MANUFACTURING ENGINEERING TECHNOLOGY

Overview

Manufacturing Engineering Technology Associate of Applied Science Degree

Program Code: 10-623-3

For more information: wctc.edu/mfg-eng *(*http://www.wctc.edu/mfg-eng/*)*

Manufacturing engineering technology blends knowledge from multiple subject areas, such as science, math, computers and mechanical/electrical engineering to solve problems in manufacturing. Technicians assist engineering and management in the creation of new products and improvement of production processes. In this program, develop a comprehensive background in manufacturing and lean processes, automated manufacturing and modern design methods.

The minimum required course grades and program grade point average (GPA) for students under this catalog are:

Core Courses = C
General Studies Courses = C-
Program GPA = 2.0

Related Certificates you can earn along the way.

- Lean Enterprise Technical Certificate (https://catalog.wctc.edu/programs/lean-enterprise/)

Learning Outcomes

Program Outcomes

1. Apply lean tools to achieve operational excellence
2. Apply manufacturing engineering principles in the design of manufacturing processes
3. Utilize computer-aided applications in design and manufacture of products and processes
4. Demonstrate the principles of material selection and application
5. Apply automation principles for design and control of manufacturing processes

Critical Life Skills

To help our students prepare for success in a workplace and society that is **increasingly global, multi-cultural, and collaborative,** all students are given opportunities to develop and demonstrate Critical Life Skills, both in and out of the classroom. The following Critical Life Skills are learning outcomes for WCTC students.

- **Communication:** Demonstrate appropriate communication.
- **Critical Thinking/Problem Solving:** Demonstrate critical thinking skills to analyze situations and solve problems.
- **Relationships:** Demonstrate effective interpersonal skills.
- **Self-management:** Demonstrate responsible and respectful behavior.

Required Courses

Listed below are the required courses for the program. To view the recommended sequence for taking courses click on the plan of study tab(s) above. Work with your Academic Advisor to design a program plan!

View your **Program Matrix** to find out when each course will be offered (term and time of day).

Code	Title	Credits
Core Courses		
204-110	Print Media/Digital Pub I	3
OR 664-160 Robotics and Servo Control		
204-112	Color Theory and Print Process	2
OR 420-316 CNC Machining Center Operation		
420-130	Industrial Blueprint Reading 1	2
Approved Substitute: 457-110		
420-160	Manufacturing Processes - Cold	2
439-181	SolidWorks for Tool Design 1	2
Approved Substitute: 457-150		
462-121	Power Systems	3
462-304	Industrial Safety	2
Approved Substitute: 462-104		
605-188	PLC 1	2
Approved Substitute: 605-126		
606-162	Manufacturing Process - Hot	2
623-161	Lean Enterprise/Intro	3
623-162	Prin for Lean Enterprise	3
623-163	J-I-T Lean Enterprise	3
623-164	Lean Leadership Applications	3
623-170	Intro to Continuous Improvment	3
Approved Substitutes: 623-130 OR 623-131		
623-173	GD&T/Solidworks	3
623-175	Computer Assisted Prog Process	3
623-180	Manufacturing Eng Capstone	4
General Studies		
801-136	English Composition 1	3
Approved Substitute: 809-223		
801-196	Oral/Interpersonal Comm	3
Approved Substitute: 801-198		
804-189	Introductory Statistics	3
809-195	Economics	3
Approved Substitutes: 809-143 OR 809-202		
809-199	Psychology of Human Relations	3
Approved Substitute: 809-198		
Total Credits		**60**

Full-time Plan

First Year

Fall Term 1		**Credits**
420-130	Industrial Blueprint Reading 1 This course will run 16 weeks.	2
420-160	Manufacturing Processes - Cold	2
462-304	Industrial Safety	2
	Credits	**6**

Fall Term 2		
204-110	Print Media/Digital Pub I	3
623-170	Intro to Continuous Improvment	3
	Credits	**6**
Winter Interim		
809-195	Economics	3
	Credits	**3**
Spring Term 1		
439-181	SolidWorks for Tool Design 1	2
801-136	English Composition 1	3
809-199	Psychology of Human Relations	3
	Credits	**8**
Spring Term 2		
204-112	Color Theory and Print Process	2
623-173	GD&T/Solidworks	3
801-196	Oral/Interpersonal Comm	3
	Credits	**8**
Second Year		
Summer Term		
804-189	Introductory Statistics	3
	Credits	**3**
Fall Term 1		
462-121	Power Systems	3
623-161	Lean Enterprise/Intro	3
	Credits	**6**
Fall Term 2		
605-188	PLC 1	2
623-162	Prin for Lean Enterprise	3
	Credits	**5**
Spring Term 1		
623-163	J-I-T Lean Enterprise	3
623-175	Computer Assisted Prog Process	3
623-180	Manufacturing Eng Capstone This course will run 16 weeks.	4
	Credits	**10**
Spring Term 2		
606-162	Manufacturing Process - Hot	2
623-164	Lean Leadership Applications	3
	Credits	**5**
	Total Credits	**60**