

# CAREER TECHNICAL EDUCATION PATHWAY: Applied Engineering- Manufacturing (C40130HM)



## Career & College Promise (CCP)

CCP provides opportunities for eligible NC high school students to take tuition-free, college courses for dual credit (some students may have to pay for textbooks and materials). Taking CCP courses accelerates completion of college certificates, diplomas, applied associate degrees that provide entry-level job skills, and associate degrees that lead to transfer within the UNC System of 4-year colleges and universities and many private institutions.

## General Admission Requirements

- College CCP Admissions Application
- High School Transcript
- Verification Form

## Applied Engineering (Manufacturing) Pathway

### Eligibility Requirements

- High School Junior or Senior
- Unweighted GPA of 2.8 or higher, **OR** demonstrate college readiness in English, reading and math on approved assessments.
- If GPA is below 2.8, principles/designees can waive the GPA and provide rationale for waiver.



## About the Applied Engineering (Manufacturing) Pathway:

This pathway is a set of courses that students can take to earn a certificate toward the Associate of Applied Science Applied Engineering Degree. These courses prepare students to use basic engineering principles and technical skills to solve technical problems in various types of industry.

## Annual Median Wage for NC Mechanical Engineering Technicians \$55,820

NCCareers.org

## You Will Learn:

- Adjusting, calibrating and repairing equipment for various businesses and industries
- Plant maintenance

## Possible Job Titles:

- Industrial Maintenance Technicians
- Industrial Machinery Repair Technician
- Control Technicians

## Possible Employment Opportunities:

- Industrial Plant Manufacturing Company
- Commercial Business

Applied Engineering (Manufacturing) Certificate				
Sem	Title	Class	Lab	Credit
FA/SP	ELC 117 Motors and Controls	2	6	4
FA/SP/SU	ELC 125 Diagrams and Schematics ( <i>strongly recommended as a foundation course</i> )	1	2	2
FA	HYD 110 Hyd./Pneumatics I	2	3	3
SU	ELC 128 Intro to PLC	2	3	3
FA/SP/SU	ISC 112 Industrial Safety	2	0	2
<b>Total Semester Hours Credit for Certificate</b>				<b>14</b>

\*ELC and HYD classes use simulated software and will require a Microsoft based PC (MAC and Chromebook will not work) for online students or to work outside class; open computer lab on campus may be loaded with required software if necessary

For more information, contact: **Trish Holsten, Secondary Partnerships Director**

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# CONNECTING HIGH SCHOOL, COLLEGE, AND CAREER



## High School (electives)

### High School

#### COMPLETE GRAD REQ:

- English (4), Math (4), Social Studies (4), Health/PE (1), Sciences (3), CCP electives

#### POSSIBLE HS ELECTIVES:

- Agricultural Mechanics I and II

## CCP Dual Enrollment (college/HS concurrently)

### Community College Appl Eng- manufacturing CCP Pathway

#### CCP JUNIOR AND SENIOR YEARS:

- Diagrams and Schematics
- Industrial Safety
- Motors and Controls
- Intro to PLC (programmable logic controller)
- Hydraulics/Pneumatics I

## After High School (post graduation)

### Community College Appl Engineering AAS Degree

#### GEN ED:

- English, Math, Psychology, Critical Thinking

#### APPLIED ENGINEERING CLASSES:

- Basic CAD
- Intro to Electricity
- Circuit Analysis I
- Intro to Automation
- Instrumentation
- PLC Applications
- Intro to Solid Modeling
- Applications Project
- Mechanisms
- Major Electives

#### ADDITIONAL REQUIRED CLASSES:

- College Student Success
- Intro to Computers

