MECHANICAL ENGINEERING TECHNOLOGY, A.A.S. - MET3

The Mechanical Engineering Technology curriculum equips the graduate for:

- performing a key role in the mechanical design process;
- installing, troubleshooting and repairing mechanical and electro-mechanical equipment;
- programming CNC machine tools, computers, programmable controllers and robots and performing general maintenance functions.

Most industrial products are mechanical in nature, and almost nothing can be made without the use of machines and structures. Electives allow students to focus on electro-mechanical coursework or maintain the mechanical program focus.

Requirements

Courses	Course Title	Credit Hours
General Education Courses		
ENG 101	English Composition I	3
or ENG 165	Professional Communications	
MAT 110	College Algebra	3
MAT 111	College Trigonometry	3
PSY 103	Human Relations	3
or PSY 201	General Psychology	
Elective Humanities/Fine Arts (https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/)		3
Subtotal		15
Required Core Subject Areas		
CIM 131	Computer Integrated Manufacturing	3
EGR 170	Engineering Materials	3
EGR 175	Manufacturing Processes	3
EGR 194	Statics and Strength of Materials	4
EGT 152	Fundamentals of CAD	3
Subtotal		16
Other Courses Required for Graduation		
COL 103	College Skills	3
EET 113	Electrical Circuits I	4
EET 212	Industrial Robotics	3
EGR 103	Preparation for Engineering Technology	2
EGR 130	Engineering Technology Applications and Programming	3
EGT 110	Engineering Graphics I	4
MET 214	Fluid Mechanics	3
MET 231	Machine Design	4
MET 240	Mechanical Senior Project	1
PHY 201	Physics I [1]	4
or PHY 221	University Physics I	
PHY 202	Physics II [1]	4
or PHY 222	University Physics II	
Subtotal		35
Electives		
Select on of the following sets:		7
MET 213	Dynamics	
MET 222	Thermodynamics	
or		
EET 234	Principles of Mechatronics	
EET 231	Industrial Electronics	
Subtotal		7
Total Hours		**73**

[1] Students considering transferring to a 4-year institution should consult with the department head regarding specific transfer pathways.

Graduation Plan

Fall Start

Course	Title	Hours
First Year		
Fall Semester		
COL 103	College Skills	3
EGR 103	Preparation for Engineering Technology	2
EGT 110	Engineering Graphics I	4
ENG 101	English Composition I	3
MAT 110	College Algebra	3
	Hours	**15**
Spring Semester		
EET 212	Industrial Robotics	3
EGR 130	Engineering Technology Applications and Programming	3
EGR 170	Engineering Materials	3
MAT 111	College Trigonometry	3
PHY 201 or PHY 221	Physics I [1] or University Physics I	4
	Hours	**16**
Summer Semester		
EGR 175	Manufacturing Processes	3
EGT 152	Fundamentals of CAD	3
MET 214	Fluid Mechanics	3
PSY 201 or PSY 103	General Psychology or Human Relations	3
	Hours	**12**
Second Year		
Fall Semester		
CIM 131	Computer Integrated Manufacturing	3
EET 113	Electrical Circuits I	4
EGR 194	Statics and Strength of Materials	4

PHY 202 or PHY 222	Physics II [2] or University Physics II	4
	Hours	**15**
Spring Semester		
MET 213 or EET 234	Dynamics or Principles of Mechatronics	3
MET 222 or EET 231	Thermodynamics or Industrial Electronics	4
MET 231	Machine Design	4
MET 240	Mechanical Senior Project	1
Elective Humanities/Fine Arts (https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/)		3
	Hours	**15**
	Total Hours	**73**

[1] or for transfer PHY 221 University Physics I (if prerequisite MAT 140 has been completed)
[2] or for transfer PHY 222 University Physics II

Spring Start

Course	Title	Hours
First Year		
Spring Semester		
COL 103	College Skills	3
EGR 103	Preparation for Engineering Technology	2
EGT 110	Engineering Graphics I	4
ENG 101	English Composition I	3
MAT 110	College Algebra	3
	Hours	**15**
Summer Semester		
EGR 130	Engineering Technology Applications and Programming	3
EGR 175	Manufacturing Processes	3
EGT 152	Fundamentals of CAD	3
MAT 111	College Trigonometry	3
	Hours	**12**
Fall Semester		
EET 113	Electrical Circuits I	4
EET 212	Industrial Robotics	3
PHY 201 or PHY 221	Physics I [1] or University Physics I	4
PSY 201 or PSY 103	General Psychology or Human Relations	3
	Hours	**14**
Second Year		
Spring Semester		
EGR 194	Statics and Strength of Materials	4
PHY 202 or PHY 222	Physics II [2] or University Physics II	4
	Hours	**8**
Summer Semester		
MET 214	Fluid Mechanics	3
Elective Humanities/Fine Arts (https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/)		3
	Hours	**6**
Fall Semester		
CIM 131	Computer Integrated Manufacturing	3
EGR 170	Engineering Materials	3
	Hours	**6**
Third Year		
Spring Semester		
MET 213 or EET 234	Dynamics or Principles of Mechatronics	3
MET 222 or EET 231	Thermodynamics or Industrial Electronics	4
MET 231	Machine Design	4
MET 240	Mechanical Senior Project	1
	Hours	**12**
	Total Hours	**73**

[1] or for transfer PHY 221 University Physics I (if prerequisite MAT 140 has been completed)
[2] or for transfer PHY 222 University Physics II

Summer Start

Course	Title	Hours
First Year		
Summer Semester		
COL 103	College Skills	3
EGR 103	Preparation for Engineering Technology	2
ENG 101	English Composition I	3
MAT 110	College Algebra	3
Elective Humanities/Fine Arts (https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/)		3
	Hours	**14**
Fall Semester		
EET 113	Electrical Circuits I	4
EGT 110	Engineering Graphics I	4
MAT 111	College Trigonometry	3
PHY 201 or PHY 221	Physics I [1] or University Physics I	4
	Hours	**15**
Spring Semester		
EET 212	Industrial Robotics	3
EGR 130	Engineering Technology Applications and Programming	3
EGR 170	Engineering Materials	3
PHY 202 or PHY 222	Physics II [2] or University Physics II	4
	Hours	**13**

Second Year		
Summer Semester		
EGR 175	Manufacturing Processes	3
EGT 152	Fundamentals of CAD	3
MET 214	Fluid Mechanics	3
	Hours	**9**
Fall Semester		
CIM 131	Computer Integrated Manufacturing	3
EGR 194	Statics and Strength of Materials	4
PSY 201 or PSY 103	General Psychology or Human Relations	3
	Hours	**10**
Spring Semester		
MET 213 or EET 234	Dynamics or Principles of Mechatronics	3
MET 222 or EET 231	Thermodynamics or Industrial Electronics	4
MET 231	Machine Design	4
MET 240	Mechanical Senior Project	1
	Hours	**12**
	Total Hours	**73**

[1] or for transfer PHY 221 University Physics I (if prerequisite MAT 140 has been completed)

[2] or for transfer PHY 222 University Physics II

Application and Advising

If you are ready to start your education, there are a few simple steps involved in enrolling at Piedmont Technical College.

Get Started Today (https://www.ptc.edu/admissions/new-students/)

Advising Information

The following information provides a guide for advisors who are helping students enroll in this program.

Mechanical Engineering Technology Enrollment and Degree Data (https://www.ptc.edu/sites/default/files/documents/academics/Engineering/MET%20Enrollment%20and%20Degree%20Data.pdf)

Program Notes

Courses for this program may be offered in the day or evening, and/or online as available.

Starting program courses in the fall semester is preferred. However, developmental, transitional and general education courses can be taken any semester.

Students need to register for EGR 103 and EGT 110 during their first semester classes if they have the test scores to enter these courses.

Recent high school graduates should be asked if they have participated in Project Lead the Way. If so, high school transcripts should be forwarded to the Engineering Department Head for possible exemption credit. When students enter this program, with Project Lead the Way course credit in high school, they may receive the following credit:

- Introduction to Engineering Design (IED) - EGT 152
- Principles of Engineering (POE) - EGR 130
- Computer Integrated Manufacturing (CIM) - CIM 131

All Engineering classes are only offered on Greenwood Campus for now.

Students will need to purchase a calculator.

Notes About Individual Classes

Completion of MAT 110 is preferred prior to taking EGR 130, but students are allowed to take MAT 110 along with EGR 130.

Program Student Learning Outcomes

Purpose Statement

In the struggle to compete in the world market, American industry is rapidly replacing low-skill human labor with high technology machines. People who understand these machines and can keep them running will prosper in this new industrial revolution. This program prepares students to fill today's available positions.

Program Student Learning Outcomes

Students completing Mechanical Engineering Technology will be able to demonstrate:

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 Mechanical Engineering Technology 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 Mechanical Engineering 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.