

# MECHANICAL ENGINEERING TECHNOLOGY

## Overview

Mechanical Engineering Technology Associate of Applied Science Degree

Program Code: 10-606-2

For more information: [wctc.edu/mech-eng](http://www.wctc.edu/mech-eng/) (<http://www.wctc.edu/mech-eng/>)

Mechanical engineers solve problems and determine functional solutions through math, science and technology. In this program, learn how to model design concepts in two and three dimensions. Use calculus to analyze forces, determine how they influence motion, and assess the combined stresses they produce within materials. Specify engineering design parameters and select materials for given applications.

Accredited by the Engineering Technology Accreditation Commission of ABET, <https://www.abet.org> (<https://nam12.safelinks.protection.outlook.com?url=https%3A%2F%2Fwww.abet.xn--org-9o0a.%2F&data=05%7C01%7CCBowman%40wctc.edu%7C2a99d1b4548242b2276c08da87756991%7C0f0bc6f814d14938a9bb9541a4d0c859c%7C0%7C0%7C637971235607806598%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6Ikh1aWw%7C3000%7C%7C&sdata=2hYYAKoqaUDimf48rQ2zVG%2F4Djiz8FgHGCPezQzXsTs%3D&reserved=0>)

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

## Learning Outcomes

### Program Outcomes

1. an ability to apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve well-defined engineering problems appropriate to the discipline;
2. an ability to design solutions for well-defined technical problems and assist with the engineering design of systems, components, or processes appropriate to the discipline;
3. an ability to apply written, oral, and graphical communication in well-defined technical and non-technical environments; and an ability to identify and use appropriate technical literature
4. an ability to conduct standard tests, measurements, and experiments and to analyze and interpret the results;
5. an ability to function effectively as a member of a technical team.

## 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
<b>Core Courses</b>		
420-160	Manufacturing Processes - Cold	2
606-114	GD&T	3
606-115	Technical Drafting/CAD	4
Approved Substitute: (606-115A AND 606-115B)		
606-116	Machine Design Elements	3
606-117	Computer Programming Engineers	3
606-121	Technical Statics	4
606-123	Solid Mechanics	3
606-135	Engineering Design Projects I	2
606-137	Measurement/Experimentation	3
606-145	Engineering Design Projects II	2
606-162	Manufacturing Process - Hot	2
606-169	Dynamics	3
606-170	Kinematics	3
606-186	3D/Parametric Design	3
606-189	Finite Elem Analysis/Engineers	3
<b>General Studies</b>		
801-136	English Composition 1	3
Approved Substitute: 801-223		
801-196	Oral/Interpersonal Comm	3
Approved Substitute: 801-198		
804-156	Calculus 2	4
804-198	Calculus 1	4
806-187	Calculus Based Physics 1	3
809-195	Economics	3
Approved Substitutes: 809-143 OR 809-287		
809-199	Psychology of Human Relations	3
Approved Substitute: 809-198		
<b>Total Credits</b>		<b>66</b>

## Full-time Plan

First Year		Credits
Fall Term 1		
606-115	Technical Drafting/CAD	4
606-117	Computer Programming Engineers	3

804-198	Calculus 1 <small>This course runs 16 weeks.</small>	4
<b>Credits</b>		<b>11</b>
<b>Fall Term 2</b>		
420-160	Manufacturing Processes - Cold	2
606-186	3D/Parametric Design	3
<b>Credits</b>		<b>5</b>
<b>Winter Interim</b>		
809-195	Economics	3
<b>Credits</b>		<b>3</b>
<b>Spring Term 1</b>		
606-121	Technical Statics	4
606-162	Manufacturing Process - Hot	2
804-156	Calculus 2 <small>This course runs 16 weeks.</small>	4
<b>Credits</b>		<b>10</b>
<b>Spring Term 2</b>		
606-114	GD&T	3
606-123	Solid Mechanics	3
<b>Credits</b>		<b>6</b>
<b>Second Year</b>		
<b>Summer Term</b>		
801-136	English Composition 1	3
<b>Credits</b>		<b>3</b>
<b>Fall Term 1</b>		
606-135	Engineering Design Projects I	2
806-187	Calculus Based Physics 1 <small>This course runs 16 weeks.</small>	3
<b>Credits</b>		<b>5</b>
<b>Fall Term 2</b>		
606-137	Measurement/Experimentation	3
606-170	Kinematics	3
<b>Credits</b>		<b>6</b>
<b>Winter Interim</b>		
801-196	Oral/Interpersonal Comm	3
<b>Credits</b>		<b>3</b>
<b>Spring Term 1</b>		
606-116	Machine Design Elements	3
606-145	Engineering Design Projects II <small>This course will run 16 weeks.</small>	2
606-169	Dynamics	3
<b>Credits</b>		<b>8</b>
<b>Spring Term 2</b>		
606-189	Finite Elem Analysis/Engineers	3
809-199	Psychology of Human Relations	3
<b>Credits</b>		<b>6</b>
<b>Total Credits</b>		<b>66</b>