WELDING (3 CR.)**

Introduces semi-automatic welding processes with emphasis on practical application. Includes the study of filler wires, fluxes and gases. Laboratory 3 hours, lecture 2 hours, total 5 hours for 3 credit class.

# Personnel

## Administrative Faculty

### **Blankenbecler, Nora**

Project Director, Health Information Management Grant  
A.A.S., Associate of Science, Mountain Empire Community College  
B.S., Milligan College  
M.B.A, King College

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M.A., Tusculum College  
M.A., East Tennessee State University  
Advanced Study, Old Dominion University/North Central University

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M.S.N., University of Virginia

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M.L.S., University of Kentucky  
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M.S., University of Nebraska

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### **Vicars, Ron**

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M.S., Fort Hays State University  
Ed.D., Nova Southeastern University

## President Emeritus

### **Suarez, Terrance E.**

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# Governance

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