

MECHANICAL DESIGN/CAD CERTIFICATE

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

30 Semester Credit Hours; Curriculum: 0272

The Mechanical Design/CAD Certificate offers a general multi-purpose curriculum that covers a concentrated area of mechanical design/CAD courses. The certificate prepares students for job positions in mechanical design, architectural design, interior design and building information management.

Code	Title	Hours
Courses for a Certificate		
CAD 116	Basic AutoCAD	3
CAD 117	Intermediate AutoCAD	4
CIS 101	Introduction to Computer Information Systems	3
ENG 120	Engineering Graphics	3
MEC 105	Processes and Materials	3
MEC 220	Elements of Machine Design	3
MEC 230	Statics and Strength of Materials	3
Select additional CAD, FME, MEC, or MFG courses; contact an academic advisor for a list of acceptable courses		8
Total Hours		30

Program Learning Outcomes

1. Evaluate mechanical designs and select the proper process and materials for production.
2. Create 2D and 3D computer drawings and models for manufacturing and prototyping.
3. Evaluate computer aided design models and assemblies based on critical thinking and problem solving skills.
4. Develop a solution through group work.

Mechanical Design/CAD Certificate Pathway

The following pathway is recommended for students pursuing the Mechanical Design/CAD Certificate.

Course	Title	Hours
First Year		
Semester One		
CAD 116	Basic AutoCAD	3
ENG 120	Engineering Graphics	3
MEC 105	Processes and Materials	3
CIS 101	Introduction to Computer Information Systems	3
Select one elective from CAD, FME, GIS, MEC or MFG		4
Hours		16
Semester Two		
CAD 117	Intermediate AutoCAD	4
CAD 118	Advanced AutoCAD	4
MEC 220	Elements of Machine Design	3
MEC 230	Statics and Strength of Materials	3
Hours		14
Total Hours		30