



## Precision Metal Engineering 1 & 2

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**Conference Period:** 10:55am-11:45am

**Tutoring Opportunities:** By appointment only

**Class Materials:**

- Safety Glasses
- Flash Drive
- Leather Work Boot

Access to Canvas and Office365 tools is available to students through our [Single Sign-on Portal \(SSO\)](#). Students receive their SSO login during enrollment.

### Course Description:

Precision Metal Engineering 1 & 2 are courses designed to familiarize students with the knowledge, skills, and career opportunities in the manufacturing industry. Emphasis is placed on technical and practical applications of manual mills, manual lathe, CNC mills, CNC lathes, CNC plasma cutter, 3D printing, laser engraving, robotics and automation, mechatronics, industrial motor control, saws and a variety of tools and processes. Students will also gain the skills to read and produce shop drawings, structural drawings, blueprints, manufacture production prototypes, and design and program a manufacturing robotic automation line.

### Course Goals:

Students who complete this course successfully will be able to:  
Program, set up, and operate a variety of manufacturing equipment and processes.  
Earn industry standard certifications  
Have the foundation to start a career in the manufacturing industry

### Student Evaluation:

The grading system for this course is as follows:

- Grade averaged 60% Major 40% Minor
- Major grades – tests (including District Common Assessments, six weeks assessments, projects, final essays, research papers, presentations); minimum three per six weeks
- Minor grades – quizzes, daily assignments, journals; minimum 4 per six weeks
- Semester exams will count 1/7 of the semester grade
- A letter system (S, N, U) is used to report a student's conduct based on proper/responsive conduct and citizenship
- Official grades will be in Skyward only and can be accessed by student and parent through Family Access.

- Per Board Policy EIA (LOCAL), “The District shall permit a student who meets the criteria detailed in the grading guidelines a reasonable opportunity to redo an assignment or retake a test for which the student received a **failing** grade. This policy applies only to initial identified major grades and does not apply to daily assignments, quizzes, six-week test, and semester final examinations. Upon reteach and retest, the new test, project, etc. recorded will be a high score of 70%.

### **Assignments, exams, expectations outside of the classroom:**

1. All assignments are due on or before the due date assigned by the teacher.
2. Students that were absent will have the opportunity to makeup work. The student shall have a time equal to days absent from class plus one day to complete all missed assignments.
3. Students are responsible for discussing with the teacher about when makeup work is due.
4. All makeup tests must be completed during the school day.
5. Work, including tests, assigned prior to an absence may be due on the first return day.

### **Attendance/Tardy Policy/Make-Up Work:**

All students are expected to be on time and attend class. EMS ISD tardy policy will be followed. If a student is absent from class, the note will need to be given to the student’s home campus attendance clerk.

If a student needs to leave early for an appointment, the student’s guardian must call the HCTC front desk at 817-306-1925 for dismissal and the student must sign out at the front office.

The HCTC allows students 3 minutes after class to walk to their vehicle or bus and then 20 minutes for transportation to and from their home campus. If a student is tardy, it is the student’s responsibility to notify the teacher for attendance purposes. Excuses such as car trouble, traffic problems or inclement weather are considered to be unexcused for students driving personal vehicles.

Make-Up Work – district policy for make-up work applies. See student handbook.

### **Classroom Expectations:**

Precision Metal Engineering students will be focused, mature, young adults that will take their learning seriously while being respectful of peers, faculty, and staff. Students will adhere to, at the minimum, EMS ISD district dress code. Students will be in class and engaged in learning every day.

Privileges granted to the Precision Metal Engineering students will be:

The opportunity to participate in student organizational competitions which may lead to district, state and national competitions.

Scholarship Opportunities

Job Opportunities

Industry Certification Opportunities

### **Preliminary Schedule of Topics, Readings, and Assignments**

Solidworks Designing

Additive Manufacturing (3D Printing)

Welding in Manufacturing

Computer Numerical Control (Conversational Programming, Coding, Cam, Machine Setup, Machine Operation)

Robotics and Automation  
Industrial Motor Control  
Mechatronics

**Academic Integrity:**

Academic integrity values the work of individuals regardless if it is another student's work, a researcher, or author. The pursuit of learning requires each student to be responsible for his or her academic work. Academic dishonesty is not tolerated in our schools. Academic dishonesty includes cheating, copying the work of another student, plagiarism, and unauthorized communication between students during an examination. The determination that a student has engaged in academic dishonesty shall be based on the judgment of the classroom teacher or other supervising professional employee and considers written materials, observation, or information from students. Students found to have engaged in academic dishonesty shall be subject to disciplinary and/or academic penalties. The teacher and campus administrator shall jointly determine such action.