

INDUSTRIAL DESIGN ENGINEERING CERTIFICATE

Note: Pathway is a recommended sequence and selection of courses. Full-time students should contact the department chair or program coordinator to discuss a full-time pathway as well as course prerequisites and recommendations.

13 Semester Credit Hours; Curriculum: 0278

The Industrial Design Engineering Certificate prepares students for CAD drafting positions using parametric modeling software, such as SolidWorks and Inventor, to design and 3D print computer models. Students will be proficient in 3D Computer modeling and 2D drafting and annotation of part drawing techniques for manufacturing. Possible job positions include: Industrial drafts-person, 3D print technician, and mechanical designer.

Code	Title	Hours
Courses for a Certificate		
CAD 107	Introduction to 3D Printing	2
CAD 210	Industrial Design Engineering Techniques	4
Select at least seven credit hours from the following:		7
CAD 230 & CAD 234	Introduction to SolidWorks and Advanced SolidWorks	
or		
CAD 116 & CAD 117	Basic AutoCAD and Intermediate AutoCAD	
Total Hours		13

Program Learning Outcomes

1. Create 2D drawings and 3D computer models for manufacturing and prototyping using parametric software.
2. Create prototypes using a 3D Printer.
3. Evaluate computer aided design models and assemblies based on critical thinking and problem solving skills.
4. Develop and present designs and prototypes to the class.
5. Create prototypes using 3D printers.

Industrial Design Engineering Certificate Pathway

The following pathway is recommended for students pursuing the Industrial Design Engineering Certificate.

Course	Title	Hours
First Year		
Semester One		
CAD 116 or CAD 230	Basic AutoCAD or Introduction to SolidWorks	3-4
Hours		3-4
Semester Two		
CAD 107	Introduction to 3D Printing	2
CAD 117 or CAD 234	Intermediate AutoCAD or Advanced SolidWorks	4
Hours		6
Second Year		
Semester One		
CAD 210	Industrial Design Engineering Techniques	4
Hours		4
Total Hours		13-14