



Principles of Applied Engineering – 8th Grade

Mr. Freeseaman

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Conference Period: 6th period from 1:11 – 1:58 pm.

Tutoring Opportunities: Monday afternoon from 3:40 – 4:40 pm.

Class Materials:

Students are asked to provide a 1 inch 3-ring binder with approximately 10 sheets of lined paper inside. This binder will be utilized in the classroom to store their notes, handouts, and journal entries. In addition, please provide a pencil and a 12-inch ruler.

Course Description:

This course provides an overview of the various fields of science, technology, engineering, and mathematics and their interrelationships. Students will use a variety of computer hardware and software applications to complete assignments and projects. In addition, students will be required return a signed Applied Engineering Safety Agreement, signed by at least one parent or legal guardian.

Course Goals:

Students who complete this course successfully will be able to apply problem-solving skills and work effectively with a project team.

As a Career/Tech Ed (CTE) course, this class is about more than learning the content; it is also meant to prepare students for the workplace. As such, orderly, productive, and respectful behavior is as much a part of the curriculum as research and projects. Failure to meet behavioral expectations will result in consequences per district policy in order to preserve the learning environment and ensure that every student has an opportunity to achieve to his or her potential.

Student Evaluation: The grading system for this course is as follows:

- Grade averaged 60% Major 40% Minor (Advanced courses 70% Major 30% Minor)
- Major grades – tests (including District Common Assessments, projects, final essays, research papers, presentations); minimum three per six weeks
- Minor grades – quizzes, daily assignments, journals; minimum four per six weeks

- Each six weeks will count as 1/3 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
- 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 and quizzes. Upon reteach and retest, the new test, project, etc. recorded will be a high score of 70%.
- Official grades will be in Skyward only and can be accessed by student and parent through Family Access.

Assignments, exams, expectations outside of the classroom:

Sufficient time is allotted for all Engineering projects to be completed during in-class hours. Major grade projects will be posted in CANVAS to accommodate students that are absent so that assignments can be completed outside of the classroom when necessary.

Attendance/Tardy Policy/Make-Up or Late Work:

EMS district policy will be followed. Please refer to the On-Line District Handbook.

Students are required to engage daily in the lessons, complete and turn assignments in on time, interact with the teacher, and show progress in the learning. A student will be considered absent if the student does not have documented engagement listed above. Students who are receiving remote asynchronous instruction are considered enrolled on the first day the student participates through one of the engagement methods listed in this document.

Daily attendance will be taken, and compulsory attendance will be followed. If a student is not engaged online, the normal truancy process will be followed (TEC, §25.092). Students must be present for 90% of the required days of learning to be promoted to the next grade level or receive credit towards graduation, if in high school. Notes for absences will still be required if a student is in remote learning.

Classroom Expectations:

- Be respectful of students, staff and property
- Have high expectations of yourself and others
- Keep hands, feet, and objects to yourself
- Be on time and prepared
- Follow directions the first time they are given

Preliminary Schedule of Topics and Assignments:

- The Engineering profession: Intro. to Engineering History and Principles
- Technical drawing and plans: Measuring, Drafting, CADD
- 3D Catapult Build of an isometric design
- Robotics: Robotic Programming using Scratch on-line, and VEX Robots in class
- Civil Engineering: Westpoint Bridge Designer Software, Balsa bridge design/build project
- Electrical Engineering: Application of Mathematic Formulas, DC Soldering Blinky Kits, AC electrical wiring project
- Architectural Scale Drawings and Homeless Shelter design/build project

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.