

## MANUFACTURING TECHNOLOGY (MT)

### About the program

Programs in this field provide general and specific educational opportunities for students seeking careers in drafting and design for manufacturing, machining operations, computer-controlled manufacturing, process control, production, and supervision.

### Degrees/Certificates within this Program:

- Associate of Science Degree, CADD/CAM Design and Manufacturing
- Certificate of Achievement, CADD/CAM Design and Manufacturing
- Associate of Science Degree, Manufacturing Technology
- Certificate of Achievement, Manufacturing Technology

### Similar Degrees/Certificates offered at CR:

- Associate of Science Degree, Drafting & 3D Modeling
- Certificate of Achievement, Drafting & 3D Modeling
- Certificate of Achievement, Welding Technology

### Career Opportunities

*Employment opportunities in this field include:*

- Machinists
- Tool & Die Makers
- Mechanical Engineers, after transferring to a four-year program
- Model Makers
- Computer Numerical Control Machine Programmers
- Electromechanical Maintenance Technicians
- Drafters and Designers

### For more information

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www.redwoods.edu/Manufacturing-Technology/
- Career & Technical Division, 707-476-4341
- Counseling & Advising, 707-476-4150

### Associate of Science Degree, CADD/CAM Design & Manufacturing

	Units
<b>General Education Requirements</b>	<b>18.0</b>
<b>Program Requirements</b>	
<b>Core Courses</b>	<b>42.0</b>
PHYS 10* Intro to Physics	3.0
DT 23 Engineering Design Graphics	3.0
or ENGR 23 Engineering Design Graphics	3.0
DT 25 Computer-Aided Design & Drafting	4.0
DT 50 3D CAD Application	4.0
DT 60 Mechanical Design Drafting	4.0
IT 60A Basic Manufacturing Blueprint Reading	3.0
IT 60B Machine Parts Blueprint Reading	3.0
MT 10 Fundamentals of Manufacturing Technology	3.0
MT 11 Advanced Manufacturing - Turning	4.0
MT 52 Ferrous Metallurgy	3.0
MT 54A Intro to Computer Numerical Control	4.0
MT 59A Mastercam 2D Programming	4.0
<b>Unrestricted Electives - as needed to complete 60 units total</b>	
<b>Total Units</b>	<b>60.0</b>
<i>*Course may be double counted toward General Education.</i>	

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### Suggested Program Sequence

#### Fall Start

Semester 1 DT 23 or ENGR 23, IT 60A\*\*, MT 10, MT 54A\*\*

Semester 2 DT 25, DT 60, IT 60B\*\*, MT 11

Semester 3 DT 50, MT 52, MT 59A\*\*

Semester 4 PHYS 10

\*\*Course offered every other year.

### Program Learning Outcomes

- Produce industry standard design documentation using Computer Aided Drafting and technical sketching.
- Develop design concepts, renderings, and models with consideration for aesthetics, cost, methods of construction and/or manufacturing, and common industrial practices.
- Use common business communication tools such as the internet, MS Office, written reports, and oral presentations.
- Analyze/interpret/present technological concepts, creative expression, resources, & data.