

Manufacturing Career Cluster

The Manufacturing Career Cluster focuses on planning, managing, and performing the processing of materials into intermediate or final products and related professional and technical support activities such as production planning and control, maintenance, and manufacturing/process engineering.

Manufacturing Technology Statewide Program of Study



The Manufacturing Technology program of study focuses on the development and use of automatic and computer controlled machines, tools, and robots that perform work on metal or plastic. CTE learners will learn how to set up and operate a variety of machine tools to produce precision parts and instruments. Students will also learn how to modify parts to make or repair machine tools or maintain individual machines, and how to use hand-welding or flame-cutting equipment.

Secondary Courses for High School Credit

Level 1

- Principles of Welding & Machining
 - 1 Semester at Ben Barber
 - 1809CT/9-12

Level 2

- Diversified Manufacturing
 - 1 Semester at Ben Barber
 - 1828CT/9-12
 - Prerequisites: Principles of Welding & Machining**
- Welding & Machining I
 - 2 Semester at Ben Barber
 - 1801CA-CB/10-12
 - NIMS Measurement, Materials & Safety**
 - Prerequisites: Principles of Welding and Machining and Algebra I**

Level 3

- Welding & Machining II
 - 2 Semesters at Ben Barber
 - 1802CA-CB/11-12
 - Prerequisites: Welding & Machining I and Geometry**
- Computer Integrated Manufacturing (PLTW) - Weighted
 - 1 Semester at Ben Barber
 - 1838CT/10-12
 - Prerequisites: Welding & Machining I and Geometry**

Level 4

- Practicum in Manufacturing
 - 2 Semesters at Ben Barber
 - 1822CA-CB (E)/12 Only
 - Selection Process
 - Prerequisites: Completion of a Level 1 or 2 AND Level 3 or 4 course.**

Roadmap to Completer

Levels	Courses	
Level 1	1809CT Principles of Welding & Machining (1 Credit)	
Level 2	1828CT Diversified Manufacturing (1 Credit)	1801CA-CB Welding & Machining I (2 Credits)
Level 3	1802CA-CB Welding & Machining II (2 Credits)	1838CT Computer Integrated Manufacturing (1 Credit)
Level 4	1822CA-CB Practicum in Manufacturing (2 Credits) <i>Students must successfully complete a level 1 or 2 course AND a level 3 or 4 course to take a practicum course</i>	

1 Semester Home Campus	2 Semester Home Campus	1 Semester Ben Barber	2 Semesters Ben Barber
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- Failure to follow the sequence of courses in the Roadmap to Completer could result in a student not meeting standards to be a CTE Completer in the program of study.
- Students without their own transportation may not be able to participate in a practicum course.
- Successful completion of the Manufacturing Technology program of study will fulfill requirements of the Business and Industry endorsement.