

# 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
<b>General Education Courses</b>		
ENG 101 or ENG 165	English Composition I Professional Communications	3
MAT 110	College Algebra	3
MAT 111	College Trigonometry	3
PSY 103 or PSY 201	Human Relations General Psychology	3
Elective Humanities/Fine Arts ( <a href="https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/">https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/</a> )		3
Subtotal		15
<b>Required Core Subject Areas</b>		
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
<b>Other Courses Required for Graduation</b>		
CIM 131 or AET 101	Computer Integrated Manufacturing Building Systems I	3
COL 103	College Skills	3
EGR 103	Preparation for Engineering Technology	2
EGR 170	Engineering Materials	3
EGT 115	Engineering Graphics II	4
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
EGT 255	Applications of Advanced CAD	2
PHY 201 or PHY 221	Physics I <sup>1</sup> University Physics I	4
PHY 202 or PHY 222	Physics II <sup>1</sup> University Physics II	4

Subtotal	41
<b>Total Hours</b>	<b>73</b>

<sup>1</sup> 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
<b>First Year</b>		
<b>Fall Semester</b>		
COL 103	College Skills	3
EGR 103	Preparation for Engineering Technology	2
EGT 110	Engineering Graphics I	4
EGT 151	Introduction to CAD	3
MAT 110	College Algebra	3
<b>Hours</b>		<b>15</b>

### Spring Semester

EGR 130	Engineering Technology Applications and Programming	3
EGT 251	Principles of CAD	3
ENG 101	English Composition I	3
MAT 111	College Trigonometry	3
PHY 201 or PHY 221	Physics I or University Physics I	4
<b>Hours</b>		<b>16</b>

### Summer Semester

EGR 175	Manufacturing Processes	3
EGT 115	Engineering Graphics II	4
EGT 165	Introduction to CAD/CAM	2
PSY 201 or PSY 103	General Psychology or Human Relations	3
<b>Hours</b>		<b>12</b>

### Second Year

#### Fall Semester

CIM 131 or AET 101	Computer Integrated Manufacturing or Building Systems I	3
EGT 225	Architectural Drawing Applications	4
EGT 252	Advanced CAD	3
PHY 202 or PHY 222	Physics II or University Physics II	4
<b>Hours</b>		<b>14</b>

#### Spring Semester

EGR 170	Engineering Materials	3
EGR 194	Statics and Strength of Materials	4
EGT 215	Mechanical Drawing Application	4
EGT 255	Applications of Advanced CAD	2

Elective Humanities/Fine Arts (<https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/>) 3

<b>Hours</b>	<b>16</b>
<b>Total Hours</b>	<b>73</b>

## Spring Start

Course	Title	Hours
<b>First Year</b>		
<b>Spring Semester</b>		
COL 103	College Skills	3
EGR 103	Preparation for Engineering Technology	2
EGT 110	Engineering Graphics I	4
EGT 151	Introduction to CAD	3
EGT 251	Principles of CAD <sup>1</sup>	3

<b>Hours</b>	<b>15</b>
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### Summer Semester

EGR 130	Engineering Technology Applications and Programming	3
EGR 175	Manufacturing Processes	3
EGT 115	Engineering Graphics II	4
EGT 165	Introduction to CAD/CAM	2
MAT 110	College Algebra	3

<b>Hours</b>	<b>15</b>
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### Fall Semester

CIM 131 or AET 101	Computer Integrated Manufacturing or Building Systems I	3
EGT 225	Architectural Drawing Applications	4
EGT 252	Advanced CAD	3
MAT 111	College Trigonometry	3
PHY 201 or PHY 221	Physics I or University Physics I	4

<b>Hours</b>	<b>17</b>
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### Second Year

#### Spring Semester

EGR 170	Engineering Materials	3
EGR 194	Statics and Strength of Materials	4
EGT 215	Mechanical Drawing Application	4
EGT 255	Applications of Advanced CAD	2
PHY 202 or PHY 222	Physics II or University Physics II	4

<b>Hours</b>	<b>17</b>
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#### Summer Semester

ENG 101	English Composition I	3
PSY 201 or PSY 103	General Psychology or Human Relations	3
Elective Humanities/Fine Arts ( <a href="https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/">https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/</a> )		3

<b>Hours</b>	<b>9</b>
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<b>Total Hours</b>	<b>73</b>
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<sup>1</sup> See Academic Advisor. Will need special approval.

## Summer Start

Course	Title	Hours
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### First Year

#### Summer Semester

COL 103	College Skills	3
EGR 103	Preparation for Engineering Technology	2
Elective Humanities/Fine Arts ( <a href="https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/">https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/</a> )		3

<b>Hours</b>	<b>8</b>
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### Fall Semester

EGT 110	Engineering Graphics I	4
EGT 151	Introduction to CAD	3
ENG 101	English Composition I	3
MAT 110	College Algebra	3

<b>Hours</b>	<b>13</b>
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### Spring Semester

EGR 130	Engineering Technology Applications and Programming	3
EGT 251	Principles of CAD	3
MAT 111	College Trigonometry	3
PHY 201 or PHY 221	Physics I or University Physics I	4

<b>Hours</b>	<b>13</b>
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### Second Year

#### Summer Semester

EGR 175	Manufacturing Processes	3
EGT 115	Engineering Graphics II	4
EGT 165	Introduction to CAD/CAM	2
PSY 201 or PSY 103	General Psychology or Human Relations	3

<b>Hours</b>	<b>12</b>
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### Fall Semester

CIM 131 or AET 101	Computer Integrated Manufacturing or Building Systems I	3
EGT 225	Architectural Drawing Applications	4
EGT 252	Advanced CAD	3
PHY 202 or PHY 222	Physics II or University Physics II	4

<b>Hours</b>	<b>14</b>
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### Spring Semester

EGR 170	Engineering Materials	3
EGR 194	Statics and Strength of Materials	4
EGT 215	Mechanical Drawing Application	4
EGT 255	Applications of Advanced CAD	2

<b>Hours</b>	<b>13</b>
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<b>Total Hours</b>	<b>73</b>
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## 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.

### 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.

Students need to register for EGR 103, EGT 151, 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:

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

### 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.

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 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.