



Program Description:

The Computer Aided Design (CAD) Technology Certificate program (Day Option) is a 24-credit, computer-based curriculum designed to develop CAD operators and CAD designers skilled in using 2-D and 3-D software tools. The program provides interactive learning on state-of-the-art software packages in the principal areas of mechanical design through solid modeling and printed circuit board design. The student will have an option of taking a course in Printed Circuit Design, Architectural CAD, Information Technology or Computer Science.

Career and Transfer Outlook:

Graduates of the program work in various industries with departments in mechanical design or manufacturing. Some of the positions that MCC graduates have held are mechanical designer and mechanical engineering technician. Graduates of the certificate program may apply most or all of their credits toward an associate degree in Computer Aided Design (CAD) Technology.

Helpful Hints:

The program should be started in the fall semester. Students who intend to finish within a year should enroll in Mechanical Drafting I (CAD 101), Introduction to Computer Aided Design (CAD 115), Printed Circuit Design (CAD 129) and Microcomputer Applications (CAP 101) in the first semester. Students must work with a faculty advisor to determine the courses to take during the spring semester.

Program Outcomes:

Graduates of the CAD Technology Certificate program are prepared to:

- Demonstrate proficiency in advanced CAD skills by creating complex drawings using wire-frame and solid modeling techniques, manipulating analytic and non-analytic surfaces, analyzing drawing data, and developing customizing techniques;
- Demonstrate proficiency in applying selected software packages used in the electronics-related industries for drawing schematics and designing multilayered printed circuit boards;
- Apply related academic skills (from mathematics, e.g.) to resolve drafting and design problems;
- Extrapolate information, data and specifications from technical resources and standards for application on drawings, projects and reports;
- Collaborate and cooperate in a team setting to enhance cognitive and social learning by sharing in a CAD engineering environment;
- Apply knowledge of CAD technology and engineering design to solve design problems.

COMPUTER AIDED DESIGN (CAD) TECHNOLOGY • Certificate

BEDFORD CAMPUS - DAY STARTS FALL SEMESTER

✓	COURSE #	COURSE TITLE	CREDITS	PREREQUISITES
_____	CAD 101	Mechanical Drafting I and Lab	3	Corequisite: CAD 115, CAD 151, articulation student or*
_____	CAD 115	Introduction to Computer Aided Design	3	Corequisite: Must be enrolled in either the CAD Technology or CAD certificate program or*
_____	CAD 129	Printed Circuit Design	3	
_____	CAD 151	Mechanical Drafting II and Lab	3	CAD 101 and CAD 115, articulation student or*
_____	CAD 169	3D Computer Aided Drafting and Design	3	CAD 101 or CAD 133 or equivalent, CAD 115 or CAD 151 or equivalent
_____	CAP 101	Microcomputer Applications	3	ENG 060 or higher placement. Students should either be taking, have successfully completed or tested out of ENG 071 and MAT 070
Choose Two CAD Electives or One CAD Elective Plus One Technical Elective			6	
_____	CAD 168	Basic 3D CAD		CAD 151
_____	CAD 205	Geometric Dimensioning and Tolerancing		CAD 151
_____	CAD 227	Advanced CAD Applications		CAD 115 and CAD 169 or CAD 168
_____	CAD 230	Architectural Drawing with CAD		CAD 101, CAD 115 or permission of instructor
Technical Elective				
_____	_____	Any CSC/ITC/NST/CAP**		
			24	

*Permission of instructor
**Must be CAP 155 or higher

Special Requirements: For the Certificate in Computer Aided Design (CAD) Technology, a total of 24 credits and a minimum cumulative GPA of 2.00 are required for graduation.