



## MACHINING CERTIFICATE

**CERTIFICATE IS A PART OF**  
Mechanical Major

### JOB OPPORTUNITIES FOR GRADUATES

There are a number of skilled positions/careers available to students taking this program. Positions held are tool & die, machinist, tool maker, die maker, mold maker, CNC machinist, CAM/CNC Programmer and CNC Operator.

### SALARY

The median hourly wage for machinists and CNC Machinists is \$18.99. The lowest 10 percent earned less than \$11.70 per hour, and the top 10 percent earned more than \$28.75 per hour. While CNC operators make slightly less the machinists and CNC machinists, they are not required to have as much overall knowledge to perform their jobs. Many CNC operators expand their skills and knowledge to become machinists.

The median hourly wage for tool and die makers is \$22.60. The lowest 10 percent earned less than \$15.16 per hour, and the top 10 percent earned more than \$33.44 per hour.

The median annual wage for industrial machinery mechanics and maintenance workers and millwrights is \$45,840. The lowest 10 percent earned less than \$29,020, and the top 10 percent earned more than \$69,990.

Apprentices will make less than journeymen make, however they are on a progressive pay scale. Generally apprentices receive pay increases as they progress through their apprenticeship. As apprentices advance in their skills and are capable of working with limited supervision their rate of pay reflects that knowledge and skill advancement.

### LOCATION

Toledo-area Campus

### REQUIRED COURSES

The Age of Coursework for Skilled Trades (SKT) courses is 6 years - chair approval required for courses beyond that. Please refer to College Policy, Chapter 2 - Academic, 3358:11-2-22 Age of Coursework Policy.

Technical courses may be selected from but are not limited to the classes listed, based on department approval.

MTH 143	Applied Industrial Mathematics	Credits: 3(Lec: 3)
SKT 143	Drftg/Blueprint Reading:3D	Credits: 3(Lec: 2 Lab: 2)
CAM 160	Machining I	Credits: 2(Lec: 1 Lab: 3)
CAM 161	Machining II	Credits: 2(Lec: 1 Lab: 3)
CAM 122	CNC Mill Applications	Credits: 2(Lec: 1 Lab: 3)
CAM 124	CNC Lathe Applications	Credits: 2(Lec: 1 Lab: 3)
CAD 144	GD & T	Credits: 2(Lec: 2)
SKT 160	Machinery Handbook	Credits: 2(Lec: 2)
SKT 125	Metallurgy: Ferrous	Credits: 2(Lec: 2)
SKT 126	Metallurgy: Non-Ferrous	Credits: 2(Lec: 2)

### COURSE ELECTIVES

Select 8 credits from the Course Electives listed:

CAM 126	Advanced CNC Applications	Credits: 2(Lec: 1 Lab: 3)
CAM 216	Basic CAD/CAM	Credits: 2(Lec: 2)
CAM 218	Advanced CAD/CAM	Credits: 2(Lec: 1 Lab: 3)
MET 150	Introduction to Industrial Robotics	Credits: 2(Lec: 1 Lab: 3)
SKT 216	Drftg/Bluprnt Read:Die Detail	Credits: 2(Lec: 2)
WLD 191	Intro to the Welding Processes	Credits: 2(Lec: 1 Lab: 3)
WLD 266	GTAW Welding	Credits: 2(Lec: 1 Lab: 3)

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#### Office of Admissions

Toledo-area Campus - (567) 661-7777  
Findlay-area Campus - (567) 429-3509

**School of Science, Technology, Engineering  
and Mathematics**  
(567) 661-7457



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