

# Manufacturing Engineering I



**Prerequisite:** Any 2 credits from Manufacturing, Transportation OR STEM

**Course:** 1808CT

**Credits:** 1

**Length:** 18 weeks

**Placement:** 10-12

## Course Description

In Manufacturing Engineering, students gain knowledge and skills in the application, design, production, and assessment of products, services, and systems and how those knowledge and skills are applied to manufacturing. Knowledge and skills in the proper application of Manufacturing Engineering, the design of technology, efficient manufacturing technology, and the assessment of the effects of production technology prepare students for success in the global economy. The main project for this class will be to manufacture a solar car for the Solar Challenge.

## Student Activities

Students will be instructed in advanced skills in the following areas:

- Shielded Metal Arc Welding (SMAW)
- Gas Metal Arc Welding (GMAW)
- Flux Cored Arc welding (FCAW)
- Gas Tungsten Arc Welding (GTAW)
- Oxy-Acetylene Cutting and Welding
- Plasma Cutting
- Project Design and Fabrication
- Working individually and in groups
- Employability and Careers in Manufacturing

## Organizations/After School/Competition

## Additional Considerations

Students need fine motor skills and mobility. Students handle sharp objects and use dangerous equipment. If seeking certification, curriculum cannot be modified.



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