

# TECHNOLOGY STUDIES: WELDING AND FABRICATION TECHNOLOGIES, AS

**Program code:** WFBT-AS-COT

**Location:** Asnuntuck

## 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.

The CT State Asnuntuck Campus is an American Welding Society (AWS) Accredited Test Facility.

## 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.

## Welding and Fabrication Learning Outcomes

1. Gain detailed knowledge of welding principles as applied to modern manufacturing processes and applications.
2. Acquire the requisite advanced skills necessary to welding in today's technological environment.
3. Practice and adhere to shop safety rules as they pertain to industry standards.
4. Correctly and safely assemble, disassemble, and operate an oxyfuel cutting station.
5. Complete satisfactory welds using SMAW in the four standard welding positions (flat, horizontal, vertical, and overhead).
6. Read and interpret engineering drawings/blueprints.
7. Understand and apply the appropriate steps involved in fabricating a part from design, to layout, to finished product.
8. Show manual dexterity/competence in performing acceptable weldments applying basic metallurgical principles.
9. Prepare and weld coupons in accordance to various welding codes in preparation for certification.
10. Operate the appropriate tools and processes to successfully meet fabrication goals.
11. Select and use the appropriate welding specific metrology tools.
12. Apply arithmetic, algebraic, geometric, and trigonometric operations applied to the welding trade.

## Degree Requirements

Code	Title	Credits
<b>Technology Studies General Education Core</b>		
ENG 1010	Composition	3
MATH 1610	Precalculus	4
ART Elective (course vetted for ARHX)		3
CHEM 1110	Concepts of Chemistry	4
	or CHEM 1210	General Chemistry I
Elective HISX - Historical Knowledge Course or Elective SBSX course in ECON		3
ENG 1080	Composition II: Technical Writing	3
	or COMM 1301	Public Speaking
CCS 1001	College and Career Success	3
<b>Technology Studies Program Core</b>		
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		3
MATH 1200	Statistics I	3-4
	or MATH 1201	Statistics I with Computer Applications
<b>Welding &amp; Fabrication Courses</b>		
MFG 1020	Introduction to Welding	4
MFG 1050	Welding Theory I	3
MFG 1028	Blueprint Reading for Welders	3
MFG 1000	Math for Welders	3
MFG 1049	Introduction to Metal Fabrication	3
MFG 1415	Safety in the Workplace	1
MFG 2081	Advanced Welding	3
MFG 2050	Welding Theory II	3
MFG 2073	Welding Codes, Testing, and Certification	3
MFG 2080	Advanced Fabrication	3
MFG 2070	Welding Automation and Processes	3
MFG 2067	Metallurgy	3
<b>Total Credits</b>		<b>68-69</b>

- Technology Studies: Welding and Fabrication Technologies Certificate