

TECHNOLOGY STUDIES: MECHATRONICS AUTOMATION TECHNICIAN, AS

Program code: MTCH-AS-COT

Location: Quinebaug Valley

Program Description

As part of the Connecticut College of Technology (COT), the Technology Studies A.S. degree provides the knowledge and skills within specific high-demand technology fields. The program consists of lecture and lab course work in engineering, technology, industrial technology, mathematics, sciences, and foundational requirements that provide a solid comprehensive background for continuation in a four-year technology degree program or entry into the workforce. Upon completion of a Technology Studies A.S. degree, students can transfer to Central CT State University or the University of Hartford to complete designated B.S. degrees.

This program has an embedded Mechatronics Automation Technician Certificate.

Learning Outcomes

1. Apply mathematical, scientific and technological principles and concepts to identify and formulate solutions to technical problems.
2. Apply critical thinking and problem-solving skills to solve technical problems.
3. Demonstrate the ability to function on teams.
4. Recognize the need to engage in life-long learning.

Mechatronics Technology Learning Outcomes

1. Apply knowledge of theory and principles related to mechanics, electronics, computer science, and process control.
2. Apply critical thinking and problem-solving skills to troubleshoot electromechanical, hydraulic, and pneumatic automation systems.
3. Apply logical reasoning and mathematics to analysis of automation systems and their components.
4. Communicate technical information clearly.
5. Apply soft skills effectively to help gain employment and be successful in the workplace.
6. Understand and follow basic shop safety guidelines and protocol.

Degree Requirements

Code	Title	Credits
Technology Studies General Education Core		
ENG 1010	Composition	3
MATH 1610	Precalculus	4
ART Elective (course vetted for ARHX)		
CHEM 1110	Concepts of Chemistry	4
or CHEM 1210	General Chemistry I	
Elective HISX - Historical Knowledge Course or Elective SBSX course in ECON		
ENG 1080	Composition II: Technical Writing	3

or COMM 1301	Public Speaking	
CCS 1001	College and Career Success	3
Technology Studies Program Core		
PHYS 1201	General Physics I	4
or PHYS 2201	Calculus-Based Physics I	
Elective BHEL - Behavioral Science Elective - choose an ANTH, PSY or SOC course		
MATH 1200	Statistics I	3-4
or MATH 1201	Statistics I with Computer Applications	
Mechatronics Automation Technician Courses		
MFG 1330	Mathematics for Electricity and Electronics	3
MFG 1337	Circuit Theory	3
or MFG 1362	CNC Maintenance and Repair	
MFG 1338	Digital Fundamentals	3
MFG 1340	Robotics	3
MFG 1342	Electronic Circuits and Devices	3
MFG 1343	Industrial Motor Controls	3
MFG 1344	Hydraulics and Pneumatics	3
MFG 1345	Electronic Variable Speed Drive	3
MFG 1346	Programmable Logic Controllers	3
MFG 1359	Industrial Maintenance	3
MFG 1415	Safety in the Workplace	1

Total Credits **64-65**

- Technology Studies: Mechatronics Automation Technician Certificate