ENGINEERING DESIGN TECHNOLOGY, A.A.S. - EGT3

All phases of manufacturing or construction require translation of ideas and design concepts into the common language of engineering drawings. Therefore, drafting and design technicians play a major role in the design and development of new products or construction. This program prepares students for actual work situations through substantial training in state-of-the-art laboratories using Computer Aided Drafting (CAD), Design and 3D modeling systems.

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		
EGT 110	Engineering Graphics I	4
EGT 151	Introduction to CAD	3
EGR 130	Engineering Technology Applications and Programming	3
EGR 175	Manufacturing Processes	3
EGR 194	Statics and Strength of Materials	4
Subtotal		17
Other Courses Required for Graduation		
CIM 131	Computer Integrated Manufacturing	3
or AET 101	Building Systems I	
EGR 170	Engineering Materials	3
EGT 115	Engineering Graphics II	4
EGT 125	Descriptive Geometry	2
EGT 165	Introduction to CAD/CAM	2
EGT 215	Mechanical Drawing Application	4
EGT 225	Architectural Drawing Applications	4
EGT 251	Principles of CAD	3
EGT 252	Advanced CAD	3
PHY 201	Physics I	4
or for transfer PHY 221 University Physics I (if prerequisite MAT 140 Analytical Geometry and Calculus I has been completed)		
PHY 202	Physics II	4
or for transfer PHY 222 University Physics II		
Subtotal		36
Total Hours		68

Graduation Plan

For Summer 2021: EGR 130 is available for the summer semester. Student who have not yet completed EGR 130 are encouraged to include this course on their Summer 2021 schedule.

Fall Start

Course	Title	Hours
First Year		
Fall Semester		
EGR 130	Engineering Technology Applications and Programming	3
EGT 110	Engineering Graphics I	4
EGT 151	Introduction to CAD	3
ENG 101	English Composition I	3
MAT 110	College Algebra	3
	Hours	16
Spring Semester		
EGT 125	Descriptive Geometry	2
EGT 251	Principles of CAD	3
MAT 111	College Trigonometry	3
PHY 201 or PHY 221	Physics I or University Physics I	4
	Hours	12
Summer Semester		
EGR 175	Manufacturing Processes	3
EGT 115	Engineering Graphics II	4
EGT 165	Introduction to CAD/CAM	2
PHY 202 or PHY 222	Physics II or University Physics II	4
	Hours	13
Second Year		
Fall Semester		
CIM 131 or AET 101	Computer Integrated Manufacturing or Building Systems I	3
EGR 170	Engineering Materials	3
EGT 225	Architectural Drawing Applications	4
EGT 252	Advanced CAD	3
	Hours	13
Spring Semester		
EGR 194	Statics and Strength of Materials	4
EGT 215	Mechanical Drawing Application	4
PSY 103 or PSY 201	Human Relations or General Psychology	3

Elective Humanities/Fine Arts (https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/)		3
	Hours	14
	Total Hours	68

Spring Start

Course	Title	Hours
First Year		
Spring Semester		
EGR 130	Engineering Technology Applications and Programming	3
EGT 110	Engineering Graphics I	4
EGT 151	Introduction to CAD	3
EGT 251	Principles of CAD [1]	3
MAT 110	College Algebra	3
	Hours	16
Summer Semester		
EGR 175	Manufacturing Processes	3
EGT 115	Engineering Graphics II	4
EGT 165	Introduction to CAD/CAM	2
MAT 111	College Trigonometry	3
	Hours	12
Fall Semester		
CIM 131 or AET 101	Computer Integrated Manufacturing or Building Systems I	3
EGR 170	Engineering Materials	3
EGT 225	Architectural Drawing Applications	4
EGT 252	Advanced CAD	3
PHY 201 or PHY 221	Physics I or University Physics I	4
	Hours	17
Second Year		
Spring Semester		
EGR 194	Statics and Strength of Materials	4
EGT 125	Descriptive Geometry	2
EGT 215	Mechanical Drawing Application	4
PHY 202 or PHY 222	Physics II or University Physics II	4
	Hours	14
Summer Semester		
ENG 101	English Composition I	3
PSY 103 or PSY 201	Human Relations or General Psychology	3
Elective Humanities/Fine Arts (https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/)		3
	Hours	9
	Total Hours	68

[1] See Academic Advisor. Will need special approval.

Summer Start

Course	Title	Hours
First Year		
Summer Semester		
EGT 151	Introduction to CAD	3
ENG 101	English Composition I	3
MAT 110	College Algebra	3
PSY 103 or PSY 201	Human Relations or General Psychology	3
	Hours	12
Fall Semester		
EGT 110	Engineering Graphics I	4
EGR 130	Engineering Technology Applications and Programming	3
MAT 111	College Trigonometry	3
PHY 201 or PHY 221	Physics I or University Physics I	4
	Hours	14
Spring Semester		
EGT 125	Descriptive Geometry	2
EGT 251	Principles of CAD	3
PHY 202 or PHY 222	Physics II or University Physics II	4
Elective Humanities/Fine Arts (https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/)		3
	Hours	12
Second Year		
Summer Semester		
EGR 175	Manufacturing Processes	3
EGT 115	Engineering Graphics II	4
EGT 165	Introduction to CAD/CAM	2
	Hours	9
Fall Semester		
CIM 131 or AET 101	Computer Integrated Manufacturing or Building Systems I	3
EGR 170	Engineering Materials	3
EGT 225	Architectural Drawing Applications	4
EGT 252	Advanced CAD	3
	Hours	13
Spring Semester		
EGR 194	Statics and Strength of Materials	4
EGT 215	Mechanical Drawing Application	4
	Hours	8
	Total Hours	68

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.

For Summer 2021: EGR 130 is available for the summer semester. Student who have not yet completed EGR 130 are encouraged to include this course on their Summer 2021 schedule.

Program Notes

Starting program courses in the fall semester is preferred. However, a freshman course is offered every semester and general education courses can be taken any semester.

If a student is not ready to take college-level courses, he or she should enroll in the appropriate developmental or transitional coursework. Students may be able to take EGT 151 or EGT 110 while they are taking 100-level transitional classes.

Students need to register for EGR 130, EGT 151, and EGT 110 during their first semester classes if they have the test scores to enter these courses.

Please see this link (https://www.ptc.edu/sites/default/files/documents/advising/egt_day_program_updated.pdf) for a day program in Engineering Design complete with advisor's notes and advice about the individual classes, including the semesters classes are offered.

Students will need to purchase a drafting kit from the bookstore. 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 Christina Knight 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:

- Principles of Engineering (POE) - EGR 130
- Computer Integrated Manufacturing (CIM) - CIM 131
- Civil Engineering and Architectural (CEA) - AET 101

Notes About Individual Classes

The English course required for this program is ENG 165. Students will follow this progression, with their starting point being determined by their placement test scores: ENG 032/012 and/or RDG 032/012 (or RWR 032/012) > ENG 100 and/or RDG 100 (or RWR 100) > ENG 165 or ENG 101. If students are planning to transfer to a four-year school, they should choose ENG 101 instead of ENG 165.

The first math course required for this program is MAT 110. Students will follow this progression, with their starting point being determined by their placement test scores: MAT 032/012 > MAT 152 or MAT 101 > MAT 102 > MAT 110.

To enroll in EGR 130, students must have completed MAT 152 or MAT 101 or have placement scores indicating readiness for MAT 102. Completion of MAT 102 is preferred, but student may take MAT 102 along with EGR 130.

All EGT classes are only offered in Greenwood for now.

EGT 215 should be a last semester class. This course requires Advisor approval in order to register.

Please note that CIM 131, EGT 252, and EGT 225 are only offered during fall semesters. EGT 251, EGT 125, EGT 215, and EGR 194 are only offered during spring semesters. EGT 165 and EGT 115 are only offered during summer semesters.

Accreditation Information

This program is accredited by the Engineering Technology Accreditation Commission of ABET, http://www.abet.org (http://www.abet.org/).

Engineering Design Technology Enrollment and Degree Data (https://catalog.ptc.edu/academic-programs/engineering-technology/engineering-technology-curricula/engineering-design-technology-aas/ https:///www.ptc.edu/sites/default/files/documents/academics/Engineering/EDT%20Enrollment%20and%20Degree%20Data.pdf)

Program Educational Objectives

Purpose Statement

Engineering Design Technology program prepares students for the highly skilled and technological workplace in engineering.

EDT Program Educational Objectives:

The objectives of the Engineering Design Technology program is to produce graduates who during their first few years of professional practice will:

- Work at a company as a CAD Technician, Lead Designer, Master Designer, or Associate Engineer.
- Render professional design services or work with a design team in the fields of Engineering Design.
- Pursue higher education if interested in getting a Bachelor's degree in the field of interest.

Program Student Learning Outcomes

Students completing Engineering Design 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 Engineering Design 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 Engineering Design Technology 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.