



# Tool and Die Making

## TECHNICAL DIPLOMA

Program Code: 32-439-1

### Downtown Milwaukee Campus (year one only), Oak Creek Campus

This is a four-semester, full-time, day program; the first two semesters are common with the one-year Machine Tool Operations program. All courses within the first year are based on the National Institute for Metalworking Skills (NIMS) Machining Level One Skill Standards in nine separate skill areas. During the third and fourth semesters, you will learn how to build and sample basic stamping dies and plastic injection molds.

### Career Outlook

There is an ongoing need for highly skilled tool and die makers and mold makers.

You can earn the CNC Setup and Operations certificate on the way to completing this technical diploma.

### Program Learning Outcomes

- Apply advanced safety practices in the machine shop
- Interpret advanced industrial/engineering drawings
- Apply precision measuring methods to part inspection
- Perform advanced machine tool equipment setup and operation
- Perform advanced programming, setup and operation of CNC Machine Tools
- Perform advanced tool, die and mold operations

### Admission Requirement

- High school diploma or GED recommended



**Manufacturing, Construction & Transportation**  
**MILWAUKEE AREA Technical College**

[matc.edu](http://matc.edu) | 414-297-MATC

**Start dates:** August and January

COURSES	Credits
MACHTL-300 Engine Lathe 1 (Turning).....	3
MACHTL-301 Engine Lathe 2 (Turning) ‡.....	3
MACHTL-309 Manual Vertical Milling Machining 1 ^.....	3
MACHTL-310 Manual Vertical Milling Machining 2 ‡ ^ ..	3
MACHTL-360 Metrology ^.....	1
MACHTL-367 Machine Tool Technology.....	1
MACHTL-384 Machine Trades Mathematics 1 ^.....	1
MDRAFT-385 Machine Blueprint Reading 1 ^.....	1
ENG-340 Workplace Communication.....	2
(or) ENG-195 Written Communication ‡	
MACHTL-304 Introduction to CNC Programming ‡ ^ ...	1
MACHTL-320 Introduction to CNC Turning Centers ‡ ....	4
MACHTL-322 Introduction to CNC Vertical Machining Centers ‡ ^ .....	4
MACHTL-325 Surface Grinding .....	4
MACHTL-385 Machine Trades Mathematics 2 ‡ ^ .....	1
MACHTL-391 Quality Control ‡ .....	1
MDRAFT-386 Machine Blueprint Reading 2 ‡ ^ .....	1
MACHTL-386 Machine Trades Mathematics 3 ‡ .....	1
MTLGY-301 Basic Heat Treatment of Metals.....	1
TDMKG-360 Basic Die Making Technology .....	1
TDMKG-366 CNC Programming 2 ‡ .....	1
TDMKG-371 Stamping Die Making 1 ‡ .....	4
TDMKG-372 Stamping Die Making 2 ‡ .....	4
TDMKG-373 Stamping Die Making 3 ‡ .....	4
MACHTL-387 Machine Trades Mathematics 4 ‡ .....	1
TDMKG-361 Advanced Die Making Technology ‡ .....	1
TDMKG-362 Cavity Die Technology.....	1
TDMKG-367 Basic CAD/CAM ‡ .....	1
TDMKG-381 Moldmaking 1 ‡ .....	4
TDMKG-382 Moldmaking 2 ‡ .....	4
TDMKG-383 Moldmaking 3 ‡ .....	4

TOTAL CREDITS: 66

‡ Prerequisite required.  
^ Counts toward earning the CNC Setup and Operations certificate.  
Program curriculum requirements are subject to change.

Current MATC students should consult their **Academic Program Plan** for specific curriculum requirements.

Possible Careers

- Tool and Die Maker (Stamping)
- Mold Maker
- Model Maker
- Jig and Fixture Maker
- Apprenticeship

Related Programs

- CNC Setup and Operations
- Computer Numerical Control (CNC) Technician
- Machine Tool Operations





matc.edu or 414-297-MATC  
Wisconsin Relay System 711

- Downtown Milwaukee Campus**  
700 West State Street
- Mequon Campus**  
5555 West Highland Road
- Oak Creek Campus**  
6665 South Howell Avenue
- West Allis Campus**  
1200 South 71st Street
- MATC Education Center at Walker's Square**  
816 West National Avenue, Milwaukee