

# SCIENCE, TECHNOLOGY, ENGINEERING & MATH (STEM)

## CAREER CLUSTER

PROGRAM OF STUDY:

## ENGINEERING

Course	Credits	Class Periods	Grade	Location
Principles of Applied Engineering	1.0	1	8-12	Home Campus
Engineering Design and Presentation <i>Prerequisites: Algebra I, and Principles of Applied Engineering</i>	1.0	1	9-12	Home Campus
Engineering Science <i>Prerequisite: Engineering Design and Presentation</i>	1.0	1	10-12	Home Campus
Practicum in STEM <i>Prerequisite: Engineering Science</i>	2.0	2	12	MCTC

### CERTIFICATION OPPORTUNITIES

Students will have the opportunity to test for Autodesk Inventor while enrolled in the Practicum in STEM course.

### PROGRAM EXPERIENCES

MCTC provides students with a true experience and understanding of the profession. The course content focuses on real-life applications of engineering, both in lesson content and project work. Students are provided a fun but realistic familiarity on the requirements, time commitment, and dedication it takes to pursue a career in engineering. Once completed with these courses, students should be able to make a sound and educated decision in their future careers in this industry.



## 8660V PRACTICUM IN STEM

**Grade: 12 2 Credits**

*Prerequisites: Engineering Science, Algebra II or concurrent enrollment in Algebra II*

This course builds upon engineering foundations and increases understanding of the overall design process in a classroom and workplace environment. Major emphasis is placed on projects as they relate to the business world, including its process, key definitions, budgets, schedules, and presentations. Projects are team-based involving cross-functional disciplines (architectural, project management) to derive cohesive solutions. Students may have the opportunity to gain field experience through field trips, guest speakers, and job shadowing.



### CAREER POSSIBILITIES

- Aerospace Engineer
- Chemical Engineer
- Civil Engineer
- Environmental Engineer
- Hydraulics
- Structural Engineer

### EXPECTATIONS OF STUDENTS

- Maintain self motivation.
- Demonstrate the ability to be a flexible team player.
- Demonstrate excellent verbal and written communication skills.
- Exhibit a willingness to share creative ideas.