

TECHNOLOGY STUDIES: MANUFACTURING ENGINEERING TECHNOLOGY, AS

Program code: MENT-AS-COT

Location: Gateway, Manchester, Middlesex, Naugatuck Valley, Three Rivers

Program Description

The Manufacturing Engineering Technology A.S. program emphasizes the application of mathematics and principles of engineering science to manufacturing processes and concepts in order to prepare students for transfer to baccalaureate programs in engineering and technology with a manufacturing focus. Upon successful completion of a degree program, Graduates may continue on with a full two years of credit towards a baccalaureate degree in engineering technology or industrial technology at Central Connecticut State University.

Also, as a standalone degree, the program gives credentials to those who are already employed in a manufacturing capacity who don't possess a degree as well as prepares students for employment opportunities in entry and second-level positions in manufacturing and industrial technology fields requiring a combination of technical preparation and a strong general education background.

Learning Outcomes

Upon successful completion of all degree program requirements, Manufacturing Engineering Technology graduates will:

1. Demonstrate team-oriented skills that permit effective participation in multicultural work and social environments.
2. Apply appropriate mathematical and scientific principles to manufacturing applications.
3. Demonstrate proficiency in manufacturing engineering fundamentals to analyze manufacturing engineering problems and make appropriate decisions.
4. Assist in the design process to meet effective production objectives.
5. Possess knowledge of engineering materials and be able to demonstrate competency in their selection and utilization in manufacturing.
6. Apply knowledge and skills to develop, interpret and select appropriate manufacturing processes.
7. Maintain a practical knowledge of state-of-the-art hardware and software in support of manufacturing systems.
8. Be aware of and use available information and data sources in support of the manufacturing systems.
9. Apply skills and knowledge to effectively and efficiently plan, organize, implement, measure and control manufacturing processes.
10. Demonstrate a thorough knowledge and understanding of engineering graphics as well as engineering drawing interpretation and application of geometric dimensioning and tolerancing basics.

11. Demonstrate a high level of proficiency in the use of state-of-the-art computer-aided design (CAD) software and be able to respond positively to continuous software revisions and upgrades.
12. Demonstrate a thorough understanding of two-dimensional and isometric CAD concepts, procedures and applications.
13. Apply knowledge of computer applications in integrating computer-aided manufacturing, computer numerical control, CAD, spreadsheets, graphs and word processing for manufacturing engineering, and technology documentation and support purposes.
14. In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Core.

Degree Requirements

Code	Title	Credits
Technology Studies General Education Core		
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
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		3
MATH 1200	Statistics I	3-4
or MATH 1201	Statistics I with Computer Applications	
Manufacturing Engineering Tech Courses		
EGR 1120	Engineering Drawing Specs	3
MFG 1477	Machine Technology Fundamentals	4
or MFG 1467	Conventional Process Machining Lab	
PHYS 1202	General Physics II	4
or PHYS 2202	Calculus-Based Physics II	
MFG 2439	Geometric Dimension and Tolerancing (G, D, and T)	3
CAD 2200	Parametric Design (SolidWorks)	3
MATH 2600	Calculus I	4
MFG 1411	Manufacturing Materials and Processes I	3
MFG 2444	CNC I	3
MFG 2405	Principles of CNC w/Mastercam	3
Total Credits		63-64