2020
2021

ACADEMIC CATALOG

Patrick
HENRY
Community College

Patrick Henry Community College 2020-2021 Session Calendar

(all dates subject to change)

SUMMER SEMESTER 2020

Important Dates	Class Sessions		
	10 Wk	5 Wk - A	5 Wk - B
Classes Begin	May 26	May 26	July 7
Last Date to Register Late or Add	June 3*	June 3*	July 15*
No Classes	June 29 – July 3	June 29 – July 3	
College Closed	July 3	July 3	
Last Date to Drop a Course to Receive a Refund	June 8	June 1	July 13
Last Date to Withdraw without Grade Penalty or to Change from Credit to Audit	July 13	June 19	July 29
Classes End	August 10	July 6	August 12
Exams	August 11 – 12	See Course Syllabus	
Grades Due	August 14 at 9:00 a.m.		

FALL SEMESTER 2020

Important Dates	Class Sessions		
	16 Wk	8 Wk - A	8 Wk - B
Classes Begin	August 24	August 24	October 19
Last Date to Register Late or Add	September 1*	September 1*	October 27*
Last Date to Drop a Course to Receive a Refund	September 10	August 31	October 27
Last Date to Withdraw without Grade Penalty or to Change from Credit to Audit	October 30	September 24	November 24
Faculty Research - No Classes	November 25		
College Closed	September 7 November 26-27	September 7	November 26 – 27
Classes End	December 11	October 16	December 18
Exams	December 14-18	See Course Syllabus	
Grades Due	December 22 at 9:00 a.m.		

SPRING SEMESTER 2021

Important Dates	Class Sessions		
	16 Wk	8 Wk - A	8 Wk - B
Classes Begin	January 7	January 7	March 4
Last Date to Register Late or Add	January 15*	January 15*	March 19*
College Closed	January 18	January 18	
Last Date to Drop a Course to Receive a Refund	January 25	January 14	March 15
Last Date to Withdraw without Grade Penalty or to Change from Credit to Audit	March 25	February 9	April 13
Spring Break	March 8 – 12	March 8 - 12	March 8 - 12
Classes End	May 4	March 3	May 11
Exams	May 5 – 7, 10 - 11	See Course Syllabus	
Faculty Research - No Classes	May 12 – 14		
Grades Due	May 13 at 9:00 a.m.		
Commencement	May 15		

* During the **first four days of a session**, students may add a course for which all pre-requisites are met.
* During days **five, six, and seven of a session,** students must obtain **written** faculty permission to enroll in a course.

8 week session: 1 EAB Progress Report
10 week session: 2 EAB Progress Reports
16 week session: 2 EAB Progress Reports

ADVISING SHEETS

Student ID:_____
Student Name:_____
Advisor Name:_____

Catalog: 2020-2021 Catalog
Program: Administration of Justice, AAS

Administration of Justice, AAS

Length: 66 credits

Purpose: The curriculum is designed to provide a theoretical and practical understanding of the criminal justice profession in local, state, and federal criminal justice systems.

Program Learning Outcomes: The student will be able to:

- demonstrate minimum proficiency in General Education Skills which are defined as oral communication, written communication, mathematical/problem solving, scientific reasoning, information literacy and critical thinking;
- demonstrate competency of effects of crime, law, and law enforcement systems in society;
- demonstrate competency of legal and non-legal drugs including identification, societal influences, and legal consequences;
- demonstrate proficiency to evaluate tort and criminal case charges, elements, victims, perpetrators, and outcomes;
- demonstrate proficiency of proper criminal investigation methods that follow laws from judicial, executive, and legislative branches; and
- demonstrate acceptable workplace skills, attitudes, and behaviors.

Occupational Objectives: The program prepares students for career service in the following areas: local and state police departments, federal agencies, correctional institutions, and security officers in commercial or industrial areas.

General Education Requirements

Course Name	Credits:	Term Taken	Grade
CST 110 - Introduction to Communication	Credits: 3		
ENG 111 - College Composition I	Credits: 3		
MTH 130 - Fundamentals of Reasoning	Credits: 3		
PLS 211 - U.S. Government I and	Credits: 3		
PLS 212 - U.S. Government I	Credits: 3		
or			
HIS 101 - History of Western Civilization I and	Credits: 3		
HIS 102 - History of Western Civilization II	Credits: 3		
or			
HIS 121 - United States History I and	Credits: 3		
HIS 122 - United States History II	Credits: 3		
PSY 200 - Principles of Psychology	Credits: 3		
SOC 200 - Principles of Sociology	Credits: 3		
HUM EEE - Humanities/Fine Arts Elective	Credits: 3		
ADJ 160 - Police Response to Critical Incidents	Credits: 3		

Total Credits: 27

Program Requirements

Course Name	Credits:	Term Taken	Grade
ADJ 100 - Survey of Criminal Justice	Credits: 3		
ADJ 105 - The Juvenile Justice System	Credits: 3		
ADJ 111 - Law Enforcement Organization & Administration I	Credits: 3		
ADJ 130 - Introduction to Criminal Law	Credits: 3		
ADJ 131 - Legal Evidence	Credits: 3		
ADJ 133 - Ethics and the Criminal Justice Professional	Credits: 3		
ADJ 146 - Adult Correctional Institutions	Credits: 3		
or			
ADJ 140 - Introduction to Corrections	Credits: 3		
or			
ADJ 145 - Corrections and the Community	Credits: 3		
ADJ 201 - Criminology	Credits: 3		
ADJ 236 - Principles of Criminal Investigation	Credits: 3		

ADJ 237 - Advanced Criminal Investigation	Credits: 3		
ADJ 280 - Capstone Project	Credits: 1		
ADJ 299 - Supervised Study	Credits: 1		
PED/HLT EEE - Wellness Electives	Credits: 3		
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		

Total Credits: 39

Minimum Required for Degree: 66 Credits

Advising Sheet

Advising Sheet Suggested Schedules: Courses in advising sheets are displayed under the semester in which the courses are regularly offered. It is possible that a course shown on the schedule for a particular semester may not be offered due to low enrollment or other factors.

Developmental Prerequisites

NOTE: * These classes meet the requirements of the Career Studies Certificate in Justice Studies.

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
ADJ 100 - Survey of Criminal Justice *	Credits: 3		
ADJ 111 - Law Enforcement Organization & Administration I *	Credits: 3		
ENG 111 - College Composition I	Credits: 3		
CST 110 - Introduction to Communication	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		

Total Credits: 16

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
ADJ 105 - The Juvenile Justice System *	Credits: 3		
ADJ 133 - Ethics and the Criminal Justice Professional	Credits: 3		
ADJ 201 - Criminology *	Credits: 3		
ADJ 146 - Adult Correctional Institutions *	Credits: 3		
HUM EEE - Humanities/Fine Arts Elective	Credits: 3		
PSY 200 - Principles of Psychology	Credits: 3		

Total Credits: 18

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
ADJ 130 - Introduction to Criminal Law	Credits: 3		
ADJ 131 - Legal Evidence	Credits: 3		
MTH 130 - Fundamentals of Reasoning	Credits: 3		
PLS 211 - U.S. Government I	Credits: 3		
SOC 200 - Principles of Sociology	Credits: 3		

Total Credits: 15

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
ADJ 236 - Principles of Criminal Investigation	Credits: 3		
ADJ 237 - Advanced Criminal Investigation	Credits: 3		
ADJ 280 - Capstone Project	Credits: 1		
ADJ 299 - Supervised Study	Credits: 1		
PLS 212 - U.S. Government I	Credits: 3		
PED/HLT EEE - Wellness Electives	Credits: 3		
ADJ 160 - Police Response to Critical Incidents	Credits: 3		

Total Credits: 17

Notes:

Student ID:_____   **Catalog: 2020-2021 Catalog**
Student Name:_____   **Program: Administrative Support Technology, AAS**
Advisor Name:_____

Administrative Support Technology, AAS

Length: 62 credits

Purpose: Individuals who are seeking their first employment or those who wish to qualify for promotion in a present position or to another field, including self-employment, may benefit from this program. This program prepares a student for work in a general office setting as well as offering skills in the legal and medical office areas. The program enables the student to become proficient in administrative duties and skills in a variety of companies – including manufacturing, service-oriented, and government–or as a virtual assistant.

Employment Objectives: Completion of this program may lead to employment or career advancement in any of a wide variety of positions such as administrative assistant, administrative secretary, executive secretary, medical secretary, medical transcriptionist, customer service representative, legal secretary, office services specialist, and clerical supervisor.

Potential Certification: A student may elect to take an industry-specific certification exam. The examinations generally require a testing fee paid by the student. After completion of this program, a student will be academically prepared to take the following examinations:

- Microsoft Office Specialist (MOS) - Word, Excel, PowerPoint
- Certified Administrative Professional (CAP) and Certified Professional Secretary (CPS) - sponsored by the International Association of Administrative Professionals (IAAP) (requires related work experience)

Program Learning Outcomes: A student will be able to:

- demonstrate minimum proficiency in General Education Skills which are defined as oral communication, written communication, mathematical/problem solving, scientific reasoning, information literacy, and critical thinking
- demonstrate the supervisory role of the administrative professional including ethical behaviors and appropriate interpersonal skills
- demonstrate proficiency with computer software, business application, and information literacy

General Education Requirements

Course Name	Credits:	Term Taken	Grade
CST 110 - Introduction to Communication	Credits: 3		
MTH 130 - Fundamentals of Reasoning	Credits: 3		
or			
MTH 154 - Quantitative Reasoning	Credits: 3		
HUM EEE - Humanities/Fine Arts Elective	Credits: 3		
SOC EEE - Social Sciences Elective	Credits: 3		
ENG 115 - Technical Writing	Credits: 3		

Total Credits: 15

Program Requirements

Course Name	Credits:	Term Taken	Grade
ACC 124 - Payroll Accounting	Credits: 3		
or			
ACC 211 - Principles of Accounting I	Credits: 3		
AST 101 - Keyboarding I	Credits: 3		
AST 102 - Keyboarding II	Credits: 3		
AST 107 - Editing/Proofreading Skills	Credits: 3		
AST 136 - Office Record Keeping	Credits: 3		
AST 137 - Records Management	Credits: 3		
AST 141 - Word Processing (Specify Software)	Credits: 3		
AST 154 - Voice Recognition Applications (Dragon Naturally Speaking)	Credits: 1		
AST 205 - Business Communications	Credits: 3		
AST 243 - Office Administration I	Credits: 3		
AST 260 - Presentation Software (Microsoft PowerPoint)	Credits: 3		
AST 290 - Coordinated Internship	Credits: 3		
AST 299 - Supervised Study	Credits: 1		
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		
ITE 140 - Spreadsheet Software	Credits: 3		

MKT 260 - Customer Service Management	Credits: 3		
PED/HLT EEE - Wellness Electives	Credits: 2		
SDV 100 - College Success Skills	Credits: 1		

Total Credits: 47

Minimum Required for Degree: 62 Credits

Advising Sheet

Advising Sheet Suggested Schedules: Courses in advising sheets are displayed under the semester in which the courses are regularly offered. It is possible that a course shown on the schedule for a particular semester may not be offered due to low enrollment or other factors.

Developmental Prerequisites

NOTE: * These classes meet the requirements of the Certificate in Clerical Studies.
Classes marked with a + meet the requirements of the *Career Studies Certificate for Office Assisting*.

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
AST 101 - Keyboarding I * +	Credits: 3		
MTH 130 - Fundamentals of Reasoning *	Credits: 3		
SDV 100 - College Success Skills * +	Credits: 1		
ITE 115 - Introduction to Computer Applications and Concepts * +	Credits: 3		
ENG 115 - Technical Writing	Credits: 3		
AST 107 - Editing/Proofreading Skills	Credits: 3		

Total Credits: 16

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
AST 102 - Keyboarding II * +	Credits: 3		
AST 154 - Voice Recognition Applications (Dragon Naturally Speaking) * +	Credits: 1		
AST 141 - Word Processing (Specify Software) * +	Credits: 3		
ACC 124 - Payroll Accounting *	Credits: 3		
ITE 140 - Spreadsheet Software *	Credits: 3		
AST 136 - Office Record Keeping	Credits: 3		

Total Credits: 16

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
AST 243 - Office Administration I *	Credits: 3		
AST 260 - Presentation Software (Microsoft PowerPoint) *	Credits: 3		
PED/HLT EEE - Wellness Electives	Credits: 2		
CST 110 - Introduction to Communication	Credits: 3		
AST 137 - Records Management	Credits: 3		
HUM EEE - Humanities/Fine Arts Elective	Credits: 3		

Total Credits: 17

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
AST 290 - Coordinated Internship	Credits: 3		
AST 299 - Supervised Study	Credits: 1		
MKT 260 - Customer Service Management	Credits: 3		
SOC EEE - Social Sciences Elective	Credits: 3		
AST 205 - Business Communications	Credits: 3		

Total Credits: 13

Notes:

Student ID:_____   Catalog: 2020-2021 Catalog
Student Name:_____   Program: Administrative Support Technology:
Advisor Name:_____   Medical Office Specialization, AAS

Administrative Support Technology: Medical Office Specialization, AAS

Length: 65 credits

Purpose: Individuals who are seeking their first employment or those who wish to qualify for promotion in a present position or to another field, including self-employment, may benefit from this program. This program prepares a student for work in a general office setting with specialized training in various medical office areas. The program enables the student to become proficient in administrative duties and provides additional skills in a medical setting.

Employment Objectives: Completion of this program may lead to employment or career advancement in any of a wide variety of positions such as administrative assistant, administrative secretary, executive secretary, medical secretary, medical transcriptionist, customer service representative, office services specialist, and clerical supervisor.

Potential Certification: A student may elect to take an industry-specific certification exam. The examinations generally require a testing fee paid by the student. After completion of this program, a student will be academically prepared to take the following examinations:

- Microsoft Office Specialist (MOS) - Word, PowerPoint, Excel;
- **Certified Administrative Professional (CAP) and Certified Professional Secretary (CPS) - sponsored by the International Association of Administrative Professionals (IAAP) (requires related work experience).**

Program Learning Outcomes: A student will be able to:

- demonstrate minimum proficiency in General Education Skills which are defined as oral communication, written communication, mathematical/problem solving, scientific reasoning, information literacy, and critical thinking
- demonstrate the management of health information through the use of filing system and electronic health records
- apply mathematical reasoning skills to formulate and solve problems as applied to electronic billing
- demonstrate proficiency with computer software, business application, and information literacy
- demonstrate acceptable workplace skills, attitudes, and behaviors

General Education Requirements

Course Name	Credits:	Term Taken	Grade
CST 110 - Introduction to Communication	Credits: 3		
ENG 115 - Technical Writing	Credits: 3		
MTH 130 - Fundamentals of Reasoning	Credits: 3		
or			
MTH 154 - Quantitative Reasoning	Credits: 3		
HUM EEE - Humanities/Fine Arts Elective	Credits: 3		
SOC EEE - Social Sciences Elective	Credits: 3		

Total Credits: 15

Program Requirements

Course Name	Credits:	Term Taken	Grade
AST 101 - Keyboarding I	Credits: 3		
AST 102 - Keyboarding II	Credits: 3		
AST 107 - Editing/Proofreading Skills	Credits: 3		
AST 136 - Office Record Keeping	Credits: 3		
AST 141 - Word Processing (Specify Software)	Credits: 3		
AST 154 - Voice Recognition Applications (Dragon Naturally Speaking)	Credits: 1		
AST 243 - Office Administration I	Credits: 3		
AST 245 - Medical Machine Transcription	Credits: 3		
AST 260 - Presentation Software (Microsoft PowerPoint)	Credits: 3		
AST 271 - Medical Office Procedures I	Credits: 3		
AST 290 - Coordinated Internship	Credits: 3		
AST 299 - Supervised Study	Credits: 1		
HIM 143 - Managing Electronic Billing In A Medical Practice	Credits: 3		
HLT 143 - Medical Terminology I	Credits: 3		
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		
ITE 140 - Spreadsheet Software	Credits: 3		
MKT 260 - Customer Service Management	Credits: 3		

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PED/HLT EEE - Wellness Electives	Credits: 2		
SDV 100 - College Success Skills	Credits: 1		

Total Credits: 50

Minimum Required for Degree: 65 Credits

Advising Sheet

Advising Sheet Suggested Schedules: Courses in advising sheets are displayed under the semester in which the courses are regularly offered. It is possible that a course shown on the schedule for a particular semester may not be offered due to low enrollment or other factors.

Developmental Prerequisites

NOTE: *These classes meet the requirements of the Career Studies Certificate in Medical Transcription.

Classes marked with a + meet the requirements for the Career Studies Certificate in Office Assisting

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
AST 101 - Keyboarding I * +	Credits: 3		
AST 107 - Editing/Proofreading Skills	Credits: 3		
ENG 115 - Technical Writing	Credits: 3		
HLT 143 - Medical Terminology I *	Credits: 3		
ITE 115 - Introduction to Computer Applications and Concepts +	Credits: 3		
SDV 100 - College Success Skills +	Credits: 1		

Total Credits: 16

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
AST 102 - Keyboarding II * +	Credits: 3		
AST 136 - Office Record Keeping	Credits: 3		
AST 141 - Word Processing (Specify Software) * +	Credits: 3		
AST 154 - Voice Recognition Applications (Dragon Naturally Speaking)	Credits: 1		
HIM 143 - Managing Electronic Billing In A Medical Practice *	Credits: 3		
MTH 130 - Fundamentals of Reasoning	Credits: 3		

Total Credits: 16

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
AST 243 - Office Administration I	Credits: 3		
AST 245 - Medical Machine Transcription	Credits: 3		
AST 260 - Presentation Software (Microsoft PowerPoint)	Credits: 3		
CST 110 - Introduction to Communication	Credits: 3		
PED/HLT EEE - Wellness Electives	Credits: 2		
SOC EEE - Social Sciences Elective	Credits: 3		

Total Credits: 17

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
AST 271 - Medical Office Procedures I	Credits: 3		
AST 290 - Coordinated Internship	Credits: 3		
AST 299 - Supervised Study	Credits: 1		
ITE 140 - Spreadsheet Software	Credits: 3		
MKT 260 - Customer Service Management	Credits: 3		
HUM EEE - Humanities/Fine Arts Elective	Credits: 3		

Total Credits: 16

Notes:

Student ID:_____

Student Name:_____

Advisor Name:_____

Catalog: 2020-2021 Catalog

Program: Advanced Cybersecurity & Networking, CSC

Advanced Cybersecurity & Networking, CSC

Career Information

Current Job Opportunities

Gainful Employment Information

Length: 19 credits

Purpose:

This career studies certificate leads to advanced-level employment opportunities in cybersecurity and networking fields. This curriculum prepares students for advanced IT knowledge and skills with strong emphasis on configuration, implementation, and troubleshooting details. It also provides the skills to recognize, prevent, and defend against treats to organization's information and information systems whether it is through physical or cyber-attacks.

Students are introduced to hands-on elements of the operating systems, computer hardware, networking concepts, programming, and cybersecurity core areas to be well prepared and successful in areas of IT, including cybersecurity and networking.

Students must successfully receive the career studies certificate in Cybersecurity and Networking Foundations before taking this advanced career studies certificate.

Employment Objectives: Graduates may seek employment opportunities as an entry-level Network Analyst/Specialist, Security Analyst/Specialist, or a Security Architect in local businesses, educational institutions, or governmental agencies.

Potential Certification: A student may elect to take an industry-specific certification exam. The examinations generally require a testing fee paid by the student. After completion of this program, a student will be academically prepared to take the following examinations:

- Security+
- CCNA

Program Learning Outcomes: A student will be able to:

- demonstrate basic knowledge of intrusion detection, incident handling, firewalls, network security laws, software vulnerability
- recognize threats and vulnerabilities to networks and servers
- develop a security infrastructure; and
- demonstrate techniques for mitigating security threats.

Program Requirements

Course Name	Credits:	Term Taken	Grade
ITN 155 - Switching, Wireless, and Wan Technologies (ICND2) - CISCO	Credits: 4		
ITN 170 - Linux System Administration	Credits: 3		
ITN 261 - Network Attacks, Computer Crime and Hacking	Credits: 3		
ITN 262 - Network Communication, Security and Authentication	Credits: 3		
ITN 266 - Network Security Layers	Credits: 3		
ITN 267 - Legal Topics In Network Security	Credits: 3		

Total Credits: 19

Minimum Required for Certificate: 19 Credits

Advising Sheet

Advising Sheet Suggested Schedules: Courses in advising sheets are displayed under the semester in which the courses are regularly offered. It is possible that a course shown on the schedule for a particular semester may not be offered due to low enrollment or other factors.

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
ITN 155 - Switching, Wireless, and Wan Technologies (ICND2) - CISCO	Credits: 4		
ITN 261 - Network Attacks, Computer Crime and Hacking	Credits: 3		
ITN 262 - Network Communication, Security and Authentication	Credits: 3		

Total Credits: 10

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
ITN 266 - Network Security Layers	Credits: 3		
ITN 267 - Legal Topics In Network Security	Credits: 3		
ITN 170 - Linux System Administration	Credits: 3		

Total Credits: 9

Notes:

Student ID:_____	Catalog: 2020-2021 Catalog
Student Name:_____	Program: Advanced Manufacturing Technician,
Advisor Name:_____	CSC

Advanced Manufacturing Technician, CSC

According to VEC labor market information, the manufacturing industry accounts for approximately 20% of employment in the region served by Patrick Henry Community College. Through its work with employers on Business and Industry Leadership Teams (BILTs), PHCC's division of Workforce, Economic, and Community Development has identified a core set of knowledge, skills, and abilities required across the advanced manufacturing industry sector, including safety, applied mathematics, quality, processes, basic maintenance and machine operation (mechatronics), computer technology, and career intelligence. In addition, employers have identified the need for internship or apprenticeship opportunities to provide hands-on, workplace experiences for students. The career studies certificate presented below provides instruction for these core skills, as well as internship opportunities. In addition to the career studies certificate, students will have an opportunity to earn the Certified Production Technician (CPT) national industry certification from the Manufacturing Skills Standards Council (MSSC). This career studies certificate will allow PHCC to not only produce an advanced manufacturing workforce with strong general manufacturing skills, but also to quickly add on courses to develop training for specific industries. For example, the proposed career studies certificate stacks fully into the Center for Advanced Film Manufacturing (CAFM) program developed in partnership with Eastman so students completing the advanced manufacturing technician certificate will only need to take two advanced film specific courses to complete the CAFM program. The proposed career studies certificate is also fully stackable to the Associate degree in General Engineering Technologies, becoming another step on the advanced manufacturing/engineering technologies career pathway.

Requirements

Course Name	Credits:	Term Taken	Grade
EGR 216 - Computer Methods In Engineering and Technology	Credits: 3		
IND 101 - Quality Assurance Technology I	Credits: 3		
IND 125 - Installation and Preventive Maintenance	Credits: 3		
IND 290 - Coordinated Internship	Credits: 3		
MEC 112 - Processes of Industry	Credits: 3		
MEC 140 - Introduction to Mechatronics	Credits: 3		
SAF 126 - Principles of Industrial Safety	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		

Minimum Required for Career Studies Certificate: 22 credits

Course Name	Credits:	Term Taken	Grade
SDV 100 - College Success Skills	Credits: 1		
EGR 216 - Computer Methods In Engineering and Technology	Credits: 3		
MEC 112 - Processes of Industry	Credits: 3		
MEC 140 - Introduction to Mechatronics	Credits: 3		
SAF 126 - Principles of Industrial Safety	Credits: 3		
IND 101 - Quality Assurance Technology I	Credits: 3		
IND 125 - Installation and Preventive Maintenance	Credits: 3		
IND 290 - Coordinated Internship	Credits: 3		

Advising Sheet

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
IND 101 - Quality Assurance Technology I	Credits: 3		
SAF 126 - Principles of Industrial Safety	Credits: 3		
MEC 140 - Introduction to Mechatronics	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		

Total Credits: 10

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
MEC 112 - Processes of Industry	Credits: 3		
IND 125 - Installation and Preventive Maintenance	Credits: 3		
EGR 216 - Computer Methods In Engineering and Technology	Credits: 3		
IND 290 - Coordinated Internship	Credits: 3		

Total Credits: 12

Notes:

Student ID:_____	Catalog: 2020-2021 Catalog
Student Name:_____	Program: Advanced Manufacturing: Advanced
Advisor Name:_____	Films Technology, CSC

Advanced Manufacturing: Advanced Films Technology, CSC

Career Information

Current Job Opportunities

Gainful Employment Information

Length: 28 credits

Purpose: This program is provided to meet the demands for an emerging technical workforce and is a direct response to local workforce and industry demand. Therefore, implementation of this program will expand employment and educational opportunities for area citizens.

Program Learning Outcomes: A student will be able to:

- demonstrate knowledge of safety, quality practices
- processes and procedures, and preventive maintenance within the manufacturing production environment
- demonstrate proficiency in applied mathematics, reading for information, and locating information
- demonstrate understanding of and proficiency in machine operations especially those relevant to advanced films manufacturing, including coating, laminating, and web handling

Minimum Required for Career Studies Certificate: 28 Credits

Course Name	Credits:	Term Taken	Grade
SDV 100 - College Success Skills	Credits: 1		
EGR 216 - Computer Methods In Engineering and Technology	Credits: 3		
MEC 140 - Introduction to Mechatronics	Credits: 3		
SAF 126 - Principles of Industrial Safety	Credits: 3		
IND 101 - Quality Assurance Technology I	Credits: 3		
IND 125 - Installation and Preventive Maintenance	Credits: 3		
IND 195 - Introduction to Manufacturing and Advanced Films Technology	Credits: 3		
IND 290 - Coordinated Internship	Credits: 3		
IND 295 - Topics In Advanced Films Technology	Credits: 3		
MEC 112 - Processes of Industry	Credits: 3		

Advising Sheet

Advising Sheet Suggested Schedules: Courses in advising sheets are displayed under the semester in which the courses are regularly offered. It is possible that a course shown on the schedule for a particular semester may not be offered due to low enrollment or other factors.

Developmental Prerequisites

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
IND 101 - Quality Assurance Technology I	Credits: 3		
SAF 126 - Principles of Industrial Safety	Credits: 3		
MEC 140 - Introduction to Mechatronics	Credits: 3		
IND 195 - Introduction to Manufacturing and Advanced Films Technology	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		

Total Credits: 13

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
MEC 112 - Processes of Industry	Credits: 3		
IND 125 - Installation and Preventive Maintenance	Credits: 3		
IND 295 - Topics In Advanced Films Technology	Credits: 3		
EGR 216 - Computer Methods In Engineering and Technology	Credits: 3		

Total Credits: 12

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
IND 290 - Coordinated Internship	Credits: 3		

Total Credits: 3

Notes:

Student ID:_____	Catalog: 2020-2021 Catalog
Student Name:_____	Program: Applied Mechatronics, CSC
Advisor Name:_____	

Applied Mechatronics, CSC

Length: 17 credits

This program is designed to prepare students for
Siemens Mechatronics certification

Requirements

Course Name	Credits:	Term Taken	Grade
IND 243 - Principles and Applications of Mechatronics	Credits: 3		
MEC 140 - Introduction to Mechatronics	Credits: 3		
MEC 155 - Mechanisms	Credits: 3		
MEC 165 - Applied Hydraulics, Pneumatics and Hydrostatics	Credits: 3		
ETR 156 - Digital Circuits and Microprocessor Fundamentals	Credits: 4		
SDV 100 - College Success Skills	Credits: 1		

Minimum Required for Career Studies Certificate: 17 Credits

Notes:

Student ID:_____   Catalog: 2020-2021 Catalog
Student Name:_____   Program: Art Studies, CSC
Advisor Name:_____

Art Studies, CSC

Length: 13 credits

Purpose: This program is designed to provide skills for the individual pursuing a vocational or other artistic interest.

Program Learning Outcomes: A student will be able to:

- demonstrate an appreciation for the arts
- create a portfolio of artwork demonstrating proficiency in specified concepts and techniques

Requirements

Course Name	Credits:	Term Taken	Grade
ART 101 - History and Appreciation of Art I	Credits: 3		
ART 102 - History and Appreciation of Art II	Credits: 3		
ART 121 - Drawing I	Credits: 3		
ART 122 - Drawing II	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		

Minimum Required for Certificate: 13 Credits

* ART 241, ART 242 may be substituted with division approval.

Notes:

Student ID:_____
Student Name:_____
Advisor Name:_____

Catalog: 2020-2021 Catalog
Program: Bookkeeping Certificate

Bookkeeping Certificate

Career Information

Current Job Opportunities

Gainful Employment Information

Length: 31 credits

Purpose: The purpose of this program is to provide additional knowledge and skill in basic accounting and bookkeeping for persons seeking immediate employment in the field, for those already employed who want to upgrade skills or for small business owners.

Employment Objectives: Employment opportunities might include accountant's assistant, bookkeeper, financial records manager, office manager or small business operator.

Potential Certification: A student may elect to take an industry-specific certification exam. The examinations generally require a testing fee paid by the student. After completion of this program, a student will be academically prepared to take the following examinations:

- Microsoft Office Specialist (MOS) - Excel;
- QuickBooks Certification.

Program Learning Outcomes: A student will be able to:

- demonstrate ability to reason critically and problem-solve;
- describe and use general business knowledge and skills;
- apply the principles of financial accounting, managerial accounting, tax accounting, and payroll accounting;
- prepare and interpret financial statements;
- demonstrate proficiency in personal computer operations and applications;
- demonstrate effective written communication skills in a business setting.

General Education Requirements

Course Name	Credits:	Term Taken	Grade
ENG 111 - College Composition I	Credits: 3		
MTH 130 - Fundamentals of Reasoning	Credits: 3		

Total Credits: 6

Program Requirements

Course Name	Credits:	Term Taken	Grade
ACC 124 - Payroll Accounting	Credits: 3		
ACC 211 - Principles of Accounting I and	Credits: 3		
ACC 212 - Principles of Accounting II	Credits: 3		
ACC 215 - Computerized Accounting	Credits: 3		
ACC 261 - Principles of Federal Taxation I	Credits: 3		
BUS 125 - Applied Business Mathematics	Credits: 3		
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		
ITE 140 - Spreadsheet Software	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		

Total Credits: 25

Minimum Required for Certificate: 31 Credits

Notes:

Student ID:_____
Student Name:_____
Advisor Name:_____

Catalog: 2020-2021 Catalog
Program: Business Administration, AA&S

Business Administration, AA&S

Length: 60-61 credits

Purpose: The curriculum is designed for the student who plans to complete a baccalaureate degree program. The transfer institution's catalog and transfer guide are the best sources of information for planning a course of study. Final responsibility for transferability of courses rests with the student and the registrar of that institution.

Program Outcomes: A student will be able to:

- locate, evaluate, interpet, and combine information to reach well-reasoned conclusions or solutions
- express themselves effectively in a variety of written forms
- calculate, interpret, and use numerical and quantitative information in a variety of settings
- demonstrate the knowledge and values necessary to become informed and contributing participants in a democratic society
- recognize and know how to apply the scientific method, and evaluate empirical information
- demonstrate skills imprortant for successful transition into the workplace and/or pursuit of further education by way of professionalism and self-management practices and behaviors
- apply the principles of financial accounting
- define key terminology associated with microeconomics
- apply the key principles associated with macroeconomics

General Education Requirements

Course Name	Credits:	Term Taken	Grade
CST 110 - Introduction to Communication	Credits: 3		
ENG 111 - College Composition I and	Credits: 3		
ENG 112 - College Composition II	Credits: 3		
HIS 121 - United States History I and	Credits: 3		
HIS 122 - United States History II	Credits: 3		
or			
HIS 101 - History of Western Civilization I and	Credits: 3		
HIS 102 - History of Western Civilization II	Credits: 3		
or			
HIS 111 - History of World Civilization I	Credits: 3		
HIS 112 - History of World Civilization II	Credits: 3		
MTH 161 - Precalculus I	Credits: 3		
or			
MTH 167 - Precalculus With Trigonometry	Credits: 5		
MTH 245 - Statistics I	Credits: 3		
MTH 261 - Applied Calculus I	Credits: 3		
HUM EEE - Humanities/Fine Arts Electives	Credits: 6		
NAS EEE - Natural Sciences Electives	Credits: 8		
SOC EEE - Social Sciences Elective	Credits: 3		

Total Credits: 41-43

Program Requirements

Course Name	Credits:	Term Taken	Grade
ACC 211 - Principles of Accounting I and	Credits: 3		
ACC 212 - Principles of Accounting II	Credits: 3		
ECO 201 - Principles of Macroeconomics	Credits: 3		
ECO 202 - Principles of Micro- Economics	Credits: 3		
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		
SDV 199 - Supervised Study In Transfer Programs	Credits: 1		
PED/HLT EEE - Wellness Electives	Credits: 2		

SDV 100 - College Success Skills	Credits: 1		

Total Credits: 19

Minimum Required for Degree: 60-62 Credits

Advising Sheet

Advising Sheet Suggested Schedules: Courses in advising sheets are displayed under the semester in which the courses are regularly offered. It is possible that a course shown on the schedule for a particular semester may not be offered due to low enrollment or other factors.

Developmental Prerequisites

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
ENG 111 - College Composition I	Credits: 3		
HIS 121 - United States History I	Credits: 3		
MTH 161 - Precalculus I	Credits: 3		
CST 110 - Introduction to Communication	Credits: 3		
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		

Total Credits: 16

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
ENG 112 - College Composition II	Credits: 3		
HIS 122 - United States History II	Credits: 3		
MTH 261 - Applied Calculus I	Credits: 3		
HUM EEE - Humanities/Fine Arts Elective	Credits: 3		
SOC EEE - Social Sciences Elective	Credits: 3		
PED/HLT EEE - Wellness Elective	Credits: 1		

Total Credits: 16

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
MTH 245 - Statistics I	Credits: 3		
ACC 211 - Principles of Accounting I	Credits: 3		
ECO 201 - Principles of Macroeconomics	Credits: 3		
HUM EEE - Humanities/Fine Arts Elective	Credits: 3		
NAS EEE - Natural Sciences Elective	Credits: 4		

Total Credits: 16

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
NAS EEE - Natural Sciences Elective	Credits: 4		
PED/HLT EEE - Wellness Elective	Credits: 1		
ECO 202 - Principles of Micro- Economics	Credits: 3		
ACC 212 - Principles of Accounting II	Credits: 3		
SDV 199 - Supervised Study In Transfer Programs	Credits: 1		

Total Credits: 12

Notes:

Student ID:_____   Catalog: 2020-2021 Catalog
Student Name:_____   Program: Business Technology: Major: Accounting,
Advisor Name:_____   AAS

Business Technology: Major: Accounting, AAS

Length: 62 credits

Purpose: This program provides knowledge and skills leading to immediate employment in the field of accounting. People who wish to qualify for promotion in a present position to another field may benefit from this program. Students are strongly urged to consult their faculty advisor in planning programs.

Employment Objectives: Some of the occupations and positions for which graduates of this program may qualify are accounting technician, junior accountant or accountant.

Potential Certification: A student may elect to take an industry-specific certification exam. The examinations generally require a testing fee paid by the student. After completion of this program, a student will be academically prepared to take the following examinations:

- Microsoft Office Specialist (MOS) - Excel
- American Institute of Professional Bookkeepers - Certified Bookkeeper (CB) (requires related work experience and code of ethics agreement)
- QuickBooks

Program Learning Outcomes: A student will be able to:

- demonstrate minimum proficiency in General Education Skills which are defined as oral communication, written communication, mathematical/problem solving, scientific reasoning, information literacy, and critical thinking
- demonstrate the ability to perform payroll
- demonstrate the ability to prepare a complex tax return
- demonstrate a mastery of QuickBooks Accounting Software
- demonstrate acceptable workplace skills, attitudes, and behaviors

General Education Requirements

Course Name	Credits:	Term Taken	Grade
ECO 202 - Principles of Micro- Economics	Credits: 3		
ENG 111 - College Composition I	Credits: 3		
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		
MTH 130 - Fundamentals of Reasoning	Credits: 3		
or			
MTH 154 - Quantitative Reasoning	Credits: 3		
HUM EEE - Humanities/Fine Arts Elective	Credits: 3		
PED/HLT EEE - Wellness Elective	Credits: 1		

Total Credits: 16

Program Requirements

Course Name	Credits:	Term Taken	Grade
ACC 124 - Payroll Accounting	Credits: 3		
ACC 211 - Principles of Accounting I	Credits: 3		
ACC 212 - Principles of Accounting II	Credits: 3		
ACC 215 - Computerized Accounting	Credits: 3		
ACC 221 - Intermediate Accounting I	Credits: 3		
ACC 222 - Intermediate Accounting II	Credits: 3		
ACC 261 - Principles of Federal Taxation I	Credits: 3		
ACC 290 - Coordinated Internship	Credits: 3		
Or			
ACC 297 - Cooperative Education	Credits: 3		
ACC 293 - Studies In	Credits: 3		
BUS 241 - Business Law I	Credits: 3		
ITE 140 - Spreadsheet Software	Credits: 3		
BUS 100 - Introduction to Business	Credits: 3		

BUS 205 - Human Resource Management	Credits: 3
FIN 107 - Personal Finance	Credits: 3
MKT 100 - Principles of Marketing	Credits: 3
SDV 100 - College Success Skills	Credits: 1

Total Credits: 46

Minimum Required for Degree: 62 Credits

Advising Sheet

Advising Sheet Suggested Schedules: Courses in advising sheets are displayed under the semester in which the courses are regularly offered. It is possible that a course shown on the schedule for a particular semester may not be offered due to low enrollment or other factors.

Developmental Prerequisites

NOTE: * These classes meet the requirements of the Certificate in Bookkeeping.

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
ACC 211 - Principles of Accounting I	Credits: 3		
BUS 100 - Introduction to Business	Credits: 3		
ENG 111 - College Composition I	Credits: 3		
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		
MTH 130 - Fundamentals of Reasoning	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		

Total Credits: 16

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
ACC 212 - Principles of Accounting II	Credits: 3		
ECO 202 - Principles of Micro- Economics	Credits: 3		
MKT 100 - Principles of Marketing	Credits: 3		
BUS 205 - Human Resource Management	Credits: 3		
ITE 140 - Spreadsheet Software	Credits: 3		

Total Credits: 15

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
ACC 221 - Intermediate Accounting I	Credits: 3		
ACC 215 - Computerized Accounting	Credits: 3		
ACC 261 - Principles of Federal Taxation I	Credits: 3		
BUS 241 - Business Law I	Credits: 3		
FIN 107 - Personal Finance	Credits: 3		
PED/HLT EEE - Wellness Elective	Credits: 1		

Total Credits: 16

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
ACC 222 - Intermediate Accounting II	Credits: 3		
ACC 293 - Studies In	Credits: 3		
ACC 290 - Coordinated Internship	Credits: 3		
ACC 124 - Payroll Accounting	Credits: 3		
HUM EEE - Humanities/Fine Arts Elective	Credits: 3		

Total Credits: 15

Notes:

Student ID:_____	Catalog: 2020-2021 Catalog
Student Name:_____	Program: Business Technology: Major:
Advisor Name:_____	Management, AAS

Business Technology: Major: Management, AAS

Length: 62 credits

Purpose: This program provides knowledge and skills leading to immediate employment in the area of management within a small to mid-size business or retail setting. People who are seeking their first employment or wish to qualify for promotion in a present position or to another field may benefit from this program.

Occupational Objectives: Graduates of this program may qualify for positions in general management, manufacturing or industrial management, customer service, sales management or retail management.

Potential Certification: A student may elect to take an industry-specific certification exam. Examinations generally require a testing fee paid by the student. After completion of this program, a student will be academically prepared to take the following exam:

- Microsoft Office Specialist (MOS) - Excel.

Program Learning Outcomes: A student will be able to:

- demonstrate minimum proficiency in General Education Skills which are defined as oral communication, written communication, mathematical/problem solving, scientific reasoning, information literacy, and critical thinking;
- outline the decision making process for managers using various decision making techniques;
- demonstrate the ability to gather, interpret, and disseminate financial information; and
- demonstrate acceptable workplace skills, attitudes, and behaviors.

General Education Requirements

Course Name	Credits:	Term Taken	Grade
ECO 202 - Principles of Micro- Economics	Credits: 3		
ENG 111 - College Composition I	Credits: 3		
MTH 130 - Fundamentals of Reasoning	Credits: 3		
or			
MTH 154 - Quantitative Reasoning	Credits: 3		
HUM EEE - Humanities/Fine Arts Elective	Credits: 3		
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		

Total Credits: 15

Program Requirements

Course Name	Credits:	Term Taken	Grade
ACC 211 - Principles of Accounting I	Credits: 3		
BUS 100 - Introduction to Business	Credits: 3		
BUS 111 - Principles of Supervision I	Credits: 3		
BUS 112 - Principles of Supervision II	Credits: 3		
BUS 200 - Principles of Management	Credits: 3		
BUS 205 - Human Resource Management	Credits: 3		
BUS 241 - Business Law I	Credits: 3		
BUS 290 - Coordinated Internship	Credits: 3		
ACC 212 - Principles of Accounting II	Credits: 3		
FIN 107 - Personal Finance	Credits: 3		
ITE 140 - Spreadsheet Software	Credits: 3		
ACC 124 - Payroll Accounting	Credits: 3		
BUS 106 - Security Awareness for Managers	Credits: 3		
MKT 100 - Principles of Marketing	Credits: 3		
MKT 260 - Customer Service Management	Credits: 3		
PED/HLT EEE - Wellness Elective	Credits: 1		
SDV 100 - College Success Skills	Credits: 1		

Total Credits: 47

Minimum Required for Degree: 62 Credits

Advising Sheet

Advising Sheet Suggested Schedules: Courses in advising sheets are displayed under the semester in which the courses are regularly offered. It is possible that a course shown on the schedule for a particular semester may not be offered due to low enrollment or other factors.

Developmental Prerequisites

NOTE: * These classes meet the requirements of the Certificate in General Business.
Classes marked with an (M) meet the requirements of the Career Studies Certificate in Management Assistant.
Class marked with an (S) meet the requirements of the Career Studies Certificate in Supervision.

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
BUS 100 - Introduction to Business	Credits: 3		
ENG 111 - College Composition I	Credits: 3		
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		
ACC 211 - Principles of Accounting I	Credits: 3		
MTH 130 - Fundamentals of Reasoning	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		

Total Credits: 16

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
ACC 212 - Principles of Accounting II	Credits: 3		
ECO 202 - Principles of Micro- Economics	Credits: 3		
MKT 100 - Principles of Marketing	Credits: 3		
ITE 140 - Spreadsheet Software	Credits: 3		
BUS 205 - Human Resource Management	Credits: 3		

Total Credits: 15

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
PED/HLT EEE - Wellness Elective	Credits: 1		
BUS 241 - Business Law I	Credits: 3		
FIN 107 - Personal Finance	Credits: 3		
BUS 111 - Principles of Supervision I	Credits: 3		
BUS 200 - Principles of Management	Credits: 3		
BUS 106 - Security Awareness for Managers	Credits: 3		

Total Credits: 16

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
MKT 260 - Customer Service Management	Credits: 3		
HUM EEE - Humanities/Fine Arts Elective	Credits: 3		
BUS 290 - Coordinated Internship	Credits: 3		
ACC 124 - Payroll Accounting	Credits: 3		
BUS 112 - Principles of Supervision II	Credits: 3		

Total Credits: 15

Notes:

Student ID:_____ Student Name:_____ Advisor Name:_____	Catalog: 2020-2021 Catalog Program: Business Technology: Management Specialization Culinary and Hospitality Management, AAS

Business Technology: Management Specialization Culinary and Hospitality Management, AAS

Length: 62 credits

Purpose: To provide a response to current and anticipated workforce shortage in the hospitality industry. Individuals who are interested in owning or seeking employment in managing a restaurant, bakery, or other related fields may benefit from this program. The Culinary and Hospitality Management program will prepare the student to enter the rapidly changing areas of hospitality and the challenges that are currently facing today's hospitality industry.

Occupational Objectives: Graduates of this program may qualify for positions in restaurant management, general hospitality management, customer service, or kitchen management positions.

Potential Certification: A student may elect to take an industry-specific certification/license exam. After completion of this program, a student will be academically prepared to take the following exams:

- ServSafe Manager Certification;
- ManageFirst Program Certification in Controlling Food Service Costs;
- ManageFirst National Management Credential.

Program Learning Outcomes: A student will be able to:

- demonstrate minimum proficiency in General Education Skills which are defined as oral communication, written communication, mathematical/problem solving, scientific reasoning, information literacy and critical thinking;
- outline the decision making process for managers using various decision making techniques;
- demonstrate the ability to gather, interpret, and disseminate financial information;
- demonstrate acceptable workplace skills, attitudes, and behaviors;
- demonstrate a working knowledge of food production, and quality control practices;
- demonstrate skills to manage food service tasks and services; and
- demonstrate knowledge of food production and dining.

General Education Requirements

Course Name	Credits:	Term Taken	Grade
ECO 202 - Principles of Micro- Economics	Credits: 3		
ENG 111 - College Composition I	Credits: 3		
MTH 130 - Fundamentals of Reasoning	Credits: 3		
or			
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		
MTH 154 - Quantitative Reasoning	Credits: 3		
HUM EEE - Humanities/Fine Arts Elective	Credits: 3		

Total Credits: 15

Program Requirements

Course Name	Credits:	Term Taken	Grade
ACC 211 - Principles of Accounting I	Credits: 3		
BUS 100 - Introduction to Business	Credits: 3		
BUS 111 - Principles of Supervision I	Credits: 3		
BUS 205 - Human Resource Management	Credits: 3		
BUS 241 - Business Law I	Credits: 3		
HRI 158 - Sanitation and Safety	Credits: 3		
HRI 218 - Fruit, Vegetable, and Starch Preparation	Credits: 3		
HRI 220 - Meat, Seafood, and Poultry Preparation	Credits: 3		
ACC 212 - Principles of Accounting II	Credits: 3		
BUS 200 - Principles of Management	Credits: 3		
FIN 107 - Personal Finance	Credits: 3		
HRI 106 - Principles of Culinary Arts I-II	Credits: 3		
ITE 140 - Spreadsheet Software	Credits: 3		
HRI 128 - Principles of Baking	Credits: 3		
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		
PED/HLT EEE - Wellness Elective	Credits: 1		

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SDV 100 - College Success Skills	Credits: 1		

Total Credits: 47

Minimum Required for Degree: 62 Credits

Advising Sheet

Advising Sheet Suggested Schedules: Courses in advising sheets are displayed under the semester in which the courses are regularly offered. It is possible that a course shown on the schedule for a particular semester may not be offered due to low enrollment or other factors.

Developmental Prerequisites

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
BUS 100 - Introduction to Business	Credits: 3		
ENG 111 - College Composition I	Credits: 3		
ACC 211 - Principles of Accounting I	Credits: 3		
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		
MTH 130 - Fundamentals of Reasoning	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		

Total Credits: 16

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
ITE 140 - Spreadsheet Software	Credits: 3		
ACC 212 - Principles of Accounting II	Credits: 3		
ECO 202 - Principles of Micro- Economics	Credits: 3		
MKT 100 - Principles of Marketing	Credits: 3		
BUS 205 - Human Resource Management	Credits: 3		

Total Credits: 15

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
BUS 241 - Business Law I	Credits: 3		
PED/HLT EEE - Wellness Elective	Credits: 1		
FIN 107 - Personal Finance	Credits: 3		
BUS 111 - Principles of Supervision I	Credits: 3		
BUS 200 - Principles of Management	Credits: 3		
HRI 106 - Principles of Culinary Arts I-II	Credits: 3		

Total Credits: 16

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
HUM EEE - Humanities/Fine Arts Elective	Credits: 3		
HRI 128 - Principles of Baking	Credits: 3		
HRI 218 - Fruit, Vegetable, and Starch Preparation	Credits: 3		
HRI 220 - Meat, Seafood, and Poultry Preparation	Credits: 3		
HRI 158 - Sanitation and Safety	Credits: 3		

Total Credits: 15

Notes:

Student ID:_____   **Catalog: 2020-2021 Catalog**
Student Name:_____   **Program: Business Technology: Management**
Advisor Name:_____   **Specialization Entrepreneurship/Small Business,**
                                                      AAS

Business Technology: Management Specialization Entrepreneurship/Small Business, AAS

Length: 62 credits

Purpose: Individuals, who are seeking their first job or those who wish to qualify for promotion in a present position or to another field, including self-employment, may benefit from this program. Students will be provided knowledge, skills, and training necessary to start a business and manage the functional areas of the business to become a successful entrepreneur.

Occupational Objectives: Completion of this program may lead to employment or career advancement in a wide variety of positions such as entrepreneur, small business owner, small business advisor, small business partner, proprietor, owner-operator, or consultant for small business.

Potential Certification: A student may elect to take an industry- specific certification exam. The examinations generally require a testing fee paid by the student. After completion of this program, a student will be academically prepared to take the following examinations:

- Microsoft Office Specialist (MOS) - Excel.

Program Learning Outcomes: A student will be able to:

- demonstrate minimum proficiency in General Education Skills which are defined as oral communication, written communication, mathematical/problem solving, scientific reasoning, information literacy, and critical thinking;
- outline the decision making process for managers using various decision making techniques;
- demonstrate the ability to gather, interpret, and disseminate financial information;
- demonstrate acceptable workplace skills, attitudes, and behaviors;
- explain the importance of entrepreneurial qualities and describe the characteristics of successful entrepreneurs; and
- create a business plan necessary to initiate and open a small business.

General Education Requirements

Course Name	Credits:	Term Taken	Grade
ECO 202 - Principles of Micro- Economics	Credits: 3		
ENG 111 - College Composition I	Credits: 3		
HUM EEE - Humanities/Fine Arts Elective	Credits: 3		
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		
MTH 130 - Fundamentals of Reasoning	Credits: 3		

Total Credits: 15

Program Requirements

Course Name	Credits:	Term Taken	Grade
ACC 211 - Principles of Accounting I	Credits: 3		
BUS 100 - Introduction to Business	Credits: 3		
BUS 111 - Principles of Supervision I	Credits: 3		
FIN 107 - Personal Finance	Credits: 3		
BUS 165 - Small Business Management	Credits: 3		
BUS 241 - Business Law I	Credits: 3		
BUS 290 - Coordinated Internship	Credits: 3		
ITE 140 - Spreadsheet Software	Credits: 3		
BUS 116 - Entrepreneurship	Credits: 3		
ACC 212 - Principles of Accounting II	Credits: 3		
MKT 100 - Principles of Marketing	Credits: 3		
PED/HLT EEE - Wellness Elective	Credits: 1		
BUS 205 - Human Resource Management	Credits: 3		
BUS 280 - Introduction to International Business I	Credits: 3		
BUS 106 - Security Awareness for Managers	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		
BUS 200 - Principles of Management	Credits: 3		

Total Credits: 47

Minimum Required for Degree: 62

Advising Sheet

Advising Sheet Suggested Schedules: Courses in advising sheets are displayed under the semester in which the courses are regularly offered. It is possible that a course shown on the schedule for a particular semester may not be offered due to low enrollment or other factors.

Developmental Prerequisites

NOTE: * These classes meet the requirements of the Career Studies Certificate in Entrepreneurial and Small Business Management.

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
ACC 211 - Principles of Accounting I	Credits: 3		
BUS 100 - Introduction to Business	Credits: 3		
ENG 111 - College Composition I	Credits: 3		
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		
MTH 130 - Fundamentals of Reasoning	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		

Total Credits: 16

Spring Semester Courses:

Course Name	Credits:	Term Taken	Grade
ACC 212 - Principles of Accounting II	Credits: 3		
BUS 205 - Human Resource Management	Credits: 3		
ECO 202 - Principles of Micro- Economics	Credits: 3		
MKT 100 - Principles of Marketing	Credits: 3		
ITE 140 - Spreadsheet Software	Credits: 3		

Total Credits: 15

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
FIN 107 - Personal Finance	Credits: 3		
BUS 241 - Business Law I	Credits: 3		
BUS 111 - Principles of Supervision I	Credits: 3		
BUS 200 - Principles of Management	Credits: 3		
BUS 106 - Security Awareness for Managers	Credits: 3		
PED/HLT EEE - Wellness Elective	Credits: 1		

Total Credits: 16

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
BUS 290 - Coordinated Internship	Credits: 3		
HUM EEE - Humanities/Fine Arts Elective	Credits: 3		
BUS 165 - Small Business Management	Credits: 3		
BUS 280 - Introduction to International Business I	Credits: 3		
BUS 116 - Entrepreneurship	Credits: 3		

Total Credits: 15

Notes:

Student ID:_____

Student Name:_____

Advisor Name:_____

Catalog: 2020-2021 Catalog

Program: Clerical Studies Certificate

Clerical Studies Certificate

Career Information

Current Job Opportunities

Gainful Employment Information

Length: 38 credits

Purpose: To provide competent entry-level office support personnel for immediate employment in business, industry, the professions, and government.

Employment Objectives: Completion of this program may lead to employment or career advancement in any of a wide variety of positions such as clerk typist, data entry keyer, file clerk, general clerk, clerk stenographer, shipping/ receiving clerk, bank teller, information clerk, and switchboard operator/receptionist.

Potential Certification: A student may elect to take an industry-specific certification exam. The examinations generally require a testing fee paid by the student. After completion of this program, a student will be academically prepared to take the following examination:

Microsoft Office Specialist (MOS) - Word, Excel, PowerPoint.

Program Learning Outcomes: A student will be able to:

- demonstrate effective written communication skills in a business setting;
- produce a variety of business documents using correct grammar, punctuation and spelling in a form acceptable in today's business environment;
- demonstrate proficiency in personal computer operations and applications;
- demonstrate various methods of filing in storing and retrieving documents both manually and electronically.

General Education Requirements

Course Name	Credits:	Term Taken	Grade
ENG 115 - Technical Writing	Credits: 3		
MTH 130 - Fundamentals of Reasoning	Credits: 3		

Total Credits: 6

Program Requirements

Course Name	Credits:	Term Taken	Grade
ACC 124 - Payroll Accounting	Credits: 3		
or			
ACC 211 - Principles of Accounting I	Credits: 3		
AST 101 - Keyboarding I	Credits: 3		
AST 102 - Keyboarding II	Credits: 3		
AST 107 - Editing/Proofreading Skills	Credits: 3		
AST 136 - Office Record Keeping	Credits: 3		
AST 141 - Word Processing (Specify Software)	Credits: 3		
AST 154 - Voice Recognition Applications (Dragon Naturally Speaking)	Credits: 1		
AST 243 - Office Administration I	Credits: 3		
AST 260 - Presentation Software (Microsoft PowerPoint)	Credits: 3		
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		
ITE 140 - Spreadsheet Software	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		

Total Credits: 32

Minimum Required for Certificate: 38 Credits

Notes:

Student ID:_____	Catalog: 2020-2021 Catalog
Student Name:_____	Program: CNC Lathe Operator, CSC
Advisor Name:_____	

CNC Lathe Operator, CSC

Length: 24

Purpose: The purpose of the CNC Lathe Operator Career Studies Certificate is to help entry-level employees in the precision machining related trades to obtain skills with emphasis on manual lathe, mill work, and an introduction to CNC lathe programming and operation.

Occupational Objective: Graduates of this program will have:

- Basic occupational skills for the Precision Machining professions.
- Basic skills and understanding of manual lathe and mill systems and terminology.
- Knowledge of safety requirements for machining trade occupations.
- Basic skills and understanding of CNC Lathe systems and terminology.
- Occupational preparation skills for employment.

Industrial Credentials: Students will have an opportunity to earn:

- NIMS Measurement, Material, and Safety
- NIMS Turning Operations

Program Description: The program is designed to develop a general foundation in Precision Machining trades with an emphasis on manual lathe, mill, and CNC lathe.

Feeder Program: This certificate feeds into Danville Community College's Precision Machine Technology, and Integrated Machining Technology.

Program Outcomes: Graduates of the CNC Lathe Operator Career Studies Certificate will be able to:

- Understand precision machining tools, terminology and systems
- Interpret blueprints, drawings, and symbols
- Use various measuring tools and equipment
- Know and apply safety requirements for machining trades

Program Requirements

Course Name	Credits:	Term Taken	Grade
MAC 102 - Machine Shop II	Credits: 7		
MAC 121 - Numerical Control I	Credits: 3		
CAD 231 - Computer Aided Drafting I	Credits: 3		
MAC 116 - Machinist Handbook	Credits: 2		
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		
MAC 221 - Advanced Machine Tool Operations I	Credits: 7		
MAC 127 - Advanced CNC Programming	Credits: 3		

Total Credits: 28

Notes:

Student ID:_____ Student Name:_____ Advisor Name:_____	Catalog: 2020-2021 Catalog Program: Computer Aided Drafting and Design (CADD) Certificate

Computer Aided Drafting and Design (CADD) Certificate

Career Information

Current Job Opportunities

Gainful Employment Information

Length: 40 credits

Purpose: Students learn to use advanced computer workstations with various CADD software applications. Students will receive instruction and practice in the planning, design, and preparation of high-quality technical drawings for a variety of projects. In addition to technical courses, there are supporting courses in communications, mathematics, and social sciences. These courses serve to broaden the student's general education background and thus better prepare students for employment and advancement in the career field.

Program Learning Outcomes: Program graduates have generic and specific occupational skills to be competitive in technical drawing creation and manipulation positions (CADD positions) in a variety of manufacturing, engineering, architectural and civil settings. Graduates demonstrate proficiency in 21st Century skills and use of current technological tools of the profession.

Occupational Objectives: Graduates may seek immediate employment or continue their education in the General Engineering Technology Degree program at PHCC. The curriculum is designed to provide educational background and skills training that would be required for students seeking employment in entry-level architectural and industrial drafting such as architectural drafting technician, engineering drafting technician, engineering assistant, CAD operator or CAD drafter.

General Education Requirements

Course Name	Credits:	Term Taken	Grade
ENG 111 - College Composition I	Credits: 3		
MTH 111 - Basic Technical Mathematics	Credits: 3		

Total Credits: 6

Program Requirements

Course Name	Credits:	Term Taken	Grade
CAD 201 - Computer Aided Drafting and Design I	Credits: 3		
CAD 202 - Computer Aided Drafting and Design II	Credits: 3		
MEC 119 - Introduction to Basic CNC and CAM	Credits: 3		
CAD 241 - Parametric Solid Modeling I	Credits: 3		
CAD 242 - Parametric Solid Modeling II	Credits: 3		
EGR 110 - Engineering Graphics	Credits: 3		
EGR 216 - Computer Methods In Engineering and Technology	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		
CAD 203 - Computer Aided Drafting and Design III	Credits: 3		
CAD 232 - Computer Aided Drafting II	Credits: 3		
CAD 233 - Computer Aided Drafting III	Credits: 3		
CAD 243 - Parametric Solid Modeling III	Credits: 3		

Total Credits: 34

Minimum Required for Certificate: 40 Credits

Advising Sheet

Advising Sheet Suggested Schedules: Courses in advising sheets are displayed under the semester in which the courses are regularly offered. It is possible that a course shown on the schedule for a particular semester may not be offered due to low enrollment or other factors.

Developmental Prerequisites

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
ENG 111 - College Composition I	Credits: 3		
MTH 111 - Basic Technical Mathematics	Credits: 3		

CAD 201 - Computer Aided Drafting and Design I	Credits: 3		
CAD 241 - Parametric Solid Modeling I	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		

Total Credits: 13

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
CAD 242 - Parametric Solid Modeling II	Credits: 3		
CAD 202 - Computer Aided Drafting and Design II	Credits: 3		
EGR 216 - Computer Methods In Engineering and Technology	Credits: 3		
CAD 232 - Computer Aided Drafting II	Credits: 3		
MEC 119 - Introduction to Basic CNC and CAM	Credits: 3		

Total Credits: 15

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
CAD 243 - Parametric Solid Modeling III	Credits: 3		
CAD 203 - Computer Aided Drafting and Design III	Credits: 3		
CAD 233 - Computer Aided Drafting III	Credits: 3		
EGR 110 - Engineering Graphics	Credits: 3		

Total Credits: 12

Notes:

Student ID:_____	**Catalog: 2020-2021 Catalog**
Student Name:_____	**Program: Computer Service Technician, CSC**
Advisor Name:_____	

Computer Service Technician, CSC

Career Information

Current Job Opportunities

Gainful Employment Information

Length: 17 credits

Purpose: This program is designed to provide skills and knowledge needed for employment as a computer service technician and certification for the CompTIA A+ exam.

Employment Objectives: Employment opportunities include repair and maintenance of computers and servers. Responsibilities may also include building or configuring new hardware, installing and updating software packages, and creating and maintaining computer networks.

Potential Certification: A student may elect to take an industry-specific certification exam. The examinations generally require a testing fee paid by the student. After completion of this program, a student will be academically prepared to take the following examinations:

- CompTIA - A+.

Program Learning Outcomes: A student will be able to:

- demonstrate skills in computer hardware knowledge related to installation, configuration, and upgrading, diagnosing and troubleshooting, preventive maintenance, printers, and basic networking; and
- demonstrate skills in computer operating system knowledge related to operating system fundamentals, installation, configuration, and upgrading, diagnosing and troubleshooting, and networks.

Program Requirements

Course Name	Credits:	Term Taken	Grade
CSC 200 - Introduction to Computer Science	Credits: 3		
ITN 106 - Microcomputer Operating Systems	Credits: 3		
ITN 107 - Personal Computer Hardware and Troubleshooting	Credits: 3		
ITN 154 - Network Fundamentals, Router Basics, and Configuration (ICND1) - CISCO	Credits: 4		
SDV 100 - College Success Skills	Credits: 1		
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		

Total Credits: 17

Notes:

Student ID:_____	Catalog: 2020-2021 Catalog
Student Name:_____	Program: Culinary and Hospitality Management,
Advisor Name:_____	CSC

Culinary and Hospitality Management, CSC

Career Information

Current Job Opportunities

Gainful Employment Information

Length: 29 credits

Purpose: This program prepares graduates to fulfill mid-to upper-level responsibilities in the hospitality industry.

Program Requirement: Daily uniform for the program is required.

Program Learning Outcomes: Upon completion, each student has the knowledge base in food production, dining and managing food service tasks to work as lead cook in the food service field.

Requirements

Course Name	Credits:	Term Taken	Grade
BUS 111 - Principles of Supervision I	Credits: 3		
BUS 205 - Human Resource Management	Credits: 3		
FIN 107 - Personal Finance	Credits: 3		
HRI 106 - Principles of Culinary Arts I-II	Credits: 3		
HRI 128 - Principles of Baking	Credits: 3		
HRI 158 - Sanitation and Safety	Credits: 3		
HRI 218 - Fruit, Vegetable, and Starch Preparation	Credits: 3		
HRI 220 - Meat, Seafood, and Poultry Preparation	Credits: 3		
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		

Minimum Required for the Career Studies Certificate: 27 Credits

Notes:

Student ID:_____ **Student Name:**_____ **Advisor Name:**_____	**Catalog: 2020-2021 Catalog** **Program: Culinary Arts, CSC**

Culinary Arts, CSC

Career Information

Current Job Opportunities

Gainful Employment Information

Length: 28 credits

Purpose: This program prepares graduates for entry-level responsibilities in the hospitality industry.

Program Requirement: Daily uniform for the program is required.

Potential Certification: ServSafe Manager Certification

Program Learning Outcomes: A student will be able to:

- outline the decision making process for managers using various decision making techniques
- demonstrate acceptable workplace skills, attitudes, and behaviors
- demonstrate knowledge of food production and dining

Requirements

Course Name	Credits:	Term Taken	Grade
HRI 106 - Principles of Culinary Arts I-II	Credits: 3		
HRI 128 - Principles of Baking	Credits: 3		
HRI 145 - Garde Manger	Credits: 3		
HRI 158 - Sanitation and Safety	Credits: 3		
HRI 190 - Coordinated Internship	Credits: 3		
HRI 218 - Fruit, Vegetable, and Starch Preparation	Credits: 3		
HRI 219 - Stock, Soup, and Sauce Preparation	Credits: 3		
HRI 220 - Meat, Seafood, and Poultry Preparation	Credits: 3		
HRI 251 - Food and Beverage Cost Control I	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		

Minimum Required for the Career Studies Certificate: 28 Credits

Notes:

Student ID:_____	**Catalog: 2020-2021 Catalog**
Student Name:_____	**Program: Cybersecurity & Networking**
Advisor Name:_____	**Foundations, CSC**

Cybersecurity & Networking Foundations, CSC

Career Information

Current Job Opportunities

Gainful Employment Information

Length: 18 credits

Purpose:

This career studies certificate leads to entry-level employment opportunities in cybersecurity and networking fields by preparing students for introductory IT knowledge and skills to recognize, prevent, and defend against threats to information and information systems.

Students are introduced to basic topics of operating systems, computer systems, computer hardware, networking concepts, programing, and cybersecurity core topics to be well prepared and successful in areas of IT including cybersecurity and networking.

Employment Objectives: Graduates may seek employment opportunities as an entry-level Network Analyst/Specialist, Security Analyst/Specialist, or a Security Architect in local businesses, educational institutions, or governmental agencies.

Potential Certification: A student may elect to take an industry-specific certification exam. The examinations generally require a testing fee paid by the student. After completion of this program, a student will be academically prepared to take the following examinations:

- Security+
- CCENT

Program Learning Outcomes: A student will be able to:

- demonstrate basic knowledge of intrusion detection, incident handling, firewalls, network security laws, software vulnerability;
- recognize threats and vulnerabilities to networks and servers;
- develop a security infrastructure; and
- demonstrate techniques for mitigating security threats.

Program Requirements

Course Name	Credits:	Term Taken	Grade
ITN 106 - Microcomputer Operating Systems	Credits: 3		
ITN 107 - Personal Computer Hardware and Troubleshooting	Credits: 3		
ITN 154 - Network Fundamentals, Router Basics, and Configuration (ICND1) - CISCO	Credits: 4		
ITN 260 - Network Security Basics	Credits: 3		
ITP 120 - Java Programming I	Credits: 4		
SDV 100 - College Success Skills	Credits: 1		

Total Credits: 18

Minimum Required for Certificate: 18 Credits

Advising Sheet

Advising Sheet Suggested Schedules: Courses in advising sheets are displayed under the semester in which the courses are regularly offered. It is possible that a course shown on the schedule for a particular semester may not be offered due to low enrollment or other factors.

Developmental Prerequisites

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
ITN 106 - Microcomputer Operating Systems	Credits: 3		
ITN 154 - Network Fundamentals, Router Basics, and Configuration (ICND1) - CISCO	Credits: 4		
ITN 260 - Network Security Basics	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		

Total Credits: 11

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
ITN 107 - Personal Computer Hardware and Troubleshooting	Credits: 3		
ITP 120 - Java Programming I	Credits: 4		

Total Credits: 7

Notes:

Student ID:_____	Catalog: 2020-2021 Catalog
Student Name:_____	Program: Early Childhood Development, AAS
Advisor Name:_____	

Early Childhood Development, AAS

Length: 62 credits

Purpose: This program is designed to prepare early childhood professionals with the knowledge and skills needed to successfully manage a classroom and teach students from diverse backgrounds with varied academic and developmental needs. Graduates will be prepared to work with students in a variety of educational environments including childcare centers, family day homes, Head Start, and public or private schools. Students will learn to use an array of teaching methods, approaches to classroom management, and methods for teaching exceptional students. Students completing this program can transfer to select schools that currently have an active articulation agreement with PHCC. See program advisor for a list of schools where graduates of the program can earn a bachelor's degree and pre -k through third grade teaching license.

Program Learning Outcomes: A student will be able to:

- demonstrate minimum proficiency in General Education Skills which are defined as oral communication, written communication, mathematical/problem solving, scientific reasoning, information literacy and critical thinking
- build meaningful curriculum in Language Arts, Math, Science, and Social Studies
- create strategies to build relationships with families and the community
- observe and document a student's developmental and academic levels
- identify ethical and professional guidelines when working in the early childhood field; and
- design, teach, and reflect on lesson plans that match Virginia standards and the developmental needs of the child

Curriculum Requirements: Students must successfully complete all of the requirements (general education and program requirements) listed under the program information to be awarded the Associate of Applied Science in Early Childhood Development.

General Education Requirements

Course Name	Credits:	Term Taken	Grade
BIO 101 - General Biology I	Credits: 4		
ENG 111 - College Composition I and	Credits: 3		
ENG 112 - College Composition II	Credits: 3		
ENG 250 - Children's Literature	Credits: 3		
HIS 121 - United States History I	Credits: 3		
or			
HIS 122 - United States History II	Credits: 3		
MTH 154 - Quantitative Reasoning	Credits: 3		
PSY 230 - Developmental Psychology	Credits: 3		

Total Credits: 22

Program Requirements

Course Name	Credits:	Term Taken	Grade
CHD 118 - Language Arts for Young Children	Credits: 3		
CHD 120 - Introduction to Early Childhood Education	Credits: 3		
CHD 145 - Teaching Art, Music and Movement to Children	Credits: 3		
CHD 146 - Math, Science, and Social Studies for Children	Credits: 3		
CHD 165 - Observation and Participation in Early Childhood/Primary Setting	Credits: 3		
CHD 166 - Infant and Toddler Programs	Credits: 3		
CHD 205 - Guiding the Behavior of Children	Credits: 3		
CHD 210 - Introduction to Exceptional Children	Credits: 3		
CHD 216 - Early Childhood Programs, School, and Social Change	Credits: 3		
CHD 265 - Advanced Observation and Participation in Early Childhood/Primary Settings	Credits: 3		
CHD 270 - Administration of Early Childcare Programs	Credits: 3		
EDU 200 - Introduction to Teaching as a Profession	Credits: 3		
EDU 235 - Health, Safety, and Nutritional Education	Credits: 3		

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SDV 100 - College Success Skills	Credits: 1		

Total Credits: 40

Minimum Required for Degree: 62 Credits

Advising Sheet

Advising Sheet Suggested Schedules: Courses in advising sheets are displayed under the semester in which the courses are regularly offered. It is possible that a course shown on the schedule for a particular semester may not be offered due to low enrollment or other factors.

Developmental Prerequisites

NOTE: * These classes meet the requirements of the Certificate in Early Childhood Education. Classes marked with an plus (+) meet the requirements of the Career Studies Certificate in Early Childhood Instruction.

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
CHD 120 - Introduction to Early Childhood Education * +	Credits: 3		
CHD 145 - Teaching Art, Music and Movement to Children * +	Credits: 3		
CHD 165 - Observation and Participation in Early Childhood/Primary Setting * +	Credits: 3		
CHD 205 - Guiding the Behavior of Children +	Credits: 3		
*			
EDU 235 - Health, Safety, and Nutritional Education * +	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		
* +			

Total Credits: 16

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
CHD 118 - Language Arts for Young Children	Credits: 3		
*			
CHD 146 - Math, Science, and Social Studies for Children *	Credits: 3		
CHD 270 - Administration of Early Childcare Programs *	Credits: 3		
ENG 111 - College Composition I	Credits: 3		
*			
PSY 230 - Developmental Psychology *	Credits: 3		

Total Credits: 15

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
CHD 166 - Infant and Toddler Programs	Credits: 3		
CHD 216 - Early Childhood Programs, School, and Social Change	Credits: 3		
EDU 200 - Introduction to Teaching as a Profession	Credits: 3		
ENG 112 - College Composition II	Credits: 3		
MTH 154 - Quantitative Reasoning	Credits: 3		

Total Credits: 15

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
ENG 250 - Children's Literature	Credits: 3		
CHD 210 - Introduction to Exceptional Children	Credits: 3		
CHD 265 - Advanced Observation and Participation in Early Childhood/Primary Settings	Credits: 3		
HIS 121 - United States History I	Credits: 3		
BIO 101 - General Biology I	Credits: 4		

Total Credits: 16

Notes:

Student ID:_____   **Catalog: 2020-2021 Catalog**
Student Name:_____   **Program: Early Childhood Education Certificate**
Advisor Name:_____

Early Childhood Education Certificate

Career Information

Current Job Opportunities

Gainful Employment Information

Length: 31 credits

Purpose: This program is designed to improve the quality of education provided in early childhood programs. Courses and content covered are based on Virginia's Core Competencies for Early Childhood Professionals and NAEYC's Standards for Initial Early Childhood Professional Preparation. Graduates of the program will be qualified to serve as a director/administrator or a lead teacher in a licensed child care center, early learning center, or family day home in the state of Virginia.

Program Learning Outcomes: Students will be able to:

- observe and document a student's developmental and academic levels;
- identify ethical and professional guidelines when working in the early childhood field;
- build meaningful curriculum in Language Arts, Math, Science, and Social Studies.

General Education Requirements

Course Name	Credits:	Term Taken	Grade
ENG 111 - College Composition I	Credits: 3		
PSY 230 - Developmental Psychology	Credits: 3		

Total Credits: 6

Program Requirements

Course Name	Credits:	Term Taken	Grade
CHD 118 - Language Arts for Young Children	Credits: 3		
CHD 120 - Introduction to Early Childhood Education	Credits: 3		
CHD 145 - Teaching Art, Music and Movement to Children	Credits: 3		
CHD 146 - Math, Science, and Social Studies for Children	Credits: 3		
CHD 165 - Observation and Participation in Early Childhood/Primary Setting	Credits: 3		
CHD 205 - Guiding the Behavior of Children	Credits: 3		
CHD 270 - Administration of Early Childcare Programs	Credits: 3		
EDU 235 - Health, Safety, and Nutritional Education	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		

Total Credits: 25

Minimum Required for Certificate: 31 Credits

Notes:

Student ID:_____	**Catalog: 2020-2021 Catalog**
Student Name:_____	**Program: Early Childhood Instruction, CSC**
Advisor Name:_____	

Early Childhood Instruction, CSC

Career Information

Current Job Opportunities

Gainful Employment Information

Length: 16 credits

Purpose: This program is an introduction to the field, designed to provide entry-level competencies documented by Virginia's Competencies for Early Childhood Professionals and NAEYC's Standards for Initial Early Childhood Professional Preparation. Graduates are qualified to work as a assistant teacher in childcare centers, family child care homes, and before and after school programs. This program also satisfies the level 2 requirement for Virginia's Quality Rating and Improvement System.

Program Learning Outcomes: Students will be able to:

- observe and document a student's developmental and academic levels
- identify ethical and professional guidelines when working in the early childhood field

Program Requirements

Course Name	Credits:	Term Taken	Grade
CHD 120 - Introduction to Early Childhood Education	Credits: 3		
CHD 145 - Teaching Art, Music and Movement to Children	Credits: 3		
CHD 165 - Observation and Participation in Early Childhood/Primary Setting	Credits: 3		
CHD 205 - Guiding the Behavior of Children	Credits: 3		
EDU 235 - Health, Safety, and Nutritional Education	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		

Total Credits: 16

Minimum Required for Certificate: 16 Credits

Notes:

Student ID:_____
Student Name:_____
Advisor Name:_____

Catalog: 2020-2021 Catalog
Program: Emergency Medical Services - Paramedic, AAS

Emergency Medical Services - Paramedic, AAS

Length: 67 credits

Purpose: This program is designed to provide knowledge and skills to prepare selected students to qualify as practitioners of emergency medical services in a variety of health service facilities.

Employment Objectives: Employment opportunities for the Paramedic include pre-hospital EMS agencies, municipal fire departments, emergency departments in hospitals, nursing homes, physician's offices, clinics, industry, and home health agencies.

Potential Certification: After successful completion of the AAS degree students will be eligible for the National Registry of Emergency Medical Technicians Paramedic (NRP) Certification examination. A student who resides outside of Virginia and plans to apply for certification as a Paramedic subsequent to completion of this education program may not meet the requirements for certification in the state of residence.

Program Learning Outcomes: Graduates of the program will:

- demonstrate minimum proficiency in General Education Skills which are defined as oral communication, written communication, mathematical/problem solving, scientific reasoning, information literacy, and critical thinking;
- demonstrate ability to apply concepts and skill required to practice as a paramedic level provider;
- demonstrates required clinical skill competencies to deliver appropriate client care;
- administer medications within the scope of practice as a paramedic provider;
- demonstrate acceptable workplace skills, attitudes, and behaviors;
- appropriately interpret ECG readings and provide ALS intervention; and
- demonstrate competency identifying human organs and listing specific functions of organs that make up organ systems.

Special Accreditation Status: The Patrick Henry Community College EMS-Paramedic Program is accredited by the Commission on Accreditation of Allied Health Education Programs (www.caahep.org) upon the recommendation of the Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions (CoAEMSP).

To Contact CAAHEP:
Commission on Accreditation of Allied Health Education Programs
25400 U.S. Highway 19 North, Suite 158
Clearwater, FL 33763
www.caahep.org

To Contact CoAEMSP:
8301 Lakeview Parkway, Suite 111-312
Rowlett, TX 75088
(214) 703-8445
FAX (214) 703-8992
www.coaemsp.org

The program is also accredited to provide Paramedic training in the Commonwealth of Virginia by:

Virginia Department of Health
Office of Emergency Medical Services (VAOEMS)
1041 Technology Park Drive
Glen Allen, VA 23059-4500
Phone 1-800-523-6019

Special Admission Requirements: The applicant must meet the following requirements for admission to the EMS Education program. Interested students should contact the EMS Program Director for academic advising.

1. Be accepted as a student to the college.
2. Graduation from high school or satisfactory completion of the GED. Verification of high school graduation or GED is required by Virginia OEMS for this level of certification. Submission of official transcripts or GED scores is mandatory for all applicants.
3. Completion of the Virginia Placement Test unless appropriate college level English or math courses have been successfully completed or multiple measures confirm competency. If any developmental courses in English or math are needed as indicated by student's scores or multiple measures, these courses must be successfully completed before the student can enroll in EMS 121 -ALS Foundations. Failure to successfully complete pre-requisites for enrollment in EMS 121 will delay program progression in the EMS curriculum by one academic year.
4. A cumulative college grade point average of 2.0 or better in all related and general education requirements completed before admission into the EMS Education program is desired and will be given higher priority for admission into the program.
5. Submit an EMS Program Application form along with required paperwork, i.e. high school transcripts, college transcripts, current EMS certification, etc. during the specified EMS Education program application period.

Admission Procedure: Applications to the program will be accepted during the specified EMS Education program application periods. After the application period has concluded all completed application files will be reviewed and considered. Qualified applicants enrolled at the college or holding current Virginia certification as an Emergency Medical, Virginia EMT- Advanced, or holding current National Registry and/or Virginia EMT-Intermediate certification will be given first priority for admission. Incomplete files will not be considered.

A completed application file includes the following:

1. The completed EMS Program Application form.

2. Official transcripts of all high school work and all prior college work other than PHCC.
3. Results of the college placement test, if not from PHCC.
4. A copy of your Virginia EMS certification, if applicable.

Because the EMS Education program addresses the educational needs of students with a variety of experiences and prior education, a limited number of entering class positions may be designated for certified EMT-Intermediates who graduated from accredited programs or for prospective high school graduates who also have been enrolled at PHCC as part of an EMT approved program of dual enrollment. Interested high school sophomores should see their counselors in the spring of their sophomore year. Interested high school juniors should see their counselors in the fall of their junior year.

Functional Abilities required for the program include:

- verbally communicate in person, via telephone and telecommunications using the English language;
- hear spoken information from co-workers, patients, physicians and dispatchers and in sounds common to the emergency scene;
- ability to lift, carry, balance up to 125 pounds (250 with assistance);
- ability to interpret and respond to written, oral, and diagnostic form instructions;
- read road maps, drive vehicle, accurately discern street signs and address numbers;
- read medication/ prescription labels and directions for usage in quick, accurate, and expedient manner;
- communicate verbally with patients and significant others in diverse cultural and age groups to interview patient, family members, and bystanders;
- discern deviations/changes in eye/skin coloration due to patient's condition and to the treatment given;
- document, in writing, all relevant information in prescribed format in light of legal ramifications of such;
- perform with good manual dexterity all tasks related to advanced emergency patient care and documentation;
- bend, stoop, balance, and crawl on uneven terrain;
- withstand varied environmental conditions such as extreme heat, cold, and moisture.

After admission to the EMS Education program, the prospective student is provided with an EMS Physical Examination form that must be completed by a physician prior to enrolling in the clinical or field internship classes.

Upon admission, all students are required to undergo mandatory drug screening. Students must have a negative drug screen in order to begin the clinical or field internship classes. Drug screens may be repeated after program acceptance to comply with clinical agency requirements.

Please **NOTE** that any prospective EMS student with a criminal conviction needs to speak with the EMS Program Director prior to enrollment at PHCC. Certain convictions will prevent the person from being certified as an Emergency Medical Services Provider in Virginia. Students must produce a satisfactory criminal background check to the standards of all clinical agencies used by the college for experiential learning prior to enrolling in the EMS program. Background checks may have to be repeated to comply with clinical agency requirements..

Readmission Requirements: Any student wishing to re-enroll in the EMS Education program must have at least a 2.0 cumulative grade point average at PHCC to be considered. A student who wishes to re-enter the EMS Education program must follow the readmission procedure outlined in the EMS Education Program Student Handbook. The student may be required to enroll in and satisfactorily complete specific courses before and/or after readmission. Additional data may be required. The EMS faculty will consider each student's application for readmission and the decision to readmit will be based on additional data, prior performance in the EMS Education program and space availability.

Students who fail an EMS course or withdraw for any reason from the EMS Education program may be readmitted to the program only once. All readmissions are at the discretion of the EMS faculty.

Advanced Placement: Current credentialed Virginia EMT, EMT-Advanced or EMT-Intermediate providers may be eligible for advanced placement.

Financial Requirements: In addition to the usual college tuition and fees, this program requires additional expenses.

Approximate costs include:

Drug screening	$38 minimum	
Criminal background check	$48 minimum	
Books	$650	
Uniforms	$100	
Physical examination	$100	
Platinum Planner	$85	
EMS Testing	$100	

Transfer of EMS Credit: Students seeking to transfer credit received from EMS courses at other institutions will be considered on an individual basis by the EMS faculty. The student may be asked to provide course descriptions, course syllabi, achievement scores and selected data from the course instructor in order to determine placement in the EMS program, subject to availability of space. Since there frequently are differences among EMS programs, students wishing to transfer should be aware that there might be an interruption in program progression.

Curriculum Requirements: In addition to formal lectures and laboratory exercises, selected experiences within driving distance of the college will be scheduled at day, evening and/or weekend times, depending on the availability of facilities.

EMS students will be required to successfully pass cognitive and psychomotor examinations at various points in the curriculum in order to continue in the program. Students who are unsuccessful will be counseled and guided in a specified number of remediation efforts. Upon successful completion of remedial requirements and passing the appropriate examinations, students may continue in the program.

To remain in the program, a student must have a "C" or above in all required EMS courses. Additionally, a grade of "C" or above in all semesters of biology and psychology is required to meet degree requirements.

Clinical/field/preceptor experiences require access to contracted clinical agencies.

General Education Requirements

Course Name	Credits:	Term Taken	Grade
ENG 111 - College Composition I	Credits: 3		
BIO 141 - Human Anatomy and Physiology I	Credits: 4		
BIO 142 - Human Anatomy and Physiology II	Credits: 4		
PHI 220 - Ethics	Credits: 3		
PSY 230 - Developmental Psychology	Credits: 3		

Total Credits: 17

Program Requirements

Course Name	Credits:	Term Taken	Grade
EMS 111 - Emergency Medical Technician - Basic	Credits: 7		
EMS 120 - Emergency Medical Technician- Basic Clinical	Credits: 1		
SDV 100 - College Success Skills	Credits: 1		
HLT 105 - Cardiopulmonary Resuscitation	Credits: 1		
EMS 121 - Preparatory Foundations	Credits: 2		
EMS 123 - EMS Clinical Preparation	Credits: 1		
EMS 125 - Basic Pharmacology	Credits: 1		
EMS 126 - Basic Pharmacology Lab	Credits: 1		
EMS 127 - Airway, Shock and Resuscitation	Credits: 1		
EMS 128 - Airway, Shock and Resuscitation Lab	Credits: 1		
EMS 135 - Emergency Medical Care	Credits: 2		
EMS 136 - Emergency Medical Care Lab	Credits: 1		
EMS 137 - Trauma Care	Credits: 1		
EMS 138 - Trauma Care Lab	Credits: 1		
EMS 139 - Special Populations	Credits: 1		
EMS 140 - Special Populations Lab	Credits: 1		
EMS 141 - Cardiovascular Care	Credits: 2		
EMS 142 - Cardiovascular Care Lab	Credits: 1		
EMS 175 - Paramedic Clinical Experience I	Credits: 2		
EMS 202 - Paramedic Pharmacology	Credits: 2		
EMS 203 - Advanced Patient Care	Credits: 2		
EMS 204 - Advanced Patient Care Lab	Credits: 2		
EMS 206 - Pathophysiology for the Health Professions	Credits: 3		
EMS 247 - Paramedic Clinical Experience II	Credits: 1		
EMS 210 - EMS Operations	Credits: 1		
EMS 212 - Leadership and Professional Development	Credits: 1		
EMS 216 - Paramedic Review	Credits: 1		
EMS 249 - Paramedic Capstone Internship	Credits: 2		
EMS 163 - Prehospital Trauma Life Support (PHTLS)	Credits: 1		
EMS 164 - Advanced Medical Life Support (AMLS)	Credits: 1		
EMS 165 - Advanced Cardiac Life Support (ACLS)	Credits: 1		
EMS 167 - Emergency Pediatrics Course (EPC)	Credits: 1		
EMS 248 - Paramedic Comprehensive Field Experience	Credits: 2		

Total Credits: 50

Minimum Required for Degree: 67 Credits

Advising Sheet

Advising Sheet Suggested Schedules: Courses in advising sheets are displayed under the semester in which the courses are regularly offered. It is possible that a course shown on the schedule for a particular semester may not be offered due to low enrollment or other factors.

Developmental Prerequisites MTT 1 Module 1 Operations With Positive Fractions MTT 1 Module 2 Operations With Positive Decimals and Percents and ENF 3.

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
EMS 111 - Emergency Medical Technician - Basic	Credits: 7		
EMS 120 - Emergency Medical Technician- Basic Clinical	Credits: 1		
HLT 105 - Cardiopulmonary Resuscitation	Credits: 1		
BIO 141 - Human Anatomy and Physiology I	Credits: 4		

Total Credits: 13

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
SDV 100 - College Success Skills	Credits: 1		
EMS 121 - Preparatory Foundations	Credits: 2		
EMS 123 - EMS Clinical Preparation	Credits: 1		
EMS 125 - Basic Pharmacology	Credits: 1		
EMS 126 - Basic Pharmacology Lab	Credits: 1		
EMS 127 - Airway, Shock and Resuscitation	Credits: 1		
EMS 128 - Airway, Shock and Resuscitation Lab	Credits: 1		
EMS 135 - Emergency Medical Care	Credits: 2		
EMS 136 - Emergency Medical Care Lab	Credits: 1		
EMS 137 - Trauma Care	Credits: 1		
EMS 138 - Trauma Care Lab	Credits: 1		

Total Credits: 13

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
ENG 111 - College Composition I	Credits: 3		
BIO 142 - Human Anatomy and Physiology II	Credits: 4		
EMS 139 - Special Populations	Credits: 1		
EMS 140 - Special Populations Lab	Credits: 1		
EMS 141 - Cardiovascular Care	Credits: 2		
EMS 142 - Cardiovascular Care Lab	Credits: 1		
EMS 175 - Paramedic Clinical Experience I	Credits: 2		

Total Credits: 14

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
EMS 202 - Paramedic Pharmacology	Credits: 2		
EMS 203 - Advanced Patient Care	Credits: 2		
EMS 204 - Advanced Patient Care Lab	Credits: 2		
EMS 206 - Pathophysiology for the Health Professions	Credits: 3		
EMS 247 - Paramedic Clinical Experience II	Credits: 1		
EMS 248 - Paramedic Comprehensive Field Experience	Credits: 2		

Total Credits: 12

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
EMS 210 - EMS Operations	Credits: 1		
EMS 212 - Leadership and Professional Development	Credits: 1		
EMS 165 - Advanced Cardiac Life Support (ACLS)	Credits: 1		
EMS 163 - Prehospital Trauma Life Support (PHTLS)	Credits: 1		
EMS 167 - Emergency Pediatrics Course (EPC)	Credits: 1		

EMS 164 - Advanced Medical Life Support (AMLS)	Credits: 1		
EMS 216 - Paramedic Review	Credits: 1		
EMS 249 - Paramedic Capstone Internship	Credits: 2		
PHI 220 - Ethics	Credits: 3		
PSY 230 - Developmental Psychology	Credits: 3		

Total Credits: 15

Notes:

Student ID:_____
Student Name:_____
Advisor Name:_____

Catalog: 2020-2021 Catalog
Program: Emergency Medical Services (EMT), CSC

Emergency Medical Services (EMT), CSC

Career Information

Current Job Opportunities

Gainful Employment Information

Length: 24 credits

Purpose: This program is designed for the student interested in pursuing a career as an Emergency Medical Technician to work in a variety of health service facilities and/or desires to advance in EMS educational pathways by pursuing advanced EMS certifications.

Employment Objectives: Employment opportunities for the Emergency Medical Technician - Basic include pre-hospital EMS/medical transport agencies, hospital emergency departments, and volunteer agencies.

Potential Certification: After successful completion of the Emergency Medical Technician course, student will be eligible to sit for the NREMT certification exam. After successful completion of CPR, students will be certified from American Heart Association as a BLS Provider. A student who resides outside of Virginia and plans to apply for certification as an Emergency Medical Technician (EMT) subsequent to completion of this education program may not meet the requirements for certification in the state of residence.

Curricular Requirements: Clinical/field/preceptor experiences require access to contracted clinical agencies.

Program Learning Outcomes: The student will be able to:

- demonstrate ability to apply knowledge and skill required to practice as an Emergency Medical Technician-Basic; and
- master clinical skill competencies.

Physical Requirements: The student must be able to:

• verbally communicate in person, via telephone and telecommunications using the English language;

• hear spoken information from co-workers, patients, physicians and dispatchers and in sounds common to the emergency scene;

• ability to lift, carry, balance up to 125 pounds (250 with assistance);

• ability to interpret and respond to written, oral, and diagnostic form instructions;

• read road maps, drive vehicle, accurately discern street signs and address numbers;

• read medication/ prescription labels and directions for usage in quick, accurate, and expedient manner;

• communicate verbally with patients and significant others in diverse cultural and age groups to interview patient, family members, and bystanders;

• discern deviations/changes in eye/skin coloration due to patient's condition and to the treatment given;

• document, in writing, all relevant information in prescribed format in light of legal ramifications of such;

• perform with good manual dexterity all tasks related to advanced emergency patient care and documentation;

• bend, stoop, balance, and crawl on uneven terrain;

• withstand varied environmental conditions such as extreme heat, cold, and moisture.

Financial Requirements: In addition to the usual college tuition and fees, this program requires additional expenses.

Approximate costs include:

Drug screening	$38 minimum
Criminal background check	$48 minimum
Books	$250
Uniforms	$50
Physical examination	$100
Platinum Planner	$30
EMS Testing	$49

Program Requirements

Course Name	Credits:	Term Taken	Grade
EMS 111 - Emergency Medical Technician - Basic	Credits: 7		
EMS 120 - Emergency Medical Technician- Basic Clinical	Credits: 1		
ENG 111 - College Composition I	Credits: 3		
HLT 105 - Cardiopulmonary Resuscitation	Credits: 1		
PSY 230 - Developmental Psychology	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		
BIO 141 - Human Anatomy and Physiology I	Credits: 4		

BIO 142 - Human Anatomy and Physiology II	Credits: 4		

Minimum Required for Career Studies Certificate: 24 Credits

Advising Sheet

Advising Sheet Suggested Schedules: Courses in advising sheets are displayed under the semester in which the courses are regularly offered. It is possible that a course shown on the schedule for a particular semester may not be offered due to low enrollment or other factors.

Developmental Prerequisites MTT 1 Module 1 Operations With Positive Fractions , MTT 1 Module 2 Operations With Positive Decimals and Percents, and ENF 3

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
ENG 111 - College Composition I	Credits: 3		
HLT 105 - Cardiopulmonary Resuscitation	Credits: 1		
SDV 100 - College Success Skills	Credits: 1		
BIO 141 - Human Anatomy and Physiology I	Credits: 4		
PSY 230 - Developmental Psychology	Credits: 3		

Total Credits: 12

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
EMS 111 - Emergency Medical Technician - Basic	Credits: 7		
EMS 120 - Emergency Medical Technician- Basic Clinical	Credits: 1		
BIO 142 - Human Anatomy and Physiology II	Credits: 4		

Total Credits: 12

Notes:

Student ID:_____	Catalog: 2020-2021 Catalog
Student Name:_____	Program: Entrepreneurial and Small Business
Advisor Name:_____	Management, CSC

Entrepreneurial and Small Business Management, CSC

Career Information

Current Job Opportunities

Gainful Employment Information

Length: 28 credits

Purpose: This program is designed to provide an entrepreneur with skills in establishing and maintaining a successful small business.

Program Learning Outcomes: A student will be able to:

- explain the importance of entrepreneurial qualities and describe the characteristics of successful entrepreneurs; and
- create a business plan necessary to initiate and open a small business.

Requirements

Course Name	Credits:	Term Taken	Grade
BUS 116 - Entrepreneurship	Credits: 3		
BUS 165 - Small Business Management	Credits: 3		
ENG 111 - College Composition I	Credits: 3		
ITE 140 - Spreadsheet Software	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		
ACC 211 - Principles of Accounting I	Credits: 3		
BUS 106 - Security Awareness for Managers	Credits: 3		
FIN 107 - Personal Finance	Credits: 3		
MKT 100 - Principles of Marketing	Credits: 3		

Minimum Required for Career Studies Certificate: 28 Credits

Student must complete the above 28 credits to be awarded the Career Studies Certificate in Small Business Management.

Notes:

Student ID:_____	Catalog: 2020-2021 Catalog
Student Name:_____	Program: Foundations of Criminal Justice, CSC
Advisor Name:_____	

Foundations of Criminal Justice, CSC

Length: 19 credits

Purpose: This Career Studies Certificate provides an overview of foundational topics related to criminal justice.

Requirements

Course Name	Credits:	Term Taken	Grade
ADJ 100 - Survey of Criminal Justice	Credits: 3		
ADJ 133 - Ethics and the Criminal Justice Professional	Credits: 3		
ADJ 201 - Criminology	Credits: 3		
ADJ 130 - Introduction to Criminal Law	Credits: 3		
ENG 111 - College Composition I	Credits: 3		
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		

Minimum Required for Career Studies Certificate: 19 Credits

Notes:

Student ID:_____

Student Name:_____

Advisor Name:_____

Catalog: 2020-2021 Catalog

Program: General Business Certificate

General Business Certificate

Career Information

Current Job Opportunities

Gainful Employment Information

Length: 31 credits

Purpose: This program is designed to provide additional knowledge and skills for persons seeking immediate employment in local business and those who wish to become better prepared to operate their own small business.

Occupational Objectives: Employment opportunities might include assistant department head, office manager, small business manager or assistant manager.

Admission Requirements: Students must meet the general admission requirements established by the college. Students with deficiencies in English or mathematics must complete appropriate developmental education courses. Students with deficiencies in computer skills will complete additional coursework.

Curriculum Requirements: Students must satisfactorily complete each of the requirements listed below in order to be awarded this certificate.

Program Learning Outcomes: A student will be able to:

- demonstrate effective written communication skills in a business setting;
- apply mathematical reasoning skills to formulate and solve problems;
- describe and use general business knowledge and skills, including managerial and supervisory concepts;
- apply the principles of financial accounting;
- demonstrate proficiency in personal computer operations and applications;
- demonstrate accepted ethical behaviors and interpersonal skills that reflect an understanding of diversity and teamwork; and
- describe contemporary approaches to management and methods to create a positive work environment.

General Education Requirements

Course Name	Credits:	Term Taken	Grade
ECO 202 - Principles of Micro- Economics	Credits: 3		
ENG 111 - College Composition I	Credits: 3		
MTH 130 - Fundamentals of Reasoning	Credits: 3		

Total Credits: 9

Program Requirements

Course Name	Credits:	Term Taken	Grade
ACC 211 - Principles of Accounting I	Credits: 3		
BUS 100 - Introduction to Business	Credits: 3		
MKT 100 - Principles of Marketing	Credits: 3		
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		
ACC 212 - Principles of Accounting II	Credits: 3		
ITE 140 - Spreadsheet Software	Credits: 3		
BUS 205 - Human Resource Management	Credits: 3		

Total Credits: 22

Minimum Required for Certificate: 31 Credits

Notes:

Student ID:_____

Student Name:_____

Advisor Name:_____

Catalog: 2020-2021 Catalog

Program: General Education Certificate

General Education Certificate

Length: 33 credits

Purpose: The Certificate in General Education is designed for students who are preparing to transfer to a four-year institution after one year of study. The program may also be attractive to students who intend to transition into one of PHCC's associate degrees. Course selection should be made in consultation with an academic advisor to ensure that students complete courses required by their transfer institution.

Program Description: This program consists of a minimum of 33 credit hours of instruction distributed into general education courses. Only courses which are transfer level college courses may be counted in this degree. This curriculum is the general equivalent of the first year of study in a PHCC transfer degree and it may be tailored to meet the requirements of most transfer degree programs at four-year institutions.

Admission Requirements: Entry into this curriculum is obtained by meeting the admission requirements established by the College. You must take developmental coursework as required by placement testing.

Curriculum Requirements: Requirements for the certificate are listed in the curriculum below.

General Education/Program Requirements

Course Name	Credits:	Term Taken	Grade
ENG 111 - College Composition I and	Credits: 3		
ENG 112 - College Composition II	Credits: 3		
HUM EEE - Humanities/Fine Arts Electives	Credits: 6		
MTH EEE - Mathematics Electives	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		
NAS EEE - Natural Sciences Electives	Credits: 8		
SOC EEE - Social Sciences Electives	Credits: 9		

Minimum Required for Certificate: 33 Credits

Advising Sheet

Advising Sheet Suggested Schedules: Courses in advising sheets are displayed under the semester in which the courses are regularly offered. It is possible that a course shown on the schedule for a particular semester may not be offered due to low enrollment or other factors.

Developmental Prerequisites

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
ENG 111 - College Composition I	Credits: 3		
HUM EEE - Humanities/Fine Arts Elective	Credits: 3		
MTH EEE - Mathematics Electives	Credits: 3		
NAS EEE - Natural Sciences Elective	Credits: 4		
SOC EEE - Social Sciences Elective	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		

Total Credits: 17

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
ENG 112 - College Composition II	Credits: 3		
HUM EEE - Humanities/Fine Arts Elective	Credits: 3		
NAS EEE - Natural Sciences Elective	Credits: 4		
SOC EEE - Social Sciences Electives	Credits: 6		

Total Credits: 16

Notes:

Student ID:_____

Student Name:_____

Advisor Name:_____

Catalog: 2020-2021 Catalog

Program: General Engineering Technologies, AAS

General Engineering Technologies, AAS

Length: 67 credits

Purpose: Provides the knowledge and skills leading to immediate employment in the field of engineering technologies and manufacturing related fields. People who wish to prepare for industry certification or qualify for promotion in a present position to another field may benefit from this program. Students may use their 18 credits of technical electives to explore a variety of technical electives but are strongly urged to pursue a concentration in one of four pathways:

Potential Industry Certifications:
A student may elect to take an industry specific certification/ license exam. Examinations generally require a testing fee paid by the student. After completion of this program, a student will be academically prepared to take the following exams:

- CADD Certification pathway: **Autodesk Certified User for Inventor, Autodesk Certified User for Revit;**
- Advanced Manufacturing pathway: **Certified Production Technician;**
- Mechatronics preparation pathway:
  - Level 1: **Siemens Certified Mechatronic Systems Assistant**
  - Level 2: **Siemens Certified Mechatronic Systems Associate**
  - **Festo - NC3 - Introduction to Robotics**
  - **Festo - NC3 - Introduction to Sensor Technology**
  - **Festo - NC3 - DC Electricity**

Occupational Objectives:
The associate degree in engineering technology qualifies graduates for an entry-level position as a technician. Concentration in one of the three pathways will prepare a graduate for more specific roles such as engineer's assistant, supervisor trainee, manufacturing specialist, quality assurance auditor, CAD technician, maintenance lead person, team leader, and computer controlled process technician.

Advancement Options:
Program specializations offer Siemens Mechatronic System Certification. Old Dominion University offers graduates of this program advanced credit transfer options for completing a baccalaureate degree.

Core Program Learning Outcomes: A student will be able to:

- apply basic principles of engineering design
- demonstrate effective engineering communication skills in geometric analysis and spatial relationships of fundamental geometric elements; points, lines, planes and solids
- demonstrate proficiency in mathematical skills to calculate static equilibrium and perform structural analysis on rigid bodies
- demonstrate proficiency in scientific reasoning to understand the engineering design process through the basics of hydraulic, electrical, computer, and mechanical systems
- demonstrate advanced level experience in using a computer as a tool for solving technical problems and performing office functions

General Education Requirements

Course Name	Credits:	Term Taken	Grade
ENG 111 - College Composition I	Credits: 3		
HUM EEE - Humanities/Fine Arts Elective	Credits: 3		
MTH 111 - Basic Technical Mathematics	Credits: 3		
CST 110 - Introduction to Communication	Credits: 3		
SOC EEE - Social Sciences Elective	Credits: 3		

Total Credits: 15

Core Program Requirements

Course Name	Credits:	Term Taken	Grade
EGR 216 - Computer Methods In Engineering and Technology	Credits: 3		
HLT 105 - Cardiopulmonary Resuscitation	Credits: 1		
MEC 119 - Introduction to Basic CNC and CAM	Credits: 3		
MEC 140 - Introduction to Mechatronics	Credits: 3		
EGR 110 - Engineering Graphics	Credits: 3		
MEC 165 - Applied Hydraulics, Pneumatics and Hydrostatics	Credits: 3		
SAF 126 - Principles of Industrial Safety	Credits: 3		
EGR 298 - Seminar and Project	Credits: 1		

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SDV 100 - College Success Skills	Credits: 1		
ETR 156 - Digital Circuits and Microprocessor Fundamentals	Credits: 4		
MEC 112 - Processes of Industry	Credits: 3		
MEC 155 - Mechanisms	Credits: 3		
IND 243 - Principles and Applications of Mechatronics	Credits: 3		
ELE 246 - Industrial Robotics Programming	Credits: 3		
IND 160 - Introduction to Robotics	Credits: 3		
TEC EEE - Technical Electives	Credits: 12		

Total Credits: 52

Technical Electives: 18 Credits

Students may choose from ANY of these 18 technical electives OR may choose to complete one of the three pathways to a certification. Some prerequisites may be required.

CADD Certification

Course Name	Credits:	Term Taken	Grade
CAD 201 - Computer Aided Drafting and Design I	Credits: 3		
CAD 243 - Parametric Solid Modeling III	Credits: 3		
CAD 202 - Computer Aided Drafting and Design II	Credits: 3		
CAD 203 - Computer Aided Drafting and Design III	Credits: 3		
CAD 241 - Parametric Solid Modeling I	Credits: 3		
CAD 232 - Computer Aided Drafting II	Credits: 3		
CAD 233 - Computer Aided Drafting III	Credits: 3		
CAD 242 - Parametric Solid Modeling II	Credits: 3		

Advanced Manufacturing

Course Name	Credits:	Term Taken	Grade
IND 195 - Introduction to Manufacturing and Advanced Films Technology	Credits: 3		
IND 101 - Quality Assurance Technology I	Credits: 3		
MEC 112 - Processes of Industry	Credits: 3		
IND 125 - Installation and Preventive Maintenance	Credits: 3		
IND 295 - Topics In Advanced Films Technology	Credits: 3		
IND 290 - Coordinated Internship	Credits: 3		

Minimum required for degree: 67 Credits

Advising Sheet

Advising Sheet Suggested Schedules: Courses in advising sheets are displayed under the semester in which the courses are regularly offered. It is possible that a course shown on the schedule for a particular semester may not be offered due to low enrollment or other factors.

Developmental Prerequisites

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
MTH 111 - Basic Technical Mathematics	Credits: 3		
EGR 110 - Engineering Graphics	Credits: 3		
ETR 156 - Digital Circuits and Microprocessor Fundamentals	Credits: 4		
SDV 100 - College Success Skills	Credits: 1		
MEC 140 - Introduction to Mechatronics	Credits: 3		

Total Credits: 14

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
TEC EEE - Technical Elective	Credits: 6		
MEC 155 - Mechanisms	Credits: 3		
MEC 165 - Applied Hydraulics, Pneumatics and Hydrostatics	Credits: 3		
IND 160 - Introduction to Robotics	Credits: 3		

| IND 243 - Principles and Applications of Mechatronics | Credits: 3 | | |
| HLT 105 - Cardiopulmonary Resuscitation | Credits: 1 | | |

Total Credits: 19

Summer Semester Courses

Course Name	Credits:	Term Taken	Grade
ENG 111 - College Composition I	Credits: 3		
HUM EEE - Humanities/Fine Arts Elective	Credits: 3		
SOC EEE - Social Sciences Elective	Credits: 3		

Total Credits: 9

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
TEC EEE - Technical Elective	Credits: 3		
SAF 126 - Principles of Industrial Safety	Credits: 3		
MEC 112 - Processes of Industry	Credits: 3		
MEC 119 - Introduction to Basic CNC and CAM	Credits: 3		
ELE 246 - Industrial Robotics Programming	Credits: 3		

Total Credits: 15

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
EGR 298 - Seminar and Project	Credits: 1		
TEC EEE - Technical Elective	Credits: 6		
CST 110 - Introduction to Communication	Credits: 3		
EGR 216 - Computer Methods In Engineering and Technology	Credits: 3		

Total Credits: 13

Notes:

Student ID:_____ **Student Name:**_____ **Advisor Name:**_____	**Catalog: 2020-2021 Catalog** **Program: General Studies Specialization: Criminal Justice, AA&S**

General Studies Specialization: Criminal Justice, AA&S

Length: 62 credits

Purpose: The curriculum is designed for the student who plans to complete a baccalaureate degree program in criminal justice. The intended transfer institution's catalog and transfer guide are the best sources of information for planning a course of study. Final responsibility for transferability of courses rests with the student and the registrar of that institution. Contact the division dean or an advisor for additional information.

Program Learning Outcomes: A student will be able to:

- locate, evaluate, interpet, and combine information to reach well-reasoned conclusions or solutions
- express themselves effectively in a variety of written forms
- calculate, interpret, and use numerical and quantitative information in a variety of settings
- demonstrate the knowledge and values necessary to become informed and contributing participants in a democratic society
- recognize and know how to apply the scientific method, and evaluate empirical information
- demonstrate skills important for successful transition into the workplace and/or pursuit of further education by way of professionalism and self-management practices and behaviors
- demonstrate competency of the effects of crime, law, and law enforcement systems in society

General Education Requirements

Course Name	Credits:	Term Taken	Grade
CST 110 - Introduction to Communication	Credits: 3		
ENG 111 - College Composition I and	Credits: 3		
ENG 112 - College Composition II	Credits: 3		
HIS 121 - United States History I and	Credits: 3		
HIS 122 - United States History II	Credits: 3		
or			
HIS 101 - History of Western Civilization I and	Credits: 3		
HIS 102 - History of Western Civilization II	Credits: 3		
or			
HIS 111 - History of World Civilization I and	Credits: 3		
HIS 112 - History of World Civilization II	Credits: 3		
MTH 161 - Precalculus I	Credits: 3		
REL 231 - Religions of The World I	Credits: 3		
ENG EEE - English Literature Electives	Credits: 3		
HUM EEE - Humanities/Fine Arts Elective	Credits: 3		
NAS EEE - Natural Sciences Electives	Credits: 8		
SOC EEE - Social Sciences Elective	Credits: 3		

Foreign Language

Select one sequence (8 credits) from the following:

Course Name	Credits:	Term Taken	Grade
FRE 101 - Beginning French I and	Credits: 4		
FRE 102 - Beginning French II	Credits: 4		
or			
SPA 101 - Beginning Spanish I and	Credits: 4		
SPA 102 - Beginning Spanish II	Credits: 4		

Total Credits: 46

Program Requirements

Course Name	Credits:	Term Taken	Grade
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		
SDV 199 - Supervised Study In Transfer Programs	Credits: 1		
PED/HLT EEE - Wellness Electives	Credits: 2		

Criminal Justice Electives

Select three courses (9 credits) from the following:

Course Name	Credits:	Term Taken	Grade
ADJ 100 - Survey of Criminal Justice	Credits: 3		
ADJ 105 - The Juvenile Justice System	Credits: 3		
ADJ 145 - Corrections and the Community	Credits: 3		
ADJ 146 - Adult Correctional Institutions	Credits: 3		

Total Credits: 16

Minimum Required for Degree: 62 Credits

Advising Sheet

Advising Sheet Suggested Schedules: Courses in advising sheets are displayed under the semester in which the courses are regularly offered. It is possible that a course shown on the schedule for a particular semester may not be offered due to low enrollment or other factors.

Developmental Prerequisites

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
ENG 111 - College Composition I	Credits: 3		
HIS 121 - United States History I	Credits: 3		
ADJ EEE - Criminal Justice Elective	Credits: 3		
NAS EEE - Natural Sciences Elective	Credits: 4		
PED/HLT EEE - Wellness Electives	Credits: 2		
SDV 100 - College Success Skills	Credits: 1		

Total Credits: 16

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
ENG 112 - College Composition II	Credits: 3		
HIS 122 - United States History II	Credits: 3		
CST 110 - Introduction to Communication	Credits: 3		
SOC EEE - Social Sciences Elective	Credits: 3		
NAS EEE - Natural Sciences Elective	Credits: 4		

Total Credits: 16

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		
REL 231 - Religions of The World I	Credits: 3		
ADJ EEE - Criminal Justice Elective	Credits: 3		
Foreign Language EEE - Foreign Language Elective	Credits: 4		
MTH 161 - Precalculus I	Credits: 3		

Total Credits: 16

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
SDV 199 - Supervised Study In Transfer Programs	Credits: 1		
Foreign Language EEE - Foreign Language Elective	Credits: 4		
HUM EEE - Humanities/Fine Arts Elective	Credits: 3		
ADJ EEE - Criminal Justice Elective	Credits: 3		
ENG EEE - English Literature Electives	Credits: 3		

Total Credits: 14

Student ID:_____	Catalog: 2020-2021 Catalog
Student Name:_____	Program: General Studies Specialization: Human
Advisor Name:_____	Services, AA&S

General Studies Specialization: Human Services, AA&S

Length: 60 credits

Purpose: The curriculum is designed for the student who plans to complete a baccalaureate degree program in human services. The intended transfer institution's catalog and transfer guide are the best sources of information for planning a course of study. Final responsibility for transferability of courses rests with the student and the registrar of that institution. Contact the division dean or an advisor for additional information.

Program Learning Outcomes: A student will be able to:

- locate, evaluate, interpet, and combine information to reach well-reasoned conclusions or solutions;
- express themselves effectively in a variety of written forms;
- calculate, interpret, and use numerical and quantitative information in a variety of settings;
- demonstrate the knowledge and values necessary to become informed and contributing participants in a democratic society;
- recognize and know how to apply the scientific method, and evaluate empirical information;
- demonstrate skills important for successful transition into the workplace and/or pursuit of further education by way of professionalism and self-management practices and behaviors; and
- demonstrate appropriate knowledge of skills essential for employment within the field of Human Services.

General Education Requirements

Course Name	Credits:	Term Taken	Grade
CST 110 - Introduction to Communication	Credits: 3		
ENG 111 - College Composition I and	Credits: 3		
ENG 112 - College Composition II	Credits: 3		
MTH 154 - Quantitative Reasoning	Credits: 3		
MTH 245 - Statistics I	Credits: 3		
HIS EEE for HMS - History Elective for Human Services	Credits: 3		
PSY 200 - Principles of Psychology	Credits: 3		
SOC 200 - Principles of Sociology	Credits: 3		
HUM EEE - Humanities/Fine Arts Electives	Credits: 6		
NAS EEE - Natural Sciences Electives	Credits: 8		

Total Credits: 38

Program Requirements

NOTE: To select courses, student should consult the catalog of the institution(s) to which transfer is anticipated in addition to these requirements:

Course Name	Credits:	Term Taken	Grade
HMS 100 - Introduction to Human Services	Credits: 3		
HMS 162 - Communication Skills For Human Services Professionals	Credits: 3		
HMS 251 - Substance Abuse I	Credits: 3		
HMS EEE - Human Services Elective	Credits: 3		
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		
PED/HLT EEE - Wellness Electives	Credits: 2		
PSY 230 - Developmental Psychology	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		
SDV 199 - Supervised Study In Transfer Programs	Credits: 1		

Total Credits: 22

Minimum Required for Degree: 60 Credits

Advising Sheet

Advising Sheet Suggested Schedules: Courses in advising sheets are displayed under the semester in which the courses are regularly offered. It is possible that a course shown on the schedule for a particular semester may not be offered due to low enrollment or other factors.

Developmental Prerequisites

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
CST 110 - Introduction to Communication	Credits: 3		
ENG 111 - College Composition I	Credits: 3		
HMS 100 - Introduction to Human Services	Credits: 3		
MTH 154 - Quantitative Reasoning	Credits: 3		
PSY 200 - Principles of Psychology	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		

Total Credits: 16

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
ENG 112 - College Composition II	Credits: 3		
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		
MTH 245 - Statistics I	Credits: 3		
SOC 200 - Principles of Sociology	Credits: 3		
HIS EEE for HMS - History Elective for Human Services	Credits: 3		

Total Credits: 15

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
HUM EEE - Humanities/Fine Arts Elective	Credits: 3		
NAS EEE - Natural Sciences Elective	Credits: 4		
PED/HLT EEE - Wellness Elective	Credits: 1		
HMS 251 - Substance Abuse I	Credits: 3		
PSY 230 - Developmental Psychology	Credits: 3		

Total Credits: 14

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
HMS 162 - Communication Skills For Human Services Professionals	Credits: 3		
HMS EEE - Human Services Elective	Credits: 3		
SDV 199 - Supervised Study In Transfer Programs	Credits: 1		
HUM EEE - Humanities/Fine Arts Elective	Credits: 3		
NAS EEE - Natural Sciences Elective	Credits: 4		
PED/HLT EEE - Wellness Elective	Credits: 1		

Total Credits: 15

Notes:

Student ID:_____	Catalog: 2020-2021 Catalog
Student Name:_____	Program: General Studies Specialization:
Advisor Name:_____	Information Technology, AA&S

General Studies Specialization: Information Technology, AA&S

Length: 60-63 credits

General Education Requirements

Course Name	Credits:	Term Taken	Grade
ENG 111 - College Composition I and	Credits: 3		
ENG 112 - College Composition II	Credits: 3		
HIS 121 - United States History I and	Credits: 3		
HIS 122 - United States History II	Credits: 3		
or			
HIS 101 - History of Western Civilization I and	Credits: 3		
HIS 102 - History of Western Civilization II	Credits: 3		
or			
HIS 111 - History of World Civilization I and	Credits: 3		
HIS 112 - History of World Civilization II	Credits: 3		
HUM EEE - Humanities/Fine Arts Electives	Credits: 6		
NAS EEE - Natural Sciences Electives	Credits: 8		
SOC EEE - Social Sciences Electives	Credits: 6		
EEE EEE - College Transfer Electives (2 classes)	Credits: 6		

Choose One of the Following

Choose one of the following combinations to fulfill the math requirement (choose based on the requirements of the transfer institution):

A

Course Name	Credits:	Term Taken	Grade
MTH 161 - Precalculus I and	Credits: 3		
MTH 261 - Applied Calculus I	Credits: 3		

B

Course Name	Credits:	Term Taken	Grade
MTH 154 - Quantitative Reasoning and	Credits: 3		
MTH 155 - Statistical Reasoning	Credits: 3		

C

Course Name	Credits:	Term Taken	Grade
MTH 161 - Precalculus I	Credits: 3		
or			
MTH 167 - Precalculus With Trigonometry and	Credits: 5		
MTH 245 - Statistics I	Credits: 3		

D

Course Name	Credits:	Term Taken	Grade
MTH 263 - Calculus I and	Credits: 4		
MTH 264 - Calculus II	Credits: 4		

Total Credits: 44-46

Program Requirements

NOTE: To select courses, student should consult the catalog of the institution(s) to which transfer is anticipated in addition to these requirements:

Course Name	Credits:	Term Taken	Grade
SDV 100 - College Success Skills	Credits: 1		

SDV 199 - Supervised Study In Transfer Programs	Credits: 1		
PED/HLT EEE - Wellness Elective	Credits: 1		

Total Credits: 16-17

Information Systems Requirements

Courses may be selected from the following:

Course Name	Credits:	Term Taken	Grade
CSC 200 - Introduction to Computer Science	Credits: 3		
CSC 201 - Computer Science I	Credits: 4		
CSC 202 - Computer Science II	Credits: 4		
CSC 205 - Computer Organization	Credits: 3		
ITN 260 - Network Security Basics	Credits: 3		

Note

(ITP 120 (4) and ITP 220 (4) can be substituted for CSC 201 and CSC 202)

Total Credits: 13-14

Minimum Required for Degree: 60-63 Credits

Advising Sheet

Advising Sheet Suggested Schedules: Courses in advising sheets are displayed under the semester in which the courses are regularly offered. It is possible that a course shown on the schedule for a particular semester may not be offered due to low enrollment or other factors.

Developmental Prerequisites

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
ENG 111 - College Composition I	Credits: 3		
CSC 200 - Introduction to Computer Science	Credits: 3		
CSC 201 - Computer Science I	Credits: 4		
MTH EEE - Mathematics Electives	Credits: 3		
PED/HLT EEE - Wellness Elective	Credits: 1		
SDV 100 - College Success Skills	Credits: 1		

Total Credits: 15

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
ENG 112 - College Composition II	Credits: 3		
HUM EEE - Humanities/Fine Arts Elective	Credits: 3		
MTH EEE - Mathematics Electives	Credits: 3		
CSC 202 - Computer Science II	Credits: 4		
EEE EEE - College Transfer Electives (2 classes)	Credits: 6		

Total Credits: 16

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
CSC 205 - Computer Organization	Credits: 3		
HIS 121 - United States History I	Credits: 3		
HUM EEE - Humanities/Fine Arts Elective	Credits: 3		
NAS EEE - Natural Sciences Elective	Credits: 4		
SOC EEE - Social Sciences Elective	Credits: 3		

Total Credits: 16

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
HIS 122 - United States History II	Credits: 3		
SOC EEE - Social Sciences Elective	Credits: 3		
SDV 199 - Supervised Study In Transfer Programs	Credits: 1		
NAS EEE - Natural Sciences Elective	Credits: 4		
EEE EEE - College Transfer Elective	Credits: 3		
Total Credits: 14			
Notes:			

Student ID:_____	Catalog: 2020-2021 Catalog
Student Name:_____	Program: General Studies Specialization:
Advisor Name:_____	Performing Arts, AA&S

General Studies Specialization: Performing Arts, AA&S

Length: 60 credits

Purpose: The curriculum is designed for the student who plans to complete a baccalaureate degree program in the performing arts area. The intended transfer institution's catalog and transfer guide are the best sources of information for planning a course of study. Final responsibility for transferability of courses rests with the student and the registrar of that institution. Contact the division dean or an advisor for additional information.

Program Learning Outcomes: A student will be able to:

- locate, evaluate, interpet, and combine information to reach well-reasoned conclusions or solutions
- express themselves effectively in a variety of written forms
- calculate, interpret, and use numerical and quantitative information in a variety of settings
- demonstrate the knowledge and values necessary to become informed and contributing participants in a democratic society
- recognize and know how to apply the scientific method, and evaluate empirical information
- demonstrate skills important for successful transition into the workplace and/or pursuit of further education by way of professionalism and self-management practices and behaviors
- distinguish and differentiate the characteristics of theatre from other art forms

General Education Requirements

Course Name	Credits:	Term Taken	Grade
CST 110 - Introduction to Communication	Credits: 3		
ENG 111 - College Composition I	Credits: 3		
ENG 112 - College Composition II	Credits: 3		
HIS 121 - United States History I and	Credits: 3		
HIS 122 - United States History II	Credits: 3		
or			
HIS 101 - History of Western Civilization I and	Credits: 3		
HIS 102 - History of Western Civilization II	Credits: 3		
or			
HIS 111 - History of World Civilization I and	Credits: 3		
HIS 112 - History of World Civilization II	Credits: 3		
MTH 154 - Quantitative Reasoning	Credits: 3		
MTH 155 - Statistical Reasoning	Credits: 3		
HUM EEE - Humanities/Fine Arts Elective	Credits: 3		
NAS EEE - Natural Sciences Electives	Credits: 8		
SOC EEE - Social Sciences Electives	Credits: 6		

Total Credits: 38

Program Requirements

Course Name	Credits:	Term Taken	Grade
CST 130 - Introduction to The Theatre	Credits: 3		
CST 131 - Acting I	Credits: 3		
CST 132 - Acting II	Credits: 3		
CST 136 - Theatre Workshop	Credits: 3		
CST 231 - History of Theatre I	Credits: 3		
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		
SDV 199 - Supervised Study In Transfer Programs	Credits: 1		
PED/HLT EEE - Wellness Electives	Credits: 2		

Total Credits: 22

Minimum Required for Degree: 60 Credits

Advising Sheet

Advising Sheet Suggested Schedules: Courses in advising sheets are displayed under the semester in which the courses are regularly offered. It is possible that a course shown on the schedule for a particular semester may not be offered due to low enrollment or other factors.

Developmental Prerequisites

NOTE: * These classes meet the requirements of the Career Studies Certificate in Theatre Arts

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
ENG 111 - College Composition I	Credits: 3		
MTH 154 - Quantitative Reasoning	Credits: 3		
CST 110 - Introduction to Communication *	Credits: 3		
CST 130 - Introduction to The Theatre *	Credits: 3		
CST 131 - Acting I *	Credits: 3		
SDV 100 - College Success Skills *	Credits: 1		

Total Credits: 16

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
ENG 112 - College Composition II	Credits: 3		
MTH 155 - Statistical Reasoning	Credits: 3		
CST 132 - Acting II *	Credits: 3		
CST 136 - Theatre Workshop *	Credits: 3		
CST 231 - History of Theatre I *	Credits: 3		

Total Credits: 15

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
SOC EEE - Social Sciences Elective	Credits: 3		
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		
NAS EEE - Natural Sciences Elective	Credits: 4		
HIS 121 - United States History I	Credits: 3		
HUM EEE - Humanities/Fine Arts Elective	Credits: 3		

Total Credits: 16

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
SOC EEE - Social Sciences Elective	Credits: 3		
NAS EEE - Natural Sciences Elective	Credits: 4		
PED/HLT EEE - Wellness Electives	Credits: 2		
HIS 122 - United States History II	Credits: 3		
SDV 199 - Supervised Study In Transfer Programs	Credits: 1		

Total Credits: 13

Notes:

Student ID:_____

Student Name:_____

Advisor Name:_____

Catalog: 2020-2021 Catalog

Program: General Studies Specialization: Teacher Education Preparation, AAS

General Studies Specialization: Teacher Education Preparation, AAS

Length: 62 credits

Purpose: This specialization has been developed to facilitate transfer of credits earned by students with the Associate of Arts & Science (AA&S) degree in General Studies by taking a prescribed set of courses at Patrick Henry Community College to the Liberal Studies Elementary Education PreK-6 Initial Licensure Program at Longwood University.

> **NOTE:** Students wishing to complete teacher education at institutions other than Longwood University should meet with the program advisor to discuss courses required by the desired transfer institution.

Admission Requirements: Longwood will guarantee acceptance of qualified PHCC graduates with an AA&S degree who have earned a minimum grade point average (GPA) of 2.5 on a four point scale at the time of application and graduation. This cumulative GPA includes the GPA as calculated by PHCC and the cumulative GPA of all other colleges attended. The GPA of 2.5 may not include more than five classes retaken with only the higher grade being calculated by the GPA. Students with a GPA below 2.5 at the time of application and/or time of graduation may be considered for admission but without the guaranteed acceptance.

Other Information: Students are strongly encouraged to apply by March 1 (for fall term) and November 1 (for spring term).

Credits earned through examination (AP, IB, CLEP, or DANTES) that were awarded credit by PHCC will be treated on an equal basis as other credits earned at PHCC. Official transcripts from each college attended and/or official documentation regarding these examinations must be provided.

Students are required to pass PRAXIS I for entry in the Longwood/NCI Teacher Prep program.

Transfer Information: Longwood University agrees that PHCC graduates who are accepted will be granted junior status; all of their credits earned toward their AA&S degree will transfer with a C or better and all of their lower-division general education goals will be met. This assumption is based on the fact that students have completed courses as outlined below.

PHCC students who complete the associate degree through dual enrollment are NOT guaranteed admission under the terms of the transfer agreement. However, such students may apply to Longwood as freshmen. When these students' applications are reviewed, high school performance, test scores (SAT/ACT), and other criteria used in the freshman review process will be considered.

Program Outcomes: A student will be able to:

- locate, evaluate, interpet, and combine information to reach well-reasoned conclusions or solutions
- express themselves effectively in a variety of written forms
- calculate, interpret, and use numerical and quantitative information in a variety of settings
- demonstrate the knowledge and values necessary to become informed and contributing participants in a democratic society
- recognize and know how to apply the scientific method, and evaluate empirical information
- demonstrate skills important for successful transition into the workplace and/or pursuit of further education by way of professionalism and self-management practices and behaviors
- complete a supervised field placement of a minimum of 40 hours in a preK-6 environment (Teacher Education Preparation)

General Education Requirements

Course Name	Credits:	Term Taken	Grade
BIO 101 - General Biology I	Credits: 4		
BIO 102 - General Biology II	Credits: 4		
CHD 145 - Teaching Art, Music and Movement to Children	Credits: 3		
ECO 201 - Principles of Macroeconomics	Credits: 3		
or			
ECO 202 - Principles of Micro- Economics	Credits: 3		
ENG 111 - College Composition I and	Credits: 3		
ENG 112 - College Composition II	Credits: 3		
ENG 250 - Children's Literature	Credits: 3		
GEO 210 - People and The Land: Intro to Cultural Geography	Credits: 3		
HIS 101 - History of Western Civilization I	Credits: 3		
or			
HIS 102 - History of Western Civilization II	Credits: 3		
HIS 121 - United States History I	Credits: 3		
HIS 122 - United States History II	Credits: 3		

MTH 154 - Quantitative Reasoning	Credits: 3		
MTH 155 - Statistical Reasoning	Credits: 3		
or			
MTH 161 - Precalculus I	Credits: 3		
PLS 211 - U.S. Government I	Credits: 3		
or			
PLS 212 - U.S. Government I	Credits: 3		
PSY 230 - Developmental Psychology	Credits: 3		
GOL 110 - Earth Science	Credits: 4		

Fine Arts Elective

Choose one course (3 credits) from the following:

Course Name	Credits:	Term Taken	Grade
ART 101 - History and Appreciation of Art I	Credits: 3		
ART 102 - History and Appreciation of Art II	Credits: 3		
CST 130 - Introduction to The Theatre	Credits: 3		
MUS 121 - Music Appreciation I	Credits: 3		

Total Credits: 54

Program Requirements

Course Name	Credits:	Term Taken	Grade
EDU 200 - Introduction to Teaching as a Profession	Credits: 3		
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		
SDV 199 - Supervised Study In Transfer Programs	Credits: 1		

Total Credits: 8

Minimum Required for Degree: 62 Credits

Advising Sheet

Advising Sheet Suggested Schedules: Courses in advising sheets are displayed under the semester in which the courses are regularly offered. It is possible that a course shown on the schedule for a particular semester may not be offered due to low enrollment or other factors.

Developmental Prerequisites

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
ENG 111 - College Composition I	Credits: 3		
BIO 101 - General Biology I	Credits: 4		
MTH 154 - Quantitative Reasoning	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		
CHD 145 - Teaching Art, Music and Movement to Children	Credits: 3		

Total Credits: 14

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
ENG 112 - College Composition II	Credits: 3		
HIS 121 - United States History I	Credits: 3		
MTH 155 - Statistical Reasoning	Credits: 3		
BIO 102 - General Biology II	Credits: 4		
PLS 211 - U.S. Government I	Credits: 3		

Total Credits: 16

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
ENG 250 - Children's Literature	Credits: 3		
ECO 201 - Principles of Macroeconomics	Credits: 3		
or			
ECO 202 - Principles of Micro- Economics	Credits: 3		
PSY 230 - Developmental Psychology	Credits: 3		
HIS 122 - United States History II	Credits: 3		
EDU 200 - Introduction to Teaching as a Profession	Credits: 3		

Total Credits: 15

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
GEO 210 - People and The Land: Intro to Cultural Geography	Credits: 3		
HIS 101 - History of Western Civilization I	Credits: 3		
SDV 199 - Supervised Study In Transfer Programs	Credits: 1		
GOL 110 - Earth Science	Credits: 4		
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		

Total Credits: 17

Notes:

Student ID:_____	Catalog: 2020-2021 Catalog
Student Name:_____	Program: General Studies Specialization: Visual
Advisor Name:_____	Arts, AA&S

General Studies Specialization: Visual Arts, AA&S

Length: 60 credits

Purpose: The curriculum is designed for the student who plans to complete a baccalaureate degree program in the study of visual arts. The intended transfer institution's catalog and transfer guide are the best sources of information for planning a course of study. Final responsibility for transferability of courses rests with the student and the registrar of that institution. Contact the division dean or an advisor for additional information.

Program Outcomes: A student will be able to:

- locate, evaluate, interpet, and combine information to reach well-reasoned conclusions or solutions
- express themselves effectively in a variety of written forms
- calculate, interpret, and use numerical and quantitative information in a variety of settings
- demonstrate the knowledge and values necessary to become informed and contributing participants in a democratic society
- recognize and know how to apply the scientific method, and evaluate empirical information
- demonstrate skills important for successful transition into the workplace and/or pursuit of further education by way of professionalism and self-management practices and behaviors
- create a portfolio of artwork demonstrating proficiency in specified concepts and techniques

General Education Requirements

Course Name	Credits:	Term Taken	Grade
CST 110 - Introduction to Communication	Credits: 3		
ENG 111 - College Composition I and	Credits: 3		
ENG 112 - College Composition II	Credits: 3		
HIS 121 - United States History I and	Credits: 3		
HIS 122 - United States History II	Credits: 3		
or			
HIS 101 - History of Western Civilization I and	Credits: 3		
HIS 102 - History of Western Civilization II	Credits: 3		
or			
HIS 111 - History of World Civilization I and	Credits: 3		
HIS 112 - History of World Civilization II	Credits: 3		
MTH 154 - Quantitative Reasoning	Credits: 3		
MTH 155 - Statistical Reasoning	Credits: 3		
ENG EEE - English Literature Electives	Credits: 3		
NAS EEE - Natural Sciences Electives	Credits: 8		
SOC EEE - Social Sciences Electives	Credits: 6		

Total Credits: 38

Program Requirements

Course Name	Credits:	Term Taken	Grade
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		
SDV 199 - Supervised Study In Transfer Programs	Credits: 1		
PED/HLT EEE - Wellness Electives	Credits: 2		

ART Electives

Select 15 credits from the following:

Course Name	Credits:	Term Taken	Grade
ART 101 - History and Appreciation of Art I	Credits: 3		
ART 102 - History and Appreciation of Art II	Credits: 3		
ART 121 - Drawing I	Credits: 3		
ART 122 - Drawing II	Credits: 3		
ART 241 - Painting I	Credits: 3		

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ART 242 - Painting II	Credits: 3		
ART 283 - Computer Graphics I	Credits: 4		
ART 284 - Computer Graphics II	Credits: 4		

Total Credits: 22

Minimum Required for Degree: 60 Credits

Advising Sheet

Advising Sheet Suggested Schedules: Courses in advising sheets are displayed under the semester in which the courses are regularly offered. It is possible that a course shown on the schedule for a particular semester may not be offered due to low enrollment or other factors.

Developmental Prerequisites

NOTE: * These classes meet the requirements of the Career Studies Certificate in Art Studies

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
ENG 111 - College Composition I	Credits: 3		
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		
MTH 154 - Quantitative Reasoning	Credits: 3		
SDV 100 - College Success Skills *	Credits: 1		
ART EEE - Art Electives (2 classes) (ART 101 and ART 121 used for certificate) *	Credits: 6		

Total Credits: 16

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
ENG 112 - College Composition II	Credits: 3		
MTH 155 - Statistical Reasoning	Credits: 3		
ART EEE - Art Electives (2 classes) (ART 102 and ART 122 used for certificate) *	Credits: 6		
SOC EEE - Social Sciences Elective	Credits: 3		

Total Credits: 15

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
CST 110 - Introduction to Communication	Credits: 3		
HIS 121 - United States History I	Credits: 3		
ART EEE - Art Elective	Credits: 3		
NAS EEE - Natural Sciences Elective	Credits: 4		
SOC EEE - Social Sciences Elective	Credits: 3		

Total Credits: 16

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
HIS 122 - United States History II	Credits: 3		
SDV 199 - Supervised Study In Transfer Programs	Credits: 1		
ENG EEE - English Literature Electives	Credits: 3		
NAS EEE - Natural Sciences Elective	Credits: 4		
PED/HLT EEE - Wellness Electives	Credits: 2		

Total Credits: 13

Notes:

Student ID:_____
Student Name:_____
Advisor Name:_____

Catalog: 2020-2021 Catalog
Program: General Studies, AA&S

General Studies, AA&S

Length: 60-62 credits

Purpose: The curriculum is designed for the student who plans to complete a baccalaureate degree program. Students often select the general studies program if they intend to transfer to a four-year institution but are uncertain what their major will be. The transfer institution's catalog and transfer guide are the best sources of information for planning a course of study. Final responsibility for transferability of courses rests with the student and the registrar of that institution. Contact the division dean or an advisor for additional information.

Program Outcomes: A student will be able to:

- locate, evaluate, interpet, and combine information to reach well-reasoned conclusions or solutions
- express themselves effectively in a variety of written forms
- calculate, interpret, and use numerical and quantitative information in a variety of settings
- demonstrate the knowledge and values necessary to become informed and contributing participants in a democratic society
- recognize and know how to apply the scientific method, and evaluate empirical information
- demonstrate skills important for successful transition into the workplace and/or pursuit of further education by way of professionalism and self-management practices and behaviors

General Education Requirements

Course Name	Credits:	Term Taken	Grade
CST 110 - Introduction to Communication	Credits: 3		
ENG 111 - College Composition I and	Credits: 3		
ENG 112 - College Composition II	Credits: 3		
HIS 121 - United States History I and	Credits: 3		
HIS 122 - United States History II	Credits: 3		
or			
HIS 101 - History of Western Civilization I and	Credits: 3		
HIS 102 - History of Western Civilization II	Credits: 3		
or			
HIS 111 - History of World Civilization I and	Credits: 3		
HIS 112 - History of World Civilization II	Credits: 3		
EEE EEE - College Transfer Electives	Credits: 9		
ENG EEE - English Literature Electives	Credits: 3		
HUM EEE - Humanities/Fine Arts Electives	Credits: 6		
NAS EEE - Natural Sciences Electives	Credits: 8		
SOC EEE - Social Sciences Electives	Credits: 6		

Choose one of the following

Choose one of the following combinations to fulfill the Math requirement **(choose based on the requirements of the transfer institution):**

A

Course Name	Credits:	Term Taken	Grade
MTH 161 - Precalculus I	Credits: 3		
or			
MTH 167 - Precalculus With Trigonometry and	Credits: 5		
MTH 245 - Statistics I	Credits: 3		
or			
MTH 261 - Applied Calculus I	Credits: 3		

B

Course Name	Credits:	Term Taken	Grade
MTH 154 - Quantitative Reasoning and	Credits: 3		
MTH 155 - Statistical Reasoning	Credits: 3		

Total Credits: 53-55

Program Requirements

Course Name	Credits:	Term Taken	Grade
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		
PED/HLT EEE - Wellness Electives	Credits: 2		
SDV 100 - College Success Skills	Credits: 1		
SDV 199 - Supervised Study In Transfer Programs	Credits: 1		

Total Credits: 7

Minimum Required for Degree: 60-62 Credits

Advising Sheet

Advising Sheet Suggested Schedules: Courses in advising sheets are displayed under the semester in which the courses are regularly offered. It is possible that a course shown on the schedule for a particular semester may not be offered due to low enrollment or other factors.

Developmental Prerequisites

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
CST 110 - Introduction to Communication	Credits: 3		
ENG 111 - College Composition I	Credits: 3		
HIS 121 - United States History I	Credits: 3		
MTH 154 - Quantitative Reasoning	Credits: 3		
SOC EEE - Social Sciences Elective	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		

Total Credits: 16

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
ENG 112 - College Composition II	Credits: 3		
HIS 122 - United States History II	Credits: 3		
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		
MTH 155 - Statistical Reasoning	Credits: 3		
HUM EEE - Humanities/Fine Arts Elective	Credits: 3		
PED/HLT EEE - Wellness Elective	Credits: 1		

Total Credits: 16

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
EEE EEE - College Transfer Elective	Credits: 3		
ENG EEE - English Literature Electives	Credits: 3		
HUM EEE - Humanities/Fine Arts Elective	Credits: 3		
NAS EEE - Natural Sciences Elective	Credits: 4		
SOC EEE - Social Sciences Elective	Credits: 3		

Total Credits: 16

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
EEE EEE - College Transfer Electives (2 classes)	Credits: 6		
NAS EEE - Natural Sciences Elective	Credits: 4		
PED/HLT EEE - Wellness Elective	Credits: 1		
SDV 199 - Supervised Study In Transfer Programs	Credits: 1		

Total Credits: 12

Notes:

Student ID:_____
Student Name:_____
Advisor Name:_____

Catalog: 2020-2021 Catalog
Program: Health Technology: Nursing, AAS

Health Technology: Nursing, AAS

Length: 68 Credits

Purpose: The two-year Associate in Applied Science Health Technology Nursing degree curriculum is a competitive entry program designed for accepted students to learn the essential knowledge and skills of the nursing discipline to render patient care as entry level practitioners of nursing in a variety of health care settings.

Employment Objective: Program graduates who subsequently obtain licensure as a Registered Nurse may be employed in a variety of health care settings including but not limited to acute care hospitals, rehabilitation centers, community and public health centers, skilled care facilities, home health agencies, long-term care facilities, outpatient care facilities, schools, military, and other comparable agencies.

Potential Certification: Upon satisfactory completion of the curriculum, graduates will be eligible to apply for licensure as a registered nurse through the state licensing board. A student who resides outside of Virginia and plans to apply for licensure as a registered nurse subsequent to completion of this education program must comply with the licensure requirements mandated by the student's state of residence.

Program Learning Outcomes: Students who complete the Nursing AAS degree will be expected to:

- provide patient centered care promoting therapeutic relationships, caring behaviors, and self-determination across the lifespan for diverse populations;
- practice safe nursing care that minimizes risk of harm across systems and client populations;
- demonstrate nursing judgment through the use of clinical reasoning, the nursing process, and evidence-based practice in the provision of safe, quality care;
- 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;
- manage client care through quality improvement processes, information technology, and fiscal responsibility to meet client needs and support organizational outcomes; and
- 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 Accreditation and Approvals: The AAS Nursing program is:

- approved by the Virginia State Board of Nursing, 9960 Mayland Drive, Suite 300, Henrico, Virginia 23233-1463, (804) 367-4515; and
- accredited by the Accreditation Commission for Education in Nursing (ACEN). The Accreditation Commission for Education in Nursing may be contacted at 3343 Peachtree Road NE, Suite 850 Atlanta, Georgia 30326, (404) 975-5000.

NCLEX RN First Time Licensure Pass Rates for PHCC, State and National for the last 5 years:

	PHCC	State	National
2019	71.11%	89.47%	88.18%
2018	86%	91.37%	88.30%
2017	85.71%	89.14%	87.11%
2016	84.78%	86.87%	84.57%
2015	88.46%	82.9%	84.53%

Admission Procedure: Interested students must apply and be accepted as a student to the college. In addition, the nursing program will offer two application periods per year during specified and advertised application periods. Nursing applications will only be accepted and processed during the advertised application periods. Each nursing applicant must include and submit all required documents specified in the application to the Nursing and Health Science office at the designated time. Admission testing will be offered to students meeting the pre-application and pre-requisite requirements. Priority admission will be given to students who score at or above the 50th percentile rank.

Program Notes:
Board of Nursing: The Virginia State Board of Nursing has the authority to deny licensure to any applicant who has violated any of the provisions of 54.1-3007 of the Code of Virginia.

Drug Testing and Criminal Background Screening: As a part of program admission, all students who are offered a seat in the nursing program must undergo mandatory drug screening and criminal background checks. The drug screen and/or the background check may be repeated during the program of study. The cost of the drug screen and background check are the responsibility of the student. Clinical agencies may deny a student participation in direct patient care based on the results of drug screen and/or background. Inability to participate in direct care at any clinical site will result in automatic program dismissal.

Granting Admission: If admission must be limited because the number of qualified applicants exceeds available program space, admission to the program will be given to applicants who score above the 50th percentile ranking starting with the highest rank score and are also residents of the college service area. Curricular GPA will be used if there are still more qualified applicants than seats available for residents of the service region. If open seats are still available applicants who scored at the 50th percentile rank or above who live outside the college service area will be offered admission starting with the higher percentile ranking, until all seats are filled. If two applicants from outside the service region have the same percentile ranking, yet only one seat remains then the curricular and cumulative GPA will also be used to determine placement. Applicants who are not accepted may reapply at the next advertised application period.

Seat Availability:
The nursing program addresses the educational needs of students with a variety of experience and prior education, a limited number or entering class positions may be designated for experienced Licensed Practical Nurses who graduated from an approved program or for prospective high school graduates who also have been enrolled at PHCC and meet all the required admission requirements. Interested high school students should meet with their counselors prior to planning their junior and senior year courses to ensure they are enrolled in all required courses. High school seniors who wish to apply to the program during their senior year must meet all of the outlined admission requirements. Dual enrollment course GPA and high school GPA will be utilized in the admission process.

Admission Requirements: All applicants must meet the following requirements for admission to the required clinical courses (NSG 100, NSG 106, NSG 130, NSG 200, NSG 115, NSG 170, NSG 210, NSG 211, NSG 252, NSG 230, and NSG 270)

STEP ONE: PRE-APPLICATION REQUIREMENTS

1. Be accepted as a student to the college.
2. Submit an official high school transcript, GED, or certificates of completion of home schooling transcripts to the Nursing office.
3. Submit official college transcripts from colleges other than Patrick Henry Community College. College transcripts must be provided in order to determine GPA based on transfer courses from other colleges.
4. Complete the Virginia Placement Test (VPT) if indicated. Successfully pass any developmental course deficiencies indicated by results of VPT or multiple measures placement. Students must demonstrate no developmental English requirements, and have the equivalent high school Algebra competency evidenced by no deficiencies in math modules 1-5. Deficiencies must be completed prior to submitting program application.
5. Students must provide proof of two high school college preparatory sciences, including Biology and Chemistry, both with a grade of "C" or higher. Deficiencies must be completed prior to submitting program application.
6. Students must attend a Nursing Program Information Session prior to application submission **(**<u>NEW REQUIREMENT for ALL students beginning with the Fall 2020 application cycle</u>.)**
7. Students must have a cumulative GPA of 2.0 or higher.

STEP TWO: PRE-REQUISITE SEMESTER
At the completion of **STEP ONE**, students will need to complete the following actions during the semester they submit the program application:

1. At the time of program application, all students (including high school seniors) must be enrolled or have previously completed the following courses with a grade of "C" or higher: BIO 141; ENG 111; SDV 100 ; CST 110; and PSY 230;
2. Applicants must maintain a 2.5 curricular GPA in the pre-requisite courses and earn a grade of "C" or higher in the pre-requisite courses listed in STEP TWO, #1. Failure to maintain the curricular GPA and/or pass the designated pre-requisite courses with a grade of "C"or higher; and/or maintain an overall 2.0; will void any program application and program acceptance.

STEP THREE: APPLICATION PROCESS

1. Applicant may submit a program application at posted application times when student has met STEP ONE Pre-application requirements, and STEP TWO: Prerequisite Semester is in progress or complete.
2. Applicants must submit all required documentation with the nursing application during the posted application week or the application will be void. Late applications will not be accepted.
3. Qualified applicants will be invited via written communication from the Nursing Program Director to take the designated nursing admission test, such as Kaplan, HESI, TEAS, or equivalent. Qualified applicants may only test once per application cycle. Kaplan admission scores from previous applicant testing periods may be used in lieu of retesting, if the scores are no more than one year old. If the student tests during the current application cycle the current test score will be used to determine admission status.
4. Admission will follow the admission procedure detailed above.
5. Students who are not accepted to the Nursing Program may apply at the next posted application time.

Readmission Requirements: Any student wishing to re-enroll in the nursing clinical courses must follow the outlined readmission process in the Nursing Student Handbook. Students who fail a nursing course, or withdraw failing, or withdraw for non-academic reasons may be readmitted to the nursing program only once. All re-admissions are at the discretion of the nursing faculty committee. A grade of "C" or higher is required in all courses of the Associate of Applied Science Nursing Degree. A student who does not earn the required grade(s) will be subject to nursing program dismissal. A student may be required to enroll in and satisfactorily complete specific courses for readmission. Additional data may be required. The nursing faculty committee will consider each student's request for readmission and the decision to readmit will be based on additional data, prior program performance, and space availability.

Advanced Placement – Licensed Practical Nurses that meet the admission requirements may be eligible for advanced placement. To be considered for advanced placement, an LPN must meet the following listed below:

1. A graduate from a Board of Nursing approved Practical Nursing School.
2. Candidate must have passed the NCLEX-PN licensing exam and hold a current unencumbered Virginia license to practice as a Practical Nurse, and maintain licensure throughout the duration of the program.
3. Candidate must have met Step ONE and STEP TWO of the Admission Requirements, **and also be enrolled in BIO 142 at the time of program application,** as this is a pre-requisite course to one of the nursing courses for which LPN's will receive advanced credit.
4. Upon meeting the above (numbers 1-3) submit a nursing application during the posted Transition Application periods.
5. LPN's who are accepted and receive advanced placement will be required to take NSG 115 (4 credits); NSG 200 (3 credits) and BIO 205 (4 credits) during the first semester of clinical courses. Successful students will then complete the last two semesters of the RN program.
6. Students must complete all program and general education courses with a grade of "C" or higher.

Physical Requirement – The minimal functional requirements for all entering nursing students include:

- sufficient eye-hand coordination and manual and finger dexterity to provide direct patient care and to manipulate and operate equipment in the delivery of patient care;

- sufficient ability to fully observe patients/patient conditions and provide patient care, read medical records, and observe and manipulate equipment, including in dimly lit environments;
- sufficient hearing to communicate with patients and healthcare team members, including ability to detect and interpret sounds when operating equipment and gathering data;
- satisfactory communication skills, to include competence in reading, writing and speaking in English, in the classroom, laboratory, and clinical settings;
- ability to perform patient care activities that require full range of motion including handling, lifting, or moving patients and/or equipment;
- ability to lift and carry items weighing up to 50 pounds;
- ability to successfully perform all required duties and responsibilities in classroom, laboratory and clinical settings in stressful situations or conditions; and
- ability to participate in classroom, laboratory, and clinical settings during irregular hours (day/evening/night shifts, weekends, more than 8 hours at a time).

Financial Requirements – In addition to the usual college tuition and fees, the nursing program requires additional expenses. Approximate costs include:

- Uniforms $130-$160
- Physical examinations and required immunizations $150- $350
- Electronic books and resources $2000
- Kaplan/NCLEX Review $600
- Drug screen $38 minimum
- Criminal background $48 minimum
- Application for licensure and criminal background $430
- AHA LBS CPR certification $157
- Digital Reading Device $125
- Graduation Pin- cost depends on price of gold or silver

Transfer Options: Students interested in program transfer must meet all admission requirements of the program and may be accepted on a space available basis. The following additional requirements will be used for transfer consideration:

- Transfer applicant is currently accepted and enrolled in an approved associate degree nursing program or equivalent whose graduates are candidates for licensure;
- Nursing student transfer applicants must have successfully completed (grade of "C" or higher) didactic, clinical laboratory and clinical nursing major courses within the previous 12 months; and
- Nursing student transfer applicants must submit a written statement from the dean or director of the nursing program from which the student is leaving, that indicates the student is in good standing and eligible to return to complete the program of nursing at the current college.

Curriculum Requirements: In addition to didactic, laboratory experiences, selected clinical experiences within driving distance of the college will be scheduled during day, evening, and/or weekend times, depending on availability of facilities.

Clinical nursing students are required to complete end of semester cumulative examinations and those scores will be counted as a percentage of the final course grade. Students must pass the general education and nursing laboratory and clinical courses with a grade of "C" or higher to continue in the program. Pre-requisite and co-requisite course enrollment must be adhered to during completion of the nursing program. Grading guidelines and the nursing program grading scale are specifically addressed in the course syllabi, and Nursing Student Handbook issued upon program acceptance. Clinical/field/preceptor experiences require access to contracted clinical agencies.

General Education Requirements

Course Name	Credits:	Term Taken	Grade
ENG 111 - College Composition I	Credits: 3		
CST 110 - Introduction to Communication	Credits: 3		
HUM EEE - Humanities/Fine Arts Elective	Credits: 3		
PSY 230 - Developmental Psychology	Credits: 3		
BIO 141 - Human Anatomy and Physiology I	Credits: 4		

Total Credits: 16

Program Requirements

Course Name	Credits:	Term Taken	Grade
BIO 142 - Human Anatomy and Physiology II	Credits: 4		
BIO 205 - General Microbiology	Credits: 4		
SOC 200 - Principles of Sociology	Credits: 3		
NSG 100 - Introduction to Nursing Concepts	Credits: 4		
NSG 106 - Competencies For Nursing Practice	Credits: 2		
NSG 130 - Professional Nursing Concepts	Credits: 1		
NSG 200 - Health Promotion and Assessment	Credits: 3		
NSG 152 - Health Care Participant	Credits: 3		
NSG 170 - Health/Illness Concepts	Credits: 6		

NSG 210 - Health Care Concepts I	Credits: 5		
NSG 211 - Health Care Concepts II	Credits: 5		
NSG 230 - Advanced Professional Nursing Concepts	Credits: 2		
NSG 252 - Complex Health Concepts	Credits: 4		
NSG 270 - Nursing Capstone	Credits: 4		
HLT 105 - Cardiopulmonary Resuscitation	Credits: 1		
SDV 100 - College Success Skills	Credits: 1		

Total Credits: 52

Minimum Requirement for Degree: 68 Credits

Advising Sheet

Advising Sheet Suggested Schedules: Courses in advising sheets are displayed under the semester in which the courses are regularly offered. It is possible that a course shown on the schedule for a particular semester may not be offered due to low enrollment or other factors.

Developmental Prerequisites

Prerequisite Semester Courses

Course Name	Credits:	Term Taken	Grade
BIO 141 - Human Anatomy and Physiology I	Credits: 4		
ENG 111 - College Composition I	Credits: 3		
PSY 230 - Developmental Psychology	Credits: 3		
CST 110 - Introduction to Communication	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		

Total Credits: 14

Semester One Courses

Course Name	Credits:	Term Taken	Grade
BIO 142 - Human Anatomy and Physiology II	Credits: 4		
NSG 100 - Introduction to Nursing Concepts	Credits: 4		
NSG 106 - Competencies For Nursing Practice	Credits: 2		
NSG 130 - Professional Nursing Concepts	Credits: 1		
NSG 200 - Health Promotion and Assessment	Credits: 3		
HLT 105 - Cardiopulmonary Resuscitation	Credits: 1		

Total Credits: 15

Semester Two Courses

Course Name	Credits:	Term Taken	Grade
BIO 205 - General Microbiology	Credits: 4		
NSG 152 - Health Care Participant	Credits: 3		
NSG 170 - Health/Illness Concepts	Credits: 6		

Total Credits: 13

Semester Three Courses

Course Name	Credits:	Term Taken	Grade
SOC 200 - Principles of Sociology	Credits: 3		
NSG 210 - Health Care Concepts I	Credits: 5		
NSG 211 - Health Care Concepts II	Credits: 5		

Total Credits: 13

Semester Four Courses

Course Name	Credits:	Term Taken	Grade
NSG 230 - Advanced Professional Nursing Concepts	Credits: 2		
NSG 252 - Complex Health Concepts	Credits: 4		

NSG 270 - Nursing Capstone	Credits: 4		
HUM EEE - Humanities/Fine Arts Elective	Credits: 3		

Total Credits: 13

Notes:

Student ID:_____ **Student Name:**_____ **Advisor Name:**_____	**Catalog: 2020-2021 Catalog** **Program: Health Technology: Pre-Nursing, CSC**

Health Technology: Pre-Nursing, CSC

Career Information

Current Job Opportunities

Gainful Employment Information

Length: 28-29 credits

Purpose: This program is designed to prepare a student for entry level practice in the health care field in the area of patient care in a variety of health service facilities and/or desires to advance in the nursing field creating a pathway to registered nursing/practical nursing.

Employment Objective: Students who successfully complete the appropriate courses may be eligible for employment in hospitals, skilled/residential nursing facilities, home care, physician offices, or other health related fields.

Potential Certification: After successful completion of the nurse aide courses, students will be eligible to **apply** to take the certification test for Certified Nurse Aide in Virginia. After successful completion of the Cardiopulmonary Resuscitation course, student will receive American Heart Association BLS certification. A student who resides outside of Virginia and plans to apply for certification as a nurse aide subsequent to completion of this education program may not meet the requirements of certification for the student's state of residence.

Program Learning Outcomes: The student will be able to:

- demonstrate skillful delivery of patient care at the nurse aide level of preparation; and
- identify common medical terms utilized in the health care setting.

Physical Requirement: The minimal functional requirements for all entering nurse aide students include:

- sufficient eye-hand coordination and manual and finger dexterity to provide direct patient care and to manipulate and operate equipment in the delivery of patient care;
- sufficient ability to fully observe patients/patient conditions and provide patient care, read patient health information, and observe and manipulate equipment, including in dimly lit environments;
- sufficient hearing to communicate with patients and healthcare team members, including ability to recognize and report changes;
- satisfactory communication skills, to include competence in reading, writing and speaking in English, in the classroom, laboratory, and clinical settings to allow for accurate recording and reporting of patient information;
- ability to perform patient care activities that require full range of motion including handling, lifting, or moving patients and/or equipment;
- ability to lift and carry items weighing up to 50 pounds;
- ability to successfully perform all required duties and responsibilities in classroom, laboratory and clinical settings in stressful situations or conditions;
- ability to participate in classroom, laboratory, and clinical settings during irregular hours (day/evening/night shifts, weekends, more than 8 hours at a time).

Curriculum Requirements: Students will be required to undergo mandatory drug screening and criminal background check. Students must have a negative drug screen and criminal background check to be eligible for clinical learning experiences. Students must earn a grade of C or higher in all semsters of ENG, NAS, PSY, SDV, and CST courses to be elgible to apply to nursing. A grade of C or higher is required in NUR 27 and NUR 21. Clinical/field/preceptor experiences require access to contracted clinical agencies.

Financial Requirements: In addition to the usual college tuition and fees, the program requires additional expenses.

Approximate Costs May Include:

Drug screening	$38 minimum
Criminal background check	$48 minimum
Uniform and shoes	$50-$75
Watch	$10
Physical examination	$80-$100
Tuberculin (TB) Skin Test	$25-$45
Certification examination	$120
Transportation to clinical agencies as required.	

Program Requirements

Course Name	Credits:	Term Taken	Grade
ENG 111 - College Composition I	Credits: 3		
HLT 105 - Cardiopulmonary Resuscitation	Credits: 1		
HLT 141 - Introduction to Medical Terminology	Credits: 1		

CST 110 - Introduction to Communication	Credits: 3		
NAS EEE - Natural Sciences Electives (CHM 110, BIO 101, NAS 150, BIO 141 or BIO 142)	Credits: 8		
NUR 27 - Nurse Aide I	Credits: 5		
NUR 21 - Nurse Aide Clinical Expereince	Credits: 1		
PSY 230 - Developmental Psychology	Credits: 3		
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		

Minimum Required for Career Studies Certificate: 28-29 Credits

Advising Sheet

Advising Sheet Suggested Schedules: Course in advising sheets are displayed under the semester in which the courses are regularly offered. It is possible that a course show on the schedule for a particular semester may not be offered due to low enrollment or other factors

Developmental Prerequisites

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
ENG 111 - College Composition I	Credits: 3		
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		
NAS EEE - Natural Sciences Elective	Credits: 4		
PSY 230 - Developmental Psychology	Credits: 3		
HLT 141 - Introduction to Medical Terminology	Credits: 1		
SDV 100 - College Success Skills	Credits: 1		

Total Credits: 14-15

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
NAS EEE - Natural Sciences Elective	Credits: 4		
CST 110 - Introduction to Communication	Credits: 3		
NUR 27 - Nurse Aide I	Credits: 5		
NUR 21 - Nurse Aide Clinical Expereince	Credits: 1		
HLT 105 - Cardiopulmonary Resuscitation	Credits: 1		

Total Credits: 14

Notes:

Student ID:_____	Catalog: 2020-2021 Catalog
Student Name:_____	Program: High-Demand Occupational Programs for
Advisor Name:_____	Employment (HOPE): Customer Service, CSC

High-Demand Occupational Programs for Employment (HOPE): Customer Service, CSC

Career Information

Current Job Opportunities

Gainful Employment Information

Length: 24 credits

Purpose: This program prepares graduates to fulfill entry-level responsibilities in the customer service industry. Prerequisites: ENF 3 or above, and MTT 1-3

Program Learning Outcomes: Upon completion, graduates will demonstrate the fundamental knowledge, skill and ability related to contact center operations, keyboarding and computer tasks, and work-ready skills necessary to work in an entry-level position in the customer service field.

Requirements

Course Name	Credits:	Term Taken	Grade
AST 117 - Keyboarding For Computer Usage	Credits: 1		
AST 171 - Introduction to Call Center Services	Credits: 3		
BUS 110 - Business Protocol	Credits: 3		
BUS 149 - Workplace Ethics	Credits: 1		
BUS 190 - Coordinated Internship	Credits: 3		
• ENG 105 - Communication in Business and Industry Credits: 2			
MKT 170 - Customer Service	Credits: 2		
SDV 106 - Preparation For Employment	Credits: 1		
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		
ITE 55 - Certification Preparation	Credits: 1		

Minimum Required for the Career Studies Certificate: 24 Credits

Notes:

Student ID:_____
Student Name:_____
Advisor Name:_____

Catalog: 2020-2021 Catalog
Program: High-Demand Occupational Programs for Employment (HOPE): Food Service, CSC

High-Demand Occupational Programs for Employment (HOPE): Food Service, CSC

Career Information

Current Job Opportunities

Gainful Employment Information

Length: 22 credits

Purpose: This program prepares graduates to fulfill entry-level responsibilities in the food service industry. Prerequisites: ENF 3 or above, and MTT 1-3

Program Learning Outcomes: Upon completion, graduates will demonstrate the fundamental knowledge, skill and ability related to food production, dining, serving, and work ready skills necessary to work as potentially certified ServSafe Manager in the food service field.

Requirements

Course Name	Credits:	Term Taken	Grade
BUS 110 - Business Protocol	Credits: 3		
BUS 149 - Workplace Ethics	Credits: 1		
HRI 106 - Principles of Culinary Arts I-II	Credits: 3		
HRI 158 - Sanitation and Safety	Credits: 3		
SDV 106 - Preparation For Employment	Credits: 1		
SDV 100 - College Success Skills	Credits: 1		
ITE 55 - Certification Preparation	Credits: 1		
MKT 170 - Customer Service	Credits: 2		
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		
HRI 190 - Coordinated Internship	Credits: 1		

Minimum Required for the Career Studies Certificate: 20 Credits

Notes:

Student ID:_____	Catalog: 2020-2021 Catalog
Student Name:_____	Program: High-Demand Occupational Programs for
Advisor Name:_____	Employment (HOPE): Logistics Supervision, CSC

High-Demand Occupational Programs for Employment (HOPE): Logistics Supervision, CSC

Length: 10 credits

Purpose: To prepare individuals with the leadership and supervisory skills necessary to successfully lead this emerging technical workforce in the logistics industry. Prerequisites: ENF 3 or above and MTT modules 1-3

Program Learning Outcomes: Upon completion, graduates will demonstrate the skills and abilities to supervise front-line material handling or fulfillment personnel, utilize computer skills and possess broad skills in both the application of theories and hands-on experience in a variety of logistics/eCommerce related disciplines.

Requirements

Course Name	Credits:	Term Taken	Grade
BUS 111 - Principles of Supervision I	Credits: 3		
IND 181 - World Class Manufacturing	Credits: 3		
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		
BUS 290 - Coordinated Internship	Credits: 1		

Minimum Required for the Career Studies Certificate: 10 Credits

Notes:

Student ID:_____	Catalog: 2020-2021 Catalog
Student Name:_____	Program: High-Demand Occupational Programs for
Advisor Name:_____	Employment (HOPE): Logistics, CSC

High-Demand Occupational Programs for Employment (HOPE): Logistics, CSC

Career Information

Current Job Opportunities

Gainful Employment Information

Length: 21 credits

Purpose: This program prepares graduates to meet the demands for an emerging technical workforce and is a direct response to local workforce and industry demand. Prerequisites: ENF 3 or above, and MTT modules 1-3

Program Learning Outcomes: Upon completion, graduates will demonstrate the fundamental knowledge, skill and ability related to front-line material handling, fulfillment, computer tasks, and work-ready skills necessary to work in an entry-level position in the logistics/eCommerce field.

Requirements

Course Name	Credits:	Term Taken	Grade
BUS 110 - Business Protocol	Credits: 3		
BUS 149 - Workplace Ethics	Credits: 1		
BUS 234 - Supply Chain Management	Credits: 3		
BUS 255 - Inventory and Warehouse Management	Credits: 3		
BUS 290 - Coordinated Internship	Credits: 3		
ITE 55 - Certification Preparation	Credits: 1		
MKT 170 - Customer Service	Credits: 2		
SDV 106 - Preparation For Employment	Credits: 1		
SDV 100 - College Success Skills	Credits: 1		
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		

Minimum Required for the Career Studies Certificate: 21 Credits

Notes:

Student ID:_____	Catalog: 2020-2021 Catalog
Student Name:_____	Program: Industrial Controls, CSC
Advisor Name:_____	

Industrial Controls, CSC

Career Information

Current Job Opportunities

Gainful Employment Information

Length: 18 credits

Purpose: This program is designed to prepare students for Siemens PLC certification. Students will also receive skills needed for installation, maintenance and repair of advanced technology production equipment.

Program Learning Outcomes: Graduates will have fundamental skills for installation and repair of electrical control systems. Graduates will demonstrate proficiency in programmable logic controllers and mechatronic process controls.

Requirements

Course Name	Credits:	Term Taken	Grade
ELE 113 - Electricity I	Credits: 3		
ELE 156 - Electrical Control Systems	Credits: 3		
ELE 233 - Programmable Logic Controller Systems I *	Credits: 3		
ETR 150 - Machine Control Using Relay & Programmable Logic	Credits: 3		
ELE 246 - Industrial Robotics Programming	Credits: 3		
INS 210 - Principles of Instrumentation	Credits: 3		

Note

* Students will be responsible for testing fees.

Minimum Required for Career Studies Certificate: 18 Credits

Notes:

Student ID:_____
Student Name:_____
Advisor Name:_____

Catalog: 2020-2021 Catalog
Program: Industrial Electronics Technology, AAS

Industrial Electronics Technology, AAS

Length: 67 credits

Purpose: The focus of this program is to provide highly skilled industrial technicians for a regional workforce. Qualified electronic technicians are needed in ever increasing numbers to assist local business and industry in taking full advantage of computerized systems, automation, and controls. The manufacturing environment of the 21st century integrates several advanced technologies including sensors, transducers, automated controls, programmable logic controls, motor control circuits, motor drives, pneumatics, microprocessors, computer hardware, and software applications. A strong educational background is required to install, maintain, troubleshoot, and repair such advanced systems.

Program Learning Outcomes: A student will be able to:

- demonstrate proficiency in oral communication
- demonstrate effective written communication skills
- demonstrate proficiency in mathematical skills to solve problems
- demonstrate proficiency in scientific reasoning
- demonstrate proficiency in information technology
- demonstrate the ability to reason critically and apply logic to solve problems
- demonstrate the ability to write a ladder program with two inputs and one output
- learn schematic symbols that apply to building a circuit with electronic devices on a bread board from a schematic diagram
- three phase motor structure and function will be emphasized to enable students to wire a single start-stop control station with a motor starter from a line diagram

Potential Certifications: Students will have the opportunity to earn a number of industry recognized certifications designed to enhance their abilities and ultimately improve their performance in specialized areas. All certifications listed below are offered through Siemens, the industry leader in automation.

NOTE: Students will be responsible for testing fees.

> *Siemens Certification in Level 1 Mechatronics
> *Siemens Certification in Level 2 Mechatronics
> *Siemens Certification in Programmable Logic Controllers
> *Siemens Certification in Variable Frequency Drives

Occupational Objectives: Employment opportunities for graduates of this program include positions as electronics technician, industrial electronics technician or service technician.

General Education Requirements

Course Name	Credits:	Term Taken	Grade
CST 110 - Introduction to Communication	Credits: 3		
MTH 111 - Basic Technical Mathematics	Credits: 3		
HUM EEE - Humanities/Fine Arts Elective	Credits: 3		
SOC EEE - Social Sciences Elective	Credits: 3		
ENG 115 - Technical Writing	Credits: 3		

Total Credits: 15

Program Requirements

Course Name	Credits:	Term Taken	Grade
EGR 216 - Computer Methods In Engineering and Technology	Credits: 3		
ELE 110 - Home Electric Power	Credits: 3		
ELE 113 - Electricity I	Credits: 3		
ELE 156 - Electrical Control Systems	Credits: 3		
ETR 150 - Machine Control Using Relay & Programmable Logic	Credits: 3		
ETR 230 - Mechatronic Process Control	Credits: 3		
ETR 298 - Seminar and Project	Credits: 1		
HLT 105 - Cardiopulmonary Resuscitation	Credits: 1		
IND 243 - Principles and Applications of Mechatronics	Credits: 3		
MEC 140 - Introduction to Mechatronics	Credits: 3		
MEC 155 - Mechanisms	Credits: 3		
MEC 165 - Applied Hydraulics, Pneumatics and Hydrostatics	Credits: 3		
TEC EEE - Technical Elective	Credits: 6		
SDV 100 - College Success Skills	Credits: 1		

ELE 246 - Industrial Robotics Programming	Credits: 3		
ETR 156 - Digital Circuits and Microprocessor Fundamentals	Credits: 4		
ETR 246 - Electronic Motor Drives Systems	Credits: 3		
INS 210 - Principles of Instrumentation	Credits: 3		

Total Credits: 52

Minimum Required for Degree: 67 Credits

Advising Sheet

Advising Sheet Suggested Schedules: Courses in advising sheets are displayed under the semester in which the courses are regularly offered. It is possible that a course shown on the schedule for a particular semester may not be offered due to low enrollment or other factors.

Developmental Prerequisites

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
ELE 113 - Electricity I	Credits: 3		
ELE 156 - Electrical Control Systems	Credits: 3		
MEC 140 - Introduction to Mechatronics	Credits: 3		
MEC 155 - Mechanisms	Credits: 3		
ETR 156 - Digital Circuits and Microprocessor Fundamentals	Credits: 4		
SDV 100 - College Success Skills	Credits: 1		

Total Credits: 17

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
IND 243 - Principles and Applications of Mechatronics	Credits: 3		
ELE 246 - Industrial Robotics Programming	Credits: 3		
ETR 150 - Machine Control Using Relay & Programmable Logic	Credits: 3		
INS 210 - Principles of Instrumentation	Credits: 3		
MEC 165 - Applied Hydraulics, Pneumatics and Hydrostatics	Credits: 3		
TEC EEE - Technical Elective	Credits: 3		

Total Credits: 18

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
EGR 216 - Computer Methods In Engineering and Technology	Credits: 3		
HLT 105 - Cardiopulmonary Resuscitation	Credits: 1		
ELE 110 - Home Electric Power	Credits: 3		
ETR 230 - Mechatronic Process Control	Credits: 3		
ETR 246 - Electronic Motor Drives Systems	Credits: 3		
TEC EEE - Technical Elective	Credits: 3		

Total Credits: 16

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
CST 110 - Introduction to Communication	Credits: 3		
ETR 298 - Seminar and Project	Credits: 1		
SOC EEE - Social Sciences Elective	Credits: 3		
ENG 111 - College Composition I	Credits: 3		
MTH 111 - Basic Technical Mathematics	Credits: 3		
HUM EEE - Humanities/Fine Arts Elective	Credits: 3		

Total Credits: 16

Notes:

Student ID:_____	Catalog: 2020-2021 Catalog
Student Name:_____	Program: Industrial Maintenance Electronics, CSC
Advisor Name:_____	

Industrial Maintenance Electronics, CSC

Career Information

Current Job Opportunities

Gainful Employment Information

Length: 27 credits

Purpose: This program is designed to prepare students for Siemens VFD certification. Students will also receive skills and knowledge needed for maintenance and repair of modern production equipment.

Program Learning Outcomes: Graduates will have fundamental skills for installation and repair of electrical systems. Graduates will demonstrate proficiency in machine technology and mechanical systems maintenance.

Requirements

Course Name	Credits:	Term Taken	Grade
EGR 216 - Computer Methods In Engineering and Technology	Credits: 3		
ELE 156 - Electrical Control Systems	Credits: 3		
ETR 156 - Digital Circuits and Microprocessor Fundamentals	Credits: 4		
SAF 126 - Principles of Industrial Safety	Credits: 3		
ETR 246 - Electronic Motor Drives Systems	Credits: 3		
MEC 155 - Mechanisms *	Credits: 3		
MEC 140 - Introduction to Mechatronics	Credits: 3		
MEC 165 - Applied Hydraulics, Pneumatics and Hydrostatics	Credits: 3		
MEC 290 - Coordinated Internship	Credits: 2		

Note
* Students will be responsible for testing fees.

Minimum Required for Career Studies Certificate: 27 Credits

Notes:

Student ID:_____	Catalog: 2020-2021 Catalog
Student Name:_____	Program: Industrial Welding Certificate
Advisor Name:_____	

Industrial Welding Certificate

Career Information

Current Job Opportunities

Gainful Employment Information

Length: 39 credits

Purpose: The curriculum is designed to provide skills and knowledge in general and specialized welding.

Program Learning Outcomes:

- Demonstrates ability of Skills in FCAW (Flux Core Arc Welding);
- Demonstrates ability of Skills in GMAW (Gas Metal Arc Welding);
- Demonstrates ability of Skills in SMAW (Shielded Metal Arc Welding).

Potential Certification: A student may elect to take an industry-specific certification exam. The examinations generally require a testing fee paid by the student. After completion of this program, a student will be academically prepared to take the following examination:

- American Welding Society FCAW D1.1 Structural Welding Code;
- American Welding Society SMAW D1.1 Structural Welding Code;
- American Welding Society GMAW D1.1 Structural Welding Code.

Occupational Objectives: Employment opportunities for graduates of this program might include welding specialist, welding assistant, self-employment and industrial maintenance.

General Education Requirements

Course Name	Credits:	Term Taken	Grade
MTH 111 - Basic Technical Mathematics	Credits: 3		
ENG 115 - Technical Writing	Credits: 3		

Total Credits: 6

Program Requirements

Course Name	Credits:	Term Taken	Grade
HLT 100 - First Aid and CardioPulmonary Resuscitation	Credits: 2		
SDV 100 - College Success Skills	Credits: 1		
WEL 120 - Introduction to Welding	Credits: 3		
WEL 123 - Shielded Metal Arc Welding (Basic)	Credits: 4		
WEL 126 - Pipe Welding I	Credits: 3		
WEL 145 - Welding Metallurgy	Credits: 3		
WEL 150 - Welding Drawing and Interpretation	Credits: 3		
WEL 160 - Gas Metal Arc Welding	Credits: 4		
WEL 161 - Flux Cored Arc Welding (FCAW)	Credits: 3		
WEL 164 - Gas Tungsten Arc Welding (GTAW), Tungsten Inert Gas (TIG)	Credits: 3		
WEL 237 - Applied Welding Process	Credits: 3		
WEL 247 - Welding Layout and Fabrication	Credits: 2		

Total Credits: 33

Minimum Required for Certificate: 39 Credits

Advising Sheet

Advising Sheet Suggested Schedules: Courses in advising sheets are displayed under the semester in which the courses are regularly offered. It is possible that a course shown on the schedule for a particular semester may not be offered due to low enrollment or other factors.

Developmental Prerequisites

Note: * These Classes meet the requirements for the Career Studies Certificate in Welding.

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
HLT 100 - First Aid and CardioPulmonary Resuscitation	Credits: 2		
SDV 100 - College Success Skills	Credits: 1		
WEL 120 - Introduction to Welding *	Credits: 3		
WEL 123 - Shielded Metal Arc Welding (Basic) *	Credits: 4		
WEL 150 - Welding Drawing and Interpretation *	Credits: 3		
MTH 111 - Basic Technical Mathematics	Credits: 3		

Total Credits: 15

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
WEL 160 - Gas Metal Arc Welding *	Credits: 4		
WEL 161 - Flux Cored Arc Welding (FCAW) *	Credits: 3		
WEL 145 - Welding Metallurgy	Credits: 3		
WEL 164 - Gas Tungsten Arc Welding (GTAW), Tungsten Inert Gas (TIG) *	Credits: 3		
ENG 115 - Technical Writing	Credits: 3		

Total Credits: 16

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
WEL 126 - Pipe Welding I	Credits: 3		
WEL 237 - Applied Welding Process	Credits: 3		
WEL 247 - Welding Layout and Fabrication	Credits: 2		

Total Credits: 8

Notes:

Student ID:_____ **Catalog: 2020-2021 Catalog**
Student Name:_____   **Program: Infant and Toddler Care, CSC**
Advisor Name:_____

Infant and Toddler Care, CSC

Career Information

Current Job Opportunities

Gainful Employment Information

Length: 16 credits

Purpose: This program is an introduction to the early childhood education field, designed to provide entry-level competencies documented by Virginia's Competencies for Early Childhood Professionals and NAEYC's Standards for Initial Early Childhood Professional Preparation with a specific focus on children ages birth to three. This career studies certificate is an approved requirement for employment in Early Head Start classrooms. This program also satisfies the level 2 requirement for Virginia's Quality Rating and Improvement System.

Program Learning Outcomes: The student will be able to:

- design lesson plans to promote child development and learning;
- identify ethical and professional guidelines when working in the early childhood field.

Requirements

Course Name	Credits:	Term Taken	Grade
CHD 120 - Introduction to Early Childhood Education	Credits: 3		
CHD 164 - Working with Infants and Toddlers in Inclusive Settings	Credits: 3		
CHD 165 - Observation and Participation in Early Childhood/Primary Setting	Credits: 3		
CHD 166 - Infant and Toddler Programs	Credits: 3		
EDU 235 - Health, Safety, and Nutritional Education	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		

Minimum Required for Career Studies Certificate: 16 Credits

Advising Sheet

Advising Sheet Suggested Schedules: Courses in advising sheets are displayed under the semester in which the courses are regularly offered. It is possible that a course shown on the schedule for a particular semester may not be offered due to low enrollment or other factors.

Developmental Prerequisites

First Semester Courses

Course Name	Credits:	Term Taken	Grade
CHD 120 - Introduction to Early Childhood Education	Credits: 3		
CHD 164 - Working with Infants and Toddlers in Inclusive Settings	Credits: 3		
CHD 165 - Observation and Participation in Early Childhood/Primary Setting	Credits: 3		
CHD 166 - Infant and Toddler Programs	Credits: 3		
EDU 235 - Health, Safety, and Nutritional Education	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		

Total Credits: 16

Notes:

Student ID:_____	Catalog: 2020-2021 Catalog
Student Name:_____	Program: Information Systems Technology
Advisor Name:_____	Specialization: Accounting Information Systems, AAS

Information Systems Technology Specialization: Accounting Information Systems, AAS

Length: 63 credits

Purpose: Individuals who are seeking their first employment or those who wish to qualify for promotion in a present position or to another field, including self-employment, may benefit from this program. Students will be provided with technical knowledge and skill in various areas of computerized accounting systems and related information technology topics. This program provides skills to analyze financial reports and solve problems to meet functional objectives of the business related to accounting systems. Upon completion of the program, the student will be prepared for immediate employment.

Employment Objectives: Completion of this program may lead to employment or career advancement in any of a wide variety of positions such as accounting systems technician, accounts receivable/accounts payable technician, payroll technician, and other positions related to IT security, information technology and accounting systems. Primary tasks and functions graduates will be able to perform include the ability to utilize accounting systems in the operation of a business, analyze financial reports, and maintain computerized accounting systems.

Potential Certification: A student may elect to take a certification exam. The examinations generally require a testing fee paid by the student. After completion of this program, a student will be academically prepared to take the following examinations:

- Microsoft Office Specialist (MOS) - Excel, Access.
- Quickbooks.
- Certiport, Inc. - IC3.
- Security +.

Curriculum Requirements: Students must successfully complete all of the general education and program requirements listed below to be awarded this degree.

Program Learning Outcomes: A student will be able to:

- demonstrate minimum proficiency in General Education Skills which are defined as oral communication, written communication, mathematical/problem solving, scientific reasoning, information literacy, and critical thinking;
- demonstrate proficiency with computer hardware, software, operating systems, and business applications;
- demonstrate acceptable workplace skills, attitudes, and behaviors; and
- demonstrate the ability to utilize accounting systems in the operation of a business, analyze financial reports, and maintain computerized accounting systems.

General Education Requirements

Course Name	Credits:	Term Taken	Grade
ENG 111 - College Composition I	Credits: 3		
ENG 112 - College Composition II	Credits: 3		
MTH 154 - Quantitative Reasoning	Credits: 3		
HUM EEE - Humanities/Fine Arts Elective	Credits: 3		
SOC EEE - Social Sciences Elective	Credits: 3		

Total Credits: 15

Program Requirements

Course Name	Credits:	Term Taken	Grade
ACC 211 - Principles of Accounting I	Credits: 3		
ACC 212 - Principles of Accounting II	Credits: 3		
ACC 215 - Computerized Accounting	Credits: 3		
ACC 221 - Intermediate Accounting I	Credits: 3		
ACC 222 - Intermediate Accounting II	Credits: 3		
CSC 200 - Introduction to Computer Science	Credits: 3		
ITD 110 - Web Page Design I	Credits: 3		
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		
ITE 140 - Spreadsheet Software	Credits: 3		
ITD 130 - Database Fundamentals	Credits: 3		
ITE 290 - Coordinated Internship	Credits: 3		
or			
ITE 297 - Cooperative Education	Credits: 3		

ITN 260 - Network Security Basics	Credits: 3		
ITN 261 - Network Attacks, Computer Crime and Hacking	Credits: 3		
ITN 262 - Network Communication, Security and Authentication	Credits: 3		
ITN 106 - Microcomputer Operating Systems	Credits: 3		
ITN 267 - Legal Topics In Network Security	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		
PED/HLT EEE - Wellness Elective	Credits: 1		
CSC 201 - Computer Science I	Credits: 4		

Total Credits: 53

Minimum Required for Degree: 65 - 68 Credits

Advising Sheet

Advising Sheet Suggested Schedules: Courses in advising sheets are displayed under the semester in which the courses are regularly offered. It is possible that a course shown on the schedule for a particular semester may not be offered due to low enrollment or other factors.

Developmental Prerequisites

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
ACC 211 - Principles of Accounting I	Credits: 3		
ENG 111 - College Composition I	Credits: 3		
CSC 200 - Introduction to Computer Science	Credits: 3		
MTH 154 - Quantitative Reasoning	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		
ITN 260 - Network Security Basics	Credits: 3		

Total Credits: 16

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
ACC 212 - Principles of Accounting II	Credits: 3		
ENG 112 - College Composition II	Credits: 3		
HUM EEE - Humanities/Fine Arts Elective	Credits: 3		
ITN 106 - Microcomputer Operating Systems	Credits: 3		
ITN 262 - Network Communication, Security and Authentication	Credits: 3		

Total Credits: 15

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
ACC 215 - Computerized Accounting	Credits: 3		
ACC 221 - Intermediate Accounting I	Credits: 3		
ITD 110 - Web Page Design I	Credits: 3		
ITN 261 - Network Attacks, Computer Crime and Hacking	Credits: 3		
ITD 130 - Database Fundamentals	Credits: 3		
CSC 201 - Computer Science I	Credits: 4		

Total Credits: 18

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
ACC 222 - Intermediate Accounting II	Credits: 3		
SOC EEE - Social Sciences Elective	Credits: 3		
PED/HLT EEE - Wellness Elective	Credits: 1		
ITE 290 - Coordinated Internship	Credits: 3		
ITE 299 - Supervised Study	Credits: 1		
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		

Total Credits: 13

Notes:

Student ID:_____
Student Name:_____
Advisor Name:_____

Catalog: 2020-2021 Catalog
Program: Information Systems Technology Specialization:
Game Design and Development, AAS

Information Systems Technology Specialization: Game Design and Development, AAS

Length: 65-69 credits

Purpose: Individuals who are seeking their first employment or those who wish to qualify for promotion in a present position or to another field, including self-employment, may benefit from this program. Students will be provided a broad background in game and simulation development, with practical applications in creative arts, audio/video technology, creative writing, modeling, design, and programming. Upon completion of the program, the student will be prepared for immediate employment.

Employment Objectives: Completion of this program may lead to employment or career advancement in any of a wide variety of positions such as such as game and simulation technician, art/animation specialist, game/simulation designer, testers, programmers, and audio/video specialist. Primary tasks and functions graduates will be able to perform include the design and development of programs related to game and simulation in such industries as health care, forensics, education, entertainment, engineering, and government.

Potential Certification: A student may elect to take a certification exam. The examinations generally require a testing fee paid by the student. After completion of this program, a student will be academically prepared to take the following examinations:

- Microsoft Certified Solution Developer (MCSD).
- Certiport, Inc. - IC3.

Curriculum Requirements: Students must successfully complete all of the general education and program requirements listed below to be awarded this degree.

Program Learning Outcomes: A student will be able to:

- demonstrate minimum proficiency in General Education Skills which are defined as oral communication, written communication, mathematical/problem solving, scientific reasoning, information literacy, and critical thinking;
- demonstrate proficiency with computer hardware, software, operating systems, and business applications;
- demonstrate acceptable workplace skills, attitudes, and behaviors; and
- design and develop a computer game using professional principles and standards.

General Education Requirements

Course Name	Credits:	Term Taken	Grade
CST 110 - Introduction to Communication	Credits: 3		
ENG 111 - College Composition I	Credits: 3		
ENG 112 - College Composition II	Credits: 3		
MTH 154 - Quantitative Reasoning	Credits: 3		
HUM EEE - Humanities/Fine Arts Elective	Credits: 3		
SOC EEE - Social Sciences Elective	Credits: 3		

Total Credits: 18

Program Requirements

Course Name	Credits:	Term Taken	Grade
ART 121 - Drawing I	Credits: 3		
CAD 238 - Computer-Aided Modeling and Rendering I	Credits: 3		
CAD 241 - Parametric Solid Modeling I	Credits: 3		
CSC 200 - Introduction to Computer Science	Credits: 3		
ITD 110 - Web Page Design I	Credits: 3		
ITD 112 - Designing Web Page Graphics	Credits: 3		
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		
ITE 290 - Coordinated Internship	Credits: 3		
or			
ITE 297 - Cooperative Education	Credits: 3		
ITE 299 - Supervised Study	Credits: 1		
ITN 106 - Microcomputer Operating Systems	Credits: 3		
ITP 110 - Visual Basic Programming I	Credits: 3		
ITP 160 - Introduction to Game Design and Development	Credits: 3		
ITN 260 - Network Security Basics	Credits: 3		
ITN 261 - Network Attacks, Computer Crime and Hacking	Credits: 3		
ITN 267 - Legal Topics In Network Security	Credits: 3		
CSC 201 - Computer Science I	Credits: 4		
PED/HLT EEE - Wellness Elective	Credits: 1		
SDV 100 - College Success Skills	Credits: 1		

Total Credits: 46

Minimum Required for Degree: 64 Credits

Advising Sheet

Advising Sheet Suggested Schedules: Courses in advising sheets are displayed under the semester in which the courses are regularly offered. It is possible that a course shown on the schedule for a particular semester may not be offered due to low enrollment or other factors.

Developmental Prerequisites

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
ENG 111 - College Composition I	Credits: 3		
CSC 200 - Introduction to Computer Science	Credits: 3		
ITD 110 - Web Page Design I	Credits: 3		
CAD 238 - Computer-Aided Modeling and Rendering I	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		
ITN 260 - Network Security Basics	Credits: 3		

Total Credits: 16

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
ENG 112 - College Composition II	Credits: 3		
MTH 154 - Quantitative Reasoning	Credits: 3		
CAD 241 - Parametric Solid Modeling I	Credits: 3		
ITP 160 - Introduction to Game Design and Development	Credits: 3		
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		
ITN 267 - Legal Topics In Network Security	Credits: 3		

Total Credits: 18

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
CST 110 - Introduction to Communication	Credits: 3		
ART 121 - Drawing I	Credits: 3		
PED/HLT EEE - Wellness Elective	Credits: 1		
CAD 241 - Parametric Solid Modeling I	Credits: 3		
CSC 201 - Computer Science I	Credits: 4		
ITN 261 - Network Attacks, Computer Crime and Hacking	Credits: 3		

Total Credits: 17

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
ITD 112 - Designing Web Page Graphics	Credits: 3		
ITN 106 - Microcomputer Operating Systems	Credits: 3		
SOC EEE - Social Sciences Elective	Credits: 3		
ITP 160 - Introduction to Game Design and Development	Credits: 3		
ITE 290 - Coordinated Internship	Credits: 3		
or			
ITE 297 - Cooperative Education	Credits: 3		

Total Credits: 15

Notes:

Student ID:_____	Catalog: 2020-2021 Catalog
Student Name:_____	Program: Information Systems Technology
Advisor Name:_____	Specialization: Internet Services, AAS

Information Systems Technology Specialization: Internet Services, AAS

Length: 67 credits

Purpose: Individuals who are seeking their first employment or those who wish to qualify for promotion in a present position or to another field, including self-employment, may benefit from this program. Students will be provided with technical knowledge and skill in Web page design, Internet programming, Internet database design, and related topics. This program provides skills to develop and design Web pages, use programming languages to develop Web pages, and be familiar with Internet protocols, security, and applications.

Employment Objectives: Completion of this program may lead to employment or career advancement in any of a wide variety of positions such as Web page designer, Internet programmer, IT Security Engineer, or Web author. Primary tasks and functions graduates will be able to perform include the ability to analyze,design, and secure Web pages using Internet programming languages, test and implement programs on the Web, develop Web pages, develop Internet databases, and manage the technical duties related to Internet services.

Potential Certification: A student may elect to take a certification exam. The examinations generally require a testing fee paid by the student. After completion of this program, a student will be academically prepared to take the following examinations:

- Certified Internet Webmaster (CIW) - CIW Associate.
- Certiport, Inc. - IC3.
- Security +.

Program Learning Outcomes: A student will be able to:

- demonstrate minimum proficiency in General Education Skills which are defined as oral communication, written communication, mathematical/problem solving, scientific reasoning, information literacy, and critical thinking;
- demonstrate proficiency with computer hardware, software, operating systems, and business applications;
- demonstrate acceptable workplace skills, attitudes, and behaviors; and
- design and develop a website using professional principles and standards.

General Education Requirements

Course Name	Credits:	Term Taken	Grade
ENG 111 - College Composition I	Credits: 3		
ENG 112 - College Composition II	Credits: 3		
HUM EEE - Humanities/Fine Arts Elective	Credits: 3		
MTH 154 - Quantitative Reasoning	Credits: 3		
SOC EEE - Social Sciences Elective	Credits: 3		

Total Credits: 15

Program Requirements

Course Name	Credits:	Term Taken	Grade
CSC 200 - Introduction to Computer Science	Credits: 3		
ITD 110 - Web Page Design I	Credits: 3		
ITD 112 - Designing Web Page Graphics	Credits: 3		
ITE 290 - Coordinated Internship	Credits: 3		
ITN 106 - Microcomputer Operating Systems	Credits: 3		
ITN 154 - Network Fundamentals, Router Basics, and Configuration (ICND1) - CISCO	Credits: 4		
ITN 267 - Legal Topics In Network Security	Credits: 3		
ITN 261 - Network Attacks, Computer Crime and Hacking	Credits: 3		
ITN 260 - Network Security Basics	Credits: 3		
ITN 262 - Network Communication, Security and Authentication	Credits: 3		
ITN 107 - Personal Computer Hardware and Troubleshooting	Credits: 3		
PED/HLT EEE - Wellness Elective	Credits: 1		
ITP 120 - Java Programming I	Credits: 4		
ITD 130 - Database Fundamentals	Credits: 3		
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		
ITN 170 - Linux System Administration	Credits: 3		
CSC 201 - Computer Science I	Credits: 4		

ITN 257 - Cloud Computing: Infrastructure and Services	Credits: 3		

Total Credits: 52

Minimum Required for Degree: 67 Credits

Advising Sheet

Advising Sheet Suggested Schedules: Courses in advising sheets are displayed under the semester in which the courses are regularly offered. It is possible that a course shown on the schedule for a particular semester may not be offered due to low enrollment and other factors.

Developmental Prerequisites

NOTE: * These classes meet the requirements of the Internet Webmaster Career Studies Certificate.

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
ENG 111 - College Composition I	Credits: 3		
CSC 200 - Introduction to Computer Science *	Credits: 3		
ITD 110 - Web Page Design I *	Credits: 3		
ITN 154 - Network Fundamentals, Router Basics, and Configuration (ICND1) - CISCO *	Credits: 4		
SDV 100 - College Success Skills *	Credits: 1		
ITN 260 - Network Security Basics	Credits: 3		

Total Credits: 16

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
ENG 112 - College Composition II	Credits: 3		
MTH 154 - Quantitative Reasoning	Credits: 3		
ITN 106 - Microcomputer Operating Systems	Credits: 3		
ITN 107 - Personal Computer Hardware and Troubleshooting	Credits: 3		
ITN 262 - Network Communication, Security and Authentication	Credits: 3		
ITN 257 - Cloud Computing: Infrastructure and Services	Credits: 3		

Total Credits: 18

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
HUM EEE - Humanities/Fine Arts Elective	Credits: 3		
SOC EEE - Social Sciences Elective	Credits: 3		
PED/HLT EEE - Wellness Elective	Credits: 1		
ITN 107 - Personal Computer Hardware and Troubleshooting	Credits: 3		
ITN 261 - Network Attacks, Computer Crime and Hacking	Credits: 3		
CSC 201 - Computer Science I	Credits: 4		

Total Credits: 16

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
ITD 130 - Database Fundamentals	Credits: 3		
ITD 112 - Designing Web Page Graphics	Credits: 3		
ITE 290 - Coordinated Internship	Credits: 3		
ITN 267 - Legal Topics In Network Security	Credits: 3		
ITN 170 - Linux System Administration	Credits: 3		

Total Credits: 15

Notes:

Student ID:_____

Student Name:_____

Advisor Name:_____

Catalog: 2020-2021 Catalog

Program: Information Systems Technology, AAS

Information Systems Technology, AAS

Length: 63 credits

Purpose: Individuals who are seeking their first employment or those who wish to qualify for promotion in a present position or to another field, including self-employment, may benefit from this program. Students will learn to use a wide array of business- oriented computer software and choose specific courses to meet career goals. The program provides a base of general skills in information systems and gives the individual the option to specialize in a particular area or complete the degree with a more generalist tract. The program provides base skills in software applications, basic PC troubleshooting and repair, networking terminology, programming concepts, and Internet resources. Upon completion of the program, the student will be prepared for immediate employment.

Employment Objectives: Completion of this program may lead to employment or career advancement in any of a wide variety of positions such as PC support technician, software specialist, helpdesk technician, or PC advisor. Graduates will be able to perform primary tasks and functions to include management of tasks, software operations, and basic problem solving.

Potential Certification: A student may elect to take a certification exam. The examinations generally require a testing fee paid by the student. After completion of this program, a student will be academically prepared to take the following examinations:

- Microsoft Office Specialist (MOS) - Excel.
- CompTIA - A+, Network+.
- Security +.
- Certiport, Inc. - IC3.
- CISCO CCENT.

Curriculum Requirements: Students must successfully complete all of the general education and program requirements listed below to be awarded this degree.

Program Learning Outcomes: A student will be able to:

- demonstrate minimum proficiency in General Education Skills which are defined as oral communication, written communication, mathematical/problem solving, scientific reasoning, information literacy, and critical thinking;
- demonstrate proficiency with computer hardware, software, operating systems, and business applications; and
- demonstrate acceptable workplace skills, attitudes, and behaviors.

General Education Requirements

Course Name	Credits:	Term Taken	Grade
ENG 111 - College Composition I	Credits: 3		
ENG 112 - College Composition II	Credits: 3		
MTH 154 - Quantitative Reasoning	Credits: 3		
HUM EEE - Humanities/Fine Arts Elective	Credits: 3		
SOC EEE - Social Sciences Elective	Credits: 3		

Total Credits: 15

Program Requirements

Course Name	Credits:	Term Taken	Grade
CSC 200 - Introduction to Computer Science	Credits: 3		
ITD 110 - Web Page Design I	Credits: 3		
ITD 130 - Database Fundamentals	Credits: 3		
ITN 106 - Microcomputer Operating Systems	Credits: 3		
ITN 107 - Personal Computer Hardware and Troubleshooting	Credits: 3		
ITN 154 - Network Fundamentals, Router Basics, and Configuration (ICND1) - CISCO	Credits: 4		
ITN 260 - Network Security Basics	Credits: 3		
ITN 261 - Network Attacks, Computer Crime and Hacking	Credits: 3		
ITN 262 - Network Communication, Security and Authentication	Credits: 3		
ITN 266 - Network Security Layers	Credits: 3		
ITN 267 - Legal Topics In Network Security	Credits: 3		
PED/HLT EEE - Wellness Elective	Credits: 1		
SDV 100 - College Success Skills	Credits: 1		
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		
ITE 290 - Coordinated Internship	Credits: 3		
ITN 170 - Linux System Administration	Credits: 3		

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CSC 201 - Computer Science I	Credits: 4		

Total Credits: 49

Minimum Required for Degree: 64 Credits

Advising Sheet

Advising Sheet Suggested Schedules: Courses in advising sheets are displayed under the semester in which the courses are regularly offered. It is possible that a course shown on the schedule for a particular semester may not be offered due to low enrollment or other factors.

Developmental Prerequisites

NOTE: * These classes meet the requirements of the <u>Computer Service Technician Career Studies Certificate</u>

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
ENG 111 - College Composition I	Credits: 3		
CSC 200 - Introduction to Computer Science *	Credits: 3		
ITN 154 - Network Fundamentals, Router Basics, and Configuration (ICND1) - CISCO *	Credits: 4		
SDV 100 - College Success Skills	Credits: 1		
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		
ITN 260 - Network Security Basics	Credits: 3		

Total Credits: 17

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
ENG 112 - College Composition II	Credits: 3		
MTH 154 - Quantitative Reasoning	Credits: 3		
ITN 106 - Microcomputer Operating Systems *	Credits: 3		
ITN 107 - Personal Computer Hardware and Troubleshooting *	Credits: 3		
ITD 130 - Database Fundamentals	Credits: 3		

Total Credits: 15

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
HUM EEE - Humanities/Fine Arts Elective	Credits: 3		
SOC EEE - Social Sciences Elective	Credits: 3		
PED/HLT EEE - Wellness Elective	Credits: 1		
ITN 261 - Network Attacks, Computer Crime and Hacking	Credits: 3		
ITD 110 - Web Page Design I	Credits: 3		
CSC 201 - Computer Science I	Credits: 4		

Total Credits: 17

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
ITN 266 - Network Security Layers	Credits: 3		
ITN 267 - Legal Topics In Network Security	Credits: 3		
ITN 262 - Network Communication, Security and Authentication	Credits: 3		
ITE 290 - Coordinated Internship	Credits: 3		
ITN 170 - Linux System Administration	Credits: 3		

Total Credits: 15

Notes:

102

Student ID:_____
Student Name:_____
Advisor Name:_____

Catalog: 2020-2021 Catalog
Program: Internet Service Webmaster, CSC

Internet Service Webmaster, CSC

Career Information

Current Job Opportunities

Gainful Employment Information

Length: 17 credits

Purpose: This program is designed to provide skills and knowledge needed for employment as a webmaster and certification from CIW as a Certified Internet Webmaster Associate.

Employment Objectives: Employment opportunities include Web Developer, Web Designer, Webmaster, Web Site Manager, and Web Programmer.

Potential Certification: A student may elect to take an industry-specific certification exam. The examinations generally require a testing fee paid by the student. After completion of this program, a student will be academically prepared to take the following examination:

- CIW: Certified Internet Webmaster Associate.

Program Learning Outcomes: A student will be able to:

- demonstrate basic knowledge of Internet fundamentals and technologies; and
- demonstrate web authoring fundamentals using HTML 5.

Program Requirements

Course Name	Credits:	Term Taken	Grade
CSC 200 - Introduction to Computer Science	Credits: 3		
ITD 110 - Web Page Design I	Credits: 3		
ITN 154 - Network Fundamentals, Router Basics, and Configuration (ICND1) - CISCO	Credits: 4		
ITN 260 - Network Security Basics	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		

Total Credits: 17

Notes:

Student ID:_____	Catalog: 2020-2021 Catalog
Student Name:_____	Program: Justice Studies, CSC
Advisor Name:_____	

Justice Studies, CSC

Career Information

Current Job Opportunities

Gainful Employment Information

Length: 19 credits

Purpose: This program is designed to provide fundamental skills of the criminal justice profession in local, state, and federal criminal justice systems.

Requirements

Course Name	Credits:	Term Taken	Grade
ADJ 100 - Survey of Criminal Justice	Credits: 3		
ADJ 105 - The Juvenile Justice System	Credits: 3		
ADJ 111 - Law Enforcement Organization & Administration I	Credits: 3		
ADJ 146 - Adult Correctional Institutions	Credits: 3		
ADJ 133 - Ethics and the Criminal Justice Professional	Credits: 3		
ADJ 201 - Criminology	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		

Minimum Required for Career Studies Certificate: 19 Credits

Notes:

Student ID:_____　　　Catalog: 2020-2021 Catalog
Student Name:_____　　　Program: Legal Assisting, AAS
Advisor Name:_____

Legal Assisting, AAS

Length: 64 credits

Purpose: The curriculum provides knowledge and skills leading to employment in the field of paraprofessionals in the legal setting.

Occupational Objectives: A graduate of this program may work as a paralegal or legal assistant in law offices, law enforcement agencies, court systems, municipal offices, corporate office - contract/legal department, banks, real estate offices, insurance agencies, and contracting agencies.

Program Learning Outcomes: A student will be able to:

- demonstrate minimum proficiency in General Education Skills which are defined as oral communication, written communication, mathematical/problem solving, scientific reasoning, information literacy, and critical thinking;
- produce a variety of legal documents using correct grammar, punctuation, and spelling in a format acceptable for the modern business environment; and
- demonstrate acceptable workplace skills, attitudes, and behaviors.

General Education Requirements

Course Name	Credits:	Term Taken	Grade
CST 110 - Introduction to Communication	Credits: 3		
ENG 115 - Technical Writing	Credits: 3		
HUM EEE - Humanities/Fine Arts Elective	Credits: 3		
MTH 130 - Fundamentals of Reasoning	Credits: 3		
PLS 211 - U.S. Government I	Credits: 3		
SOC EEE - Social Sciences Elective	Credits: 3		

Total Credits: 18

Program Requirements

Course Name	Credits:	Term Taken	Grade
AST 107 - Editing/Proofreading Skills	Credits: 3		
AST 136 - Office Record Keeping	Credits: 3		
LGL 110 - Introduction to Law and The Legal Assistant	Credits: 3		
LGL 115 - Real Estate Law For Legal Assistants	Credits: 3		
LGL 117 - Family Law	Credits: 3		
LGL 125 - Legal Research	Credits: 3		
LGL 126 - Legal Writing	Credits: 3		
LGL 200 - Ethics For The Legal Assistant	Credits: 1		
LGL 215 - Torts	Credits: 3		
LGL 218 - Criminal Law	Credits: 3		
LGL 219 - Basics of Litigation Support	Credits: 3		
LGL 225 - Estate Planning and Probate	Credits: 3		
LGL 230 - Legal Transactions	Credits: 3		
LGL 290 - Coordinated Internship	Credits: 2		
LGL 299 - Supervised Study	Credits: 1		
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		
PED/HLT EEE - Wellness Electives	Credits: 2		

Total Credits: 46

Minimum Required for Degree: 67 Credits

Advising Sheet

Advising Sheet Suggested Schedules: Courses in advising sheets are displayed under the semester in which the courses are regularly offered. It is possible that a course shown on the schedule for a particular semester may not be offered due to low enrollment or other factors.

Developmental Prerequisites

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
ENG 115 - Technical Writing	Credits: 3		
LGL 110 - Introduction to Law and The Legal Assistant	Credits: 3		
LGL 125 - Legal Research	Credits: 3		
LGL 200 - Ethics For The Legal Assistant	Credits: 1		
SDV 100 - College Success Skills	Credits: 1		
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		
AST 107 - Editing/Proofreading Skills	Credits: 3		

Total Credits: 17

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
AST 136 - Office Record Keeping	Credits: 3		
HUM EEE - Humanities/Fine Arts Elective	Credits: 3		
LGL 126 - Legal Writing	Credits: 3		
LGL 215 - Torts	Credits: 3		
CST 110 - Introduction to Communication	Credits: 3		
SOC EEE - Social Sciences Elective	Credits: 3		

Total Credits: 18

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
PED/HLT EEE - Wellness Electives	Credits: 2		
LGL 115 - Real Estate Law For Legal Assistants	Credits: 3		
LGL 117 - Family Law	Credits: 3		
LGL 230 - Legal Transactions	Credits: 3		
PLS 211 - U.S. Government I	Credits: 3		
MTH 130 - Fundamentals of Reasoning	Credits: 3		

Total Credits: 17

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
LGL 218 - Criminal Law	Credits: 3		
LGL 219 - Basics of Litigation Support	Credits: 3		
LGL 225 - Estate Planning and Probate	Credits: 3		
LGL 290 - Coordinated Internship	Credits: 2		
LGL 299 - Supervised Study	Credits: 1		

Total Credits: 12

Notes:

Student ID:_____ **Student Name:**_____ **Advisor Name:**_____	**Catalog: 2020-2021 Catalog** **Program: Machining Technician, CSC**

Machining Technician, CSC

Length: 23 credits

Purpose: The purpose of the Machining Technician Career Studies Certificate is to help entry-level employees in the precision machining related trades obtain skills with emphasis on manual lathe and mill work. Student's meeting the CSC requirements will have entry level skills in the following occupational areas: Manual Lathe Machinist, Manual Mill Machinist.

Occupational Objective: Graduates of this program will have:

- Basic occupational skills for the Precision Machining professions.
- Basic skills and understanding of manual lathe and mill systems and terminology.
- Knowledge of safety requirements for machining trade occupations.
- Occupational preparation skills for employment.

Industrial Credentials: Students will have an opportunity to earn: NIMS Measurement, Material, and Safety

Feeder Program: This certificate feeds into Danville Community College's Precision Machine Technology, and Integrated Machining Technology Programs.

Program Outcomes: Graduates of the Machining Skills Certificate will be able to:

- Understand precision machining tools, terminology and systems
- Interpret blueprints, drawings, and symbols
- Use various measuring tools and equipment
- Know and apply safety requirements for machining trades

Program Requirements

Course Name	Credits:	Term Taken	Grade
DRF 160 - Machine Blueprint Reading	Credits: 3		
ENG 115 - Technical Writing	Credits: 3		
MAC 101 - Machine Shop I	Credits: 8		
MTH 111 - Basic Technical Mathematics	Credits: 3		
SAF 130 - Industrial Safety - OSHA 10	Credits: 1		
SDV 100 - College Success Skills	Credits: 1		
MAC 102 - Machine Shop II	Credits: 7		

Total Credits: 26

Notes:

Student ID:_____	Catalog: 2020-2021 Catalog
Student Name:_____	Program: Management Assistant, CSC
Advisor Name:_____	

Management Assistant, CSC

Career Information

Current Job Opportunities

Gainful Employment Information

Length: 25 credits

Purpose: This program is designed to provide an individual with basic foundation management skills in the area of general management principles, human resources, communications, psychology, and accounting.

Program Learning Outcomes: A student will be able to:

- describe and use general business knowledge and skills, including managerial and supervisory concepts;
- demonstrate ability to reason critically and problem-solve; and
- demonstrate accepted ethical behaviors and interpersonal skills that reflect an understanding of diversity and teamwork.

Requirements

Course Name	Credits:	Term Taken	Grade
BUS 200 - Principles of Management	Credits: 3		
BUS 205 - Human Resource Management	Credits: 3		
ENG 111 - College Composition I	Credits: 3		
MTH 130 - Fundamentals of Reasoning	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		
ACC 124 - Payroll Accounting	Credits: 3		
BUS 106 - Security Awareness for Managers	Credits: 3		
BUS 111 - Principles of Supervision I	Credits: 3		

Minimum Required for Career Studies Certificate: 25 Credits

Notes:

Student ID:_____

Student Name:_____

Advisor Name:_____

Catalog: 2020-2021 Catalog

Program: Medical Transcription, CSC

Medical Transcription, CSC

Career Information

Current Job Opportunities

Gainful Employment Information

Length: 29 credits

Purpose: This program is designed to provide skills related to keyboarding, medical office procedures and communications, and the transcription of medical information.

Program Learning Outcomes: A student will be able to:

- apply medical vocabulary in producing documents used in the health field; and
- document skills in using a keyboard and word processing software for speed and accuracy.

Program Requirements

Course Name	Credits:	Term Taken	Grade
AST 101 - Keyboarding I	Credits: 3		
AST 102 - Keyboarding II	Credits: 3		
AST 107 - Editing/Proofreading Skills	Credits: 3		
AST 141 - Word Processing (Specify Software)	Credits: 3		
AST 154 - Voice Recognition Applications (Dragon Naturally Speaking)	Credits: 1		
AST 245 - Medical Machine Transcription	Credits: 3		
ENG 115 - Technical Writing	Credits: 3		
HIM 143 - Managing Electronic Billing In A Medical Practice	Credits: 3		
HLT 143 - Medical Terminology I	Credits: 3		
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		

Minimum Required for Career Studies Certificate: 29 Credits

Notes:

Student ID:_____ **Student Name:**_____ **Advisor Name:**_____	**Catalog: 2020-2021 Catalog** **Program: Motorsports Advanced Racecar Setup**

Motorsports Advanced Racecar Setup

Purpose -

To provide students the opportunity to develop advanced skills in racecar set up. This includes race day set-up, engine tuning using a dyno, and preparation for pit-stops.

Requirements

Course Name	Credits:	Term Taken	Grade
MAC 121 - Numerical Control I	Credits: 3		
MTS 132 - Motorsports Structural Technology III	Credits: 3		
MTS 210 - Race Car Setup I	Credits: 3		
MTS 211 - Race Car Setup II	Credits: 3		
MTS 240 - Stock Car Engines II	Credits: 3		
MTS 250 - Engine Machining Processes II	Credits: 3		
MTS 295 - Introduction to Pit Stop	Credits: 2		
MTS 298 - Dyno Engine Performance	Credits: 3		
WEL 135 - Inert Gas Welding	Credits: 2		
Notes:			

Student ID:_____ **Student Name:**_____ **Advisor Name:**_____	**Catalog: 2020-2021 Catalog** **Program: Motorsports Technician, CSC**

Motorsports Technician, CSC

Career Information

Current Job Opportunities

Gainful Employment Information

Length: 25-27 credits

Purpose: This program is designed to provide fundamental skills for an entry-level technician in a high-performance race shop.

Admission Requirements: Students may be required to complete a Motorsports Program Application, entrance test and interview. Students deficient in computer skills and/or fundamental motorsports terminology must complete additional coursework. Tools and daily uniforms for the program are required.

Requirements

Course Name	Credits:	Term Taken	Grade
SDV 100 - College Success Skills	Credits: 1		
MAC 161 - Machine Shop Practices I	Credits: 3		
MTS 120 - Introduction to Motorsports Technology	Credits: 3		
MTS 125 - Motorsports Technology I	Credits: 3		
MTS 130 - Motorsports Structural Technology I	Credits: 3		
MTS 131 - Motorsports Structural Technology II	Credits: 3		
MTS 135 - Sheet Metal Fabrication	Credits: 3		
MTS 140 - Stock Car Engines I	Credits: 3		
MTS 150 - Engine Machining Processes I	Credits: 4		

Minimum Required for the Career Studies Certificate: 26 Credits

Notes:

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Student ID:_____   **Catalog: 2020-2021 Catalog**
Student Name:_____   **Program: Nurse Aide Training, CSC**
Advisor Name:_____

Nurse Aide Training, CSC

Career Information

Current Job Opportunities

Gainful Employment Information

Length: 17 credits

Purpose: This program prepares a student for entry level practice in the health care field to provide patient care in a variety of health service facilities.

Employment Objective: Students who successfully complete the appropriate courses may be eligible for employment in hospitals, skilled/residential nursing facilities, home care, physician offices, or other health related facilities.

Potential Certification: After successful completion of the nurse aide courses, student will be eligible to apply to take the certification test for Certified Nurse Aide in Virginia. After successful completion of the Cardiopulmonary Resuscitation course, student will receive American Heart Association Basic Life Support certification. A student who resides outside of Virginia and plans to apply for certification as a nurse aide subsequent to completion of this education program may not meet the requirements of certification for the student's state of residence.

Program Learning Outcomes: Demonstrate skillful delivery of patient care at the nurse aide level of preparation.

Physical Requirement: The minimal functional requirements for all entering nurse aide students include:

- sufficient eye-hand coordination and manual and finger dexterity to provide direct patient care and to manipulate and operate equipment in the delivery of patient care;
- sufficient ability to fully observe patients/patient conditions and provide patient care, read patient health information, and observe and manipulate equipment, including in dimly lit environments;
- sufficient hearing to communicate with patients and healthcare team members, including ability to recognize and report changes;
- satisfactory communication skills, to include competence in reading, writing and speaking in English, in the classroom, laboratory, and clinical settings to allow for accurate recording and reporting of patient information;
- ability to perform patient care activities that require full range of motion including handling, lifting, or moving patients and/or equipment;
- ability to lift and carry items weighing up to 50 pounds;
- ability to successfully perform all required duties and responsibilities in classroom, laboratory and clinical settings in stressful situations or conditions;
- ability to participate in classroom, laboratory, and clinical settings during irregular hours (day/evening/night shifts, weekends, more than 8 hours at a time).

Curriculum Requirements: Students will be required to undergo mandatory drug screening and criminal background check. Students must have a negative drug screen and criminal background check to be eligible for clinical learning experiences. Students must earn a grade of C or higher in the nurse aide lecture, lab, and clinical courses (NUR 27 and NUR 21) in order to earn the career studies certificate. Clinical/field/preceptor experiences require access to contracted clinical agencies.

Financial Requirements: In addition to the usual college tuition and fees, the program requires additional expenses.

Approximate costs may include:

Drug screening	$38 minimum
Criminal background check	$48 minimum
Uniform	$30/$50
Watch	$10
Physical examination and TB Skin Test	$80-$100
Textbook/Workbook	$25-$45
Certification examination	$120
Transportation to clinical agencies as required	

Program Requirements

Course Name	Credits:	Term Taken	Grade
HCT 110 - Therapeutic Communication In The Health Care Setting	Credits: 3		
HLT 105 - Cardiopulmonary Resuscitation	Credits: 1		
HLT 143 - Medical Terminology I	Credits: 3		
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		
NUR 27 - Nurse Aide I	Credits: 5		
NUR 21 - Nurse Aide Clinical Expereince	Credits: 1		
SDV 100 - College Success Skills	Credits: 1		

Total Credits: 17

Advising Sheet

Advising Sheet Suggested Schedules: Course in advising sheets are displayed under the semester in which the courses are regularly offered. It is possible that a course show on the schedule for a particular semester may not be offered due to low enrollment or other factors.

Developmental Prerequisites

NOTE: *Students completing NUR courses in this curriculum require a placement of ENF 2, a placement of ENF 3 is required for HLT 143, and ITE 115.*

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
NUR 27 - Nurse Aide I	Credits: 5		
NUR 21 - Nurse Aide Clinical Expereince	Credits: 1		
HCT 110 - Therapeutic Communication In The Health Care Setting	Credits: 3		
HLT 105 - Cardiopulmonary Resuscitation	Credits: 1		
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		
HLT 143 - Medical Terminology I	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		

Total Credits: 17

Notes:

Student ID:_____
Student Name:_____
Advisor Name:_____

Catalog: 2020-2021 Catalog
Program: Office Assisting, CSC

Office Assisting, CSC

Career Information

Current Job Opportunities

Gainful Employment Information

Length: 20 credits

Purpose: This program is designed to provide skills in preparation for a job as an office assistant requiring tasks related to keyboarding, records management, office administration, writing, and computer use.

Program Learning Outcomes: A student will be able to:

- demonstrate proficiency in personal computer operations and applications;
- demonstrate various methods of filing in storing and retrieving documents both manually and electronically;
- produce a variety of business documents using correct grammar, punctuation, and spelling in a form acceptable in today's business environment.

Requirements

Course Name	Credits:	Term Taken	Grade
AST 101 - Keyboarding I	Credits: 3		
AST 102 - Keyboarding II	Credits: 3		
AST 107 - Editing/Proofreading Skills	Credits: 3		
AST 141 - Word Processing (Specify Software)	Credits: 3		
AST 154 - Voice Recognition Applications (Dragon Naturally Speaking)	Credits: 1		
ENG 115 - Technical Writing	Credits: 3		
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		

Minimum Required for Career Studies Certificate: 20 Credits

Notes:

Student ID:_____	**Catalog: 2020-2021 Catalog**
Student Name:_____	**Program: Physical Therapist Assistant**
Advisor Name:_____	

Physical Therapist Assistant

Purpose: The two-year Associate of Applied Science degree in Physical Therapist Assistant is designed to prepare selected students to qualify as contributing members of the health care team, providing direct patient care as entry-level PTAs working under the supervision of a physical therapist in a variety of medical settings. The profession of physical therapy meets the needs of the public through many methods including, but not limited to, improving patient mobility, relieving pain, decreasing functional limitations, health and wellness promotion, public education, and injury/disability prevention. Patients may range in age from newborn to the elderly and employment settings may include hospitals, outpatient clinics, long-term care and skilled care facilities, rehabilitation centers, home health care agencies, school systems, and others.

Potential Certification: Upon successful completion of the curriculum, students will be eligible to apply to take the National Physical Therapist Examination for PTAs leading to licensure as a PTA, which is required to practice in each state. A student who graduates from the physical therapy assistant program must comply with the licensure and National Physical Therapy Exam (NPTE) requirements for the state in which the student intends to practice.

Program Learning Outcomes: Graduates will be able to:

- demonstrate minimum proficiency in General Education Skills which are defined as civic engagement, critical thinking, professional readiness, quantitative literacy, scientific literacy, and written communication
- demonstrate appropriate written and verbal communication that is professional and effective for the practice of physical therapy
- demonstrate an ability to use problem solving, critical thinking, and decision making skills to provide appropriate physical therapy care for patient safety following the physical therapist's plan of care
- demonstrate an ability to collect and review appropriate data to perform evidence-based interventions within the scope of practice for a PTA and within the physical therapist's plan of care
- demonstrate the ability to adhere to federal and state regulations, facility policies and procedures, and APTA standards of ethical conduct in clinical practice as a physical therapist assistant

Accreditation Status of the Physical Therapist Assistant Program: Effective October 29, 2019 Patrick Henry Community College has been granted Candidate for Accreditation status by the Commission on Accreditation in Physical Therapy Education (1111 North Fairfax Street, Alexandria, VA 22314; phone 703-706-3245; email: accreditation@apta.org). If needing to contact the program/institution directly, please call 276-656-0288 or email jmartin@patrickhenry.edu.

Candidate for Accreditation is a pre-accreditation status of affiliation with the Commission on Accreditation in Physical Therapy Education that indicates the program is progressing toward accreditation and may matriculate students in technical/professional courses. Candidate for Accreditation is not an accreditation status nor does it assure eventual accreditation. Graduation from a physical therapist assistant program accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE) is necessary for eligibility to sit for the licensure examination which is required in all states.

Data regarding performance of graduates including graduation rate, licensure examination pass rate, and employment rate of licensed graduates will be collected once the program is initiated and has graduated its first cohort of students and will be provided in the interest of public disclosure.

Admission Procedures: In addition to meeting the requirements to be admitted to PHCC, students must also submit an application to the Physical Therapist Assistant program. The PHCC PTA program will accept program applications once a year typically during the fall semester, at a specified time. Once accepted as a student to PHCC, students planning to apply to the PTA program are highly encouraged to speak with the PTA Program Director to review the program application requirements.

Pre-application Requirements:

1. Current PHCC student application
2. Evidence of high school graduation or GED
3. Evidence of high school Biology and Chemistry with a grade of "C" or higher; or college equivalent Biology (BIO 101 /BIO 102 or NAS 150), Chemistry (CHM 110 or CHM 111), or other as approved.
4. Evidence of developmental math modules 1-5 or appropriate equivalent; or High School Algebra II and HSGPA 3.0 or better; or SAT Math Score Range 510-520; or ACT Math Score Range 19-21 (*VPT scores, Multiple Measures, HS Transcript must be less than five years old*)
5. No developmental English requirements needed
6. Calculated Cumulative GPA of 2.5 or higher (*GPA calculation will include most recent 24 college credits; or if less than 24 college credits have been completed a combination of all high school work and all college credits completed at time of application*)
7. Evidence of a minimum of 20 documented volunteer hours (10 hours in 2 different clinical settings under supervision of a PT/PTA) *Hours must be completed within two years prior to application submission. Please utilize the PTA Program: Observation Hours Form to document required hours.*
8. Students must obtain two completed PTA Program: Applicant Recommendation Forms (*Forms must be completed by an employer, professional associate, PT/PTA clinician, or professor.*)
9. Review and sign student acknowledgement of PTA Program: Essential Functions of PTA Students Form

Prerequisite Semester

The following prerequisite courses must be in progress or previously completed with a grade of "C" or higher at the time of program application. High School seniors must be dual enrolled or have previously completed these courses at time of application.

- SDV 100
- ENG 111

- PSY 230
- HUM EEE
- BIO 141

Completed PTA applications will be processed following the posted application deadline and qualified applicants will be invited to take the timed admission test (TEAS V for allied health or equivalent). For the purposes of admission to the PHCC PTA program, there is no "passing" score on the timed admission test. The individual raw score will be added into the admission point system.

The PTA program is competitive and selective and is limited to up to 16 students. An admission point system will be utilized to determine the top qualified applicants including points for GPA, volunteer hours, and admission test score. The top-scoring finalists will be offered an admissions interview with program faculty, including a pre-interview writing prompt. Each finalist will then be scored (via rubric) reflecting their knowledge of the field of physical therapy and writing/communication skills. The top scoring applicants will be offered admission to the PTA program on a space available basis.

Program Notes:

- When admission is limited because the number of qualified applicants exceeds available space, priority will be given to applicants who are residents in the college service area including Martinsville, Henry, and Patrick counties. If further delineation is required, individual category TEAS (or equivalent) admission test scores will be utilized beginning with science and followed by math, reading, and English and language usage respectively, as needed.
- Applicants who are not accepted will be eligible to reapply at the next application period. A new application must be submitted as applications do not carry over from year to year.
- Please note: any student who fails to earn a "C" or higher in the required prerequisite courses that are concurrently enrolled in at the time of submission of PTA application will void any program application and possible acceptance.
- As a part of the program admission, all students who are offered a seat in the PTA program must undergo mandatory drug screening and criminal background checks. The cost of the drug screen and background check are the responsibility of the student. Clinical agencies may deny a student participation in direct patient care based on the results of drug screen and/or background. Inability to participate in direct care at any clinical site will result in automatic program dismissal.
- Upon acceptance, students must also complete a medical physical examination. Students must provide a record of immunizations and TB skin test which must be current throughout the student's enrollment in the program. The **initial** TB skin test must be a **two-step method.** Students are required to have proof of 2 MMR's, 2 Varicella vaccines or titer demonstrating immunity and a yearly flu vaccine or doctor verification of allergy. The TB skin test must be done **annually.** During clinical experiences, students may be exposed to blood or other potentially infectious materials increasing the risk of acquiring the Hepatitis B infection. Students may choose to obtain the Hepatitis B vaccination or provide a waiver.
- Students must achieve and maintain certification in Cardiopulmonary Resuscitation (Health Care Provider/Basic Life Support) throughout the course of the program. HLT 105, Cardiopulmonary Resuscitation, is included in the first semester of technical coursework to provide students with an opportunity to achieve their certification. Successful completion will allow students to remain certified through all clinical experiences. If a student already has their certification they must provide evidence of renewal to last through all clinical experiences.
- To remain in the program, students must receive a final grade of "C" or better in all PTH coursework as well as BIO 142 (whether taken prior to program admission or during the first semester of the technical program). In lab courses, students must pass all skill check offs and lab practicals to proceed in the program. Re-entrance to the program is always subject to seat availability. A student who withdraws from the PTA program or is removed due to failure in the PTA program, will be permitted to re-apply and, upon acceptance, enter the program only one additional time.

Curricular Requirements: Students must earn a grade of <u>C</u> or higher in all degree coursework to graduate. Clinical/field/preceptor experiences require access to contracted clinical agencies.

Physical Requirement: Students are expected to meet the Essential Functions of PTA Students. Each student must sign an acknowledgement of these terms. These may be found on the program webpage, www.patrickhenry.edu/physical-therapy-assistant.

Financial Requirements: In addition to the ususal college tuition and fees, the PTA program requires additional expenses. Approximate costs include:

- Clinical specific attire $75
- Drug screen $38 minimum
- Criminal background $48 minimum
- Program books and resources $1200-$1500
- Physical examinations and immunizations $150-$350
- Student APTA and VA chapter fees $90 annually
- Academic PEAT (practice exams) $79
- Virginia licensing fees $100
- FSBPT PTA national exam $485
- Prometric test center fee for exam $82.60

General Education Requirements

Course Name	Credits:	Term Taken	Grade
ENG 111 - College Composition I	Credits: 3		
PSY 230 - Developmental Psychology	Credits: 3		
HUM EEE - Humanities/Fine Arts Elective	Credits: 3		
BIO 141 - Human Anatomy and Physiology I	Credits: 4		
BIO 142 - Human Anatomy and Physiology II	Credits: 4		

Total Credits: 17

Program Requirements

Course Name	Credits:	Term Taken	Grade
PTH 105 - Introduction to Physical Therapist Assisting	Credits: 2		
PTH 110 - Medical Reporting	Credits: 1		
PTH 115 - Kinesiology for the Physical Therapist Assistant	Credits: 4		
PTH 121 - Therapeutic Procedures I	Credits: 5		
PTH 122 - Therapeutic Procedures II	Credits: 5		
PTH 131 - Clinical Education	Credits: 3		
PTH 151 - Musculoskeletal Structure and Function	Credits: 4		
PTH 226 - Therapeutic Exercise	Credits: 4		
PTH 227 - Pathological Conditions	Credits: 3		
PTH 210 - Psychological Aspects of Therapy	Credits: 2		
PTH 225 - Rehabilitation Procedures	Credits: 4		
PTH 245 - Professional Issues	Credits: 3		
PTH 251 - Clinical Practicum I	Credits: 3		
PTH 252 - Clinical Practicum II	Credits: 4		
PTH 255 - Seminar in Physical Therapy	Credits: 2		
HLT 105 - Cardiopulmonary Resuscitation	Credits: 1		
SDV 100 - College Success Skills	Credits: 1		

Total Credits: 51

Minimum Requirements for Degree: 68 credits

Advising Sheet

Advising Sheet Suggested Schedules: Courses in advising sheets are displayed under the semester in which the courses are regularly offered. It is possible that a course shown on the schedule for a particular semester may not be offered due to low enrollment or other factors.

Prerequsite Semester Courses

Course Name	Credits:	Term Taken	Grade
SDV 100 - College Success Skills	Credits: 1		
ENG 111 - College Composition I	Credits: 3		
PSY 230 - Developmental Psychology	Credits: 3		
HUM EEE - Humanities/Fine Arts Elective	Credits: 3		
BIO 141 - Human Anatomy and Physiology I	Credits: 4		

Total Credits: 14

Semester One Courses

Course Name	Credits:	Term Taken	Grade
BIO 142 - Human Anatomy and Physiology II	Credits: 4		
PTH 105 - Introduction to Physical Therapist Assisting	Credits: 2		
PTH 121 - Therapeutic Procedures I	Credits: 5		
PTH 151 - Musculoskeletal Structure and Function	Credits: 4		
HLT 105 - Cardiopulmonary Resuscitation	Credits: 1		

Total Credits: 16

Semester Two Courses

Course Name	Credits:	Term Taken	Grade
PTH 110 - Medical Reporting	Credits: 1		
PTH 115 - Kinesiology for the Physical Therapist Assistant	Credits: 4		
PTH 226 - Therapeutic Exercise	Credits: 4		
PTH 227 - Pathological Conditions	Credits: 3		

Total Credits: 12

Semester Three Courses

Course Name	Credits:	Term Taken	Grade
PTH 131 - Clinical Education	Credits: 3		
PTH 210 - Psychological Aspects of Therapy	Credits: 2		
PTH 225 - Rehabilitation Procedures	Credits: 4		
PTH 122 - Therapeutic Procedures II	Credits: 5		

Total Credits: 14

Semester Four Courses

Course Name	Credits:	Term Taken	Grade
PTH 245 - Professional Issues	Credits: 3		
PTH 251 - Clinical Practicum I	Credits: 3		
PTH 252 - Clinical Practicum II	Credits: 4		
PTH 255 - Seminar in Physical Therapy	Credits: 2		

Total Credits: 12

Notes:

Student ID:_____

Student Name:_____

Advisor Name:_____

Catalog: 2020-2021 Catalog

Program: Practical Nursing Certificate

Practical Nursing Certificate

Career Information

Current Job Opportunities

Gainful Employment Information

Length: 49 credits

Purpose: This program prepares selected students to qualify as practitioners of practical nursing in a variety of health service facilities.

Employment Objectives: Employment opportunities in for the practical nurse, once licensed, include skilled and residential nursing care facilities, physician offices and clinics, industry, schools, home health care agencies, and others as applicable.

Potential Certification: After successful completion of the practical nursing program, graduates will be eligible to apply for licensure as a practical nurse through the state licensing board. A student who resides outside of Virginia and plans to apply for licensure as a practical nurse subsequent to completion of this education program must comply with the licensure requirements mandated by the student's state of residence.

Program Learning Outcomes: Graduates of the program will:

- effectively apply the principles of safe and effective care incorporating the foundational principles of practical nursing;
- demonstrate minimum competency to practice practical nursing at entry level; and
- demonstrate fundamental basic skill competency

Special Accreditation/Approval Status: The practical nursing program is approved by the Virginia State Board of Nursing, 9960 Mayland Drive, Suite 300, Henrico, Virginia 23233-1463, (804) 367-4515. The practical nursing progam is not nationally accredited.

NCLEX-PN First Time Licensure Pass Rates:

	PHCC	State	National
2019	71.43%	84.28%	85.63%
2018	86.67%	84.15%	85.93%
2017	85.0%	80.50%	83.85%
2016	n/a	78.76%	84.57%
2015	93.33%	78.89%	81.89%

Special Admission Requirements: The applicant must meet the following requirements for admission into the required program and clinical courses (PNE 161, PNE 141 , PNE 142 , PNE 163 , PNE 145 , PNE 164 , PNE 173 , PNE 158 , and NUR 135). Interested students should contact the nursing/health science office for academic advising.

1. Be accepted as a student to the college.
2. Graduate from high school or a GED.
3. Complete the Virginia Placement Test if indicated. If scores indicate, the applicant will be required to successfully complete developmental courses before submitting a practical nursing program application.
4. Validate computer competency equivalent to ITE 101.
5. Complete one unit of high school algebra with no grade below a 'C' verified by Multiple Measures or Virginia Placement Test scores as indicated. Any deficiencies can be made up through approved developmental or college level courses. Deficiencies in math modules 1-5 must be completed before application to the practical nursing program.
6. Complete one high school unit of college prep level biology or chemistry with no grade below a 'C.' College courses that may be used for high school substitute include: BIO 101 , BIO 102 or CHM 110.
7. Maintain cumulative college or high school grade point average of 2.0 or higher.
8. After meeting the above criteria, submit an application for the Practical Nursing Program during the specified advertised application period, along with required paperwork, i.e. high school transcripts, college transcripts, etc. during the application period.
9. Students must attend a Nursing Program Information Session prior to application submission **(**NEW REQUIREMENT for ALL students beginning with the Fall 2020 application cycle.)**
10. Achieve a passing score on the Admission Test.
11. Students will be scheduled for the admission test after their application file has been reviewed and approved. Applicants must have satisfactory scores in reading, mathematics, science, English and language usage.

Admission procedure: Applications to the nursing program are processed during specified advertised application periods. At the end of the advertised application period, completed applications with required supporting documents, will be reviewed and considered. Admission testing will be offered to students meeting all admission requirements.

Students who meet criteria, meaning score within the state regulation (45th percentile ranking) will be given priority.

NOTE: When admission must be limited because the number of qualified applicants exceeds available space, admission to the program will be given to applicants who scored at or above the 45th percentile ranking, and are also residents of the college service area. If seats are still available applicants who scored at or above the 45th percentile ranking, who live outside of the college service area will be offered admission starting with the higher percentile ranking, until all seats are filled. The number of qualified applicants offered admission to

the practical nursing program is contingent upon space available in the classroom, nursing laboratories, the programs access to sufficient clinical spaces in contracted clinical facilities in order to meet program learning outcomes, and qualified nursing faculty to teach students in classrooms, laboratories and clinical settings.

Applicants who are not accepted will be eligible to reapply at the next application period, at which time applicants meeting admission requirements will be allowed to repeat the admission test, and the most recent scores will be used for admission consideration.

Physical Requirement: The minimal functional requirements for all entering nursing students include:

- sufficient eye-hand coordination and manual and finger dexterity to provide direct patient care and to manipulate and operate equipment in the delivery of patient care;
- sufficient ability to fully observe patients/patient conditions and provide patient care, read medical records, and observe and manipulate equipment, including in dimly lit environments;
- sufficient hearing to communicate with patients and healthcare team members, including ability to detect and interpret sounds when operating equipment and gathering data;
- satisfactory communication skills, to include competence in reading, writing and speaking in English, in the classroom, laboratory, and clinical settings;
- ability to perform patient care activities that require full range of motion including handling, lifting, or moving patients and/or equipment;
- ability to lift and carry items weighing up to 50 pounds;
- ability to successfully perform all required duties and responsibilities in classroom, laboratory and clinical settings in stressful situations or conditions; and
- ability to participate in classroom, laboratory, and clinical settings during irregular hours (day/evening/night shifts, weekends, more than 8 hours at a time).

As a component of program admission, students are required to undergo mandatory drug screening and a criminal background check. Students must have a negative drug screen in order to begin clinical courses. Any charges or costs associated with the criminal background check and drug screen will be the responsibility of the student. Clinical agencies may deny a student participation in direct patient care based on results of drug screen and/or criminal background. Inability to complete clinical experiences will result in program dismissal.

Please note that the Virginia State Board of Nursing may refuse to admit a candidate to any licensure examination and refuse to issue a license or certificate to any applicant who has been convicted of any felony or misdemeanor involving moral turpitude. Students must produce a satisfactory criminal background check to the standards of all clinical agencies used by the college for experiential learning upon enrolling in the Practical Nursing program.

Financial Requirements: In addition to the usual college tuition and fees, this program requires additional expenses.

Approximate costs include:

Uniforms	$160
Physical examination	$100
Books	$800-$1000
Graduation Pin: cost depends on price of gold or silver	
AHA BCLS CPR certification	$154
Standardized tests	$150
Criminal background checks	$48 minimum
Drug screens	$38 minimum
Application for licensure fees and criminal background	$410
Transportation to clinical agencies, seminars, etc. as required	

Transfer Options: Students interested in program transfer must meet all admission requirements of the program for which transfer is being requested. Transfer is granted on a space available basis. Transfer applicants must currently be accepted and enrolled in a board approved practical nursing program or equivalent whose graduates are candidates for licensure and may only transfer into a board approved program. Additional requirements that will be used for transfer consideration will include performance in didactic, clinical laboratory, and clinical courses, and standardized test performance. Students may be required to demonstrate competency in previous course work through demonstration and testing.

Curriculum Requirements: To remain in the program, a student must have a "C" or above in all PNE and NUR courses. Additionally, student must have a grade of "C" or above in all semesters of English, health, natural science and psychology courses. In addition to formal lectures and laboratory experiences, clinical experiences within driving distance of the college will be scheduled at day, evening and/or weekend times, depending on availability of facilities. Criminal background checks and drug screens may be repeated after program acceptance to comply with clinical agency requirements. Clinical/field/preceptor experiences require access to contracted clinical agencies.

General Education Requirements

Course Name	Credits:	Term Taken	Grade
ENG 111 - College Composition I	Credits: 3		
HLT 141 - Introduction to Medical Terminology	Credits: 1		
NAS 150 - Human Biology	Credits: 4		
PSY 230 - Developmental Psychology	Credits: 3		

120

Total Credits: 11

Program Requirements

Course Name	Credits:	Term Taken	Grade
NUR 135 - Drug Dosage Calculations	Credits: 2		
PNE 161 - Nursing In Health Changes I	Credits: 6		
PNE 141 - Nursing Skills I	Credits: 2		
PNE 142 - Nursing Skills II	Credits: 2		
PNE 163 - Nursing In Health Changes III	Credits: 8		
PNE 145 - Trends In Practical Nursing	Credits: 1		
PNE 164 - Nursing In Health Changes IV	Credits: 11		
PNE 173 - Pharmacology For Practical Nurses	Credits: 2		
PNE 158 - Mental Health and Psychiatric Nursing	Credits: 2		
HLT 105 - Cardiopulmonary Resuscitation	Credits: 1		
SDV 100 - College Success Skills	Credits: 1		

Total Credits: 38

Minimum Required for Certificate: 49 Credits

Advising Sheet

Advising Sheet Suggested Schedules: Courses in advising sheets are displayed under the semester in which the courses are regularly offered. It is possible that a course shown on the schedule for a particular semester may not be offered due to low enrollment or other factors.

Developmental Prerequisites

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
PNE 161 - Nursing In Health Changes I	Credits: 6		
PNE 141 - Nursing Skills I	Credits: 2		
PNE 142 - Nursing Skills II	Credits: 2		
NAS 150 - Human Biology	Credits: 4		
NUR 135 - Drug Dosage Calculations	Credits: 2		
HLT 141 - Introduction to Medical Terminology	Credits: 1		
SDV 100 - College Success Skills	Credits: 1		
HLT 105 - Cardiopulmonary Resuscitation	Credits: 1		

Total Credits: 19

Summer Semester Courses

Course Name	Credits:	Term Taken	Grade
PNE 163 - Nursing In Health Changes III	Credits: 8		
PNE 173 - Pharmacology For Practical Nurses	Credits: 2		
PSY 230 - Developmental Psychology	Credits: 3		
ENG 111 - College Composition I	Credits: 3		

Total Credits: 16

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
PNE 164 - Nursing In Health Changes IV	Credits: 11		
PNE 158 - Mental Health and Psychiatric Nursing	Credits: 2		
PNE 145 - Trends In Practical Nursing	Credits: 1		

Total Credits: 14

Notes:

Student ID:_____ **Student Name:**_____ **Advisor Name:**_____	**Catalog: 2020-2021 Catalog** **Program: Residential/Commercial/Industrial** **Electrician, CSC**

Residential/Commercial/Industrial Electrician, CSC

Career Information

Current Job Opportunities

Gainful Employment Information

Length: 22 credits

Purpose: This program is designed to provide skills for entry-level positions in the practice of electrical servicing and preparation of the National Electrical Code Examination.

Program Learning Outcomes: Graduates will have fundamental skills for entry-level electrical installation and repair. Graduates will demonstrate proficiency in electrical codes, OSHA safety criteria, wiring circuits and mechatronic system troubleshooting.

Requirements

Course Name	Credits:	Term Taken	Grade
ELE 110 - Home Electric Power	Credits: 3		
ELE 113 - Electricity I	Credits: 3		
ELE 156 - Electrical Control Systems	Credits: 3		
ELE 138 - National Electric Code Review I	Credits: 3		
ETR 150 - Machine Control Using Relay & Programmable Logic	Credits: 3		
HLT 105 - Cardiopulmonary Resuscitation	Credits: 1		
MEC 140 - Introduction to Mechatronics	Credits: 3		
INS 210 - Principles of Instrumentation	Credits: 3		

Minimum Required for Career Studies Certificate: 22 Credits

Notes:

Student ID:_____	Catalog: 2020-2021 Catalog
Student Name:_____	Program: Robotic Welding, CSC
Advisor Name:_____	

Robotic Welding, CSC

Length: 21 credits

Purpose: This career studies certificate is designed for students who are looking to learn how to safely and effectively program and operate robotic welders.

Program Learning Outcomes: Graduates will demonstrate fundamental skills in robotic programming and operation including troubleshooting of robotic welds.

Requirements

Course Name	Credits:	Term Taken	Grade
WEL 120 - Introduction to Welding	Credits: 3		
WEL 126 - Pipe Welding I	Credits: 3		
WEL 150 - Welding Drawing and Interpretation	Credits: 3		
WEL 160 - Gas Metal Arc Welding	Credits: 4		
WEL 198 - Seminar and Project	Credits: 4		
WEL 241 - Robotic Programming	Credits: 2		
WEL 242 - Robotic Welding	Credits: 2		

Minimum Required for Career Studies Certificate: 21 credits

Notes:

Student ID:_____	Catalog: 2020-2021 Catalog
Student Name:_____	Program: Robotics and Automation Technology,
Advisor Name:_____	CSC

Robotics and Automation Technology, CSC

Length: 18 credits

Purpose: The Robotics and Automation Technology program provides an introduction to industrial robotics and explains how they are used in automated systems. The primary focus of the program is on automated processes, the role of robots within those processes and all related support equipment. Successful completer of this program will have an advanced understanding of robot operations, programming, material handling techniques and technical system components.

Requirements

Course Name	Credits:	Term Taken	Grade
MEC 140 - Introduction to Mechatronics	Credits: 3		
IND 160 - Introduction to Robotics	Credits: 3		
SAF 126 - Principles of Industrial Safety	Credits: 3		
ELE 233 - Programmable Logic Controller Systems I	Credits: 3		
IND 250 - Introduction to Basic Computer Integrated Manufacturing	Credits: 3		
ELE 246 - Industrial Robotics Programming	Credits: 3		

Total Credits: 18

Notes:

Student ID:_____ **Student Name:**_____ **Advisor Name:**_____	**Catalog: 2020-2021 Catalog** **Program: Science Specialization: Health Science,** **AA&S**

Science Specialization: Health Science, AA&S

Length: 60

Purpose: The curriculum is designed for the student who plans to transfer and complete a baccalaureate degree program in the area of Health Sciences, Health Promotion, or Health Education.

Program Learning Outcomes: A student will be able to:

- demonstrate minimum proficiency in General Education Skills which are defined as oral communication, written communication, mathematical/problem solving, scientific reasoning, information literacy, and critical thinking;
- demonstrate competency in identifying human organs and listing specific functions of organs that make up organ systems;
- identify the path taken by nutrients as they travel through the digestive system;
- identify top three health concerns for adults, male and female; and
- demonstrate the ability to identify individuals and populations at risk for common select diseases.

General Education Requirements

Course Name	Credits:	Term Taken	Grade
CST 110 - Introduction to Communication	Credits: 3		
ENG 111 - College Composition I and	Credits: 3		
ENG 112 - College Composition II	Credits: 3		
HIS 121 - United States History I	Credits: 3		
or			
HIS 122 - United States History II	Credits: 3		
MTH 154 - Quantitative Reasoning	Credits: 3		
MTH 155 - Statistical Reasoning	Credits: 3		
PHI 220 - Ethics	Credits: 3		
PSY 230 - Developmental Psychology	Credits: 3		
SOC 200 - Principles of Sociology	Credits: 3		
NAS EEE - Natural Sciences Electives	Credits: 8		

Total Credits: 35

Program Requirements

Course Name	Credits:	Term Taken	Grade
BIO 141 - Human Anatomy and Physiology I and	Credits: 4		
BIO 142 - Human Anatomy and Physiology II	Credits: 4		
HLT 116 - Introduction to Personal Wellness Concepts	Credits: 3		
or			
HLT 143 - Medical Terminology I	Credits: 3		
HLT 250 - General Pharmacology	Credits: 3		
HLT 230 - Principles of Nutrition and Human Development	Credits: 3		
PED 210 - Introduction to Physical Education and Health	Credits: 3		
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		
SDV 199 - Supervised Study In Transfer Programs	Credits: 1		

Total Credits: 25

Minimum Required for Degree: 60 Credits

Advising Sheet

Advising Sheet Suggested Schedules: Courses in advising sheets are displayed under the semester in which the courses are regularly offered. It is possible that a course shown on the schedule for a particular semester may not be offered due to low enrollment or other factors.

Developmental Prerequisites

Required MTT Module 1-5 (minimum) MTT Module 1-9 (maximum depending on NAS EEE selection)

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
ENG 111 - College Composition I	Credits: 3		
CST 110 - Introduction to Communication	Credits: 3		
NAS EEE - Natural Sciences Elective	Credits: 4		
HLT 116 - Introduction to Personal Wellness Concepts	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		

Total Credits: 14

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
ENG 112 - College Composition II	Credits: 3		
HIS 121 - United States History I	Credits: 3		
or			
HIS 122 - United States History II	Credits: 3		
PSY 230 - Developmental Psychology	Credits: 3		
MTH 154 - Quantitative Reasoning	Credits: 3		
NAS EEE - Natural Sciences Elective	Credits: 4		

Total Credits: 16

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
BIO 141 - Human Anatomy and Physiology I	Credits: 4		
PED 210 - Introduction to Physical Education and Health	Credits: 3		
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		
MTH 155 - Statistical Reasoning	Credits: 3		
SOC 200 - Principles of Sociology	Credits: 3		

Total Credits: 16

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
BIO 142 - Human Anatomy and Physiology II	Credits: 4		
HLT 230 - Principles of Nutrition and Human Development	Credits: 3		
HLT 250 - General Pharmacology	Credits: 3		
PHI 220 - Ethics	Credits: 3		
SDV 199 - Supervised Study In Transfer Programs	Credits: 1		

Total Credits: 14

Notes:

Student ID:_____
Student Name:_____
Advisor Name:_____

Catalog: 2020-2021 Catalog
Program: Science Specialization: Pre-BSN, AA&S

Science Specialization: Pre-BSN, AA&S

Length: 61 credits

Purpose:

- To prepare Associate Degree Registered Nurse graduates to enter university B.S.N. bridge programs* (2+1+1 option).
- To provide a curriculum of study for eligible students (i.e. students with prior degrees, students who have dual enrolled) who are waiting to apply to the Associate Degree (1+2+1 option).
- To prepare transfer students to enter B.S.N programs (2+2 option).
- To assist Health Science Certificate completer's who are waiting to apply and be accepted to the Associate Degree Nursing program and plan to continue their education at the B.S.N. level.

Program Learning Outcomes: A student will be able to:

- demonstrate minimum proficiency in General Education Skills which are defined as oral communication, written communication, mathematical/problem solving, scientific reasoning, information literacy, and critical thinking;
- demonstrate competency in identifying human organs and listing specific functions of organs that make up organ systems
- identify the path taken by nutrients as they travel through the digestive system;
- distinguish between the different drug classifications and commonly prescribed medications; and
- demonstrate quantitative literacy by using and interpreting tables and graphs.

Curricular Requirements: Students must earn a grade of C or higher in courses that are required in the Associate of Applied Science Health Technology Nurisng degree program, and Practical Nursing Certificate program. Students pursuing transfer for a BSN must earn a C or higher in all courses.

General Education Requirements (50 credits)

Course Name	Credits:	Term Taken	Grade
CST 110 - Introduction to Communication	Credits: 3		
ENG 111 - College Composition I and	Credits: 3		
ENG 112 - College Composition II	Credits: 3		
HIS 121 - United States History I	Credits: 3		
or			
HIS 122 - United States History II	Credits: 3		
or			
HIS 101 - History of Western Civilization I	Credits: 3		
or			
HIS 102 - History of Western Civilization II	Credits: 3		
MTH 154 - Quantitative Reasoning	Credits: 3		
or			
MTH 161 - Precalculus I	Credits: 3		
and			
MTH 155 - Statistical Reasoning	Credits: 3		
or			
MTH 245 - Statistics I	Credits: 3		
PSY 230 - Developmental Psychology	Credits: 3		
and			
SOC 200 - Principles of Sociology	Credits: 3		
or			
PSY 200 - Principles of Psychology	Credits: 3		

Total Credits: 24

Humanities/Fine Arts Elective

Select from:

Course Name	Credits:	Term Taken	Grade
ART 101 - History and Appreciation of Art I	Credits: 3		
or			
ART 102 - History and Appreciation of Art II	Credits: 3		

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or			
ENG 241 - Survey of American Literature I	Credits: 3		
or			
ENG 242 - Survey of American Literature II	Credits: 3		
or			
ENG 243 - Survey of English Literature I	Credits: 3		
or			
ENG 244 - Survey of English Literature II	Credits: 3		
or			
ENG 251 - Survey of World Literature I	Credits: 3		
or			
ENG 252 - Survey of World Literature II	Credits: 3		
MUS 121 - Music Appreciation I	Credits: 3		
REL 200 - Survey of The Old Testament	Credits: 3		
REL 210 - Survey of The New Testament	Credits: 3		
REL 231 - Religions of The World I	Credits: 3		
or			
REL 232 - Religions of The World II	Credits: 3		
PHI 220 - Ethics	Credits: 3		

Total Credits: 6

Laboratory Science

Course Name	Credits:	Term Taken	Grade
BIO 141 - Human Anatomy and Physiology I and	Credits: 4		
BIO 142 - Human Anatomy and Physiology II	Credits: 4		
BIO 205 - General Microbiology	Credits: 4		
CHM 111 - College Chemistry I and	Credits: 4		
CHM 112 - College Chemistry II	Credits: 4		
or			
BIO 101 - General Biology I and	Credits: 4		
BIO 102 - General Biology II	Credits: 4		

Total Credits: 20

Program Requirements (11 credits)

Course Name	Credits:	Term Taken	Grade
SDV 199 - Supervised Study In Transfer Programs	Credits: 1		
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		

Total Credits: 5

Pre-BSN Electives

Course Name	Credits:	Term Taken	Grade
HLT 230 - Principles of Nutrition and Human Development	Credits: 3		
HLT 250 - General Pharmacology	Credits: 3		

Total Credits: 6

Minimum Required for Degree: 61 Credits

Advising Sheet

Advising Sheet Suggested Schedules: Courses in advising sheets are displayed under the semester in which the courses are regularly offered. It is possible that a course shown on the schedule for a particular semester may not be offered due to low enrollment or other factors.

Developmental Prerequisites

NOTE: Modules 1-9 required for MTH 161 or MTH 245. Modules 1-5 required for MTH 155

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
ENG 111 - College Composition I	Credits: 3		
HIS 121 - United States History I	Credits: 3		
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		
BIO 101 - General Biology I	Credits: 4		
MTH 161 - Precalculus I	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		

Total Credits: 17

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
ENG 112 - College Composition II	Credits: 3		
CST 110 - Introduction to Communication	Credits: 3		
BIO 102 - General Biology II	Credits: 4		
MTH 155 - Statistical Reasoning	Credits: 3		
HUM EEE - Humanities/Fine Arts Elective	Credits: 3		

Total Credits: 16

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
BIO 205 - General Microbiology	Credits: 4		
HLT 230 - Principles of Nutrition and Human Development	Credits: 3		
BIO 141 - Human Anatomy and Physiology I	Credits: 4		
HUM EEE - Humanities/Fine Arts Elective	Credits: 3		

Total Credits: 14

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
PSY 230 - Developmental Psychology	Credits: 3		
SDV 199 - Supervised Study In Transfer Programs	Credits: 1		
SOC 200 - Principles of Sociology	Credits: 3		
HLT 250 - General Pharmacology	Credits: 3		
BIO 142 - Human Anatomy and Physiology II	Credits: 4		

Total Credits: 14

Notes:

Student ID:_____	Catalog: 2020-2021 Catalog
Student Name:_____	Program: Science, AA&S
Advisor Name:_____	

Science, AA&S

Length: 60-63 credits

Purpose: The curriculum is designed for the student who plans to complete a baccalaureate degree program. The transfer institution's catalog and transfer guide are the best sources of information for planning a course of study. Final responsibility for transferability of courses rests with the student and the registrar of that institution.

Curriculum Requirements: Students must successfully complete all of the requirements listed below to be awarded this degree.

Program Outcomes: A student will be able to:

- demonstrate minimum proficiency in General Education Skills which are defined as oral communication, written communication, mathematical/problem solving, scientific reasoning, information literacy, and critical thinking;
- demonstrate competency in scientific thinking by designing an appropriate experiment and identifying key components;
- demonstrate quantitative literacy by using and interpreting tables and graphs; and
- demonstrate scientific literacy by correctly using the terms, hypothesis, law, and theory in their scientific context.

General Education Requirements

Course Name	Credits:	Term Taken	Grade
ENG 111 - College Composition I and	Credits: 3		
ENG 112 - College Composition II	Credits: 3		
HIS 121 - United States History I and	Credits: 3		
HIS 122 - United States History II	Credits: 3		
or			
HIS 101 - History of Western Civilization I and	Credits: 3		
HIS 102 - History of Western Civilization II	Credits: 3		
or			
HIS 111 - History of World Civilization I	Credits: 3		
and			
HIS 112 - History of World Civilization II	Credits: 3		
MTH EEE - Mathematics Electives (Choose two math courses from Mathematic Electives, MTH 167 or higher) *See Developmental Prerequisites*	Credits: 3		
NAS EEE - Natural Sciences Electives	Credits: 16		
HUM EEE - Humanities/Fine Arts Electives	Credits: 6		

Must Complete 2 Two-Semester Sequences

Course Name	Credits:	Term Taken	Grade
SOC EEE - Social Sciences Electives	Credits: 6		
PED/HLT EEE - Wellness Elective	Credits: 1		
EEE EEE - College Transfer Electives	Credits: 7-8		

Note

[Choose based on the requirements of the transfer institution]

Total Credits: 55-58

Program Requirements

Course Name	Credits:	Term Taken	Grade
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		
SDV 199 - Supervised Study In Transfer Programs	Credits: 1		
SDV 100 - College Success Skills	Credits: 1		

Total Credits: 5

Minimum Required for Degree: 60-63 Credits

Advising Sheet

Advising Sheet Suggested Schedules: Courses in advising sheets are displayed under the semester in which the courses are regularly offered. It is possible that a course shown on the schedule for a particular semester may not be offered due to low enrollment or other factors.

Developmental Prerequisites

First Semester Courses

Course Name	Credits:	Term Taken	Grade
ENG 111 - College Composition I	Credits: 3		
HUM EEE - Humanities/Fine Arts Elective	Credits: 3		
HIS 121 - United States History I	Credits: 3		
NAS EEE - Natural Sciences Elective	Credits: 4		
PED/HLT EEE - Wellness Elective	Credits: 1		
SDV 100 - College Success Skills	Credits: 1		

Total Credits: 15

Second Semester Courses

Course Name	Credits:	Term Taken	Grade
ENG 112 - College Composition II	Credits: 3		
HIS 122 - United States History II	Credits: 3		
MTH EEE - Mathematics Electives	Credits: 4		
NAS EEE - Natural Sciences Elective	Credits: 4		

Total Credits: 14

Third Semester Courses

Course Name	Credits:	Term Taken	Grade
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		
MTH EEE - Mathematics Electives	Credits: 4		
SOC EEE - Social Sciences Elective	Credits: 3		
NAS EEE - Natural Sciences Elective	Credits: 4		
FA EEE - Fine Arts Electives	Credits: 3		

Total Credits: 16

Fourth Semester Courses

Course Name	Credits:	Term Taken	Grade
SDV 199 - Supervised Study In Transfer Programs	Credits: 1		
NAS EEE - Natural Sciences Elective	Credits: 4		
SOC EEE - Social Sciences Elective	Credits: 3		
EEE EEE - College Transfer Electives (2 classes)	Credits: 6		

Total Credits: 14

Notes:

Substance Abuse Counselor-Assistant

Purpose: The career studies certificate (CSC) program in Substance Abuse Counselor-Assistant is designed to fulfill the necessary educational requirements to attain the Virginia Certified Substance Abuse Counselor Assistant (CSAC-A) credential. This career studies certificate meets the specified statutory requirements for didactic training and supervised experiential training. In addition to completing the CSC, students must also pass the Virginia State Constructed CSAC-A exam to earn the Virginia Certified Substance Abuse Counselor Assistant (CSAC-A) credential.

Occupational Objectives: Students who complete the program may be qualified for employment in a variety of positions related to substance use disorders, including:

Substance Abuse Counselor- Assistant

Substance Use Disorder Case Manager

Family Services Specialist Assistant

Social Services Liaison

Case Management Aide

Client Advocate

Social Services Para-professional

Requirements

Course Name	Credits:	Term Taken	Grade
HMS 121 - Basic Counseling Skills I	Credits: 3		
HMS 141 - Group Dynamics I	Credits: 3		
HMS 226 - Helping Across Cultures	Credits: 3		
HMS 230 - Ethics in Human Services	Credits: 3		
HMS 251 - Substance Abuse I	Credits: 3		
HMS 258 - Case Management and Substance Abuse	Credits: 3		
HMS 290 - Coordinated Internship	Credits: 3		
PSY 200 - Principles of Psychology	Credits: 3		
PSY 215 - Abnormal Psychology	Credits: 3		

Total Credits: 27

Advising Sheet

Advising Sheet Suggested Schedules: Courses in advising sheets are displayed under the semester in which the courses are regularly offered. It is possible that a course shown on the schedule for a particular semester may not be offered due to low enrollment or other factors.

Developmental Prerequisites

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
HMS 121 - Basic Counseling Skills I	Credits: 3		
HMS 226 - Helping Across Cultures	Credits: 3		
HMS 251 - Substance Abuse I	Credits: 3		
HMS 258 - Case Management and Substance Abuse	Credits: 3		
PSY 200 - Principles of Psychology	Credits: 3		

Total Credits: 15

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
HMS 290 - Coordinated Internship	Credits: 3		
HMS 141 - Group Dynamics I	Credits: 3		
HMS 230 - Ethics in Human Services	Credits: 3		
PSY 215 - Abnormal Psychology	Credits: 3		

Total Credits: 12

Notes:

Student ID:_____	Catalog: 2020-2021 Catalog
Student Name:_____	Program: Supervision, CSC
Advisor Name:_____	

Supervision, CSC

Career Information

Current Job Opportunities

Gainful Employment Information

Length: 28 credits

Purpose: This program is designed to provide the business professional with skills related to the effective supervision of personnel.

Program Learning Outcomes: A student will be able to:

- describe and use general business knowledge and skills, including managerial and supervisory concepts;
- demonstrate accepted ethical behaviors and interpersonal skills that reflect an understanding of diversity and teamwork; and
- describe contemporary approaches to management and methods to create a positive work environment.

Requirements

Course Name	Credits:	Term Taken	Grade
BUS 111 - Principles of Supervision I	Credits: 3		
BUS 112 - Principles of Supervision II	Credits: 3		
BUS 200 - Principles of Management	Credits: 3		
BUS 205 - Human Resource Management	Credits: 3		
ENG 111 - College Composition I	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		
ITE 115 - Introduction to Computer Applications and Concepts	Credits: 3		
BUS 106 - Security Awareness for Managers	Credits: 3		
MTH 130 - Fundamentals of Reasoning	Credits: 3		
CST 110 - Introduction to Communication	Credits: 3		

Minimum Required for Career Studies Certificate: 28 Credits

Notes:

Student ID:_____

Student Name:_____

Advisor Name:_____

Catalog: 2020-2021 Catalog

Program: Technical Studies Specialization: Motorsports Technology, AAS

Technical Studies Specialization: Motorsports Technology, AAS

Length: 66-68 credits

Purpose: To provide a rapid response to an anticipated workforce shortage for the motorsports industry within the mid-Atlantic region. The student will be engaged in mastering the academic and technical skill sets required for employment.

Program Learning Outcomes: A student will be able to:

- demonstrate knowledge of auto racing and race vehicles, their characteristics, specifications, rules, regulations, systems, current technology, and testing methods
- demonstrate knowledge about components, systems, configuration, classification, terminology, and principles of functioning of high performance engines used in race competitions
- using codes and specifications, demonstrate the ability to assemble, test, and apply corrective methods to resolve technical issues related to maximum power performance of race engines
- demonstrate knowledge of aerodynamics, stability, and control of race vehicles, and the ability to design, model, and fabricate structures and bodies of race vehicles using blueprints and safety specifications
- demonstrate knowledge of engineering materials, manufacturing processes, and testing techniques, and skill to conceive fabricate and/or assemble suspension, traction, steering and braking systems of race vehicles

Occupational Objectives: Employment opportunities for graduates of this program include chassis technician, set-up assistant, crew member, block assembly assistant, engine builder, or engine machine technician in racing environments.

General Education Requirements

Course Name	Credits:	Term Taken	Grade
HUM EEE - Humanities/Fine Arts Elective	Credits: 3		
MTH 111 - Basic Technical Mathematics	Credits: 3		
SOC EEE - Social Sciences Elective	Credits: 3		
CST 110 - Introduction to Communication	Credits: 3		
ENG 115 - Technical Writing	Credits: 3		

Total Credits: 15

Program Requirements

Course Name	Credits:	Term Taken	Grade
MTS 130 - Motorsports Structural Technology I	Credits: 3		
MTS 131 - Motorsports Structural Technology II	Credits: 3		
MTS 132 - Motorsports Structural Technology III	Credits: 3		
MTS 135 - Sheet Metal Fabrication	Credits: 3		
MTS 140 - Stock Car Engines I	Credits: 3		
MTS 210 - Race Car Setup I	Credits: 3		
MTS 211 - Race Car Setup II	Credits: 3		
MTS 240 - Stock Car Engines II	Credits: 3		
MAC 161 - Machine Shop Practices I	Credits: 3		
MTS 298 - Dyno Engine Performance	Credits: 3		
PED/HLT EEE - Wellness Elective	Credits: 1		
WEL 135 - Inert Gas Welding	Credits: 2		
MTS 120 - Introduction to Motorsports Technology	Credits: 3		
MTS 125 - Motorsports Technology I	Credits: 3		
MTS 150 - Engine Machining Processes I	Credits: 4		
MTS 250 - Engine Machining Processes II	Credits: 3		
MAC 121 - Numerical Control I	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		
SDV 199 - Supervised Study In Transfer Programs	Credits: 1		
MTS 295 - Introduction to Pit Stop	Credits: 2		

Total Credits: 54

Minimum Required for Degree: 66-68 Credits

Advising Sheet

Advising Sheet Suggested Schedules: Courses in advising sheets are displayed under the semester in which the courses are regularly offered. It is possible that a course shown on the schedule for a particular semester may not be offered due to low enrollment or other factors.

Developmental Prerequisites

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
SDV 100 - College Success Skills	Credits: 1		
MTH 111 - Basic Technical Mathematics	Credits: 3		
WEL 135 - Inert Gas Welding	Credits: 2		
MTS 120 - Introduction to Motorsports Technology	Credits: 3		
MTS 125 - Motorsports Technology I	Credits: 3		
MAC 161 - Machine Shop Practices I	Credits: 3		
ENG 115 - Technical Writing	Credits: 3		

Total Credits: 15

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
HUM EEE - Humanities/Fine Arts Elective	Credits: 3		
MTS 131 - Motorsports Structural Technology II	Credits: 3		
CST 110 - Introduction to Communication	Credits: 3		
MTS 130 - Motorsports Structural Technology I	Credits: 3		
MTS 135 - Sheet Metal Fabrication	Credits: 3		
MTS 210 - Race Car Setup I	Credits: 3		

Total Credits: 18

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
PED 111 - Weight Training I	Credits: 1		
MTS 140 - Stock Car Engines I	Credits: 3		
MTS 150 - Engine Machining Processes I	Credits: 4		
MTS 132 - Motorsports Structural Technology III	Credits: 3		
MTS 211 - Race Car Setup II	Credits: 3		
MAC 121 - Numerical Control I	Credits: 3		

Total Credits: 17

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
SOC EEE - Social Sciences Elective	Credits: 3		
SDV 199 - Supervised Study In Transfer Programs	Credits: 1		
MTS 240 - Stock Car Engines II	Credits: 3		
MTS 250 - Engine Machining Processes II	Credits: 3		
MTS 295 - Introduction to Pit Stop	Credits: 2		
MTS 298 - Project In Motorsports Marketing	Credits: 3		

Total Credits: 15

Notes:

Student ID:_____
Student Name:_____
Advisor Name:_____

Catalog: 2020-2021 Catalog
Program: Theatre Arts, CSC

Theatre Arts, CSC

Career Information

Current Job Opportunities

Gainful Employment Information

Length: 19 credits

Purpose: This program is designed to provide skills specifically related to acting and stage design.

Program Learning Outcomes: A student will be able to:

- demonstrate competency in at least one aspect of theatre acting
- distinguish and differentiate the characteristics of theatre from other art forms

Requirements

Course Name	Credits:	Term Taken	Grade
CST 110 - Introduction to Communication	Credits: 3		
CST 130 - Introduction to The Theatre	Credits: 3		
CST 131 - Acting I	Credits: 3		
CST 132 - Acting II	Credits: 3		
CST 136 - Theatre Workshop	Credits: 3		
CST 231 - History of Theatre I	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		

Minimum Required for Certificate: 19 Credits

Notes:

Student ID:_____   **Catalog: 2020-2021 Catalog**
Student Name:_____   **Program: Therapeutic Massage Certificate**
Advisor Name:_____

Therapeutic Massage Certificate

Career Information

Current Job Opportunities

Gainful Employment Information

Length: 39 credits

Purpose: The program is designed to prepare students with the skills and competencies necessary to enter into the field of massage therapy.

Employment Objectives: Obtain employment as a massage therapist in a variety of settings such as health care, business, recreational settings, and self-employment. Businesses using massage therapists include hotels, cruise ships, hospitals, corporations, doctor's offices, and many spa or personal wellness agencies.

Potential Certification: A graduate may apply to take the MBLEX after successful completion of the education program, in addition the graduate may apply for licensure in Virginia as a Massage Therapist. A student who resides outside of Virginia and plans to apply for licensure as a massage therapist subsequent to completion of this education program must comply with the licensure requirements for the student's state of residence. This education program may not meet the requirements for licensing or certification for the student's state of residence.

Program Learning Outcomes: A student will be able to:

- demonstrate practical ability to deliver massage at the introductory level;
- demonstrate practical ability to deliver massages using specified techniques; and
- identify all major systems within the human body and list each major organ with its primary functions

Curricular Requirements: Core therapeutic massage courses that are greater than five years old must be repeated for credit to be eligible for program graduation.

General Education Requirements

Course Name	Credits:	Term Taken	Grade
ENG 111 - College Composition I and	Credits: 3		
ENG 112 - College Composition II	Credits: 3		
BUS 165 - Small Business Management	Credits: 3		
HLT 105 - Cardiopulmonary Resuscitation	Credits: 1		
PED 109 - Yoga	Credits: 1		
NAS 150 - Human Biology	Credits: 4		

Total Credits: 15

Program Requirements

Course Name	Credits:	Term Taken	Grade
HLT 170 - Introduction to Massage	Credits: 1		
HLT 180 - Therapeutic Massage I	Credits: 3		
HLT 280 - Therapeutic Massage II	Credits: 3		
HLT 281 - Therapeutic Massage III	Credits: 3		
HLT 220 - Concepts of Disease	Credits: 3		
HLT 143 - Medical Terminology I	Credits: 3		
HLT 116 - Introduction to Personal Wellness Concepts	Credits: 3		
HLT 193 - Muscles and Massage	Credits: 4		
SDV 100 - College Success Skills	Credits: 1		

Total Credits: 24

Minimum Required for Certificate: 39 Credits

Advising Sheet

Advising Sheet Suggested Schedules: Courses in advising sheets are displayed under the semester in which the courses are regularly offered. It is possible that a course shown on the schedule for a particular semester may not be offered due to low enrollment or other factors.

Developmental Prerequisites

Semester One Courses

Course Name	Credits:	Term Taken	Grade
ENG 111 - College Composition I	Credits: 3		
HLT 170 - Introduction to Massage	Credits: 1		
HLT 180 - Therapeutic Massage I	Credits: 3		
NAS 150 - Human Biology	Credits: 4		
SDV 100 - College Success Skills	Credits: 1		

Total Credits: 12

Semester Two Courses

Course Name	Credits:	Term Taken	Grade
ENG 112 - College Composition II	Credits: 3		
HLT 143 - Medical Terminology I	Credits: 3		
HLT 280 - Therapeutic Massage II	Credits: 3		
HLT 193 - Muscles and Massage	Credits: 4		
PED 109 - Yoga	Credits: 1		

Total Credits: 14

Semester Three Courses

Course Name	Credits:	Term Taken	Grade
HLT 116 - Introduction to Personal Wellness Concepts	Credits: 3		
BUS 165 - Small Business Management	Credits: 3		
HLT 105 - Cardiopulmonary Resuscitation	Credits: 1		
HLT 220 - Concepts of Disease	Credits: 3		
HLT 281 - Therapeutic Massage III	Credits: 3		

Total Credits: 13

Notes:

Student ID:_____　　　　　　Catalog: 2020-2021 Catalog
Student Name:_____　　　　　　Program: Welding, CSC
Advisor Name:_____

Welding, CSC

Length: 20 credits

Purpose: This program is designed to provide the layman and practitioner fundamental skills and knowledge in metal trades.

Career Information

Current Job Opportunities

Gainful Employment Information

Program Learning Outcomes: Graduates will have fundamental skills for entry-level weld installations. Graduates will demonstrate proficiency in oxyacetylene processes, arc and MIG welding procedures.

Requirements

Course Name	Credits:	Term Taken	Grade
WEL 120 - Introduction to Welding	Credits: 3		
WEL 123 - Shielded Metal Arc Welding (Basic)	Credits: 4		
WEL 150 - Welding Drawing and Interpretation	Credits: 3		
WEL 160 - Gas Metal Arc Welding	Credits: 4		
WEL 161 - Flux Cored Arc Welding (FCAW)	Credits: 3		
WEL 164 - Gas Tungsten Arc Welding (GTAW), Tungsten Inert Gas (TIG)	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		

Minimum Required for the Career Studies Certificate: 20 Credits

Notes:

Student ID:_____

Student Name:_____

Advisor Name:_____

Catalog: 2020-2021 Catalog

Program: Wellness, CSC

Wellness, CSC

Career Information

Current Job Opportunities

Gainful Employment Information

Length: 26 credits

Purpose: This program is designed to prepare a student to identify common health concerns, educate communities about resources and availability of healthcare services, and advocate for community health needs.

Employment Objective This program is designed to prepare a student for entry level employment as a wellness coordinator in community based clinics, community centers, or fitness centers.

Program Learning Outcomes: The student will be able to:

- demonstrate the ability to identify individuals and populations at risk for common select diseases; and
- identify top three health concerns for adult, male and female

Program Requirements

Course Name	Credits:	Term Taken	Grade
CST 110 - Introduction to Communication	Credits: 3		
ENG 111 - College Composition I	Credits: 3		
HLT 230 - Principles of Nutrition and Human Development	Credits: 3		
HLT 116 - Introduction to Personal Wellness Concepts	Credits: 3		
NAS 150 - Human Biology	Credits: 4		
SOC 200 - Principles of Sociology	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		
HLT 250 - General Pharmacology	Credits: 3		
PED 210 - Introduction to Physical Education and Health	Credits: 3		

Total Credits: 26

Advising Sheet

Advising Sheet Suggested Schedules: Courses in advising sheets are displayed under the semester in which the courses are regularly offered. It is possible that a course shown on the schedule for a particular semester may not be offered due to low enrollment or other factors.

Developmental Prerequisites

Fall Semester Courses

Course Name	Credits:	Term Taken	Grade
ENG 111 - College Composition I	Credits: 3		
CST 110 - Introduction to Communication	Credits: 3		
NAS 150 - Human Biology	Credits: 4		
HLT 116 - Introduction to Personal Wellness Concepts	Credits: 3		
SDV 100 - College Success Skills	Credits: 1		

Total Credits: 14

Spring Semester Courses

Course Name	Credits:	Term Taken	Grade
SOC 200 - Principles of Sociology	Credits: 3		
HLT 230 - Principles of Nutrition and Human Development	Credits: 3		
HLT 250 - General Pharmacology	Credits: 3		
PED 210 - Introduction to Physical Education and Health	Credits: 3		

Total Credits: 12

Notes:

COURSES

Courses

Accounting

ACC 124 - Payroll Accounting

Credits: 3

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.
Prerequisites: ENF 3 or ENG 111 co-requisite, MTT 1 - Module 1 Operations With Positive Fractions-MTT 1 - Module 2 Operations With Positive Decimals and Percents.

ACC 134 - Small Business Taxes

Credits: 3

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

Credits: 3

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 hours per week.
Prerequisites: ENF 3 or ENG 111 co-requisite, MTT 1 - Module 1 Operations With Positive Fractions-MTT 1 - Module 2 Operations With Positive Decimals and Percents.

ACC 212 - Principles of Accounting II

Credits: 3

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 hours per week.
Prerequisite: ACC 211

ACC 215 - Computerized Accounting

Credits: 3

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.

Lecture 3 hours per week.
Prerequisite or corequisite: ACC 211 or equivalent

ACC 221 - Intermediate Accounting I

Credits: 3

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.

Lecture 3 hours per week.
Prerequisite: ACC 212 or equivalent

ACC 222 - Intermediate Accounting II

Credits: 3

Continues accounting principles and theory with emphasis on accounting for fixed assets, intangibles, corporate capital structure, long-term liabilities, and investments.

Lecture 3 hours per week.
Prerequisite ACC 212 or equivalent

ACC 231 - Cost Accounting I

Credits: 3

Studies cost accounting methods and reporting as applied to job order, process, and standard cost accounting systems. Includes cost control and other topics.

Lecture 3 hours per week.
Prerequisite ACC 212 or equivalent.

ACC 261 - Principles of Federal Taxation I

Credits: 3

Presents the study of federal taxation as it relates to individuals and related entities. Includes tax planning, compliance and reporting.

Lecture 3 hours per week.
Prerequisite: ENF 3 or ENG 111 co-requisite, MTT 1 - Module 1 Operations With Positive Fractions-MTT 1 - Module 2 Operations With Positive Decimals and Percents.

ACC 290 - Coordinated Internship

Credits: 3

Supervises on-the-job training in selected business, industrial or service firms coordinated by the college

ACC 293 - Studies In

Credits: 3

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.

ACC 297 - Cooperative Education

Credits: 3

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.

ACC 299 - Supervised Study

Credits: 1

Assigns problems for independent study incorporating previous instruction and supervised by the instructor.

Administration of Justice

ADJ 100 - Survey of Criminal Justice

Credits: 3

Presents an overview of the United States criminal justice system; introduces the major system components--law enforcement, judiciary, and corrections.

Lecture 3 hours per week.

ADJ 105 - The Juvenile Justice System

Credits: 3

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.

Lecture 3 hours per week.

ADJ 111 - Law Enforcement Organization & Administration I

Credits: 3

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. Part I of II.

Lecture 3 hours per week.

ADJ 112 - Law Enforcement Organization & Administration II

Credits: 3

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. Part II of II.

Lecture 3 hours per week.
Prerequisite: divisional approval or ADJ 111

ADJ 130 - Introduction to Criminal Law

Credits: 3

Surveys the general principals of American criminal law, the elements of major crimes, and the basic steps of prosecution procedure.

Lecture 3 hours per week.

ADJ 131 - Legal Evidence

Credits: 3

Surveys the identification, degrees, and admissibility of evidence for criminal prosecution; examines pre-trial and trial procedures as they pertain to the rules of evidence.

Lecture 3 hours per week.
Prerequisite: ADJ 100

ADJ 133 - Ethics and the Criminal Justice Professional

Credits: 3

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 140 - Introduction to Corrections

Credits: 3

Focuses on societal responses to the offender. Traces the evolution of practices based on philosophies of retribution, deterrence, and rehabilitation. Reviews contemporary correctional activities and their relationships to other aspects of the criminal justice system.

ADJ 145 - Corrections and the Community

Credits: 3

Studies and evaluates the relationships and interactions between correctional organizations and free society. Focuses on the shared responsibility of the community and corrections agencies to develop effective programs for management and treatment of criminal offenders.

ADJ 146 - Adult Correctional Institutions

Credits: 3

Describes the structures, function, and goals of state and federal correctional institutions (prisons, farms, community-based units, etc.) for adult inmates.

Lecture 3 hours per week.

ADJ 160 - Police Response to Critical Incidents

Credits: 3

Provides a basic introduction to incident command and emerging trends. Addresses bomb threats; hostage/barricade situations; attacks on insti-

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tutions such as schools and hospitals; criminal hazmat; terrorist, militia/paramilitary, and extended crime scene evidence collection scenarios; and other long term or large scale events.

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3

ADJ 201 - Criminology

Credits: 3

Studies current and historical data pertaining to criminal and other deviant behavior. Examines theories that explain crime and criminal behavior in human society.

Lecture 3 hours per week.

ADJ 228 - Narcotics and Dangerous Drugs

Credits: 3

Surveys the historical and current usage of narcotics and dangerous drugs. Teaches the identification and classification of such drugs and emphasizes the symptoms and effects on their users. Examines investigative methods and procedures utilized in law enforcement efforts against illicit drug usage.

Lecture 3 hours per week.

ADJ 234 - Terrorism and Counter- Terrorism

Credits: 3

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.

ADJ 236 - Principles of Criminal Investigation

Credits: 3

Surveys the fundamentals of criminal investigation procedures and techniques. Examines crime scene search, collecting, handling and preserving of evidence.

Lecture 3 hours per week.

ADJ 237 - Advanced Criminal Investigation

Credits: 3

Introduces specialized tools and scientific aids used in criminal investigation. Applies investigative techniques to specific situations and preparation of trial evidence.

Lecture 3 hours per week.
Prerequisite: ADJ 236 or division approval

ADJ 280 - Capstone Project

Credits: 1

Provides a capstone research project for the final semester of the program, focusing inquiry upon an area of interest to the student or area relevant to the student's prospective career field. May include problem based research topics, internships, or other focused projects.

Lecture 1 hour per week.
Corequisite: ADJ 236 or equivalent

ADJ 299 - Supervised Study

Credits: 1

Assigns problems for independent study incorporating previous instruction and supervised by the instructor.

Arabic

ARA 101 - Beginning Arabic

Credits: 5

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.

Lecture 5 hours per week.

ARA 102 - Beginning Arabic II

Credits: 5

Introduces understanding, speaking, reading, and writing skills and emphasizes basic Arabic sentence structure. Discusses the diversity of cultures in the Arab world. Part II of II.

Lecture 5 hours per week.

Arts

ART 101 - History and Appreciation of Art I

Credits: 3

Presents the history and interpretation of architecture, sculpture, and painting. Begins with prehistoric art and follows the development of western civilization to the present. Part I of II. This is a Passport Transfer course

Lecture 3 hours per week.
Prerequisite: A placement of ENF 3 or ENG 111 co-requisite. May be taken out of sequence.

ART 102 - History and Appreciation of Art II

Credits: 3

Presents the history and interpretation of architecture, sculpture, and painting. Begins with prehistoric art and follows the development of western civilization to the present. Part II of II. This is a Passport Transfer course.

Lecture 3 hours per week.
Prerequisite: A placement of ENF 3 or ENG 111 corequisite. May be taken out of sequence.

ART 121 - Drawing I

Credits: 3

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. Part I of II.

Lecture 1 hour. Studio instruction 4 hours.
Total 5 hours per week.

ART 122 - Drawing II

Credits: 3

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. Part II of II.

Lecture 1 hour. Studio instruction 4 hours.
Total 5 hours per week.

ART 241 - Painting I

Credits: 3

Introduces abstract and representational painting in acrylic and/or oil with emphasis on color composition and value.

Lecture 1 hour. Studio instruction 4 hours.
Total 5 hours per week.
Prerequisite: ART 122 or divisional approval. Part I of II.

ART 242 - Painting II

Credits: 3

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Introduces abstract and representational painting in acrylic and/or oil with emphasis on color composition and value.

Lecture 1 hour. Studio instruction 4 hours.
Total 5 hours per week.
Prerequisites: ART 241 or divisional approval. Part II of II.

ART 283 - Computer Graphics I

Credits: 4

Utilizes microcomputers and software to produce computer graphics. Employs techniques learned to solve studio projects which reinforce instruction and are appropriate for portfolio use. Part I of II.

Lecture 2 hours. Studio instruction 4 hours.
Total 6 hours per week.
Prerequisite: ITE 115.

ART 284 - Computer Graphics II

Credits: 4

Utilizes microcomputers and software to produce computer graphics. Employs techniques learned to solve studio projects which reinforce instruction and are appropriate for portfolio use. Part II of II.

Lecture 2 hours. Studio instruction 4 hours.
Total 6 hours per week.
Prerequisite: ITE 115.

American Sign Language

ASL 101 - American Sign Language I

Credits: 4

Introduces the fundamentals of American Sign Language (ASL) used by the Deaf Community, including basic vocabulary, syntax, finger-spelling, and grammatical non-manual signals. Focuses on communicative competence. Develops gestural skills as a foundation for ASL enhancement. Introduces cultural knowledge and increases understanding of The Deaf Community. Part I of II.

Lecture 3 hours. Laboratory 2 hours.
Total 4 hours per week.

ASL 102 - American Sign Language II

Credits: 4

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. Develops gestural skills as a foundation for ASL enhancement. Introduces cultural knowledge and increases understanding of the Deaf Community. Part II of II.

Lecture 3 hours. Laboratory 2 hours.
Total 4 hours per week.

Administrative Support Technology

AST 101 - Keyboarding I

Credits: 3

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.
Prerequisite: ENF 3 or ENG 111 corequisite

AST 102 - Keyboarding II

Credits: 3

Develops keyboarding and document production skills with emphasis on preparation of specialized business documents. Continues skill-building for speed and accuracy.

Lecture 3 hours per week.
Prerequisite AST 101

AST 107 - Editing/Proofreading Skills

Credits: 3

Develops skills essential to creating and editing business documents. Covers grammar, spelling, diction, punctuation, capitalization, and other usage problems.

Lecture 3 hours per week.

AST 117 - Keyboarding For Computer Usage

Credits: 1

Teaches the alphabetic keyboard and 10-key pad. Develops correct keying techniques.

Lecture 1 hour per week.

AST 136 - Office Record Keeping

Credits: 3

Introduces types of record keeping duties performed in the office, such as financial, tax, payroll, and inventory. Utilizes specialized software where applicable.

3
3

AST 137 - Records Management

Credits: 3

Teaches filing and records management procedures for hard copy, electronic, and micrographic systems. Identifies equipment, supplies, and solutions to records management problems.

3
3

AST 141 - Word Processing (Specify Software)

Credits: 3

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.

Lecture 3 hours per week.
Prerequisite AST 101 or equivalent and ITE 115

AST 154 - Voice Recognition Applications (Dragon Naturally Speaking)

Credits: 1

Teaches the computer user to use the voice as an input device to compose documents and to give commands directly to the computer.

Lecture 1 hour per week.
Prerequisite: ENF 3 or ENG 111 corequisite

AST 171 - Introduction to Call Center Services

Credits: 3

Introduces concepts and skills needed to be an effective customer service representative for a telephone service operation. Covers call center theory and technology, interpersonal communication skills, customer relations attitudes, telecommunications techniques, and professional procedures to handle a variety of customer service sales requests.

Lecture 3 hours per week.

AST 205 - Business Communications

Credits: 3

Teaches techniques of oral and written communications. Emphasizes writing and presenting business-related materials.

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3

AST 238 - Word Processing Advanced Operations

Credits: 3

Teaches advanced word processing features including working with merge files, macros, and graphics; develops competence in the production of complex documents.

Lecture 3 hours per week.
Prerequisite: AST 102, AST 141, ITE 115

AST 243 - Office Administration I

Credits: 3

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.

Lecture 3 hours per week.
Prerequisite AST 101, ENF 3 or ENG 111 corequisite

AST 244 - Office Administration II

Credits: 3

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.

Lecture 3 hours per week.
Prerequisite AST 243 or equivalent. ENF 3 or ENG 111 corequisite

AST 245 - Medical Machine Transcription

Credits: 3

Develops machine transcription skills, integrating operation of transcribing equipment with understanding of medical terminology. Emphasizes dictation techniques and accurate transcription of medical documents in prescribed formats.

Lecture 3 hours per week.
Prerequisite AST 102 or equivalent and HLT 143.

AST 260 - Presentation Software (Microsoft PowerPoint)

Credits: 3

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 hand-outs. Incorporates use of sound and video clips.

Lecture 3 hours per week.
Prerequisite: ENF 3 or ENG 111 corequisite; ITE 115

AST 271 - Medical Office Procedures I

Credits: 3

Covers medical office procedures, records management, preparation of medical reports, and other medical documents.

Lecture 3 hours per week.
Co-requisite AST 102 or equivalent. ENF 3 or ENG 111 corequisite

AST 290 - Coordinated Internship

Credits: 3

Supervises on-the-job training in selected business, industrial or service firms coordinated by the college.

AST 299 - Supervised Study

Credits: 1

Assigns problems for independent study incorporating previous instruction and supervised by the instructor.

Automotive

AUT 109 - Applied Mathematics For Automotive Technicians

Credits: 3

Introduces arithmetic skills, conversion of units, consumer mathematics, solution of linear algebraic expression, and the solving of applied problems in torque, horse-power, and piston displacement.

Lecture 3 hours per week.

AUT 111 - Automotive Engines I

Credits: 3

Presents analysis of power, cylinder condition, valves and bearings in the automotive engine to establish the present condition, repairs or adjustments. Part I of II.

Lecture 2 hours. Laboratory 2 hours.
Total 4 hours per week.
Prerequisites: A placement of ENF 2 or above and MTT 1 - Module 1 Operations With Positive Fractions-MTT 1 - Module 3 Algebra Basics.

AUT 112 - Automotive Engines II

Credits: 3

Presents analysis of power, cylinder condition, valves and bearings in the automotive engine to establish the present condition, repairs or adjustments. Part II of II.

Lecture 2 hours. Laboratory 2 hours.
Total 4 hours per week.
Prerequisites: A placement of ENF 2 or above and MTT 1 - Module 1 Operations With Positive Fractions-MTT 1 - Module 3 Algebra Basics.

AUT 113 - Cylinder Block Service I

Credits: 3

Studies basic cylinder block reconditioning, including boring, re-sleeving, line-boring and deck resurfacing. Includes repair techniques for damaged block and cylinder head castings to include cold welding, brazing, welding and epoxy.

Lecture 2 hours. Laboratory 3 hours.
Total 5 hours per week.
Prerequisites: A placement of ENF 2 or above and MTT 1 - Module 1 Operations With Positive Fractions-MTT 1 - Module 3 Algebra Basics.

AUT 114 - Cylinder Head Service II

Credits: 3

Studies cylinder head reconditioning, including valve seat grinding, re-facing valves, servicing valve guides, valve seat inserts, cutting for valve seals and spring, thread repair and resurfacing mating surfaces.

Lecture 2 hours. Laboratory 3 hours.
Total 5 hours per week.
Prerequisite AUT 113.

AUT 120 - Introduction to Automotive Machine Shop

Credits: 3

Introduces automotive machining operations emphasizing shop safety and the safe use of machine shop tools. Surveys basic machining operations and specialized auto machining techniques necessary for reconditioning engine and chassis components. Requires basic set of machinist's hand tools. Prerequisite or corequisite for all other machinist courses.

Lecture 2 hours. Laboratory 3 hours.
Total 5 hours per week.
Prerequisites: A placement of ENF 2 or above and MTT 1 - Module 1 Operations With Positive Fractions-MTT 1 - Module 3 Algebra Basics.

AUT 121 - Automotive Fuel Systems I

Credits: 3

Analyses major domestic and foreign automotive fuel systems to include carburetors and fuel injection systems. Includes detailed inspection and discussion of fuel tanks, connecting lines, instruments, filters, fuel pumps, superchargers, and turbo charger. Also includes complete diagnosis, troubleshooting, overhaul and factory adjustment procedures of all major carbureted and fuel injection systems.

Lecture 2 hours. Lab 2 hours.
Total 4 hours per week.

AUT 125 - Anti-Pollution Systems

Credits: 3

Studies various anti-pollution systems used on modern automobiles, installation, inspection, repair and service.

Lecture 2 hours. Laboratory 3 hours.
Total 5 hours per week.

AUT 161 - Automotive Diagnosis I

Credits: 3

Introduces principles of automotive maintenance using modern diagnostic methods. Uses theory and laboratory experiments designed to explain and illustrate scientific basis of modern electronic and mechanical diagnostic procedures. Part I of II.

Lecture 2 hours. Laboratory 3 hours.
Total 5 hours per week.
Prerequisites: ENF 3 or ENG 111 co-requisite. MTT 1 - Module 1 Operations With Positive Fractions-MTT 1 - Module 3 Algebra Basics.

AUT 162 - Automotive Diagnosis II

Credits: 3

Introduces principles of automotive maintenance using modern diagnostic methods. Uses theory and laboratory experiments designed to explain and illustrate scientific basis of modern electronic and mechanical diagnostic procedures. Part II of II.

Lecture 2 hours. Laboratory 3 hours.
Total 5 hours per week.
Prerequisites: A placement of ENF 2 or above and MTT 1 - Module 1 Operations With Positive Fractions-MTT 1 - Module 3 Algebra Basics.

AUT 165 - Auto Diagnosis and Tune-Up

Credits: 2

Presents the techniques for diagnosis of malfunctions in systems of the automobile. Uses dynamometers, oscilloscopes and other specialized diagnostic and testing equipment. Demonstrates tune-up of conventional and rotary engines.

Lecture 1 hour. Laboratory 3 hours.
Total 4 hours per week.

AUT 190 - Coordinated Internship

Credits: 1

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.

AUT 215 - Emissions Systems Diagnosis and Repair

Credits: 2

Presents logical diagnostic paths to identify vehicle HC-CO, O2, and NOx failure areas, teaches a progression of failure detection from most likely to more complex causes. Emphasizes use of infrared analyzer and manufacturer's specified adjustments.

Lecture 2 hours per week.

AUT 236 - Automotive Climate Control

Credits: 4

Introduces principles of refrigeration, air conditioning controls, and adjustment and general servicing of automotive air conditioning systems.

Lecture 3 hours. Laboratory 3 hours.

Total 6 hours per week.

AUT 241 - Automotive Electricity I

Credits: 3

Introduces electricity and magnetism, symbols and circuitry as applied to the alternators, regulators, starters, lighting systems, instruments and gauges and accessories. Part I of II.

Lecture 2 hours. Laboratory 2 hours.
Total 4 hours per week.

AUT 242 - Automotive Electricity II

Credits: 3

Introduces electricity and magnetism, symbols and circuitry as applied to the alternators, regulators, starters, lighting systems, instruments and gauges and accessories. Part II of II.

Lecture 2 hours. Laboratory 2 hours.
Total 4 hours per week.

AUT 245 - Automotive Electronics

Credits: 3

Introduces field of electronics as it applies to the modern automobile. Emphasizes basic circuit operation, diagnosis and repair of digital indicator and warning systems.

Lecture 3 hours.
Total 3 hours per week.

AUT 265 - Automotive Braking Systems

Credits: 3

Presents operation, design, construction, repair, and servicing of braking system, including Anti- Lock Brake Systems (ABS). Explains uses of tools and test equipment, evaluation of test results, estimation of repair cost for power, standard and disc brakes.

Lecture 2 hours. Laboratory 3 hours.
Total 5 hours per week.

AUT 266 - Auto Alignment, Suspension and Steering

Credits: 3

Introduces use of alignment equipment in diagnosing, adjusting, and repairing front and rear suspensions. Deals with repair and servicing of power and standard steering systems.

Lecture 1 hour. Laboratory 6 hours.
Total 7 hours per week.

AUT 275 - Shop Management

Credits: 2

Studies shop layout, personnel management, cost analysis record keeping and quality control. Discusses shop manager, service salesman, and service writer's roles in customer relations.

Lecture 2 hours per week.

Broadcasting

BCS 110 - Fundamentals In Video Production

Credits: 4

Studies the use of video equipment and the application of production techniques and aesthetics in electronic media, and develops fundamental production skills through hands on experience with cameras, video tape records, video switcher, graphic computers, and lighting instruments.

Lecture 3 hours. Laboratory 3 hours.
Total 6 hours per week.
Prerequisite: ENF 3 or ENG 111 co-requisite

BCS 299 - Supervised Study

Credits: 1

Assigns problems for independent study incorporating previous instruction and supervised by the instructor. May be repeated for credit.

Biology

BIO 101 - General Biology I

Credits: 4

Explores fundamental characteristics of living matter from the molecular level to the ecological community with an emphasis on general bio-logical principles. Introduces the diversity of living organisms, their structure, function, and evolution. Part I of II. This is a Passport Transfer course.

Lecture 3 hours. Recitation and lab 3 hours.
Total 6 hours per week.
Prerequisite: A placement of ENF 3 or ENG 111 co-requisite. MTT 1 - Module 1 Operations With Positive Fractions-MTT 1 - Module 3 Algebra Basics.

BIO 102 - General Biology II

Credits: 4

Explores fundamental characteristics of living matter from the molecular level to the ecological community with emphasis on general biological principles. Introduces the diversity of living organisms, their structure, function and evolution. Part II of II.

Lecture 3 hours. Recitation and lab 3 hours.
Total 6 hours per week.
Prerequisite: BIO 101

BIO 141 - Human Anatomy and Physiology I

Credits: 4

Integrates anatomy and physiology of cells, tissues, organs, and systems of the human body. Integrates concepts of chemistry, physics, and pathology. Part I of II.

Lecture 3 hours. Laboratory 3 hours.
Total 6 hours per week.

BIO 142 - Human Anatomy and Physiology II

Credits: 4

Integrates anatomy and physiology of cells, tissues, organs, and systems of the human body. Integrates concepts of chemistry, physics, and pathology. Part II of II.

Lecture 3 hours. Laboratory 3 hours.
Total 6 hours per week.

BIO 205 - General Microbiology

Credits: 4

Examines morphology, genetics, physiology, ecology, and control of microorganisms. Emphasizes application of microbiological techniques to selected fields.

Lecture 3 hours. Recitation and laboratory 3 hours.
Total 6 hours per week.
Prerequisites: A placement of ENF 3 or ENG 111 co-requisite. Prerequisites: one year of college biology and one year of college chemistry or divisional approval.

Business Management and Administration

BUS 100 - Introduction to Business

Credits: 3

Presents a broad introduction to the functioning of business enterprise within the U.S. economic framework. Introduces economic systems, essential elements of business organization, production, and human resource management, marketing, finance, and risk management. Develops business vocabulary.

Lecture 3 hours per week.
Prerequisites: ENF 3 or ENG 111 corequisite

BUS 106 - Security Awareness for Managers

Credits: 3

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 110 - Business Protocol

Credits: 3

Presents basic business etiquette, customs and protocol for individuals desiring to succeed in the global business environment. Presents information on new manners relating to diversity, plurality, family values, sexual freedom, substance abuse, and hiring and firing practices. Discusses dress, language, communication traditions, socializing, traveling and meeting protocol.

Lecture 3 hours per week.

BUS 111 - Principles of Supervision I

Credits: 3

Teaches fundamentals of supervision, including primary responsibilities of the supervisor. Introduces factors relating to 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 hours per week.
Prerequisite: ENF 3 or ENG 111 corequisite

BUS 112 - Principles of Supervision II

Credits: 3

Develops skills in carrying out the responsibilities of supervisor including interviewing, evaluating and disciplining, and problem-solving techniques.

Lecture 3 hours per week.
Prerequisite: ENF 3 or ENG 111 corequisite, BUS 111

BUS 116 - Entrepreneurship

Credits: 3

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, and franchising. Uses problems and cases to demonstrate implementation of these techniques.

Lecture 3 hours per week.
Prerequisite: ENF 3 or ENG 111 corequisite

BUS 125 - Applied Business Mathematics

Credits: 3

Applies mathematical operations to business process and problems such as wages and payroll, sales and property taxes, check-book records and bank reconciliation, depreciation, overhead, distribution of profit and loss in partnerships, distribution of corporate dividends, commercial discounts, markup, markdown, simple interest, present values, bank discount notes, multiple payment plans, compound interest, annuities, sinking funds, and amortization.

Lecture 3 hours per week.
Prerequisites: ENF 3 or ENG 111 corequisite, MTH 130 or division approval

BUS 149 - Workplace Ethics

Credits: 1

Provides a broad overview of ethics in the modern day business world including workforce skill building and self-awareness through group dis-

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cussions. 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 160 - Legal Aspects of Small Business Operations

Credits: 1

Covers the functional areas of business law, specifically as it applies to small business. Provides the students with a working knowledge of business contracts, agency relationships, and product liability. Provides a knowledge base for small business owners to overcome problems that are individually within their abilities. Covers selection of professional assistance for problems of a more serious nature.

Lecture 1 hour per week.

BUS 165 - Small Business Management

Credits: 3

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.
Prerequisite: ENF 3 or ENG 111 corequisite

BUS 190 - Coordinated Internship

Credits: 3

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. HOPE would require 75 contact hours in the internship.

BUS 200 - Principles of Management

Credits: 3

Teaches management and the management functions of planning, organizing, leading, 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.
Prerequisite: ENF 3 or ENG 111 corequisite

BUS 205 - Human Resource Management

Credits: 3

Introduces employment, selection, and placement of personnel, forecasting, job analysis, job descriptions, training methods and programs, employee evaluation systems, compensation, benefits, and labor relations.

Lecture 3 hours per week.
Prerequisite: ENF 3 or ENG 111 corequisite

BUS 234 - Supply Chain Management

Credits: 3

Examines the process of planning, organizing, and controlling the flow of materials and services from supplier to end users/ customers. Focuses on coordinating supply management, operations and integrated logistics into a seamless pipeline to maintain a continual flow of products and services.

Lecture 3 hours per week.

BUS 241 - Business Law I

Credits: 3

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.

Lecture 3 hours per week.
Prerequisite: ENF 3 or ENG 111 corequisite

BUS 255 - Inventory and Warehouse Management

Credits: 3

Emphasizes the relationships of inventory and warehouse management to customer service and profitability of the wholesale distributor. Focuses on the role of computerized systems and resulting information for effective management of inventory and the warehouse under various conditions.

Lecture 3 hours per week.

BUS 280 - Introduction to International Business I

Credits: 3

Studies the problems, challenges, and opportunities which arise when business operations or organizations transcend national boundaries. Examines the functions of international business in the economy, international and transnational marketing, production, and financial operations.

Lecture 3 hours per week.
Prerequisites: ENF 3 or ENG 111 corequisite

BUS 290 - Coordinated Internship

Credits: 3

Supervises on-the-job training in selected business, industrial or service firms coordinated by the college.

Lecture 3 hours per week.

BUS 290 - Coordinated Internship

Credits: 1

Virginia's Community Colleges: Coordinated Internship - BUS 290
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.

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BUS 297 - Cooperative Education

Credits: 3

Supervises in on-the-job training for pay in approved business, industrial and service firms, coordinated by the college's cooperative education office.

BUS 299 - Supervised Study

Credits: 3

Assigns problems for independent study incorporating previous instruction and supervised by the instructor.

Childhood Development

CHD 118 - Language Arts for Young Children

Credits: 3

Presents techniques and methods for encouraging the development of language and perceptional skills in young children. Stresses improvement of vocabulary, speech and methods to stimulate discussion. Surveys children's literature, examines elements of quality storytelling and story reading, and stresses the use of audio- visual materials.

Lecture 2 hours. Laboratory 2 hours.
Total 4 hours per week.

CHD 120 - Introduction to Early Childhood Education

Credits: 3

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.

Lecture 3 hours per week.

CHD 145 - Teaching Art, Music and Movement to Children

Credits: 3

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.

Lecture 2 hours. Laboratory 2 hours.
Total 4 hours per week.

CHD 146 - Math, Science, and Social Studies for Children

Credits: 3

Provides experiences in content, methods, and materials for the development of math, science, and social studies skills in children. Emphasis will be on developing strategies for using various resources to facilitate children's construction of knowledge. Addresses strategies for intervention and support for children with special needs and English Language Learners.

Lecture 2 hours. Laboratory 2 hours.
Total 4 hours per week.

CHD 164 - Working with Infants and Toddlers in Inclusive Settings

Credits: 3

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.

Lecture 3 hours per week.

CHD 165 - Observation and Participation in Early Childhood/Primary Setting

Credits: 3

Observes and participates in early childhood settings such as child care centers, pre-schools, Montessori schools or public schools in Kindergarten through 3rd grade levels. Students spend one hour each week in a seminar session in addition to 60 clock hours in the field. May be taken again for credit.

Lecture 1 hour. Laboratory 4 hours.
Total 5 hours per week.

CHD 166 - Infant and Toddler Programs

Credits: 3

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.

Lecture 3 hours per week.

CHD 205 - Guiding the Behavior of Children

Credits: 3

Explores positive ways to build self-esteem in children and help them develop self-control. Presents practical ideas for encouraging pro-social behavior in children and emphasizes basic skills and techniques in-group management.

Lecture 3 hours per week.

CHD 210 - Introduction to Exceptional Children

Credits: 3

Reviews the history of education for exceptional children. Studies the characteristics associated with exceptional children. Explores positive techniques for managing behavior and adapting materials for classroom use.

Lecture 3 hours per week.

CHD 216 - Early Childhood Programs, School, and Social Change

Credits: 3

Explores methods of developing positive, effective relations with families to enhance their developmental goals for children. Considers culture and other diverse needs, perspectives, and abilities of families and educators. Emphasizes advocacy and public policy awareness as an important role of early childhood educators. Describes risk factors and identifies community resources.

Lecture 3 hours per week.

CHD 265 - Advanced Observation and Participation in Early Childhood/Primary Settings

Credits: 3

Observes and participates in early childhood settings such as child care centers, pre-school, Montessori schools, or public school settings (kindergarten through third grade). Emphasizes planning and implementation of appropriate activities and materials for children. Students will spend one hour each week in a seminar session in addition to 60 clock hours in the field. May be taken again for credit.

Lecture 1 hour. Laboratory 4 hours.
Total 5 hours per week.

CHD 270 - Administration of Early Childcare Programs

Credits: 3

Examines the skills needed for establishing and managing early childhood programs. Emphasizes professionalism and interpersonal skills, program planning, staff selection and development, creating policies, budgeting, and developing forms for record keeping.

Lecture 3 hours per week.

Chemistry

CHM 110 - Survey of Chemistry

Credits: 3

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.
Prerequisites: ENF 2 or above, MTT 1 - Module 1 Operations With Positive Fractions-MTT 1 - Module 3 Algebra Basics.

CHM 111 - College Chemistry I

Credits: 4

Explores the fundamental laws, theories, and mathematical concepts of chemistry. Designed primarily for science and engineering majors. Requires a strong background in mathematics. Part I of II. this is a Passport Transfer course.

Lecture 3 hours. Laboratory 3 hours.
Total 6 hours per week.
Prerequisite: ENF 3 or ENG 111 corequisite

CHM 112 - College Chemistry II

Credits: 4

Explores the fundamental laws, theories, and mathematical concepts of chemistry. Designed primarily for science and engineering majors. Requires a strong background in mathematics. Part II of II.

Lecture 3 hours. Laboratory 3 hours.
Total 6 hours per week.
Prerequisite: CHM 111.

Chinese

CHI 101 - Beginning Chinese I

Credits: 5

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

Credits: 5

Introduces understanding, speaking, reading, and writing skills; emphasizes basic Chinese sentence structure. Part II of II.

Lecture 5 hours per week.
Prerequisite: CHI 101

Communication Studies and Theatre

CST 110 - Introduction to Communication

Credits: 3

Examines the elements affecting speech communication at the individual, small group and public communication levels with emphasis on practice of communication at each level.

Lecture 3 hours per week.
Prerequisite: ENF 2

CST 130 - Introduction to The Theatre

Credits: 3

Surveys the principles of drama, the development of theatre production, and selected plays to acquaint the student with various types of theatrical presentations.

Lecture 3 hours per week.

CST 131 - Acting I

Credits: 3

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. Part I of II.

Lecture 2 hours. Laboratory 3 hours.
Total 5 hours per week.

CST 132 - Acting II

Credits: 3

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. Part II of II.

Lecture 2 hours. Laboratory 3 hours.
Total 5 hours per week.

CST 136 - Theatre Workshop

Credits: 3

Enables students to work in various activities of play production. The student participates in performance, set design, stage carpentry, sound, costuming, lighting, stage-managing, props, promotion, or stage crew. May be repeated for credit. Variable hours per week.

CST 231 - History of Theatre I

Credits: 3

Analyzes and studies theatre history to include architecture, performers and performance, playwrights, stage, production methods, and audience from the Greeks through modern drama. Part I of II.

Lecture 3 hours per week.
Prerequisite: A placement of ENF 3 or ENG 111 corequisite

Computer Science

CSC 130 - Scientific Programming

Credits: 3

Introduces a science-oriented, high level programming language. Studies the language and its application in problem solving in a structured programming environment. Includes the concepts and practice of structured programming, problem-solving, top-down design of algorithms, basic C syntax, control structures, arrays, and data structures.

Lecture 3 hours per week.

CSC 200 - Introduction to Computer Science

Credits: 3

Provides broad introduction to computer science. Discusses architecture and function of computer hardware, including networks and operating systems, data and instruction representation and data organization. Covers software, algorithms, programming languages and software engineering. Discusses artificial intelligence and theory of computation. Includes a hand-on component.

Lecture 3 hours per week.
Prerequisite: ENF 3 or above, MTT 1 - Module 1 Operations With Positive Fractions - MTT 1 - Module 5 Linear Equations, Inequalities and Systems of Linear Equations In Two Variables

CSC 201 - Computer Science I

Credits: 4

Introduces algorithm and problem solving methods. Emphasizes structured programming concepts, elementary data structures and the study and use of a high level programming language.

Lecture 4 hours per week.
Prerequisite: CSC 200

CSC 202 - Computer Science II

Credits: 4

Examines data structures and algorithm analysis. Covers data structures (including sets, strings, stacks, queues, arrays, records, files, linked lists, and trees), abstract data types, algorithm analysis (including searching and sorting methods), and file structures.

Lecture 4 hours per week.
Prerequisite CSC 201

CSC 205 - Computer Organization

Credits: 3

Examines the hierarchical structure of computer architecture. Focuses on multi- level machine organization. Uses a simple assembler language to complete programming projects. Includes processors, instruction, execution, addressing techniques, data representation and digital logic.

Lecture 3 hours per week.
Prerequisite: ENF 3 or above, MTT 1 - Module 1 Operations With Positive Fractions-MTT 1 - Module 5 Linear Equations, Inequalities and Systems of Linear Equations In Two Variables.

Computer Aided Drafting & Design

CAD 201 - Computer Aided Drafting and Design I

Credits: 3

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.

CAD 202 - Computer Aided Drafting and Design II

Credits: 3

Teaches production drawings and advanced operations in computer aided drafting.

Lecture 2 hours. Laboratory 2 hours.
Total 4 hours per week.
Prerequisites: ENF 3 or ENG 111 co-requisite, MTT 1 - Module 1 Operations With Positive Fractions-MTT 1 - Module 6 Exponents, Factoring

and Polynomial Equations.

CAD 203 - Computer Aided Drafting and Design III

Credits: 3

Teaches advanced CAD applications. Includes customization and/or use of advanced software.

Lecture 2 hours. Laboratory 2 hours.
Total 4 hours per week.
Prerequisites: ENF 3 or ENG 111 co-requisite, MTT 1 - Module 1 Operations With Positive Fractions-MTT 1 - Module 6 Exponents, Factoring and Polynomial Equations.

CAD 231 - Computer Aided Drafting I

Credits: 3

Teaches computer aided drafting concepts and equipment designed to develop a general understanding of components and operate a typical CAD system.

Lecture 2 hours. Laboratory 3 hours.
Total 5 hours per week.

CAD 232 - Computer Aided Drafting II

Credits: 3

Teaches advanced operation in computer-aided drafting.

Lecture 2 hours. Laboratory 2 hours.
Total 4 hours per week.

CAD 233 - Computer Aided Drafting III

Credits: 3

Exposes student to 3-D and modeling. Focuses on proficiency in Production drawing using a CAD system.

Lecture 2 hours. Laboratory 2 hours.
Total 4 hours per week.

CAD 238 - Computer-Aided Modeling and Rendering I

Credits: 3

Focuses on training students in the contemporary techniques of 3D modeling, rendering, and animation on the personal computer. Introduces the principles of visualization, sometimes known as photo-realism, which enables the student to create presentation drawings for both architectural and industrial product design. Uses computer animation to produce walk-throughs that will bring the third dimension to architectural designs. Part I of II.

Lecture 2 hours. Laboratory 2 hours.
Total 4 hours per week.

CAD 239 - Computer-Aided Modeling and Rendering II

Credits: 3

Focuses on training students in the contemporary techniques of 3D modeling, rendering, and animation on the personal computer. Introduces the principles of visualization, sometimes known as photo-realism, which enables the student to create presentation drawings for both architectural and industrial product design. Uses computer animation to produce walk-throughs that will bring the third dimension to architectural designs. Part II of II.

Lecture 2 hours. Laboratory 2 hours.
Total 4 hours per week.

CAD 241 - Parametric Solid Modeling I

Credits: 3

Focuses on teaching students the design of parts by parametric and solid modeling. Topics covered will include but not be limited to, sketch profiles; geometric and dimensional constraints; 3-D features; model generation by extrusion, revolution and sweep; and the creation of 2-D drawing views that include sections, details and auxiliary. Part I of II.

Lecture 2 hours. Laboratory 2 hours.

Total 4 hours per week.

CAD 242 - Parametric Solid Modeling II

Credits: 3

Focuses on teaching students the design of parts by parametric solid modeling. Topics covered will include, but not be limited to, sketch profiles; geometric and dimensional constraints; 3-D features; model generation by extrusion, revolution and sweep; and the creation of 2-D drawing views that include sections, details and auxiliary. Part II of II.

Lecture 2 hours. Laboratory 2 hours.
Total 4 hours per week.

CAD 243 - Parametric Solid Modeling III

Credits: 3

Focuses on teaching students the software for the design of parts and assemblies by means of advanced parametric solid modeling to include advanced mechanical drafting techniques and building mechanical assemblies.

Lecture 2 hours. Laboratory 2 hours.
Total 4 hours per week.
Prerequisites: CAD 241, CAD 242

CAD 293 - Studies In Computer-Aided Drafting

Credits: 3

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. Variable hours per week.

Drafting

DRF 160 - Machine Blueprint Reading

Credits: 3

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.

Economics

ECO 201 - Principles of Macroeconomics

Credits: 3

Introduces macroeconomics including the study of Keynesian, classical, monetarist principles and theories, the study of national economic growth, inflation, recession, unemployment, financial markets, money and banking, the role of government spending and taxation, along with international trade and investments. This is a Passport Transfer course.

Lecture 3 hours per week.
Prerequisites: ENF 3 or ENG 111 co-requisite, MTT 1 - Module 1 Operations With Positive Fractions-MTT 1 - Module 3 Algebra Basics.

ECO 202 - Principles of Micro- Economics

Credits: 3

Introduces the basic concepts of micro- economics. Explores the free market concepts with coverage of economic models and graphs, scarcity and choices, supply and demand, elasticities, marginal benefits and costs, profits, and production and distribution.

Lecture 3 hours per week.
Prerequisites: ENF 3 or ENG 111 co-requisite, MTT 1 - Module 1 Operations With Positive Fractions-MTT 1 - Module 3 Algebra Basics.

Education

EDU 200 - Introduction to Teaching as a Profession

Credits: 3

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.

Lecture 2 hours. Laboratory 2 hours.
Total 4 hours per week.
Prerequisites: All Developmental English requirements met and successful completion of 24 credits of transfer courses.

EDU 235 - Health, Safety, and Nutritional Education

Credits: 3

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 wellbeing of children, as well as procedures for reporting child abuse.

Lecture 3 hours per week

Electives

ADJ EEE - Criminal Justice Elective

Credits: 3

Administration of Justice Elective (ADJ EEE)

ART EEE - Art Electives (2 classes)

Credits: 6

Art Elective

EEE EEE - College Transfer Elective

Credits: 3

College Transfer Electives (EEE EEE)

EEE EEE - College Transfer Electives

Credits: 4

College Transfer Electives (EEE EEE)

EEE EEE - College Transfer Electives

Credits: 5

College Transfer Electives (EEE EEE)

EEE EEE - College Transfer Electives

Credits: 9

EEE EEE - College Transfer Electives

EEE EEE - College Transfer Electives

Credits: 7-8

College Transfer Electives (EEE EEE)

EEE EEE - College Transfer Electives (2 classes)

Credits: 6

College Transfer Electives (EEE EEE)

ENG EEE - English Literature Electives

Credits: 3

English Literature Electives (ENG EEE)

FA EEE - Fine Arts Electives

Credits: 3

Fine Arts Electives (FA EEE)

FA EEE - Fine Arts Electives

Credits: 4

Fine Arts Electives (FA EEE)

Foreign Language EEE - Foreign Language Elective

Credits: 4

Foreign Language Elective (Foreign Language EEE) Foreign Language Elective

HUM EEE - Humanities/Fine Arts Elective

Credits: 3

Humanities/Fine Arts Electives (HUM EEE)

HUM EEE - Humanities/Fine Arts Electives

Credits: 4

Humanities/Fine Arts Electives (HUM EEE)

HUM EEE - Humanities/Fine Arts Electives

Credits: 6

Humanities Electives (HUM EEE)

ITE EEE - Information Technology Electives

Credits: 3

Information Technology Electives (ITE EEE)

ITE EEE - Information Technology Electives

Credits: 4

Information Technology Electives (ITE EEE)

ITE EEE - Information Technology Electives

Credits: 3-4

Information Technology Electives (ITE EEE)

MTH EEE - Mathematics Electives

Credits: 3

Mathematics Electives (MTH EEE)

MTH EEE - Mathematics Electives

Credits: 4

Mathematics Electives (MTH EEE)

MTH EEE - Mathematics Electives

Credits: 5

Mathematics Electives (MTH EEE)

MTS EEE - Motorsports Management and Technology Electives

Credits: 6

Motorsports Management and Technology Electives

MUS EEE - Music Elective

Credits: 2

Music Elective

MUS EEE - Music Elective

Credits: 4

Music Elective

NAS EEE - Natural Sciences Elective

Credits: 4

Natural Sciences Electives (NAS EEE)

NAS EEE - Natural Sciences Electives

Credits: 3

Natural Sciences Electives (NAS EEE)

NAS EEE - Natural Sciences Electives

Credits: 8

Natural Sciences Electives (NAS EEE)

NAS EEE - Natural Sciences Electives

Credits: 3-4

Natural Sciences Electives

NAS EEE - Natural Sciences Electives

Credits: 16

Natural Sciences Electives (NAS EEE)

PED/HLT EEE - Wellness Elective

Credits: 1

Wellness Electives (PED/HLT EEE)

PED/HLT EEE - Wellness Electives

Credits: 2

Wellness Electives (PED/HLT EEE)

PED/HLT EEE - Wellness Electives

Credits: 3

Wellness Electives (PED/HLT EEE)

Science EEE - Science Elective

Credits: 3-4

Science Elective

SOC EEE - Social Sciences Elective

Credits: 3

Social Sciences Electives (SOC EEE)

SOC EEE - Social Sciences Electives

Credits: 6

Social Sciences Electives (SOC EEE)

SOC EEE - Social Sciences Electives

Credits: 9

Social Sciences Electives (SOC EEE)

TEC EEE - Technical Elective

Credits: 3

Technical Elective

TEC EEE - Technical Elective

Credits: 6

Technical Elective

Engineering

EGR 110 - Engineering Graphics

Credits: 3

Presents theories and principles of orthographic projection. Studies multiview, pictorial drawings and sketches, geometric construction, sectioning, lettering, tolerancing, dimensioning and auxiliary projections. Studies the analysis and graphic presentation of space relationships of fundamental geometric elements; points, lines, planes and solids. Includes instruction in Computer Aided Drafting.

Lecture 2 hours. Laboratory 2 hours.
Total 4 hours per week.

EGR 123 - Introduction to Engineering Design

Credits: 2

Introduces the fundamental knowledge and experience needed to understand the engineering design process through the basics of electrical, computer, and mechanical systems. Includes the completion of a project in which a specific electro- mechanical robot kit will be analyzed, assembled, and operated.

Lecture 1 hour. Laboratory 2 hours.
Total 3 hours per week.

EGR 135 - Statics For Engineering Technology

Credits: 3

Introduces Newton's Laws, resultants and equilibrium of force systems, analysis of trusses and frames. Teaches determination of centroids, distributed loads and moments of inertia. Covers dry friction and force systems in space.

Lecture 3 hours per week. 3 credits.
Prerequisites MTH 111 or MTH 161 or MTH 162

EGR 136 - Strength of Materials For Engineering Technology

Credits: 3

Presents concepts of stress and strain. Focuses on analysis of stresses and deformations in loaded members, connectors, shafts, beams, columns and combined stress.

Lecture 3 hours per week.

EGR 216 - Computer Methods In Engineering and Technology

Credits: 3

Provides advanced level experience in using a computer as a tool for solving technical problems and performing office functions. Includes computer hardware and operating system usage, structured programming in a selected high level language, use of word processing software, computer graphics and spreadsheets. Focuses on the analysis and solution of problems in engineering and technology.

Lecture 2 hours. Laboratory 2 hours.
Total 4 hours per week.

EGR 285 - Capstone Project

Credits: 1

Provides a capstone research project for the final semester of the program, focusing inquiry upon an area of interest to the student or area relevant to their prospective career field. May include problem based research topics, internships, or other focused projects.

Lecture 1 hour per week.

Prerequisite: IND 290

EGR 298 - Seminar and Project

Credits: 1

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.

TEC EEE - Technical Electives

Credits: 12

Technical Electives

Electrical Technology

ELE 110 - Home Electric Power

Credits: 3

Covers the fundamentals of residential power distribution, circuits, panels, fuse boxes, breakers, and transformers. Includes study of the national electrical code, purpose and interpretation.

Lecture 2 hours. Laboratory 2 hours.
Total 4 hours per week.

ELE 113 - Electricity I

Credits: 3

Teaches principles of electricity covering fundamentals, devices and components in both DC and AC circuits. Part I of II.

Lecture 3 hours per week.

ELE 115 - Basic Electricity

Credits: 3

Covers basic circuits and theory of fundamental concepts of electricity. Presents a practical approach to discussion of components and devices.

Lecture 3 hours per week.
Prerequisites: A placement of ENF 2 or above and MTT 1 - Module 1 Operations With Positive Fractions-MTT 1 - Module 3 Algebra Basics.

ELE 138 - National Electric Code Review I

Credits: 3

Covers purpose and interpretation of the National Electrical Code as well as various charts, code rulings and wiring methods. Prepares the student to take the journeyman-level exam.

Lecture 2 hours per week.
Prerequisite: ELE 110

ELE 156 - Electrical Control Systems

Credits: 3

Includes troubleshooting and servicing electrical controls, electronic motors, motor controls, motor starters, relays, overloads, instruments and control circuits.

Lecture 2 hours. Laboratory 2 hours.
Total 4 hours per week.

ELE 233 - Programmable Logic Controller Systems I

Credits: 3

Teaches operating and programming of programmable logic controllers. Covers analog and digital interfacing and communication schemes as they apply to system. Part I of II.

Lecture 2 hours. Laboratory 2 hours.
Total 4 hours per week.
Prerequisite: ETR 156 and MEC 140

ELE 233 - Robotics and Automation Technology

Credits: 3

Teaches operating and programming of programmable logic controllers. Covers analog and digital interfacing and communication schemes as they apply to system. Prerequisite: ETR 156 and ETR 211 or equivalent. Part I of II.

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ETR 156

ELE 246 - Industrial Robotics Programming

Credits: 3

Introduces industrial robotics and their programming for repetitive manufacturing systems. Includes the design of software that ensures safe operation and programming of both on- and off-line robot operations. This course is cross-listed with IND 246. Credit will not be awarded for both.

Lecture 2 hours. Lab 2 hours.
Total 4 hours per week.

ETR 140 - Introduction to Mechatronics

Credits: 3

Presents foundational concepts in mechatronics including analog and digital electronics, sensors, actuators, microprocessors, and microprocessor interfacing to electromechanical systems. Surveys components and measurement equipment used in the design, installation, and repair of mechatronic equipment and circuits.

Lecture 2 hours. Laboratory 3 hours.
Total 5 hours per week.

ETR 156 - Digital Circuits and Microprocessor Fundamentals

Credits: 4

Introduces characteristics and applications of digital logic elements including gates, counters, registers, displays and pulse generators. Applies microprocessor theory and applications, including internal architecture of the micro- processor, interfacing, input/output, and memory.

Lecture 3 hours. Laboratory 3 hours.
Total 6 hours per week.

Emergency Medical Services

EMS 111 - Emergency Medical Technician - Basic

Credits: 7

Prepares student for certification as a Virginia and National Registry EMT. Focuses on all aspects of pre-hospital basic life support as defined by the Virginia Office of Emergency Medical Services curriculum for Emergency Medical Technician.

Lecture 5 hours. Laboratory 4 hours.
Total 9 hours per week.
Corequisite: EMS 120. Prerequisite: CPR certification at the Health Care Provider level

EMS 120 - Emergency Medical Technician- Basic Clinical

Credits: 1

Provides supervised direct patient contact introducing the student to the assessment and emergency care of sick and injured patients. This course is a corequisite for EMS 111.

Lab 2 hours per week.
Total 2 hours per week.

EMS 121 - Preparatory Foundations

Credits: 2

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.
Prerequisites: Current Virginia EMT and CPR certification as approved by the Virginia Office of EMS

EMS 123 - EMS Clinical Preparation

Credits: 1

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.
Prerequisite: Current Virginia EMT and CPR certification as approved by the Virginia Office of EMS

EMS 125 - Basic Pharmacology

Credits: 1

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.
Prerequisite: Current Virginia EMT and CPR certification as approved by the Virginia Office of EMS
Corequisite: EMS 126

EMS 126 - Basic Pharmacology Lab

Credits: 1

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.
Prerequisite: Current Virginia EMT and CPR certification as approved by the Virginia Office of EMS
Corequisite: EMS 125

EMS 127 - Airway, Shock and Resuscitation

Credits: 1

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.
Total 1 hour per week.
Prerequisite: Current Virginia EMT and CPR certification as approved by the Virginia Office of EMS
Corequisite: EMS 128

EMS 128 - Airway, Shock and Resuscitation Lab

Credits: 1

Focuses on specific skills related to airway, resuscitation and shock management.

Laboratory 2 hours.
Total 2 hours per week.
Prerequisite: Current Virginia EMT and CPR certification as approved by the Virginia Office of EMS
Corequisite: EMS 127

EMS 135 - Emergency Medical Care

Credits: 2

Prepares the student to assess and manage patients with common medical emergencies.

Lecture 2 hours.
Total 2 hours per week.
Prerequisites: EMS 121, EMS 123, EMS 125, EMS 126, EMS 127, and EMS 128
Corequisite: EMS 136

EMS 136 - Emergency Medical Care Lab

Credits: 1

Focuses on specific skills related to the assessment and management of common medical emergencies.

Laboratory 2 hours.
Total 2 hours per week.
Prerequisites: EMS 121, EMS 123, EMS 126, EMS 127, and EMS 128
Corequisite: EMS 135

EMS 137 - Trauma Care

Credits: 1

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.
Prerequisites: EMS 121, EMS 123, EMS 125, EMS 126, EMS 127,and EMS 128
Corequisite: EMS 138

EMS 138 - Trauma Care Lab

Credits: 1

Focuses on the skills required for the assessment and management of patients with traumatic injury.

Laboratory 2 hours.
Total 2 hours per week.
Prerequisites: EMS 121, EMS 123, EMS 125, EMS 126, EMS 127, and EMS 128
Corequisite: EMS 137

EMS 139 - Special Populations

Credits: 1

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.
Prerequisites: EMS 121, EMS 123, EMS 125, EMS 126, EMS 127, and EMS 128
Corequisite: EMS 140

EMS 140 - Special Populations Lab

Credits: 1

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 hour.
Total 2 hours per week.
Prerequisites: EMS 121, EMS 123, EMS 125, EMS 126, EMS 127, and EMS 128
Corequisite: EMS 139

EMS 141 - Cardiovascular Care

Credits: 2

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.
Prerequisites: EMS 121, EMS 123, EMS 125, EMS 126, EMS 127, and EMS 128
Corequisite: EMS 142

EMS 142 - Cardiovascular Care Lab

Credits: 1

Focuses on skills involved in the assessment and management of cardiac-related

Laboratory 2 hours.
Total 2 hour per week.
Prerequisites: EMS 121, EMS 123, EMS 125, EMS 126, EMS 127, and EMS 128
Corequisite EMS 141

EMS 150 - Advanced Emergency Medical Technician (AEMT)

Credits: 7

Prepares students to build upon content in the Emergency Medical Technician (EMT) curriculum and demonstrate competency in specific advanced skills and knowledge.

Lecture 5 hours; Lab 4 hours
9 hours per week
Prerequisite: EMS 170

EMS 163 - Prehospital Trauma Life Support (PHTLS)

Credits: 1

Prepares for certification as a Prehospital Trauma Life Support provider as defined by the American College of Surgeons.

Lecture 1 hour per week.
Prerequisites: EMS 111 or equivalent.

EMS 164 - Advanced Medical Life Support (AMLS)

Credits: 1

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)

Credits: 1

Prepares for certification as an Advanced Cardiac Life provider. Follows course as defined by the American Heart Association.

Lecture 1 hour per week.
Prerequisites: EMS 100, 153 or equivalent.

EMS 167 - Emergency Pediatrics Course (EPC)

Credits: 1

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).

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Lecture 1 hour.
Total 1 hour per week.

EMS 170 - ALS Internship I

Credits: 1

Begins 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.

Laboratory 3 hours per week.
Co-requisite: EMS 150

EMS 175 - Paramedic Clinical Experience I

Credits: 2

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.

Laboratory 6 hours.
Total 6 hours per week.
Prerequisites: EMS 121, EMS 123, EMS 125, EMS 126, EMS 127, and EMS 128

EMS 202 - Paramedic Pharmacology

Credits: 2

Focuses on advanced pharmacological interventions, medications and their effects.

Lecture 2 hours.
Total 2 hours per week.
Prerequisites: EMS 125, EMS 126, EMS 135, EMS 136, EMS 137, EMS 138, EMS 139, EMS 140, EMS 141, and EMS 142

EMS 203 - Advanced Patient Care

Credits: 2

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.
Prerequisites: EMS 135, EMS 136, EMS 137, EMS 138, EMS 139, EMS 140, EMS 141, and EMS 142
Corequisite: EMS 204

EMS 204 - Advanced Patient Care Lab

Credits: 2

Focuses on the comprehensive assessment and management of out-of-hospital and inter-facility patients using scenario-based learning.

Laboratory 4 hours.
Total 4 hours per week.
Prerequisites: EMS 135, EMS 136, EMS 137, EMS 138, EMS 139, EMS 140, EMS 141, and EMS 142
Corequisite: EMS 203

EMS 206 - Pathophysiology for the Health Professions

Credits: 3

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.
Prerequisites: BIO 141 and BIO 142

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EMS 210 - EMS Operations

Credits: 1

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.
Prerequisites: EMS 135, EMS 136, EMS 137, EMS 138, EMS 139, EMS 140, EMS 141, EMS 142

EMS 212 - Leadership and Professional Development

Credits: 1

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.
Prerequisites: EMS 135, EMS 136, EMS 137, EMS 138; EMS 139; EMS 140; EMS 141; EMS 142

EMS 216 - Paramedic Review

Credits: 1

Provides the student with intensive review for the practical and written portions of the National Registry Paramedic exam. May be repeated once, for credit.

Lecture 1 hour per week.

EMS 247 - Paramedic Clinical Experience II

Credits: 1

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.

Laboratory 3 hours.
Total 3 hours per week.
Prerequisites: EMS 135, EMS 136, EMS 137, EMS 138, EMS 139, EMS 140, EMS 141, EMS 142, EMS 175

EMS 248 - Paramedic Comprehensive Field Experience

Credits: 2

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.

Laboratory 6 hours.
Total 6 hours per week.
Prerequisites: EMS 135, EMS 136, EMS 139, EMS 140, EMS 141, EMS 142,and EMS 175

EMS 249 - Paramedic Capstone Internship

Credits: 2

Provides summative evaluation of the Paramedic student in the cognitive, psychomotor, and affective domains.

Laboratory 6 hours.
Total 6 hours per week.
Prerequisites: EMS 202, EMS 203, EMS 204, EMS 206, EMS 247, and EMS 248

English Fundamentals

ENF 1 - Preparing For College English I

Credits: 8

Provides integrated reading and writing instruction for students who require extensive preparation to succeed in college- level English courses. Students will place into this course based on placement test score. Upon successful completion and faculty recommendation, students will move into Preparing for College English III (if they require additional preparation) or into college-level English (if they require no additional preparation). Credit is not applicable toward graduation.

Lecture 8 hours per week.
Prerequisite: Qualifying placement test score

ENF 2 - Preparing For College English II

Credits: 4

Provides integrated reading and writing instruction for students who require inter-mediate preparation to succeed in college-level English courses. Students will place into this course based on placement test score. Upon successful completion and faculty recommendation, students will move into Preparing for College Level III (if they require additional preparation) or into college-level English (if they require no additional preparation). Credit is not applicable toward graduation.

Lecture 4 hours per week.
Prerequsites: Qualifying placement test score

ENF 3 - Preparing For College English III

Credits: 2

Provides integrated reading and writing instruction for students who require minimal preparation for college-level English but still need some preparation to succeed. Students in this course will be co- enrolled in college-level English. Students will place into this course based on place-ment test score. Credit is not applicable toward graduation.

Lecture 2 hours per week.
Prerequisites: Qualifying placement score
Co-Enrollment in a college-level English course

English

ENG 111 - College Composition I

Credits: 3

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.
Prerequisites: ENF 3 or ENG 111 co-requisite, satisfactory score on appropriate English proficiency examination and four units of high school English or equivalent.

ENG 112 - College Composition II

Credits: 3

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.

Lecture 3 hours per week.
Prerequisites: ENF 3 or ENG 111 co-requisite, satisfactory score on appropriate English proficiency examination and four units of high school English or equivalent. CANNOT be taken out of sequence.

ENG 115 - Technical Writing

Credits: 3

Develops ability in technical writing through extensive practice in composing technical reports and other documents. Guides students in achiev-ing voice, tone, style, and content in formatting, editing, and graphics. Introduces students to technical discourse through selected reading.

Lecture 3 hours per week.

ENG 131 - Technical Report Writing I

Credits: 3

Offers a review of organizational skills including paragraph writing and basic forms of technical communications, various forms of business correspondence, and basic procedures for research writing. Includes instruction and practice in oral communication skills.

Lecture 3 hours per week.
Prerequisite: ENF 3

ENG 210 - Advanced Composition

Credits: 3

Helps students refine skills in writing non-fiction prose. Guides development of individual voice and style. Introduces procedures for publication.

Lecture 3 hours per week.
Prerequisite ENG 112 or divisional approval.

ENG 241 - Survey of American Literature I

Credits: 3

Examines American literary works from colonial times to the present, emphasizing the ideas and characteristics of our national literature. Involves critical reading and writing. Part I of II.

Lecture 3 hours per week. May be taken out of sequence.
Prerequisite ENG 112 or divisional approval

ENG 242 - Survey of American Literature II

Credits: 3

Examines American literary works from colonial times to the present, emphasizing the ideas and characteristics of our national literature. Involves critical reading and writing. Part II of II. May be taken out of sequence.

Lecture 3 hours per week.
Prerequisite ENG 112 or divisional approval

ENG 243 - Survey of English Literature I

Credits: 3

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. Part I of II. May be taken out of sequence.

Lecture 3 hours per week.
Prerequisite ENG 112 or divisional approval

ENG 244 - Survey of English Literature II

Credits: 3

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. Part II of II. May be taken out of sequence.

Lecture 3 hours per week.
Prerequisite ENG 112 or divisional approval

ENG 250 - Children's Literature

Credits: 3

Surveys the history, development and genres of children's literature, focusing on analysis of texts for literary qualities and in terms of audience.

Prerequisite: ENG 112 or divisional approval

ENG 251 - Survey of World Literature I

Credits: 3

Examines major works of world literature. Involves critical reading and writing. Part I of II. May be taken out of sequence.

Lecture 3 hours per week.
Prerequisite: ENG 112 or divisional approval

ENG 252 - Survey of World Literature II

Credits: 3

Examines major works of world literature. Involves critical reading and writing. Part II of II. May be taken out of sequence.

Lecture 3 hours per week.
Prerequisite ENG 112 or divisional approval

Environmental Science

ENV 100 - Basic Environmental Science

Credits: 3

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.
Prerequisite: ENF 3 or ENG 111 corequisite

Electronics Technology

ETR 150 - Machine Control Using Relay & Programmable Logic

Credits: 3

Provides an introduction to hardwired relay logic and the programmable logic controller (PLC) as utilized in a variety of different control tasks. Covers different types of inputs and outputs in control system. Teaches practical troubleshooting strategies.

Lecture 2 hours. Laboratory 2 hours.
Total 4 hours per week.
Prerequisite: ELE 156

ETR 230 - Mechatronic Process Control

Credits: 3

Studies systems integrating mechanical components with electrical components and logic devices used to control manufacturing operations. Surveys electromechanical actuators, sensors, digital to analog conversion, and methods of computer control as related to the managing and monitoring of manufacturing processes.

Lecture 2 hours. Laboratory 2 hours.
Total 4 hours per week.
Prerequisite:MEC 140

ETR 246 - Electronic Motor Drives Systems

Credits: 3

Introduces advanced operations, setup, programming and troubleshooting of electronic motor drives that are used for the control of industrial AC motors.

Lecture 2 hours. Laboratory 2 hours.
Total 4 hours per week.

ETR 298 - Seminar and Project

Credits: 1

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.

Financial Services

FIN 107 - Personal Finance

Credits: 3

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.

FIN 215 - Financial Management

Credits: 3

Introduces basic financial management topics including statement analysis, working capital, capital budgeting, and long-term financing. Focuses on Net Present Value and Internal Rate of Return techniques, lease vs. buy analysis, and Cost of Capital computations. Uses problems and cases to enhance skills in financial planning and decision making.

Lecture 3 hours per week.
Prerequisites: ENF 3 or ENG 111 corequisite, MTH 130 or above

French

FRE 101 - Beginning French I

Credits: 4

Introduces understanding, speaking, reading, and writing skills and emphasizes basic French sentence structure. Part I of II.

Lecture 4 hours per week. May include one additional hour of oral practice per week.
Prerequisite: ENF 3 or ENG 111 corequisite.

FRE 102 - Beginning French II

Credits: 4

Introduces understanding, speaking, reading, and writing skills and emphasizes basic French sentence structure. Part II of II.

Lecture 4 hours per week. May include one additional hour of oral practice per week.
Prerequisite: ENF 3 or ENG 111 corequisite.

Geography

GEO 210 - People and The Land: Intro to Cultural Geography

Credits: 3

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 activity. Introduces the student to types and uses of maps.

Lecture 3 hours per week.
Prerequisite: A placement of ENF 3 or ENG 111 corequisite.

GEO 225 - Economic Geography

Credits: 3

Familiarizes the student with the various economic, geographic, political and demographic factors that affect international target markets and trade activity.

Lecture 3 hours per week.

German

GER 101 - Beginning German I

Credits: 5

Introduces understanding, speaking, reading, and writing skills and emphasizes basic German sentence structures. Part I of II.

Lecture 5 hours per week. May include one additional hour oral practice per week.

GER 102 - Beginning German II

Credits: 5

Introduces understanding, speaking, reading, and writing skills and emphasizes basic German sentence structures. Part II of II.

Lecture 5 hours per week. May include one additional hour oral practice per week.

Geology

GOL 110 - Earth Science

Credits: 4

Examines the dynamics of the earth and its relation to the solar system. Applies the principles of geology, oceanography, meteorology, and astronomy in a multi- disciplinary science environment. Stresses the effects of geologic processes on the environment.

Lecture 3 hours. Laboratory 3 hours.
Total 6 hours per week.

Health Care

HCT 110 - Therapeutic Communication In The Health Care Setting

Credits: 3

Develops therapeutic relationship, communication and culture, problem solving, electronic communication, techniques in therapeutic communication and blocks to therapeutic communication. Addresses assertiveness, anger, and managing team conflict.

Lecture 3 hours per week.
Prerequisite: ENF 1

Health Information Management

HIM 143 - Managing Electronic Billing In A Medical Practice

Credits: 3

Presents practical knowledge on use of computer technology in medical practice management. Develops basic skills in preparation of universal billing claim. Explores insurance claim processing issues.

Lecture 3 hours per week.
Prerequisite: ENF 3 or ENG 111 co-requisite. MTT 1 - Module 1 Operations With Positive Fractions-MTT 1 - Module 3 Algebra Basics.

History

HIS EEE for HMS - History Elective for Human Services

Credits: 3

HIS EEE for HMS

HIS 101 - History of Western Civilization I

Credits: 3

Examines the development of western civilization from ancient times to the present. Part I of II. May be taken out of sequence.

Lecture 3 hours per week.
Prerequisite: ENF 3 or ENG 111 corequisite

HIS 102 - History of Western Civilization II

Credits: 3

Examines the development of western civilization from ancient times to the present. Part II of II. May be taken out of sequence.

Lecture 3 hours per week.
Prerequisite: ENF 3 or ENG 111 corequisite

HIS 111 - History of World Civilization I

Credits: 3

Surveys Asian, African, Latin American, and European civilizations from ancient times to the present. Part I of II. This is a Passport Transfer course.

Lecture 3 hours per week.
Prerequisite: ENF 3 or ENG 111 corequisites. May be taken out of sequence.

HIS 112 - History of World Civilization II

Credits: 3

Surveys Asian, African, Latin American, and European civilizations from the ancient period to the present. Part II of II. This is a Passport Transfer course.

Lecture 3 hours per week.
Prerequisite: ENF 3 or ENG 111 corequisite. May be taken out of sequence.

HIS 121 - United States History I

Credits: 3

Surveys United States history from its beginning to the present. Part I of II. This is a Passport transfer course.

Lecture 3 hours per week.
Prerequisite: ENF 3 or ENG 111 corequisite. May be taken out of sequence.

HIS 122 - United States History II

Credits: 3

Surveys United States history from its beginning to the present. Part II of II. this is a Passport Transfer course.

Lecture 3 hours per week.
Prerequisite: ENF 3 or ENG 111 corequisite. May be taken out of sequence.

Health

HLT 100 - First Aid and CardioPulmonary Resuscitation

Credits: 2

Focuses on principles and techniques of safety, first aid, and cardiopulmonary resuscitation.

Lecture 2 hours per week.
Prerequisite: ENF 3 or ENG 111 corequisite.

HLT 105 - Cardiopulmonary Resuscitation

Credits: 1

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

Credits: 2

Focuses on the principles and techniques of safety and first aid.

Lecture 2 hours per week.
Prerequisite: ENF 3 or ENG 111 corequisite.

HLT 116 - Introduction to Personal Wellness Concepts

Credits: 3

Introduces students to the dimensions of wellness including the physical, emotional, environmental, spiritual, occupational, and social components.

Lecture 3 hours per week.

Prerequisite: ENF 3 or ENG 111 corequisite.

HLT 141 - Introduction to Medical Terminology

Credits: 1

Focuses on medical terminology for students preparing for careers in the health professions.

Lecture 1 hours per week.
Prerequisite: ENF 3 or ENG 111 corequisite.

HLT 143 - Medical Terminology I

Credits: 3

Provides an understanding of medical abbreviations and terms. Includes the study of prefixes, suffixes, word stems, and technical terms with emphasis on proper spelling, pronunciation and usage. Emphasizes more complex skills and techniques in understanding medical terminology. Part I of II.

Lecture 3 hours per week.
Prerequisite: ENF 3 or ENG 111 corequisite.

HLT 170 - Introduction to Massage

Credits: 1

Introduces the student to the field of massage therapy. Student practices basic Swedish massage strokes, aromatherapy, effleurage, petrissage and friction, as well as indications and contra-indication for massage.

Lecture 1 hour per week.
Co-requisite: NAS 150.

HLT 180 - Therapeutic Massage I

Credits: 3

Introduces the student to the history and requirements for massage therapy. Covers the terms and practice of massage with introduction to equipment, safety, and ethics as well as massage movements and techniques. Includes information about the benefits of massage, contraindications, client interview, client-therapist relationship, draping, good body mechanics, and anatomical landmarks. Basic massage techniques are blended into a relaxing, health enhancing full-body session preparing the students for their student clinical experience.

Lecture 1 hour. Laboratory 6 hours.
Total 7 hours per week.
Prerequisite: ENF 3 or ENG 111. Corequisite: MTT 1 - Module 1 Operations With Positive Fractions, MTT 1 - Module 2 Operations With Positive Decimals and Percents, HLT 170, NAS 150.

HLT 193 - Muscles and Massage

Credits: 4

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.

Lecture 4 hours per week.
Corequisite: HLT 280.

HLT 220 - Concepts of Disease

Credits: 3

Emphasizes general principles, classifications, causes, and treatments of selected disease processes. Intended primarily for students enrolled in health technology programs.

Lecture 3 hours per week.
Prerequisite: ENF 3 or ENG 111 corequisite; corequisite HLT 281.

HLT 230 - Principles of Nutrition and Human Development

Credits: 3

Teaches the relationship between nutrition and human development. Emphasizes nutrients, balanced diet, weight control, and the nutritional needs of an individual.

Lecture 3 hours per week.

Prerequisite: ENF 3 or ENG 111 corequisite.

HLT 250 - General Pharmacology

Credits: 3

Emphasizes general pharmacology for the health related professions covering general principles of drug actions/reactions, major drug classes, specific agent within each class, and routine mathematical calculations needed to determine desired dosages.

Lecture 3 hours per week.
Prerequisite: ENF 3 or ENG 111.

HLT 280 - Therapeutic Massage II

Credits: 3

Introduces the student to the history and requirements for massage therapy. Covers the terms and practice of massage with introduction to equipment, safety, and ethics as well as massage movements and techniques. Includes information about the benefits of massage, contraindications, client interview, client-therapist relationship, draping, good body mechanics, and anatomical landmarks. Basic massage techniques are blended into a relaxing, health enhancing full-body session preparing the student for their student clinical experience.

Lecture 1 hour Laboratory 6 hours
Total 7 hours per week.
Prerequisite: HLT 180/HLT 170. Corequisite HLT 193.

HLT 281 - Therapeutic Massage III

Credits: 3

Introduces the concept of consultation, client management, session design, and integration of specific therapeutic approaches into a full-body session. Students learn to give specific therapeutic attention to the regions of the back, neck and torso. Using knowledge of muscle anatomy, students perform more advanced massage techniques to address hypertonicity, chronic ischemia, trigger points, fibrotic tissue, adhesions and scar tissue. Includes common clinical applications in the body regions covered and the integration of specific techniques into a full-body session.

Lecture 1 hour. Laboratory 6 hours.
Total 7 hours per week.
Prerequisite: HLT 280.

Hotel-Restaurant-Institutional Management

HRI 106 - Principles of Culinary Arts I-II

Credits: 3

Introduces the fundamental principles of food preparation and basic culinary procedures. Stresses the use of proper culinary procedures combined with food science, proper sanitation, standards of quality for food items that are made, and proper use and care of kitchen equipment. Part I of II.

Lecture 2 hours. Laboratory 3 hours.
Total 5 hours per week.

HRI 119 - Applied Nutrition For Food Service

Credits: 3

Studies food composition, nutrition science, and application of nutrition principles taught by the food service professional. Provides the student with a basic understanding of human nutrition and application of nutrition in the service of commercially prepared meals.

Lecture 3 hours per week.

HRI 126 - The Art of Garnishing

Credits: 1

Focuses on the relationship between colors and shapes and how they pertain to garnishes. Provides student with knowledge to create impressive presentations.

Lecture 1 hour per week.

HRI 128 - Principles of Baking

Credits: 3

Instructs the student in the preparation of breads, pastries, baked desserts, candies, frozen confections, and sugar work. Applies scientific principles and techniques of baking. Promotes the knowledge/skills required to prepare baked items, pastries and confections.

Lecture 2 hours. Laboratory 3 hours.
Total 5 hours per week.

HRI 134 - Food and Beverage Service Management

Credits: 3

Provides a conceptual and technical framework for managing the service of meals in a variety of commercial settings. Studies the integration of production and service delivery, guest contact dynamics, reservations management and point-of-sale systems.

Lecture 2 hours. Laboratory 3 hours.
Total 5 hours per week.

HRI 145 - Garde Manger

Credits: 3

Studies garde manger, the art of decorative cold food preparation and presentation. Provides a detailed practical study of cold food preparation and artistic combination and display of cold foods.

Lecture 2 hours. Laboratory 3 hours.
Total 5 hours per week.

HRI 154 - Principles of Hospitality Management

Credits: 3

Presents basic understanding of the hospitality industry by tracing the industry's growth and development, reviewing the organization and management of lodging, food, and beverage operations, and focusing on industry opportunities and future trends.

Lecture 3 hours per week.

HRI 158 - Sanitation and Safety

Credits: 3

Covers the moral and legal responsibilities of management to insure a sanitary and safe environment in a food service operation. Emphasizes the causes and prevention of food borne illnesses in conformity with federal, state and local guidelines. Focuses on OSHA standards in assuring safe working conditions.

Lecture 3 hours per week.

HRI 190 - Coordinated Internship

Credits: 3

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.

HRI 190 - Coordinated Internship

Credits: 1

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

HRI 206 - International Cuisine

Credits: 3

Introduces the concepts of cultural differences and similarities and the preparation of the food specialties of the major geographical areas of the world. Focuses on emerging cuisines as they become popular.

Lecture 2 hours. Laboratory 3 hours.
Total 5 hours per week.

HRI 207 - American Regional Cuisine

Credits: 3

Studies the distinct regional cooking styles of America and its neighbors. Emphasizes the indigenous ingredients as well as the cultural aspect of

each region's cooking style. Includes the preparation of the various regional foods.

Lecture 2 hours. Laboratory 3 hours.
Total 5 hours per week.

HRI 218 - Fruit, Vegetable, and Starch Preparation

Credits: 3

Instructs the student in the preparation of fruits, vegetables, grains, cereals, legumes and farinaceous products. Promotes the knowledge/skills necessary to prepare menu items from fruits, vegetables, and their byproducts, and to select appropriate uses as meal components.

Lecture 2 hours. Laboratory 3 hours.
Total 5 hours per week.

HRI 219 - Stock, Soup, and Sauce Preparation

Credits: 3

Instructs the student in the preparation of stocks, soups, and sauces. Promotes the knowledge/ skills to prepare stocks, soups, and sauces, and to select appropriate uses as meal components.

Lecture 2 hours. Laboratory 3 hours.
Total 5 hours per week.

HRI 220 - Meat, Seafood, and Poultry Preparation

Credits: 3

Provides the study and preparation of meat, poultry, shellfish, fish, and game. Promotes the knowledge/skills required to select appropriate use of these foods as meal components.

Lecture 2 hours. Laboratory 3 hours.
Total 5 hours per week.

HRI 251 - Food and Beverage Cost Control I

Credits: 3

Presents methods of pre-cost and pre-control as applied to the menu, purchasing, receiving, storing, issuing, production, sales and service which result in achievement of an operation's profit potential. Emphasizes both manual and computerized approaches. Part I of II.

Lecture 3 hours per week.

HRI 252 - Food and Beverage Cost Control II

Credits: 3

Presents methods of pre-cost and pre-control as applied to the menu, purchasing, receiving, storing, issuing, production, sales and service which result in achievement of an operation's profit potential. Emphasizes both manual and computerized approaches. Part II of II.

Lecture 3 hours per week.

HRI 256 - Principles and Applications of Catering

Credits: 3

Analyzes and compares the principles of on-premise and off-premise catering. Includes student presentations in a series of catered functions where they assume typical managerial/ employee positions emphasizing planning, organizing, operating, managing and evaluating.

Lecture 2 hours. Laboratory 2 hours.
Total 4 hours per week.

HRI 290 - Coordinated Internship

Credits: 2

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.

Human Services

HMS 100 - Introduction to Human Services

Credits: 3

Introduces human service agencies, roles and careers. Presents a 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.
Prerequisites: ENF 3 or ENG 111 corequisite.

HMS 121 - Basic Counseling Skills I

Credits: 3

Develops skills needed to function in a helping relationship. Emphasizes skills in attending, listening and responding. Clarifies personal skill strengths, deficits and goals for skill improvement.

Lecture 3 hours per week.

HMS 141 - Group Dynamics I

Credits: 3

Examines the stages of group development, group dynamics, the role of the leader in a group, and recognition of the various types of group processes. Discusses models of group dynamics that occur as a result of group membership dynamics.

Lecture 3 hours per week.

HMS 162 - Communication Skills For Human Services Professionals

Credits: 3

Covers basic written and verbal communication skills, listening skills, interviewing techniques, and completing written documentation to professional standards.

Lecture 3 hours per week.
Prerequisites: ENF 3 or ENG 111 corequisite.

HMS 195 - Introduction to Developmental Disabilities

Credits: 3

Presents an overview, history, and current philosophy of developmental disabilities programs. Provides descriptions and examines causes of developmental disabilities, identifies intervention strategies, promotes social and legal advocacy, explores employment and career opportunities.

Lecture 3 hours per week.
Prerequisites: ENF 3 or ENG 111 corequisite.

HMS 226 - Helping Across Cultures

Credits: 3

Provides an historical overview of selected cultural and racial groups. Promotes understanding of group differences and the impact on counseling services.

Lecture 3 hours per week.

HMS 230 - Ethics in Human Services

Credits: 3

Examines ethical concepts specific to human services organizations and careers. Considers self-determination, informed consent, confidentiality, boundaries, conflict of interest, dual relationships, as well as value clarification and the impact of culture.

Lecture 3 hours per week.

HMS 251 - Substance Abuse I

Credits: 3

Provides knowledge, skills, and insight for working in drug and alcohol abuse programs. Emphasizes personal growth and client growth measures in helping relationships. Stresses various methods of individual and group techniques for helping the substance abuser.

Lecture 3 hours per week.
Prerequisites: ENF 3 or ENG 111 corequisite.

HMS 258 - Case Management and Substance Abuse

Credits: 3

Focuses on the process for interviewing substance abuse clients. Includes intake, assessment, handling denial, and ending the interview. Teaches skills for writing short-term goals and treatment plans with emphasis on accountability. Examines various reporting devices.

Lecture 3 hours per week.

HMS 290 - Coordinated Internship

Credits: 3

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.

Industrial Engineering Technology

IND 101 - Quality Assurance Technology I

Credits: 3

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. Part I of II.

Lecture 3 hours per week.
Prerequisites: ENF 3 or ENG 111 corequisite, MTT 1 - Module 1 Operations With Positive Fractions-MTT 1 - Module 3 Algebra Basics.

IND 125 - Installation and Preventive Maintenance

Credits: 3

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 160 - Introduction to Robotics

Credits: 3

Studies evolution and history of robotics with an emphasis on automated and flexible manufacturing. Presents advantages and limitations of present robot systems.

Lecture 2 hours. Laboratory 2 hours.
Total 4 hours per week.

IND 181 - World Class Manufacturing

Credits: 3

Studies the principles and applications of the globalization of industry. Emphasizes the fundamentals of interpersonal/team, process, organization skills, total quality tools for continuous improvement, statistical process control, manufacturing resource planning and just-in-time.

IND 195 - Introduction to Manufacturing and Advanced Films Technology

Credits: 3

Introduces basic concepts and skills of the Advanced Manufacturing and Advanced Films Technology fields. Presents discussion of manufacturing career opportunities and industry practices with specific emphasis on the history, purpose, practice and organization of the advanced films industry. Introduces the foundation mathematics for industrial measurements, English/SI system conversions and statistical process control. Covers concepts of automated system integration, quality assurance, teamwork and positive work ethics.

Lecture 3 hours per week.

IND 243 - Principles and Applications of Mechatronics

Credits: 3

Introduces terminology and principles related to Mechatronic system design and application. Integrates concepts of electrical/electronic, mechanical and computer technologies in the development, setup, operation and troubleshooting of automated products and systems. Covers

breakdown of various automated manufacturing operations with emphasis on system planning, development and troubleshooting processes.

Lecture 2 hours. Laboratory 2 hours.
Total 4 hours per week.
Prerequisites: EGR 277 , MEC 165 and MEC 140 or MEC 155.

IND 246 - Industrial Robotics Programming

Credits: 3

Introduces industrial robotics and their programming for repetitive manufacturing systems. Includes the design of software that ensures safe operation and programming of both on- and off-line robot operations.

IND 250 - Introduction to Basic Computer Integrated Manufacturing

Credits: 3

Presents basic principles used in the design and implementation in a computer integrated manufacturing system. Emphasizes team concept and all aspects of a computer integrated manufacturing system to include the following: Robotics, Conveyor Control, Machining Center Integration Quality Control, Statistical Quality Control, and Computer Integrated Manufacturing (CIM) software.

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IND 290 - Coordinated Internship

Credits: 3

Supervised 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.

IND 295 - Topics In Advanced Films Technology

Credits: 3

Introduces the web coating process, including formulating product and raw materials, mixing and solution handling, feed systems, coating application process, coating equipment, substrates, and drying. Covers dyeing and instrumentation concepts, process measurements and monitoring, and web winding. Presents basic concepts of lean manufacturing and Six Sigma as relates to troubleshooting and problem solving.

Lecture 2 hours. Laboratory 2 hours.
Total 4 hours per week.

Information Technology-Design & Database

ITD 110 - Web Page Design I

Credits: 3

Stresses a working knowledge of web site designs, construction, and management using HTML, or XHTML. Includes headings, lists, links, images, image maps, tables, forms, and frames.

Lecture 3 hours per week.

ITD 112 - Designing Web Page Graphics

Credits: 3

Explores the creation of digital graphics for web design. Include basic design elements such as color and layout will be explored utilizing a computer graphics program(s).

Lecture 3 hours per week.

ITD 130 - Database Fundamentals

Credits: 3

Introduces the student to Relational Database and Relational Database theory. Includes planning, defining and using a database; table design, linking, and normalization; types of databases, database description and definition.

Lecture 3 hours per week.

ITD 210 - Web Page Design II

Credits: 3

Incorporates advanced techniques in web site planning, design, usability, accessibility, advanced site management, and maintenance utilizing web editor software(s).

Lecture 3 hours per week.
Prerequisite: ITD 110

Information Technology-Essentials

ITE 55 - Certification Preparation

Credits: 1

Serves as a review of objectives for a specific Certification. Uses certification test preparation software, when available, in conjunction with a faculty resource person. May be repeated for credit.

Lecture 1 hour per week.

ITE 101 - Introduction to Microcomputers

Credits: 2

Examines concepts and terminology related to microcomputers and introduces specific uses of microcomputers.

Lecture 2 hours per week.

ITE 115 - Introduction to Computer Applications and Concepts

Credits: 3

Covers computer concepts and internet skills, and uses a software suite which includes word processing, spreadsheet, database, and presentation software to demonstrate skills.

Lecture 3 hours per week.
Prerequisite: ENF 3 or ENG 111 corequisite. Recommended prerequisite keyboarding skills.

ITE 130 - Introduction to Internet Services

Credits: 3

Provides students with a working knowledge of Internet terminology and services including e-mail, WWW browsing, search engines, FTP, file compression, and other services using a variety of software packages. Provides instruction for basic web page construction.

Lecture 3 hours per week.

ITE 140 - Spreadsheet Software

Credits: 3

Covers the use of spreadsheet software to create spreadsheets with formatted cells and cell ranges, control pages, multiple sheets, charts, and macros. Topics 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. Covers MOS Excel objectives.

Lecture 3 hours per week.
Prerequisite: ITE 115

ITE 150 - Desktop Database Software

Credits: 3

Incorporates instruction in planning, defining, and using a database; performing queries; producing reports; working with multiple files; and concepts of database programming. Include database concepts, principles of table design and table relationships, entering data, creating and using forms, using data from different sources, filtering, and creating mailing labels. Covers MOS Access certification objectives.

Lecture 3 hours per week.
Prerequisite: ITE 115

ITE 199 - Certification Preparation

Credits: 1

Serves as a review of objectives for a specific certification. Uses certification test preparation software, when available, in conjunction with a faculty resource person. May be repeated for credit.

Lecture 1 hour per week.

ITE 290 - Coordinated Internship

Credits: 3

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.

ITE 297 - Cooperative Education

Credits: 3

Supervises in on-the-job training for pay in approved business, industrial and service firms, coordinated by the college's cooperative education office.

ITE 299 - Supervised Study

Credits: 1

Assigns problems for independent study incorporating previous instruction and supervised by the instructor. May be repeated for credit.

Information Technology-Networking

ITN 106 - Microcomputer Operating Systems

Credits: 3

Teaches use of operating system utilities and multiple-level directory structures, creation of batch files, and configuration of microcomputer environments. May include a study of graphical user interfaces. Maps to A+ Software Certification.

Lecture 3 hours per week.

ITN 107 - Personal Computer Hardware and Troubleshooting

Credits: 3

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. Maps to A+ Hardware Certification.

Lecture 3 hours per week.

ITN 154 - Network Fundamentals, Router Basics, and Configuration (ICND1) - CISCO

Credits: 4

Provides instruction in the fundamentals of networking environments, the basics of router operations, and basic router configuration.

Lecture 3 hours. Laboratory 2 hours.
Total 5 hours per week.

ITN 155 - Switching, Wireless, and Wan Technologies (ICND2) - CISCO

Credits: 4

Provides the skills and knowledge to install, operate, and troubleshoot a small-to-medium sized branch office enterprise network, including configuring several switches and routers, configuring wireless devices, configuring VLANS, connecting to a WAN, and implementing network security.

Lecture 3 hours. Laboratory 2 hours.
Total 5 hours per week.

ITN 155L - Switching, Wireless, and Wan Technologies (ICND2) - CISCO Laboratory

Credits: 1

Provides problem solving experience to supplement instruction in Introductory Routing- CISCO.

Laboratory 2 hours per week.
Corequisite: ITN 155.

ITN 170 - Linux System Administration

Credits: 3

Focuses instruction on the installation, configuration and administration of the Linux operating system and emphasizes the use of Linux as a network client and workstation.

3
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ITE 115

ITN 257 - Cloud Computing: Infrastructure and Services

Credits: 3

Focuses on cloud infrastructure, deployment, security models, and the key considerations in migrating to cloud computing. Covers the technologies and processes required to build traditional, virtualized, and cloud data center environments, including computation, storage, networking, desktop and application virtualization, business continuity, security, and management.
(3cr) Lecture 3 hours. Total 3 hours per week.

3
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ITE 115

ITN 260 - Network Security Basics

Credits: 3

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 give security keys, confidentiality integrity, availability, accountability and auditability.

Lecture 3 hours per week.

ITN 261 - Network Attacks, Computer Crime and Hacking

Credits: 3

Encompasses in-depth exploration of various methods for attacking and defending a network. Explores network security concepts from the viewpoint of hackers and their attack methodologies. Includes topics about hackers, attacks, Intrusion Detection Systems (IDS) malicious code, computer crime and industrial espionage.

Lecture 3 hours per week.

ITN 262 - Network Communication, Security and Authentication

Credits: 3

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 hours per week.

ITN 263 - Internet/Intranet Firewalls and E-Commerce Security

Credits: 3

Gives an in-depth exploration of firewall, Web security, and e-commerce security. Explores firewall concepts, types, topology and the firewall's relationship to the TCP/IP protocol. Includes client/server architecture, the Web server, HTML and HTTP in relation to Web Security, and digital certification, D.509, and public key infrastructure (PKI).

Lecture 3 hours per week.

ITN 266 - Network Security Layers

Credits: 3

Provides an in-depth exploration of various security layers needed to protect the network. Explores Network Security from the viewpoint of the environment in which the network operates and the necessity to secure that environment to lower the security risk to the network. Includes physical security, personnel security, operating system security, software security and database security.

Lecture 3 hours per week.

ITN 267 - Legal Topics In Network Security

Credits: 3

Conveys an in-depth exploration of the civil and common law issues that apply to network security. Explores statutes, jurisdictional, and constitutional issues related to computer crimes and privacy. Includes rules of evidence, seizure and evidence handling, court presentation and computer privacy in the digital age.

Lecture 3 hours per week.

ITN 290 - Coordinated Internship

Credits: 3

Supervises on-the-job training in selected business, industrial or service firms coordinated by the college.

Internship
Total 3 hours per week.

ITN 297 - Cooperative Education

Credits: 3

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.

Cooperative
Total 3 hours per week.

Information Technology-Programming

ITP 110 - Visual Basic Programming I

Credits: 3

Involves instruction in fundamentals of event-driven programming using Visual Basic. Emphasizes program construction, algorithm development, coding, debugging, and documentation of graphical user interface applications.

Lecture 3 hours per week.

ITP 120 - Java Programming I

Credits: 4

Entails 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 4 hours per week.
Prerequisite: ITP 220

ITP 160 - Introduction to Game Design and Development

Credits: 3

Introduces object-oriented game design and development. Provides overview of the electronic game design and development process and underlines the historical contest, content creation strategies, game careers, and future trends in the industry. Utilizes a game language environment to introduce game design, object-oriented paradigms, software design, software development and product testing. Teaches skills of writing a game design document and creating a game with several levels and objects. Integrate 2D animations, 3D models, sound effects, and background music as well as graphic backgrounds.

Lecture 3 hours per week.

ITP 220 - Java Programming II

Credits: 4

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 4 hours per week.
Prerequisite: ITP 120.

Instrumentation

INS 210 - Principles of Instrumentation

Credits: 3

Introduces the basic concepts and terminology of process control systems. Presents types of control systems, applicable component elements, basic control analysis, and documentation requirements for measuring instruments and signal conditioning.

Lecture 2 hours. Laboratory 2 hours per week.
Total 4 hours per week.

INS 230 - Instrumentation I

Credits: 3

Presents the fundamental scientific principles of process control including temperature, pressure, level, and flow measurements. Topics include transducers, thermometers, and gauges are introduced along with calibration.

Lecture 2 hours. Laboratory 3 hours.
Total 5 hours per week.
ETR 113 and ETR 144

Japanese

JPN 101 - Beginning Japanese I

Credits: 5

Develops the understanding, speaking, reading, and writing of Japanese, and emphasizes the structure of the language. Part I of II.

Lecture 5 hours per week. May include one additional hour of oral practice per week.

JPN 102 - Beginning Japanese II

Credits: 5

Develops the understanding, speaking, reading, and writing of Japanese, and emphasizes the structure of the language. Part II of II.

Lecture 5 hours per week. May include one additional hour of oral practice per week.

Legal Administration

LGL 110 - Introduction to Law and The Legal Assistant

Credits: 3

Introduces various areas of law in which a legal assistant may be employed. Includes study of the 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.

Lecture 3 hours per week.
Prerequisite: ENF 3 or ENG 111 corequisite.

LGL 115 - Real Estate Law For Legal Assistants

Credits: 3

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 these various instruments and studies the system of recording and search of public documents.

Lecture 3 hours per week.
Prerequisite: ENF 3 or ENG 111 corequisite.

LGL 117 - Family Law

Credits: 3

Studies elements of a valid marriage, grounds for divorce and annulment, separation, defenses, custody, support, adoptions, and applicable tax consequences. Includes property settlement, pre- and ante-nuptial agreements, pleadings, and rules of procedure. May include specific federal and Virginia consumer laws.

Lecture 3 hours per week.
Prerequisite: ENF 3 or ENG 111 corequisite.

LGL 125 - Legal Research

Credits: 3

Provides an understanding of various components of a law library, and emphasizes research skills through the use of digests, encyclopedias, reporter systems, codes, Shepard's Citations, ALR, and other research tools. May include overview of computer applications and writing projects.

Lecture 3 hours per week.
Prerequisite: ENF 3 or ENG 111 corequisite, MTT 1 - Module 1 Operations With Positive Fractions-MTT 1 - Module 3 Algebra Basics. Prerequisite or corequisite: LGL 110.

LGL 126 - Legal Writing

Credits: 3

Studies proper preparation of various legal documents, including legal memoranda, letters, and pleadings. Involves practical applications. May include case and appellate briefs.

Lecture 3 hours per week.
Prerequisite: LGL 125, ENG 111 or permission from instructor.

LGL 200 - Ethics For The Legal Assistant

Credits: 1

Examines general principles of ethical conduct applicable to legal assistants. Includes the application of rules of ethics to the practicing legal assistant.

Lecture 1 hour per week.
Prerequisite: ENF 3 or ENG 111 corequisite.

LGL 215 - Torts

Credits: 3

Studies fundamental principles of the law of torts. May include preparation and use of pleadings and other documents involved in the trial of a civil action. Emphasizes personal injury, products liability, and malpractice cases.

Lecture 3 hours per week.
Prerequisite: ENF 3 or ENG 111 corequisite.

LGL 218 - Criminal Law

Credits: 3

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.

Lecture 3 hours per week.

LGL 219 - Basics of Litigation Support

Credits: 3

Provides a practical understanding and knowledge of litigation support services, including docket control, case management, document production and organization. Examines the use of privileged documents and various court clerks' offices. Focuses on multiple party case management.

Lecture 3 hours per week.
Prerequisite: ENF 3 or ENG 111 corequisite.

LGL 225 - Estate Planning and Probate

Credits: 3

Introduces various devices used to plan an estate, including wills, trust, 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.

Lecture 3 hours per week.
Prerequisite: ENF 3 or ENG 111 corequisite.

LGL 226 - Real Estate Abstracting

Credits: 3

Reviews aspects of abstracting title to real estate, recordation of land transactions, liens, grantor-grantee indices, warranties, covenants, restrictions, and easements.

Lecture 3 hours per week.
Prerequisite: LGL 115. ENF 3 or ENG 111 corequisite

LGL 230 - Legal Transactions

Credits: 3

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.

Lecture 3 hours per week.
Prerequisite: ENF 3 or ENG 111 corequisite.

LGL 290 - Coordinated Internship

Credits: 2

Supervises on-the-job training in selected business, industrial or service firms coordinated by the college.

LGL 299 - Supervised Study

Credits: 1

Assigns problems for independent study incorporating previous instruction and supervised by the instructor.

Machine Technology

MAC 101 - Machine Shop I

Credits: 8

Introduces the machinist to identification, care, and use of precision tools and instruments. Emphasizes the operation of the drill press, lathe, power saw, grinder, and milling machine. Covers the sharpening of lathe curing tools, safety, and good housekeeping. Provides for operation and setup on the various types of precision grinders, milling machines, and drill presses. Part I of II.

Lecture 5 hours. Laboratory 9 hours.
Total 14 hours per week.

MAC 102 - Machine Shop II

Credits: 7

Introduces the machinist to identification, care, and use of precision tools and instruments. Emphasizes the operation of the drill press, lathe, power saw, grinder, and milling machine. Covers the sharpening of lathe curing tools, safety, and good housekeeping. Provides for operation and setup on the various types of precision grinders, milling machines, and drill presses. Part II of II.

Lecture 5 hours. Laboratory 9 hours.
Total 14 hours per week.

MAC 116 - Machinist Handbook

Credits: 2

Uses the machinist handbook as a ready reference book of tabular data, formulas, designs and processes relating to machine technology.

Lecture 2 hours per week.

MAC 121 - Numerical Control I

Credits: 3

Focuses on numerical control techniques in metal forming and machine processes. Includes theory and practice in lathe and milling machine computer numerical control program writing, setup and operation.

Lecture 2 hours. Laboratory 2 hours.
Total 4 hours per week.

MAC 126 - Introductory CNC Programming

Credits: 3

Introduces programming of computerized numerical control machines with hands-on programming and operation of CNC machines.

Lecture 2 hours. Laboratory 3 hours.
Total 5 hours per week.

MAC 127 - Advanced CNC Programming

Credits: 3

Provides in-depth study of programming computerized numerical control machines.

Lecture 3 hours per week.

MAC 161 - Machine Shop Practices I

Credits: 3

Introduces safety procedures, bench work, hand tools, precision measuring instruments, drill presses, cut-off saws, engine lathes, manual surface grinders, and milling machines.

Lecture 2 hours. Laboratory 2 hours.
Total 4 hours per week.

MAC 221 - Advanced Machine Tool Operations I

Credits: 7

Focuses on advanced lathe and mill work with concentration on fits, finishes, inspection, quality control, and basic heat treating. Includes design and construction of specific projects to determine the student's operational knowledge of all equipment. Part I of II.

Lecture 4 hours. Laboratory 9 hours.
Total 13 hours per week.

Marketing

MKT 100 - Principles of Marketing

Credits: 3

Presents principles, methods, and problems involved in marketing to consumers and organizational buyers. Discusses problems and policies connected with distribution and sale of products, pricing, promotion, and buyer motivation. Examines variations of marketing research, legal, social, ethical, e-commerce, and international considerations in marketing.

Lecture 3 hours per week.
Prerequisite: ENF 3 or ENG 111 corequisite.

MKT 160 - Marketing For Small Business

Credits: 3

Presents the development of the marketing mix for small business. Includes areas such as product development, pricing, promotion, salesmanship, customer relations, and consumer behavior.

Lecture 3 hours per week.
Prerequisite: ENF 3 or ENG 111 corequisite.

MKT 170 - Customer Service

Credits: 2

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 2 hours per week.

MKT 200 - Consumers, Marketing, and Society

Credits: 3

Presents an overview of the marketing system as it applies to the needs and wants of consumers and the purchasing process, along with consideration of the role of government in consumer affairs. Assists the individual in becoming an informed consumer and better business manager through an understanding of rights and obligations in consumer transactions.

Lecture 3 hours per week.

MKT 260 - Customer Service Management

Credits: 3

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.
Prerequisite: ENF 3 or ENG 111 corequisite.

Developmental Mathematics-Technology Based

MTT 1 - Developmental Mathematics (Technology-Based) I

Credits: 1

Covers mathematics topics in a technology-based setting to prepare students for the study of college level mathematics courses and curricula. Designed for the study of one developmental math unit prescribed by the student's placement test results. Credits not applicable toward graduation. Placement scores requiring the student to complete one developmental math unit.

MTT 1 - Module 1 Operations With Positive Fractions

Credits: 1

Includes operations and problem solving with proper fractions, improper fractions, and mixed numbers without the use of a calculator. Emphasizes applications and includes U. S. customary units of measure. Credit is not applicable toward graduation.

Lecture 1 hour per week.
Prerequisite: Qualifying placement score.

MTT 1 - Module 2 Operations With Positive Decimals and Percents

Credits: 1

Includes operations and problem solving with positive decimals and percents. Emphasizes applications and includes U.S. customary and metric units of measure. Credit is not applicable toward graduation.

Lecture 1 hour per week.
Prerequisite: MTT 1 - Module 1 Operations With Positive Fractions or qualifying placement score.

MTT 1 - Module 3 Algebra Basics

Credits: 1

Includes basic operations with algebraic expressions and solving simple algebraic equations using signed numbers with emphasis on applications. Credit is not applicable toward graduation.

Lecture 1 hour per week.
Prerequisite: MTT 1 - Module 2 Operations With Positive Decimals and Percents or qualifying placement score

MTT 1 - Module 4 First Degree Equations and Inequalities In One Variable

Credits: 1

Includes solving first degree equations and inequalities containing one variable, and using them to solve application problems. Emphasizes applications and problem solving. Credit is not applicable toward graduation.

Lecture 1 hour per week.
Prerequisite: MTT 1 - Module 3 Algebra Basics or qualifying placement score.

MTT 1 - Module 5 Linear Equations, Inequalities and Systems of Linear Equations In Two Variables

Credits: 1

Includes finding the equation of a line, graphing linear equations and inequalities in two variables and solving systems of two linear equations.

Emphasizes writing and graphing equations using the slope of the line and points on the line, and applications. Credit is not applicable toward graduation.

Lecture 1 hour per week.
Prerequisite: MTT 1 - Module 4 First Degree Equations and Inequalities In One Variable or qualifying placement score.

MTT 1 - Module 6 Exponents, Factoring and Polynomial Equations

Credits: 1

The student will learn to perform operations on exponential expressions and polynomials. Students will also learn techniques to factor polynomials and use these techniques to solve polynomial equations. Emphasis should be on learning all the different factoring methods, and solving application problems using polynomial equations. Credit is not applicable toward graduation.

Lecture 1 hour per week.
Prerequisite: MTT 1 - Module 5 Linear Equations, Inequalities and Systems of Linear Equations In Two Variables or qualifying placement score.

MTT 1 - Module 7 Rational Expressions and Equations

Credits: 1

Includes simplifying rational algebraic expressions, solving rational algebraic equations and solving applications that use rational algebraic equations. Credit is not applicable toward graduation.

Lecture 1 hour per week.
Prerequisite: MTT 1 - Module 6 Exponents, Factoring and Polynomial Equations or qualifying placement score.

MTT 1 - Module 8 Rational Exponents and Radicals

Credits: 1

Includes simplifying radical expressions, using rational exponents, solving radical equations and solving applications using radical equations. Credit is not applicable toward graduation.

Lecture 1 hour per week.
Prerequisite: MTT 1 - Module 7 Rational Expressions and Equations or qualifying placement score.

MTT 1 - Module 9 Functions, Quadratic Equations and Parabolas

Credits: 1

Includes an introduction to functions in ordered pair, graph, and equation form. Also introduces quadratic functions, their properties and their graphs. Credit is not applicable toward graduation.

Lecture 1 hour per week.
Prerequisite: MTT 1 - Module 8 Rational Exponents and Radicals or qualifying placement score.

Mathematics

MTH 111 - Basic Technical Mathematics

Credits: 3

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 per week.
Prerequisite: MTT 1 - Module 1 Operations With Positive Fractions-MTT 1 - Module 3 Algebra Basics or corequisite: MCR 1.

MTH 130 - Fundamentals of Reasoning

Credits: 3

Presents elementary concepts of algebra, linear graphing, financial literacy, descriptive statistics, and measurement & geometry. Based on college programs being supported by this course, colleges may opt to add additional topics such as logic or trigonometry. This course is intended for occupational/technical programs.

Lecture 3 hours per week.
Prerequisite: Competency in MTT 1 - Module 1 Operations With Positive Fractions-MTT 1 - Module 3 Algebra Basics as demonstrated through placement or unit completion or equivalent or corequisite: MCR 2.

MTH 133 - Mathematics For Health Professions

Credits: 3

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 per week.
Prerequisite: Competency in MTT 1 - Module 1 Operations With Positive Fractions-MTT 1 - Module 3 Algebra Basics as demonstrated through placement or unit completion or equivalent or corequisite: MCR 9.

MTH 154 - Quantitative Reasoning

Credits: 3

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 per week.
Prerequisite: Competency in MTT 1 - Module 1 Operations With Positive Fractions-MTT 1 - Module 5 Linear Equations, Inequalities and Systems of Linear Equations In Two Variables as demonstrated through placement or unit completion or equivalent or corequisite: MCR 4.

MTH 155 - Statistical Reasoning

Credits: 3

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 per week.
Prerequisite: Competency in MTT 1 - Module 1 Operations With Positive Fractions-MTT 1 - Module 5 Linear Equations, Inequalities and Systems of Linear Equations In Two Variables as demonstrated through placement or unit completion or equivalent or corequisite: MCR 5.

MTH 161 - Precalculus I

Credits: 3

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: Precalculus I and MTH 167 - Precalculus With Trigonometry or equivalent. This is a Passport Transfer course.
* MTH 161/162 and 167 should only be taken by students preparing for calculus or for four-year degree programs that require study in College Algebra/PreCalculus. Precalculus may not satisfy general education and may not receive transfer credit.

Lecture 3 hours per week.
Prerequisite: Competency in MTT 1 - Module 1 Operations With Positive Fractions-MTT 1 - Module 9 Functions, Quadratic Equations and Parabolas as demonstrated through placement or unit completion or equivalent or corequisite: MCR 6.

MTH 162 - Precalculus II

Credits: 3

Presents trigonometry, trigonometric applications including Law of Sines and Cosines and an introduction to conics. Credit will not be awarded for both MTH 162: Precalculus II and MTH 167 - Precalculus With Trigonometry or equivalent. This is a Passport Transfer course.
* MTH 161/162 and 167 should only be taken by students preparing for calculus or for four-year degree programs that require study in College Algebra/PreCalculus. Precalculus may not satisfy general education and may not receive transfer credit.

Lecture 3 hours per week.
Prerequisite: Placement or completion of MTH 161 - Precalculus I or equivalent with a grade of C or better.

MTH 167 - Precalculus With Trigonometry

Credits: 5

Presents topics in power, polynomial, rational, exponential, and logarithmic functions, systems of equations, trigonometry, and trigonometric applications, including Law of Sines and Cosines, and an introduction to conics. Credit will not be awarded for both MTH 167: Precalculus with Trigonometry and MTH 161/MTH 162: Precalculus I and II or equivalent. This is a Passport Transfer course.
* MTH 161/162 and 167 should only be taken by students preparing for calculus or for four-year degree programs that require study in College Algebra/PreCalculus. Precalculus may not satisfy general education and may not receive transfer credit.

Lecture 5 hours.

Total 5 hours per week.
Prerequisite: Competency in MTT 1 - Module 1 Operations With Positive Fractions-MTT 1 - Module 9 Functions, Quadratic Equations and Parabolas as demonstrated through placement or unit completion or equivalent or corequisite: MCR 7.

MTH 245 - Statistics I

Credits: 3

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 per week.
Prerequisite: Completion of MTH 154 or MTH 161 or equivalent with a grade of C or better.

MTH 261 - Applied Calculus I

Credits: 3

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 per week.
Prerequisite: Completion of MTH 161 or equivalent with a grade of C or better.

MTH 263 - Calculus I

Credits: 4

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 per week.
Prerequisite: Completion of MTH 167 or MTH 161/MTH 162 or equivalent with a grade of C or better.

MTH 264 - Calculus II

Credits: 4

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 per week.
Prerequisite: Completion of MTH 263 or equivalent with a grade of C or better.

MTH 265 - Calculus III

Credits: 4

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 per week.
Prerequisite: Completion of MTH 264 - Calculus II or equivalent with a grade of C or better.

MTH 266 - Linear Algebra

Credits: 3

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 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.

Mathematics Corequisite

MCR 1 - Learning Support For Basic Technical Mathematics

Credits: 2

Provides mathematical instruction for students who require minimum preparation for college-level but still need further preparation to succeed. Students in this course will be co-enrolled in college-level Basic Technical Mathematics. Credits not applicable toward graduation and do not replace MTT courses waived. Successful completion of Basic Technical Mathematics results in the prerequisite MTT being satisfied.

Lecture 2 hours per week.
Prerequisites: Completion of any one of the MTT 1 - Module 1 Operations With Positive Fractions-MTT 1 - Module 3 Algebra Basics. Corequisite: MTH 111.

MCR 2 - Learning Support For Fundamentals of Reasoning

Credits: 2

Provides mathematical instruction for students who require minimum preparation for college-level but still need further preparation to succeed. Students in this course will be co-enrolled in college-level Fundamentals of Reasoning. Credits not applicable toward graduation and do not replace MTT courses waived. Successful completion of Fundamentals of Reasoning results in the prerequisite MTT being satisfied.

Lecture 2 hours per week.
Prerequisite: Completion of any one of the MTT 1 - Module 1 Operations With Positive Fractions-MTT 1 - Module 3 Algebra Basics. Corequisite: MTH 130.

MCR 4 - Learning Support For Quant Reasoning

Credits: 2

Provides instruction for students who require minimum preparation for college-level Quantitative Reasoning. Students in this course will be co-enrolled in MTH 154. Credits are not applicable toward graduation and do not replace MTT courses waived. Successful completion of Quantitative Reasoning results in the prerequisite MTT being satisfied.

Lecture 2 hours per week.
Prerequisite: Completion of any three of the MTT 1 - Module 1 Operations With Positive Fractions-MTT 1 - Module 5 Linear Equations, Inequalities and Systems of Linear Equations In Two Variables and corequisite: MTH 154 - Quantitative Reasoning.

MCR 5 - Learning Support For Statistical Reasoning

Credits: 2

Provides instruction for students who require minimum preparation for college-level Statistical Reasoning. Students in this course will be co-enrolled in MTH 155. Credits not applicable toward graduation and do not replace MTT courses waived. Successful completion of Statistical Reasoning results in the prerequisite MTT being satisfied.

Lecture 2 hours per week.
Prerequisite: Completion of any three of the MTT 1 - Module 1 Operations With Positive Fractions-MTT 1 - Module 5 Linear Equations, Inequalities and Systems of Linear Equations In Two Variables and corequisite: MTH 155 - Statistical Reasoning.

MCR 6 - Learning Support For Precalculus I

Credits: 2

Provides instruction for students who require minimum preparation for college-level Precalculus. Students in this course will be co-enrolled in MTH 161. Credits not applicable toward graduation and do not replace MTT courses waived. Successful completion of Precalculus I results in the prerequisite MTT being satisfied.

Lecture 2 hours per week.
Prerequisite: Completion of any seven of the MTT 1 - Module 1 Operations With Positive Fractions-MTT 1 - Module 9 Functions, Quadratic Equations and Parabolas and corequisite: MTH 161 - Precalculus I.

MCR 7 - Learning Support For Precalculus With Trigonometry

Credits: 2

Provides instruction for students who require minimum preparation for college-level Precalculus but still need further preparation to succeed. Students in this course will be co-enrolled in MTH 167. Credits not applicable toward graduation and do not replace MTT courses waived. Successful completion of Precalculus w/ Trig results in the prerequisite MTT being satisfied.

Lecture 2 hours per week.
Prerequisite: Completion of any seven of the MTT 1 - Module 1 Operations With Positive Fractions-MTT 1 - Module 9 Functions, Quadratic Equations and Parabolas and corequisite: MTH 167 - Precalculus With Trigonometry.

MCR 9 - Learning Support In Mathematics For Health Professions

Credits: 2

Provides mathematical instruction for students who require minimum preparation for college-level but still need further preparation to succeed. Students in this course will be co-enrolled in college-level Mathematics for Health Professions. Credits not applicable toward graduation and do not replace MTT courses waived. Successful completion of Mathematics for Health Professions results in the prerequisite MTT being satisfied.

Lecture 2 hours per week.
Prerequisite: Completion of any one of the MTT 1 - Module 1 Operations With Positive Fractions-MTT 1 - Module 3 Algebra Basics. Corequisite: MTH 133.

Mechanical Engineering Technology

MEC 112 - Processes of Industry

Credits: 3

Analyzes the processes of manufacturing products from materials for industry/engineering. Includes machining, casting, forming, molding, hot/cold working, chipless machining, and welding. Addresses quality assurance and inspection procedures.

Lecture 3 hours per week.

MEC 119 - Introduction to Basic CNC and CAM

Credits: 3

Teaches the basic concepts of Computer Numerical Control (CNC) programming of Numerical Control Machinery with emphasis on Computer Aided Manufacturing (CAM)/Computer Aided Drafting (CAD). Program writing procedures will be based on using the following: basic G-code programming language for CNC machinery, CAD/CAM programming systems to produce correct code for CNC Machinery, basic computer usage, CAD/CAM integration, and code-to-machine transfer via Distributive Numeric Control (DNC).

Lecture 2 hours. Laboratory 2 hours.
Total 4 hours per week.

MEC 140 - Introduction to Mechatronics

Credits: 3

Presents foundational concepts in mechatronics including analog and digital electronics, sensors, actuators, microprocessors, and microprocessor interfacing to electro-mechanical systems. Surveys components and measurement equipment used in the design, installation, and repair of mechatronic equipment and circuits.

Lecture 2 hours. Laboratory 2 hours.
Total 4 hours per week.

MEC 155 - Mechanisms

Credits: 3

Studies the purpose and actions of CAMS, gear trains, levers, and other mechanical devices used to transmit control. Focuses on motions, linkages, velocities, and acceleration of points within a link mechanism, layout method for designing cams and gear grain. Requires preparation of weekly laboratory reports.

Lecture 2 hours. Laboratory 2 hours.
Total 4 hours per week.

MEC 165 - Applied Hydraulics, Pneumatics and Hydrostatics

Credits: 3

Teaches fluid power system design, operation, testing, maintenance and repair. Includes reservoirs, pump connecting valves, cylinders, pressure regulating valves, flow control valves, hydraulic motors, and introduction to basic hydrostatic hydraulic systems.

Lecture 2 hours. Laboratory 3 hours.
Total 5 hours per week.
Prerequisite: MEC 140 or ETR 140 .

MEC 290 - Coordinated Internship

Credits: 2

Supervises on-the-job training in selected business, industrial or service firms coordinated by the college.

Media Technology

MET 293 - Studies In

Credits: 3

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. Variable hours per week. 1-5 credits.

Prerequisite: ENF 3 or ENG 111 corequisite.

MET 295 - Topics In

Credits: 3

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 per week. 1-5 credits.

Prerequisite: ENF 3 or ENG 111 corequisite.

Motorsports Management and Technology

MTS 95 - Topics In Motorsports

Credits: 3

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.

MTS 100 - Introduction to Motorsports Management

Credits: 3

Provides a survey of the motorsports industry. Includes history, growth, and economic impact of motorsports. Includes sanctioning organizations, classification and characteristics of vehicles, related to businesses and industries, financial issues, career opportunities, and other motorsports-related topics.

Lecture 3 hours per week.
Prerequisite: ENF 3 or ENG 111 co-requisite. Corequisite: MTS 95.

MTS 110 - Introduction to Motorsports Marketing

Credits: 3

Provides an overview of the principles of marketing goods and services related to the motorsports industry. Includes motorsports promotion, motorsports products, media impact, use of technology in motorsports marketing, motorsports sponsors, hospitality management, public relations, and other topics related to motorsports marketing.

Lecture 3 hours per week.
Prerequisite: ENF 3 or ENG 111 corequisite. Corequisite: MTS 95.

MTS 120 - Introduction to Motorsports Technology

Credits: 3

Introduces the student to a survey of the Motorsports Industry. Explores the student to a broad overview of the industry, terminology and technology associated with developing a competition racecar.

Lecture 3 hours per week.

MTS 125 - Motorsports Technology I

Credits: 3

Introduces the student to the various systems of the racecar. Focuses on the inter-related functions and the theoretical concepts of the high performance race engine. Emphasizes hands-on skills with identification and installation of component parts of a race engine.

Lecture 2 hours. Laboratory 2 hours.
Total 4 hours per week.
Prerequisite: MTS 120.

MTS 126 - Motorsports Technology II

Credits: 3

Introduces the student to charging, ignition systems and fuel systems of Stock Car racing. Provides hands- on experience with specialized ignition systems, charging systems, fuel cells, fuel delivery, carburetion, and backup systems.

Lecture 2 hours. Laboratory 2 hours.
Total 4 hours per week.
Prerequisite: All developmental English requirements met, MTT 1 - Module 1 Operations With Positive Fractions-MTT 1 - Module 3 Algebra Basics, MTH 111, and MTS 125 . Corequisite: MTS 95 and PHY 131.

MTS 130 - Motorsports Structural Technology I

Credits: 3

Introduces the student to the basic design and fabrication of a racecar. Develops skills for use of the tools, equipment, and materials in the production of a racecar. Emphasizes safety, accuracy, and aesthetics of the racecar and the work environment.

Lecture 2 hours. Laboratory 2 hours.
Total 4 hours per week.

MTS 131 - Motorsports Structural Technology II

Credits: 3

Introduces the student to the design and fabrication of a roll cage. Develops skills in the use of tools, equipment, and materials selection to bend, form, and fabricate the primary structural safety component. Emphasizes NASCAR and other sanctioning bodies' specifications.

Lecture 1 hour. Laboratory 4 hours.
Total 5 hours per week.
Prerequisite: MTH 130. Corequisite: MTS 95.

MTS 132 - Motorsports Structural Technology III

Credits: 3

Introduces the student to the design and fabrication of body parts. Develops skills in the use of tools, equipment, and materials selection to bend, form, and fabricate the primary structural safety component. Emphasizes NASCAR and other sanctioning bodies' specifications.

Lecture 1 hour. Laboratory 4 hours.
Total 5 hours per week.
Prerequisite: MTS 130 and MTS 131. Corequisite: MTS 95.

MTS 135 - Sheet Metal Fabrication

Credits: 3

Introduces sheet metal terminology, fabrication, and installation for covering structural framework of race cars. Provides project oriented, problem-based experiences with equipment and machinery used in the Motorsports Industry.

Lecture 2 hours. Laboratory 2 hours.
Total 4 hours per week.

MTS 140 - Stock Car Engines I

Credits: 3

Provides a comprehensive study concerning all areas of race engines including cylinder block configuration and classification. Covers principles of race engine operation and subsystems. Included are lubrication systems (both wet and dry sump) and specialized cooling systems.

Lecture 2 hours. Laboratory 2 hours.
Total 4 hours per week.
Prerequisites: All developmental English requirements met, and MTH 111 or MTH 161. Corequisite: MTS 95 and PHY 131.

MTS 150 - Engine Machining Processes I

Credits: 4

Introduces general machining techniques and practices relating to engines and fabrication of Stock Car engine parts. Includes applied mathematics operations found in machining race engines.

Lecture 2 hours. Laboratory 4 hours.

Total 6 hours per week.

MTS 195 - High Performance Engine Induction Systems

Credits: 3

Introduces the concepts and practices of modification in the upper engine systems. Includes carburetion, cylinder heads, intake manifold, valves, and components that supply gas and air to the engine. Hands on experiences will reinforce the research and development stages of the high performance engine horsepower output development.

Lecture 2 hours. Laboratory 2 hours.
Total 4 hours per week.

MTS 205 - Motorsports Safety, Environmental, and Transport Issues

Credits: 3

Provides an overview of the safety, environmental, and transportation issues related to the motorsports industry. Includes workplace regulations; materials handling; transport of vehicles and other equipment; moving complex operations; housing of personnel; DOT regulations; and other issues related to the safety, environment, and transport in the motorsports industry.

Lecture 3 hours per week.
Prerequisites: ENF 3 or ENG 111 corequisite. Corequisite: MTS 95.

MTS 210 - Race Car Setup I

Credits: 3

Introduces the student to basic chassis geometry. Develops skills to square the wheelbase, set ride heights, and establish proper weight distribution. Emphasizes teamwork, communication of settings, and accuracy in set up.

Lecture 2 hours. Laboratory 2 hours.
Total 4 hours per week.
Prerequisite: All Developmental English requirements met, MTT 1 - Module 1 Operations With Positive Fractions-MTT 1 - Module 3 Algebra Basics, MTS 131. Corequisite: MTS 95.

MTS 211 - Race Car Setup II

Credits: 3

Exposes the student to advanced racecar geometry. Develops skills to engage in on-track adjustments for top performance of the vehicle. Emphasizes application of skills on-site and under race conditions.

Lecture 1 hours. Laboratory 4 hours.
Total 5 hours per week.
Prerequisite: MTS 210. Corequisite: MTS 95.

MTS 240 - Stock Car Engines II

Credits: 3

Introduces the student to the engine short block assembly and proper machining of the cylinder block. Employs various machining techniques needed to bore final size, relieve pressure, and lighten the cylinder block for assembly.

Lecture 1 hour. Laboratory 4 hours.
Total 5 hours per week.
Prerequisites: MTS 140 and MTS 150. Corequisite: MTS 95.

MTS 241 - Stock Car Engines III

Credits: 3

Introduces the student to cylinder head machining and processes related to applications of racecar set-up and repair. Review processes performed in aluminum and cast iron head repair. Introduces stock car valve train flow characteristics and combustion chamber measurements.

Lecture 1 hour. Laboratory 4 hours.
Total 5 hours per week.
Prerequisite: MTS 240. Corequisite: MTS 95.

MTS 250 - Engine Machining Processes II

Credits: 3

Introduces the student to comprehensive machining techniques related to engine and fabrication processes of race engine parts. Demonstrates and performs modern CNC machining operations for race engines.

Lecture 1 hour. Laboratory 4 hours.
Total 5 hours per week.
Prerequisites: MTS 140 and MTS 150. Corequisite: MTS 95.

MTS 290 - Coordinated Internship

Credits: 2

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.

MTS 295 - Introduction to Pit Stop

Credits: 2

Introduces the student to the importance of health, wellness and safety procedures for increased performance and reliability in Pit Stop times. Focuses on the basics and speed of chassis adjustments, tire changing, jacking, and gas can process.

Lecture 3 hours per week.
Corequisite MTS 95.

MTS 295 - Machining and Welding

Credits: 3

Introduction to safety procedures, bench work, hand tools, precision measuring instruments, drill presses, cut-off saws, milling machines and lathes.

Lecture 3 hours per week.
Prerequisite: All Developmental English requirements met, and MTT 1 - Module 1 Operations With Positive Fractions-MTT 1 - Module 3 Algebra Basics. Corequisite: MTS 95.

MTS 298 - Dyno Engine Performance

Credits: 3

Introduces the comprehensive use of the Engine Dynamometer within the high performance environment. Includes advanced theory and applications for engine performance factors. Provides hands on experiences with working engines.

Lecture 2 hours. Laboratory 2 hours.
Total 4 hours per week.
Corequisite: MTS 95, MTS 240 and MTS 250.

MTS 298 - Project In Motorsports Marketing

Credits: 3

Builds on basic marketing and management principles by applying them to real world Motorsports projects. Students will apply marketing techniques to market Motorsports products and services.

Corequisite: MTS 95.

MTS 299 - Supervised Study

Credits: 1

Assigns problems for independent study incorporating previous instruction and supervised by the instructor.

Music

MUS 111 - Music Theory I

Credits: 4

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 112 - Music Theory II

Credits: 4

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 II of II.

Lecture 3 hours. Laboratory 2 hours.
Total 5 hours per week.
Prerequisite: A placement of ENF 3 or ENG 111 corequisite.

MUS 121 - Music Appreciation I

Credits: 3

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. Part I of II.

Lecture 3 hours per week.
Prerequisite: ENF 3 or ENG 111 corequisite.

MUS 135 - Jazz Ensemble

Credits: 1

Consists of performance from Standard Jazz and American Songbook Repertoires, including study of ensemble techniques, interpretation, and improvisation. Divisional approval required. May be repeated for credit.

Laboratory 3 hours per week.
Prerequisite: ENF 3 or ENG 111 corequisite.

MUS 136 - Applied Music-Voice

Credits: 1

Teaches singing, proper breath control, diction, and development of tone. Studies the standard vocal repertoire.

Laboratory 4 hours per week.
Prerequisite: ENF 3 or ENG 111 corequisite.

MUS 137 - Chorus Ensemble

Credits: 1

Ensemble consists of performance from the standard repertoires, including study of ensemble techniques and interpretation. May be repeated for credit.

Laboratory 3 hours per week.
Prerequisite: ENF 3 or ENG 111 corequisite.

MUS 145 - Applied Music - Keyboard

Credits: 1

Teaches piano, organ, harpsichord, or synthesizer. Studies the standard repertoire.

Laboratory 4 hours per week.
Prerequisite: ENF 3 or ENG 111 corequisite.

MUS 149 - Band Ensemble

Credits: 1

Ensemble consists of performance from the standard repertoires, including study of ensemble techniques and interpretation. Divisional approval required. May be repeated for credit.

Laboratory 3 hours per week.
Prerequisite: ENF 3 or ENG 111 corequisite.

MUS 155 - Applied Music - Woodwinds

Credits: 1

Teaches fundamentals of the woodwind instruments. Studies the standard repertoire.

Laboratory 4 hours per week.
Prerequisite: ENF 3 or ENG 111 corequisite.

MUS 175 - Applied Music - Brass

Credits: 1

Teaches fundamentals of brass instruments. Studies the standard repertoire.

Laboratory 4 hours per week.
Prerequisite: ENF 3 or ENG 111 corequisite.

MUS 185 - Applied Music - Percussion

Credits: 1

Teaches fundamentals of percussion instruments. Studies the standard repertoire.

Laboratory 4 hours per week.
Prerequisite: ENF 3 or ENG 111 corequisite.

MUS 236 - Advanced Applied Music - Voice

Credits: 1

Continues MUS 136. Private lessons are available for either 1 or 2 hours of credit per semester. The length of the lessons will be 30 minutes for 1 hour credit and 1 hour for 2 hours credit per semester. All courses in applied music may be repeated for a total of 8 hours for the major and 4 hours for the minor.

Laboratory 2 hours per week.

Natural Science

NAS 150 - Human Biology

Credits: 4

Surveys the structure and function of the human body. Applies principally to students who are not majoring in the health or science fields.

Lecture 4 hours per week.
Prerequisite: ENF 3 or ENG 111 corequisite and one high school college prep level science class with no grade below C.

Nursing

NSG 100 - Introduction to Nursing Concepts

Credits: 4

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: Acceptance to nursing program; BIO 141. Corequisite: NSG 106, NSG 130, NSG 200, BIO 142, and HLT 105.

NSG 106 - Competencies For Nursing Practice

Credits: 2

Focuses on the application of concepts through clinical skill development. Emphasizes the use of clinical judgement 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 1 hour. Laboratory 3 hours.
Total 4 hours a week.
Prerequisite: BIO 141. Corequisite: NSG 100, NSG 130, NSG 200, BIO 142 and HLT 105.

NSG 115 - Healthcare Concepts For Transition

Credits: 4

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 hours.
Total 6 hours per week.
Prerequisite: BIO 141 & BIO 142, ENG 111, PSY 230, CST 110, SDV 108; Acceptance to the Transition Program; Corequisites: NSG 200 - Health Promotion and Assessment; BIO 205, Microbiology and HLT 105 Cardiopulmonary Resuscitation.

NSG 130 - Professional Nursing Concepts

Credits: 1

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: BIO 141. Corequisite: NSG 100, NSG 106, NSG 200, BIO 142, and HLT 105.

NSG 152 - Health Care Participant

Credits: 3

Focuses on the health and wellness of diverse families, individuals 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: BIO 142, NSG 100, NSG 106, NSG 130, NSG 200. Corequisite: NSG 170 and BIO 205.

NSG 170 - Health/Illness Concepts

Credits: 6

Focuses on the nursing care of individuals and/or families throughout the lifespan with an emphais on health and illness concepts. Includes concepts of nursing care for the antepartum client and clients with common and predictable illnesses. Provides supervised learning experiences in college nursing laboratories, clinical or community settings, and/or simulated environments.

Lecture 4 hours, Laboratory 6 hours.
Total 10 hours per week.
Prerequisite: BIO 142, NSG 100, NSG 106, NSG 130 and NSG 200 . Corequisite: NSG 152 and BIO 205.

NSG 200 - Health Promotion and Assessment

Credits: 3

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/communities settings, and/or simulated environments.

Lecture 2 hours. Laboratory 3 hours.
Total 5 hours per week.
Prerequisite: BIO 141. Corequisite: NSG 100, NSG 106, NSG 130, BIO 142, and HLT 105.

NSG 210 - Health Care Concepts I

Credits: 5

Focuses on care of clients across the lifespan in multiple settings including concepts related to physiological health alterations and reproduction. Emphasizes the nursing process in the development of clinical judgement for clients with multiple needs. Provides supervised learning experiences in college nursing laboratories, clincial/community settings, and/or simulated environments.

Lecture 3 hours. Laboratory 6 hours.

Total 9 hours per week.
Prerequisite: BIO 205, NSG 152, NSG 170. Corequisite: NSG 211 and SOC 200.

NSG 211 - Health Care Concepts II

Credits: 5

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 judgement for clients with multiple needs. Provides supervised learning experiences in college nursing laboratories, clinical/community settings and/or simulated environments.

Lecture 3 hours. Laboratory 6 hours.
Total 9 hours per week.
Prerequisite: NSG 152, NSG 170 and BIO 205. Corequisite: NSG 210 and SOC 200.

NSG 230 - Advanced Professional Nursing Concepts

Credits: 2

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 per week.
Prerequisite: NSG 210, NSG 211 and SOC 200. Corequisite: NSG 252, NSG 270, and HUM EEE.

NSG 252 - Complex Health Concepts

Credits: 4

Focuses on nursing care of diverse individuals and families integrating complex health concepts. Emphasizes clinical judgement, patient-centered care and collaboration.

Lecture 4 hours per week.
Prerequisite: NSG 210, NSG 211 and SOC 200. Corequisite: NSG 230, NSG 270, HUM EEE.

NSG 270 - Nursing Capstone

Credits: 4

Provides students 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 judgement, 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, clincial/community settings, and/or simulated environments.

Laboratory 12 hours per week.
Prerequisite: NSG 210, NSG 211, and SOC 200. Corequisite: NSG 230, NSG 252, and HUM EEE.

NUR 21 - Nurse Aide Clinical Expereince

Credits: 1

Provides guided nurse aide experiences for practicing skills in the clinical setting. Applies fundamental principles of basic nurse aide care.

Laboratory 3 hours per week.
Prerequisite ENF 1, NUR 27.

NUR 27 - Nurse Aide I

Credits: 5

Teaches care of older patients with emphasis on the social, emotional, and spiritual needs. Covers procedures; communication and interpersonal relations; observation, charting and reporting; safety and infection control; anatomy and physiology; personal care, nutrition and patient feeding; death and dying. May include laboratory or clinical hours.

Lecture 4 hours. Laboratory 3 hours.
Total 7 hours per week.
Prerequisite ENF 1.

NUR 135 - Drug Dosage Calculations

Credits: 2

Focuses on apothecary, metric, household conversion in medication dosage calculation for adult and pediatric clients. Provides a practical ap-

proach to learning to calculate and prepare medications and solutions. Includes calculating intravenous flow rates.

Lecture 2 hours per week.
Prerequisite: MTT 1 - Module 1 Operations With Positive Fractions-MTT 1 - Module 3 Algebra Basics

Physical Education and Recreation

PED 101 - Fundamentals of Physical Activity I

Credits: 1

Presents principles underlying the components of physical fitness. Utilizes conditioning activities involving cardiovascular strength and endurance, respiratory efficiency, muscular strength, and flexibility. May include fitness assessment, nutrition and weight control information, and concepts of wellness. Part I of II.

Lecture 0 hours. Laboratory 2 hours.
Total 2 hours per week.

PED 102 - Fundamentals of Physical Activity II

Credits: 1

Presents principles underlying the components of physical fitness. Utilizes conditioning activities involving cardiovascular strength and endurance, respiratory efficiency, muscular strength, and flexibility. May include fitness assessment, nutrition and weight control information, and concepts of wellness. Part II of II

Lecture 0 hours. Laboratory 2 hours.
Total 2 hours per week.
Prerequisite: PED 101.

PED 103 - Aerobic Fitness I

Credits: 1

Develops cardiovascular fitness though activities designed to elevate and sustain heart rates appropriate to age and physical condition. Part I of II.

Lecture 0 hours. Laboratory 2 hours.
Total 2 hours per week.

PED 104 - Aerobic Fitness II

Credits: 1

Develops cardiovascular fitness though activities designed to elevate and sustain heart rates appropriate to age and physical condition. Part II of II.

Lecture 0 hours. Laboratory 2 hours.
Total 2 hours per week.

PED 105 - Aerobic Dance I

Credits: 1

Focuses on physical fitness through dance exercises. Emphasizes the development of cardiovascular endurance, muscular endurance, and flexibility. Part I of II.

Lecture 0 hours. Laboratory 2 hours.
Total 2 hours per week.

PED 107 - Exercise and Nutrition I

Credits: 1

Provides for the study and application of fitness and wellness and their relationship to a healthy lifestyle. Defines fitness and wellness, evaluates the student's level of fitness and wellness. Students will incorporate physical fitness and wellness into the course and daily living. A personal fitness/wellness plan is required for the 2 credit course. Part I of II.

Lecture 0 hours. Laboratory 2 hours.
Total 2 hours per week.

PED 108 - Exercise and Nutrition II

Credits: 1

Provides for the study and application of fitness and wellness and their relationship to a healthy lifestyle. Defines fitness and wellness, evaluates the student's level of fitness and wellness. Students will incorporate physical fitness and wellness into the course and daily living. A personal fitness/wellness plan is required for the 2 credit course. Part II of II.

Lecture 0 hours. Laboratory 2 hours.
Total 2 hours per week.

PED 109 - Yoga

Credits: 1

Focuses on the forms of yoga training emphasizing flexibility.

Lecture 0 hours. Laboratory 2 hours.
Total 2 hours per week.

PED 110 - Zumba

Credits: 1

Focuses on Latin rhythms, dance moves and techniques in Zumba. Utilizes physical activity, cardiovascular endurance, balance, coordination and flexibility as related to dance.

Lecture 0 hours. Laboratory 2 hours.
Total 2 hours per week.

PED 111 - Weight Training I

Credits: 1

Focuses on muscular strength and endurance training through individualized workout programs. Teaches appropriate use of weight training equipment. Part I of II.

Lecture 0 hours. Laboratory 2 hours.
Total 2 hours per week.

PED 112 - Weight Training II

Credits: 1-2

Focuses on muscular strength and endurance training through individualized workout programs. Teaches appropriate use of weight training equipment. Part II of II.

Lecture 0 hours. Laboratory 2 hours.
Total 2 hours per week.

PED 118 - Baseball Fundamentals I

Credits: 1

Enhances the mental and physical ability of students for playing the sport of baseball. Consists of units related to weight training, flexibility, fielding, throwing, hitting, pitching, and position play. Students will gain knowledge about the history of the sport and gain an understanding and respect for the game and its role in society.

Lecture 0 hours. Laboratory 2 hours.
Total 2 hours per week.

PED 119 - Baseball Fundamentals II

Credits: 1

Continues to enhance the mental and physical ability of students for playing the sport of baseball. Continues to teach the skills necessary to play the sport. Provides students with the opportunity to evaluate, train, and coach players in order to enhance others' playing abilities. Provides an understanding of the multiple processes involved in forming a baseball team.

Lecture 0 hours. Laboratory 2 hours.
Total 2 hours per week.

PED 120 - Yoga II

Credits: 1

Focuses on the forms of yoga training emphasizing flexibility.

Lecture 0 hours. Laboratory 2 hours.
Total 2 hours per week.
Prerequisite: PED 109.

PED 129 - Self-Defense

Credits: 1

Examines history, techniques, and movements associated with self- defense. Introduces the skills and methods of self- defense emphasizing mental and physical discipline.

Lecture 0 hours. Laboratory 2 hours.
Total 2 hours per week.

PED 133 - Golf I

Credits: 1

Teaches basic skills of golf, rules, etiquette, scoring, terminology, equipment selection and use, and strategy. Part I of II.

Lecture 0 hours. Laboratory 2 hours.
Total 2 hours per week.

PED 134 - Golf II

Credits: 1

Teaches basic skills of golf, rules, etiquette, scoring, terminology, equipment selection and use, and strategy. Part II of II.

Lecture 0 hours. Laboratory 2 hours.
Total 2 hours per week.

PED 137 - Martial Arts I

Credits: 1

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 hours. Laboratory 2 hours.
Total 2 hours per week.

PED 138 - Martial Arts II

Credits: 1

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 II of II.

Lecture 0 hours. Laboratory 2 hours.
Total 2 hours per week.

PED 150 - Soccer

Credits: 1

Emphasizes soccer skills and techniques, strategies, rules, equipment, and physical conditioning.

Lecture 0 hours. Laboratory 2 hours.
Total 2 hours per week.

PED 152 - Basketball

Credits: 1

Introduces basketball skills, techniques, rules, and strategies

Lecture 0 hours. Laboratory 2 hours.
Total 2 hours per week.

PED 154 - Volleyball

Credits: 1

Introduces skills, techniques, strategies, rules, and scoring.

Lecture 0 hours. Laboratory 2 hours.
Total 2 hours per week.

PED 156 - Softball

Credits: 1

Emphasizes softball skills, techniques, strategies, and rules.

Lecture 0 hours. Laboratory 2 hours.
Total 2 hours per week.

PED 157 - Soccer II

Credits: 1

Emphasizes advanced soccer skills and techniques, strategies, rules, equipment, and physical conditioning.

Lecture 0 hours. Laboratory 2 hours.
Total 2 hours per week.
Prerequisite: PED 150.

PED 206 - Sports Appreciation

Credits: 2

Focuses on the history, trends, rules, methods, strategy, and terminology of selected sports activities. Provides student awareness as a spectator and/or participant.

Lecture 2 hours per week.
Prerequisite: ENF 3 or ENG 111 corequisite.

PED 210 - Introduction to Physical Education and Health

Credits: 3

Provides an overview of the historical, philosophical, psychological, physiological, and sociological principles of health, physical education, and recreation.

Lecture 3 hours per week.
Prerequisite: ENF 3 or ENG 111 corequisite.

PED 220 - Adult Health and Development

Credits: 3

Provides direct application of the theories of aging and physical activity. Teaches techniques for developing appropriate individualized fitness and activity programs for older adults. Focuses on physical, social, and mental well-being. Includes assessment and evaluation of physical fitness principles, role of exercise in disease prevention, leadership skills and communication strategies.

Lecture 2 hours. Laboratory 2 hours.
Total 4 hours per week.
Prerequisite: ENF 3 or ENG 111 corequisite.

Philosophy

PHI 101 - Introduction to Philosophy I

Credits: 3

Introduces a broad spectrum of philosophical problems and perspectives with an emphasis on the systematic questioning of basic assumptions about meaning, knowledge, reality, and values. Part I of II.

Lecture 3 hours per week.
Prerequisite: ENF 3 or ENG 111 corequisite.

PHI 220 - Ethics

Credits: 3

Provides a systematic study of representative ethical systems.

Lecture 3 hours per week.
Prerequisite: ENF 3 or ENG 111 corequisite.

Physical Therapist Assistant

PTH 105 - Introduction to Physical Therapist Assisting

Credits: 2

Introduces the physical therapist assistant student to the field of physical therapy practice and develops basic patient care skills for application in the initial physical therapy clinical experience.

Lecture 1 hour. Laboratory 3 hours.
Total 4 hours per week.

PTH 110 - Medical Reporting

Credits: 1

Emphasizes the principles of medical reporting, including the ability to abstract pertinent information from actual medical records. Includes the writing of patient progress notes in standardized formats and medical terminology.

Lecture 1 hour per week.

PTH 115 - Kinesiology for the Physical Therapist Assistant

Credits: 4

Focuses on the relationship of specific joint structure and function, the role of individual muscles and groups of muscles and neurologic principles in both normal and pathological movement. The course includes a review of basic physics and biomechanical principles applied to human movement. Includes specific posture and gait analysis.

Lecture 2 hours. Laboratory 4 hours.
Total 6 hours per week.

PTH 121 - Therapeutic Procedures I

Credits: 5

Prepares the students to properly and safely administer basic physical therapy procedures utilized by physical therapist assistants. The procedures include therapeutic modalities. Procedures may include therapeutic exercise, electrotherapy and cardiopulmonary rehabilitation. Part I of II.

Lecture 3 hours. Laboratory 4 hours.
Total 7 hours per week.

PTH 122 - Therapeutic Procedures II

Credits: 5

Prepares the students to properly and safely administer basic physical therapy procedures utilized by physical therapist assistants. The procedures include therapeutic modalities. Procedures may include therapeutic exercise, electrotherapy and cardiopulmonary rehabilitation. Part II of II.

Lecture 3 hours. Laboratory 4 hours.
Total 7 hours per week.

PTH 131 - Clinical Education

Credits: 3

Provides supervised instruction in the delivery of physical therapy in one of various clinical settings. Emphasizes the practice of all therapeutic skills learned in the first year, including direct patient care skills and all forms of communication.

Laboratory 9 hours per week.

PTH 151 - Musculoskeletal Structure and Function

Credits: 4

Studies the human musculoskeletal system. Covers terms of position and movement, location and identification of specific bony landmarks, joint structure and design, ligaments, muscle origin, action and innervation, and emphasizes types of contraction.

Lecture 2 hours. Laboratory 4 hours.
Total 6 hours per week.

PTH 210 - Psychological Aspects of Therapy

Credits: 2

Focuses on the psychological reactions and sociological impact of illness and injury in clients and their families, and among health care givers who work with them. Examines individual self-identity and the nature of changing client/ therapist relationships across the life span.

Lecture 2 hours per week.

PTH 225 - Rehabilitation Procedures

Credits: 4

Focuses on treatment techniques typical of long term rehabilitation, e.g., the rehabilitation of congenital, neurological and disfigurement associated with chronic injury and disease.

Lecture 2 hours. Laboratory 4 hours.
Total 6 hours per week.

PTH 226 - Therapeutic Exercise

Credits: 4

Emphasizes the basic principles underlying different approaches to exercise including rationale for treatment and may include neurological treatments such a simple facilitation and inhibitory techniques and the teaching of home programs.

Lecture 2 hours. Laboratory 4 hours.
Total 6 hours per week.

PTH 227 - Pathological Conditions

Credits: 3

Presents specific pathologic conditions commonly seen in physical therapy. Emphasizes musculoskeletal and neurological system conditions, and all major body systems are represented.

Lecture 3 hours per week.

PTH 245 - Professional Issues

Credits: 3

Examines the health care delivery system with regard to the current practice environment, federal and state influences, laws, and regulations, practice guidelines and ethical considerations which affect the practice of physical therapy.

Lecture 3 hours per week.

PTH 251 - Clinical Practicum I

Credits: 3

Provides instruction in local health care facilities in the actual administration of physical therapy treatments under the supervision of licensed physical therapists. Provides experience in a variety of clinical settings. Part I of II.

Laboratory 15 hours per week.

PTH 252 - Clinical Practicum II

Credits: 4

Provides instruction in local health care facilities in the actual administration of physical therapy treatments under the supervision of licensed physical therapists. Provides experience in a variety of clinical settings. Part II of II.

Laboratory 16 hours per week.

PTH 255 - Seminar in Physical Therapy

Credits: 2

Includes preparation for licensing examination, specialized lectures, and preparation of a student project.

Lecture 2 hours per week.

Physics

PHY 131 - Applied Physics I

Credits: 3

Emphasizes applications of topics such as precision measurement, statics, dynamics, energy, momentum, properties of matter, heat, sound, optics, electricity and magnetism.

Lecture 2 hours. Laboratory 2 hours.
Total 4 hours per week.
Prerequisite: MTT 1 - Module 1 Operations With Positive Fractions-MTT 1 - Module 9 Functions, Quadratic Equations and Parabolas, ENF 3 or ENG 111 corequisite. Prerequisites high school algebra, geometry and trigonometry, or equivalent or divisional approval. Part I of II.

PHY 201 - General College Physics I

Credits: 4

Teaches fundamental principles of physics. Covers mechanics, thermodynamics, wave phenomena, electricity and magnetism, and selected topics in modern physics. Part I of II.

Lecture 3 hours. Laboratory 3 hours.
Total 6 hours per week.
Prerequisite: MTH 161, ENF 3 or ENG 111 corequisite.

PHY 202 - General College Physics II

Credits: 4

Teaches fundamental principles of physics. Covers mechanics, thermodynamics, wave phenomena, electricity and magnetism, and selected topics in modern physics. Part II of II.

Lecture 3 hours. Laboratory 3 hours.
Total 6 hours per week.
Prerequisite: PHY 201, MTH 161.

PHY 241 - University Physics I

Credits: 4

Teaches principles of classical and modern physics. Includes mechanics, wave phenomena, heat, electricity, magnetism, relativity, and nuclear physics. Part I of II.

Lecture 3 hours. Laboratory 3 hours.
Total 6 hours per week.
Prerequisite: MTH 173, MTH 273, or MTH 263 or divisional approval; and ENF 3 or ENG 111 corequisite.

PHY 242 - University Physics II

Credits: 4

Teaches principles of classical and modern physics. Includes mechanics, wave phenomena, heat, electricity, magnetism, relativity, and nuclear physics. Part II of II.

Lecture 3 hours. Laboratory 3 hours.
Total 6 hours per week.
Prerequisites for PHY 241: MTH 263 or divisional approval. Prerequisite for PHY 242--MTH 174, MTH 274, MTH 263 or divisional approval.

Political Science

PLS 211 - U.S. Government I

Credits: 3

Teaches structure, operation, and process of national, state, and local governments. Includes the in-depth study of the three branches of the government and of public policy. Part I of II. This is a Passport Transfer course.

Lecture 3 hours per week.
Prerequisite: Placement of ENF 3 or ENG 111 corequisite. May be taken out of sequence.

PLS 212 - U.S. Government I

Credits: 3

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. Part II of II.

Lecture 3 hours per week.
Prerequisite: ENF 3 or ENG 111 corequisite. May be taken out of sequence.

Practical Nursing

PNE 141 - Nursing Skills I

Credits: 2

Studies principles and procedures essential to the basic nursing care of patients. Part I of II.

Lecture 1 hour per week. Laboratory 3 hours per week.
Total 4 hours per week.
Corequisites: NAS 150, NUR 135, & PNE 161. Must be accepted to the PN Program.

PNE 142 - Nursing Skills II

Credits: 2

Studies principles and procedures essential to the basic nursing care of patients. Part II of II.

Lecture 1 hour per week. Lab 3 hours per week.
Total 4 hours per week.
Corequisite: NAS 150, NUR 135, & PNE 161, HLT 141. Must be accepted to the PN Program.

PNE 145 - Trends In Practical Nursing

Credits: 1

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.
Prerequisite: PNE 163. Corequisite: PNE 164, PNE 158.

PNE 158 - Mental Health and Psychiatric Nursing

Credits: 2

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 2 hours per week.
Corequisite: PNE 164, PNE 145.

PNE 161 - Nursing In Health Changes I

Credits: 6

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 163 - Nursing In Health Changes III

Credits: 8

Continues the focus on nursing situations and procedures necessary to assist individuals in meeting special needs related to human functions.

Lecture 4 hours. Laboratory 12 hours.
Total 16 hours per week.

Prerequisite: PNE 161, PNE 141, PNE 142, NAS 150. Corequisite: PSY 230, PNE 173. Must be accepted to the PN Program.

PNE 164 - Nursing In Health Changes IV

Credits: 11

Continues the focus on nursing situations and procedures necessary to assist individuals in meeting special needs related to human functions.

Lecture 6 hours. Laboratory 15 hours.
Total 21 hours per week.
Corequisite: PNE 158, PNE 145

PNE 173 - Pharmacology For Practical Nurses

Credits: 2

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 2 hours per week.
Corequisite: PNE 163.

Psychology

PSY 135 - Child Care Psychology

Credits: 3

Analyzes the development of the child from conception to adolescence with concentration on physical, cognitive, emotional, and social growth patterns. Includes theory, research, and practical applications. Provides background for careers involving continuous work with children.

Lecture 3 hours per week.
Prerequisite: ENF 3 or ENG 111 corequisite.

PSY 200 - Principles of Psychology

Credits: 3

Surveys the basic concepts of psychology. Covers the scientific study of behavior and mental processes, research methods and measurement, theoretical perspectives, and application. Includes biological bases of behavior, learning, social interactions, memory, and personality; and other topics such as sensation, perception, consciousness, thinking, intelligence, language, motivation, emotion, health, development, psychological disorders, and therapy. this is a Passport Transfer course.

Lecture 3 hours per week.
Prerequisites: Readiness to enroll in ENG 111 required.

PSY 215 - Abnormal Psychology

Credits: 3

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.

Lecture 3 hours per week.
Prerequisite: PSY 200

PSY 216 - Social Psychology

Credits: 3

Examines individuals in social contexts, their social roles, group processes and intergroup relations. Includes topics such as small group behavior, social behavior, social cognition, conformity, attitudes, and motivation.

Lecture 3 hours per week.
Prerequisite: PSY 200

PSY 219 - Cross-Cultural Psychology

Credits: 3

Investigates psychological principles from a cross-cultural perspective. Examines cultural basics for views of reality. Describes topics such as time, space, values, sex-roles, and human development in relation to culture.

Lecture 3 hours per week.
Prerequisite: PSY 200

PSY 230 - Developmental Psychology

Credits: 3

Studies the development of the individual from conception to death. Follows a life-span perspective on the developmental tasks of the person's physical, cognitive, and psychosocial growth.

Lecture 3 hours per week.
Prerequisite: ENF 3 or ENG 111 corequisite.

Religion

REL 200 - Survey of The Old Testament

Credits: 3

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.

Lecture 3 hours per week.
Prerequisite: ENG 111 or division approval.

REL 210 - Survey of The New Testament

Credits: 3

Surveys books of the New Testament, with special attention upon placing the writings within their historical and geographical setting.

Lecture 3 hours per week.
Prerequisite: ENG 111 or division approval.

REL 231 - Religions of The World I

Credits: 3

Studies religions of the world with attention to origin, history, and doctrine. Part I of II.

Lecture 3 hours per week.
Prerequisite: ENG 111 or division approval.

REL 232 - Religions of The World II

Credits: 3

Studies religions of the world with attention to origin, history, and doctrine. Part II of II.

Lecture 3 hours per week.
Prerequisite: ENG 111 or division approval.

Recreation and Parks

RPK 100 - Introduction to Recreation, Parks & Leisure Studies

Credits: 3

Includes history and philosophy of the Recreation and Parks movement. Discusses the theory of leisure and play. Analyzes leisure service delivery systems and career opportunities. Emphasizes the commercial, non-profit and public sectors, Armed Forces, therapeutic recreation as well as volunteer service.

Lecture 3 hours per week.
Prerequisite: ENG 111

RPK 141 - Leadership and Supervision

Credits: 3

Introduces leadership and supervision in the leisure services industry. Assesses leadership styles, traits and leadership theories and provides the opportunity for students to assess their own individual styles. Addresses group dynamics, conflict, and issues relating specifically to leadership of volunteers. Includes a leadership practicum.

Lecture 2 hours. Laboratory 2 hours.
Total 4 hours per week.
Prerequisite: ENF 3 or ENG 111 corequisite.

RPK 146 - Recreation Facilities Management & Design

Credits: 3

Introduces concepts of facilities planning, site analysis, planning and zoning strategies, and landscape design. Emphasizes the creation and maintenance of "people-space." Presents issues regarding community development, needs assessment, facility planning and design, geographic use patterns and demographics. Includes field experience.

Lecture 2 hours. Laboratory 2 hours.
Total 4 hours per week.
Prerequisite: ENF 3 or ENG 111 corequisite, and advanced standing.

RPK 152 - Sports First Aid & Safety

Credits: 1

Focuses on the introduction to first aid protocols causes, signs and symptoms of injury for coaches, injury prevention, preseason physicals, fitness screenings, and conditioning programs and return to play guidelines, injury prevention and risk management, as well as the design and implementation of a medical emergency plan.

Laboratory 2 hours per week.

RPK 180 - Youth Sports Administration

Credits: 3

Prepares coaching professionals to develop and implement emotionally and physically healthful youth sports programs. Includes an analysis of the youth sports program planning process including: philosophy development, learning styles and outcomes, managing parents and players, skills development, risk management, financial planning and strategic partnerships and sports event management.

Lecture 3 hours per week.

RPK 201 - Recreation and Parks Management

Credits: 3

Examines organization and management of recreation and park agencies. Discusses theories and principles of management, organizational behavior, budget preparation, hiring preparation, hiring practices and personnel management, documentation and presentation. Examines software specific to recreation facility and program management.

Lecture 3 hours per week.
Prerequisites: ENF 3 or ENG 111 corequisite.

RPK 210 - Principles and Psychology of Coaching

Credits: 3

Provides and analysis of volunteer coaching and the coaching profession planning process including; philosophy development, learning styles and outcomes, managing parents and players, skills development, risk management, financial planning, drugs and eating disorders in sport and physical training.

Lecture 2 hours. Laboratory 2 hours.
Total 4 hours per week.
Prerequisite: ENF 3 or ENG 111 corequisite.

RPK 265 - Risk Management

Credits: 3

Discusses the law and liability as they relate to the delivery of leisure services. Teaches practitioners legal principles necessary to analyze programs and facilities with respect to safety, emergency preparedness, and accident reporting protocols. Review hiring procedures, ADA compliance, national (CPSC, ASTM, OSHA) and professional standards (NRPA, ACA), certification and training standards (CPRP, CTRS), supervision and the role of maintenance and insurance. Uses case law and national compliance standards to illustrate legal principles.

Lecture 3 hours per week.
Prerequisite: ENF 3 or ENG 111 corequisite, and advanced standing.

Russian

RUS 101 - Beginning Russian I

Credits: 5

Develops the understanding, speaking, reading, and writing of Russian, and emphasizes the structure of the language. May include oral drill and practice. Part I of II.

Lecture 5 hours per week. May include one additional hour of oral practice per week.

RUS 102 - Beginning Russian II

Credits: 5

Develops the understanding, speaking, reading, and writing of Russian, and emphasizes the structure of the language. May include oral drill and practice. Part II of II.

Lecture 5 hours per week. May include one additional hour of oral practice per week.

Safety

SAF 126 - Principles of Industrial Safety

Credits: 3

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

Credits: 1

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.

Sociology

SOC 200 - Principles of Sociology

Credits: 3

Introduces fundamentals of social life. Presents significant research and theory in areas such as culture, social structure, socialization, deviance, social stratification, and social institutions.

Lecture 3 hours per week.
Prerequisites: ENF 3 or ENG 111 corequisite.

SOC 211 - Principles of Anthropology I

Credits: 3

Inquiries 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.

SOC 212 - Principles of Anthropology II

Credits: 3

Inquiries 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 II of II.

Lecture 3 hours per week.

SOC 245 - Sociology of Aging

Credits: 3

Introduces study of aging with special emphasis on later stages of the life cycle. Includes theories of aging, historical and comparative settings, social policy, and future trends of aging.

Lecture 3 hours per week.

SOC 268 - Social Problems

Credits: 3

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.

Lecture 3 hours per week.
Prerequisites: ENF 3 or ENG 111 corequisite, and instructor approval.

Spanish

SPA 101 - Beginning Spanish I

Credits: 4

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. Part I of II.

Lecture 4 hours per week. May include one additional hour of oral practice per week.
Prerequisite: ENF 3 or ENG 111 corequisite.

SPA 102 - Beginning Spanish II

Credits: 4

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. Part II of II.

Lecture 4 hours per week. May include one additional hour of oral practice per week.
Prerequisite: ENF 3 or ENG 111 corequisite.

SPA 103 - Basic Spoken Spanish I

Credits: 3

Teaches oral communication and introduces cultural mores and customs to students with no prior instruction in the language. Part I of II.

Lecture 3 hours per week.

SPA 104 - Basic Spoken Spanish II

Credits: 3

Teaches oral communication and introduces cultural mores and customs to students with no prior instruction in the language. Part II of II.

Lecture 3 hours per week.

SPA 163 - Spanish For Health Professionals I

Credits: 3

Introduces Spanish to those in the health sciences. Emphasizes oral communication and practical medical vocabulary. May include oral drill and practice. Part I of II.

Lecture 3 hours per week.

SPA 164 - Spanish For Health Professionals II

Credits: 3

Introduces Spanish to those in the health sciences. Emphasizes oral communication and practical medical vocabulary. May include oral drill and practice. Part II of II.

Lecture 3 hours per week.

SPA 201 - Intermediate Spanish

Credits: 4

Continues to develop understanding, speaking, reading, and writing skills. Part I of II.

Lecture 4 hours per week. May include one additional hour of oral practice per week.
Prerequisite: SPA 102 or equivalent.

SPA 202 - Intermediate Spanish

Credits: 4

Continues to develop understanding, speaking, reading, and writing skills. Part II of II.

Lecture 4 hours per week. May include one additional hour of oral practice per week.
Prerequisite: SPA 102 or equivalent.

Student Development

SDV 100 - College Success Skills

Credits: 1

Assists students in transition to colleges. Provides overviews of college policies, procedures, and curricular offerings. Encourages contacts with other students and staff. Assists students toward college success through information regarding effective study habits, career and academic planning, and other college resources available to students. Strongly recommended for beginning students.

Lecture 1 hour per week.

SDV 104 - Study Skills

Credits: 2

Assists students in planning strategies to overcome nonproductive study habits and in implementing positive study behaviors. Includes management, memory improvement, note taking, and test taking.

Lecture 2 hours per week.

SDV 106 - Preparation For Employment

Credits: 1

Provides experience in resume writing, preparation of applications, letters of application, and successfully preparing for and 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.

Lecture 1 hour per week.

SDV 107 - Career Education

Credits: 1

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 hour per week.

SDV 108 - College Survival Skills

Credits: 1

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.

Lecture 1 hour per week.
Corequisite: ENF 1.

SDV 199 - Supervised Study In Transfer Programs

Credits: 1

Provides experience in preparation of application of admission to senior institutions, exploring degrees and programs of study at the senior institutions, assessment of core competencies, and assistance with other needs such as housing, study habits, and financial aid when transitioning from the community college to the senior institution. Assists students in understanding differences in community college life and academics and

the senior institution.

Lecture 1 hour per week.
Prerequisite: ENG 111 and completion of 33 semester hours or more in a transfer program of study.

SDV 299 - Supervised Study

Credits: 1

Assigns problems for independent study incorporating previous instruction and supervised by the instructor.

Lecture 1 hour per week.

Welding

WEL 117 - Oxyfuel Welding and Cutting

Credits: 3

Introduces history of oxyacetylene welding, principles of welding and cutting, nomenclature of the equipment, development of the puddle, running flat beads, butt-welding in different positions. Also explains brazing, silver and soft soldering, and heat-treating of small tools, safety procedures in the use of tools and equipment.

Lecture 2 hours. Laboratory 3 hours.
Total 5 hours per week.

WEL 120 - Introduction to Welding

Credits: 3

Introduces history of welding processes. Covers types of equipment, and assembly of units. Stresses welding procedures such as fusion, non-fusion, and cutting oxyacetylene. Introduces arc welding and plasma arc cutting. Emphasizes procedures in the use of tools and equipment.

Lecture 2 hours. Laboratory 2 hours.
Total 4 hours per week.

WEL 123 - Shielded Metal Arc Welding (Basic)

Credits: 4

Teaches operation of AC and DC power sources, 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.

Lecture 2 hours. Laboratory 6 hours.
Total 8 hours per week.

WEL 124 - Shielded Metal Arc Welding (Advanced)

Credits: 4

Continues instruction on operation of AC and DC power sources, 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.

Lecture 2 hours. Laboratory 6 hours.
Total 8 hours per week.

WEL 126 - Pipe Welding I

Credits: 3

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 130 - Inert Gas Welding

Credits: 3

Introduces practical operations in the uses of inert-gas-shield arc welding. Discusses equipment, safety operations, welding practice in the various positions process applications, and manual and semi-automatic welding.

Lecture 2 hours. Laboratory 3 hours.
Total 5 hours per week.

WEL 135 - Inert Gas Welding

Credits: 2

Introduces practical operations in use of inert gas shielded arc welding. Studies equipment operation, setup, safety and practice of GMAW (MIG) and GTAW (TIG).

Lecture 1 hour. Laboratory 3 hours.
Total 4 hours per week.

WEL 141 - Welder Qualification Tests I

Credits: 3

Studies techniques and practices of testing welded joints through destructive and non-destructive tests. Part I of II.

Lecture 2 hours. Laboratory 3 hours.
Total 5 hours per week.

WEL 145 - Welding Metallurgy

Credits: 3

Studies steel classifications, heat treatment procedures, properties of ferrous and non- ferrous metals. Discusses techniques and practices of testing welded joints and destructive/ nondestructive, visual magnetic and fluorescent testing.

Lecture 2 hours. Laboratory 2 hours.
Total 4 hours per week.

WEL 150 - Welding Drawing and Interpretation

Credits: 3

Teaches fundamentals required for successful drafting as applied to the welding industry. Includes blueprint reading, geometric principles of drafting and freehand sketching, basic principles of orthographic projection, preparation of drawings and interpretation of symbols.

Lecture 2 hours per week.

WEL 160 - Gas Metal Arc Welding

Credits: 4

Introduces semi-automatic welding processes with emphasis on practical application. Includes the study of filler wires, fluxes, and gases.

Lecture 2 hours. Laboratory 4 hours.
Total 6 hours per week.

WEL 161 - Flux Cored Arc Welding (FCAW)

Credits: 3

Introduces flux cored semi-automatic 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 164 - Gas Tungsten Arc Welding (GTAW), Tungsten Inert Gas (TIG)

Credits: 3

Introduces practical operations in the use of tungsten arc welding and equipment. Studies equipment operation setup, safety, and practice of Gas Tungsten Arc Welding (GTAW), Tungsten Inert Gas (TIG).

Lecture 2 hours. Laboratory 3 hours.
Total 5 hours per week.

WEL 198 - Seminar and Project

Credits: 4

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.

Lab: 2 hours per week

WEL 237 - Applied Welding Process

Credits: 3

Studies advanced welding applications for various materials, advanced welding skills and fabrication equipment. Examines materials to be welded such as stainless steel and aluminum, choosing the proper welding process such as advanced Gas Tungsten Arc Welding (GTAW)-Aluminum, Gas Metal Arc Welding (GMAW)-Aluminum and Shielded Metal Arc Welding (SMAW), developing the appropriate welding procedure for the materials chosen and successfully completing a capstone project for the entire course of study

Lecture 2 hours. Laboratory 3 hours.
Total 5 hours per week.

WEL 241 - Robotic Programming

Credits: 2

Examines safety, setup, programming, and operation of a welding robot. Covers variables and problems in addition to solutions applied to provide a practical and efficient application of the Gas Metal Arc Welding (GMAW) process to an automated system. (Part I of II)

Lecture 1 hour, Laboratory 3 hours,
Total 2 hours per week.

WEL 242 - Robotic Welding

Credits: 2

Incorporates skills learned in Robotic Welding I into simulating projects used in industry. Focuses on Gas Metal Arc Welding (GMAW) processes used to create weldments taken from industry drawings and blueprints. (Part II of II)

Lecture 1 hour. Laboratory 3 hours.
Total 4 hours per week.
Pre-requsite: WEL 241

WEL 247 - Welding Layout and Fabrication

Credits: 2

Introduces student to project layout from shop sketches/blueprints, developing templates/patterns and the use of fabrication tools. Covers the safe operation of different types of manual metal fabrication equipment used in the industry. Examines safe and efficient use of the manual metal shear, metal roller, metal break and other fabrication. (Part I of II)

Lecture 1 hour. Laboratory 3 hours.
Total 4 hours per week.
Pre-requiste: WEL 150

WEL 298 - Seminar and Project

Credits: 2

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.

Lab 2 hours week

Other Courses

ART EEE - Art Elective
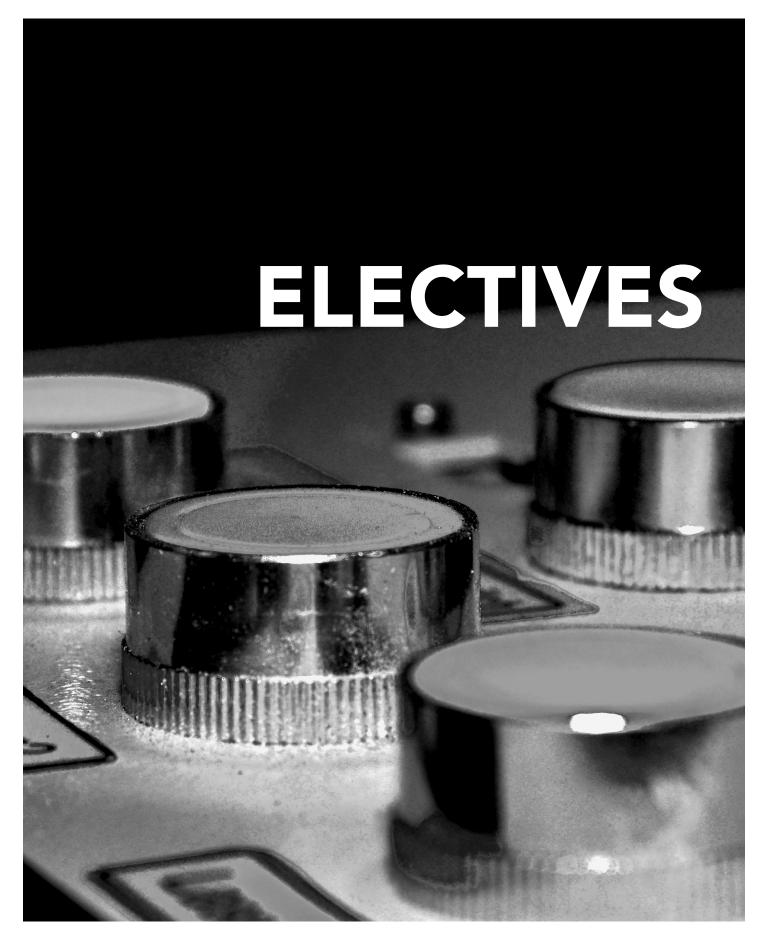
Credits: 3

Art Elective (3 credits)

HMS EEE - Human Services Elective

Credits: 3

Human Services Elective

ELECTIVES

Electives

Students should choose from among the following electives to complete their program of study requirements.

College Transfer Electives (EEE EEE)

Title		Credits
ACC 211	Accounting I	3.00
ACC 212	Accounting II	3.00
ARA 101	Beginning Arabic I	5.00
ARA 102	Beginning Arabic II	5.00
ART 101	History and Appreciation of Art I	3.00
ART 102	History and Appreciation of Art II	3.00
ART 121	Drawing I	3.00
ART 122	Drawing II	3.00
ART 241	Painting I	3.00
ART 242	Painting II	3.00
ART 283	Computer Graphics I	4.00
ART 284	Computer Graphics II	4.00
ASL 101	American Sign Language I	4.00
ASL 102	American Sign Language II	4.00
BIO 101	General Biology I	4.00
BIO 102	General Biology II	4.00
BIO 205	General Microbiology	4.00
BIO 141	Human Anatomy & Physiology I	4.00
BIO 142	Human Anatomy & Physiology II	4.00
CHI 101	Beginning Chinese I	5.00
CHI 102	Beginning Chinese II	5.00
CHM 110	Survey of Chemistry	3.00
CHM 111	College Chemistry I	4.00
CHM 112	College Chemistry II	4.00
CSC 200	Introduction to Computing	3.00
CSC 201	Computer Science I	4.00
CSC 202	Computer Science II	4.00
CSC 205	Computer Organization	3.00
CST 110	Introduction to Communications	3.00
CST 130	Introduction to the Theatre	3.00
CST 131	Acting I	3.00
CST 132	Acting II	3.00
CST 136	Theatre Workshop	3.00
CST 231	History of Theatre I	3.00
ECO 201	Principles of Macroeconomics	3.00
ECO 202	Principles of Microeconomics	3.00
EDU 200	Introduction to Teaching as a Profession	3.00
EDU 235	Health, Safety, and Nutritional Education	3.00
ENG 241	Survey of American Literature I	3.00
ENG 242	Survey of American Literature II	3.00
ENG 243	Survey of English Literature I	3.00
ENG 244	Survey English Literature II	3.00
ENG 250	Children's Literature	3.00
ENG 251	Survey of World Literature I	3.00
ENG 252	Survey of World Literature II	3.00
FIN 107	Personal Finance	3.00
FRE 101	Beginning French I	5.00
FRE 102	Beginning French II	5.00
GEO 210	People and the Land: Intro to Cultural Geography	3.00
GEO 225	Economic Geography	3.00
GER 101	Beginning German I	5.00
GER 102	Beginning German II	5.00
HIS 101	History of Western Civilization I	3.00
HIS 102	History of Western Civilization II	3.00
HIS 111	History of World Civilization I	3.00
HIS 112	History of World Civilization II	3.00
HIS 121	United States History I	3.00
HIS 122	United States History II	3.00
HLT 230	Principles of Nutrition & Human Development	3.00
HMS 100	Introduction to Human Services	3.00
HMS 195	Introduction to Developmental Disabilities	3.00
HMS 251	Substance Abuse I	3.00
ITE 115	Introduction to Computer Applications & Concepts	3.00
ITN 154	Network Fundamentals, Router Basics, and Configuration (ICND1) – CISCO	4.00
ITN 260	Network Security Basics	3.00
ITP 120	Java Programming I	4.00
ITP 220	Java Programming II	4.00
JPN 101	Beginning Japanese I	5.00
JPN102	Beginning Japanese II	5.00
MUS 111	Music Theory I	4.00
MUS 112	Music Theory II	4.00
MUS 121	Music Appreciation I	3.00
PHI 101	Introduction to Philosophy I	3.00
PHI 220	Ethics	3.00
PHY 201	General College Physics I	4.00
PHY 202	General College Physics II	4.00
PHY 241	University Physics I	4.00
PHY 242	University Physics II	4.00
PLS 211	U.S. Government I	3.00
PLS 212	U.S. Government II	3.00
PSY 200	Principles of Psychology	3.00
PSY 215	Abnormal Psychology	3.00
PSY 216	Social Psychology	3.00
PSY 219	Cross-Cultural Psychology	3.00
PSY 230	Developmental Psychology	3.00
REL 200	Survey of the Old Testament	3.00
REL 210	Survey of the New Testament	3.00
REL 231	Religions of the World I	3.00
REL 232	Religions of the World II	3.00
RUS 101	Beginning Russian I	5.00
RUS 102	Beginning Russian II	5.00
SOC 200	Principles of Sociology	3.00
SOC 245	Sociology of Aging	3.00
SOC 268	Social Problems	3.00
SPA 101	Beginning Spanish I	4.00
SPA 102	Beginning Spanish II	4.00

English Literature Electives (ENG EEE)

ENG 241	Survey of American Literature	3.00
ENG 242	Survey of American Literature II	3.00
ENG 243	Survey of English Literature I	3.00
ENG 244	Survey of English Literature II	3.00
ENG 250	Children's Literature	3.00
ENG 251	Survey of World Literature I	3.00
ENG 252	Survey of World Literature II	3.00

Humanities/Fine Arts Electives (HUM/FA EEE)

ART 101	History and Appreciation of Art I	3.00
ART 102	History and Appreciation of Art II	3.00
ART 121	Drawing I	3.00
ART 122	Drawing II	3.00
ART 241	Painting I	3.00
ART 242	Painting II	3.00
ART 283	Computer Graphics I	4.00
ART 284	Computer Graphics II	4.00
CST 130	Introduction to the Theatre	3.00
CST 131	Acting I	3.00
CST 132	Acting II	3.00
CST 136	Theatre Workshop	3.00
CST 231	History of Theatre I	3.00
ENG 241	Survey of American Literature I	3.00
ENG 242	Survey of American Literature II	3.00
ENG 243	Survey of English Literature I	3.00
ENG 244	Survey English Literature II	3.00
ENG 250	Children's Literature	3.00
ENG 251	Survey of World Literature I	3.00
ENG 252	Survey of World Literature II	3.00
MUS 111	Music Theory I	3.00
MUS 112	Music Theory II	3.00
MUS 121	Music Appreciation I	3.00
PHI 101	Introduction to Philosophy I	3.00
PHI 220	Ethics	3.00
REL 200	Survey of the Old Testament	3.00
REL 210	Survey of the New Testament	3.00
REL 231	Religions of the World I	3.00
REL 232	Religions of the World II	3.00

Information Technology Electives (ITE EEE)

CSC 201	Computer Science I	4.00
CSC 202	Computer Science II	4.00
CSC 205	Computer Organization	3.00
ITD 112	Web Page Graphics	3.00
ITD 210	Web Page Design II	3.00
ITN 155	Switching, Wireless, and WAN Technologies (ICND2) – Cisco	4.00
ITN 260	Network Security Basics	3.00
ITP 110	Visual Basic Programming	3.00
ITP 120	Java Programming I	4.00
ITP 220	Java Programming II	4.00

Natural Sciences Electives (NAS EEE)

BIO 101	General Biology I	4.00
BIO 102	General Biology II	4.00
BIO 141	Human Anatomy & Physiology I	4.00
BIO 142	Human Anatomy & Physiology II	4.00
BIO 205	General Microbiology	4.00
CHM 111	College Chemistry I	4.00
CHM 112	College Chemistry II	4.00
ENV 100	Basic Environmental Science	3.00
NAS 150	Human Biology	3.00
PHY 201	General College Physics I	4.00
PHY 202	General College Physics II	4.00
PHY 241	University Physics I	4.00
PHY 242	University Physics II	4.00

Mathematics Electives (MTH EEE)

MTH 111	Basic Technical Math	3.00
MTH 130	Fundamentals of Reasoning	3.00
MTH 133	Mathematics for Health Professions	3.00
MTH 154	Quantitative Reasoning	3.00
MTH 155	Statistical Reasoning	3.00
MTH 161	PreCalculus I	3.00
MTH 162	PreCalculus II	3.00
MTH 167	PreCalculus with Trig	5.00
MTH 245	Statistics I	3.00
MTH 261	Applied Calculus I	3.00
MTH 263	Calculus I	4.00
MTH 264	Calculus II	4.00
MTH 265	Calculus III	4.00
MTH 266	Linear Algebra	3.00

Social Sciences Electives (SOC EEE)

ECO 201	Principles of Macroeconomics	3.00
ECO 202	Principles of Microeconomics	3.00
GEO 210	People and the Land: Intro to Cultural Geography	3.00
HIS 101	History of Western Civilization I	3.00
HIS 102	History of Western Civilization II	3.00
HIS 121	United States History I	3.00
HIS 122	United States History II	3.00
PLS 211	U.S. Government I	3.00
PLS 212	U.S. Government II	3.00
PSY 200	Principles of Psychology	3.00
PSY 215	Abnormal Psychology	3.00
PSY 216	Social Psychology	3.00
PSY 219	Cross-Cultural Psychology	3.00
PSY 230	Developmental Psychology	3.00
SOC 200	Principles of Sociology	3.00
SOC 211	Principles of Anthropology I	3.00
SOC 212	Principles of Anthropology II	3.00
SOC 245	Sociology of Aging	3.00
SOC 268	Social Problems	3.00

Physical Education/Wellness Electives (PED EEE)

HLT 100	First Aid and Cardiopulmonary Resuscitation	2.00
HLT 105	Cardiopulmonary Resuscitation	1.00
HLT 106	First Aid and Safety	2.00

HLT 116	Introduction to Personal Wellness Concepts	3.00
HLT 141	Introduction to Medical Terminology	1.00
HLT 143	Medical Terminology	3.00
HLT 230	Principles of Nutrition and Human Development	3.00
HLT 250	General Pharmacology	3.00
PED 101	Fundamentals of Physical Activity I	1.00
PED 102	Fundamentals of Physical Activity II	1.00
PED 103	Aerobic Fitness I	1.00
PED 104	Aerobic Fitness II	1.00
PED 105	Aerobic Dance I	1.00
PED 107	Exercise and Nutrition I	1.00
PED 108	Exercise and Nutrition II	1.00
PED 110	Zumba	1.00
PED 111	Weight Training I	1.00
PED 112	Weight Training II	1.00
PED 118	Baseball Fundamentals I	1.00
PED 119	Baseball Fundamentals II	1.00
PED 120	Yoga II	1.00
PED 129	Self-Defense	1.00
PED 133	Golf I	1.00
PED 134	Golf II	1.00
PED 138	Martial Arts II	1.00
PED 150	Soccer	1.00
PED 152	Basketball	1.00
PED 156	Softball	1.00
PED 206	Sports Appreciation	2.00
PED 210	Introduction to Physical Education and Health	3.00
PED 220	Adult Health and Development	3.00