

## CAD/CAM, ADVANCED Certificate

Minimum Credits: 24.5  
Contact Hours: 36.0

**INTRODUCTION:** This certificate program develops student skills in the operation of computer-aided drafting (CAD) software and extensive focus on set-up, programming, and operation of computer numerical control (CNC), CNC lathes, milling machines, and wire EDM plus advanced inspection equipment. Completion of this certificate will qualify the student for entry-level employment as CNC machine operators, set-up personnel, and programmers.

A prerequisite for this program is the completion of the Basic Manufacturing Technology certificate program **OR** the Welding Fabrication certificate plus MTH 112/Technical Math II, **OR** the CAD Engineering associate degree.

### FIRST SEMESTER ( FALL )

COURSE	TITLE	CREDITS	CONTACT HOURS
CAD 220	Machine Design <sup>A</sup>	3.5	5.0
MFG 201	Introduction to CNC <sup>A</sup>	6.0	10.0
MFG 204	Computer-Aided Manufacturing <sup>A</sup>	<u>3.0</u>	<u>4.0</u>
COURSE CREDITS/CONTACT HOURS:		12.5	19.0

### SECOND SEMESTER ( SPRING )

COURSE	TITLE	CREDITS	CONTACT HOURS
MFG 220	Jigs and Fixture Design Fundamentals <sup>A</sup>	3.0	4.0
MFG 202	Advanced CNC <sup>A</sup>	6.0	10.0
	Elective	<u>3.0</u>	<u>3.0-4.0</u>
COURSE CREDITS/CONTACT HOURS:		<u>12.0</u>	<u>17.0-18.0</u>
TOTAL MINIMUM PROGRAM CREDITS/CONTACT HOURS:		24.5	36.0

#### NOTES:

<sup>A</sup>Included in occupational specialty – GPA of 2.0 or higher must be maintained in the area of occupational specialty.

With additional coursework Advanced CAD/CAM graduates can earn an AAS degree in CAD/CAM Technology.