

ENGINEERING SEMESTER SYLLABUS

Mr. Houts

houts_daren@silverfalls.k12.or.us

(503) 873-6331 ext. 3792



The course will: emphasize advanced engineering skills by hand and by computer using AutoCAD and Inventor as well as other software .

Students dig deep into the engineering design process, applying math, science, and engineering standards to hands-on projects. They work both individually and in teams to design solutions to a variety of problems using 3D modeling software, and use engineering documentation for their work.

The student will:

- Draft using hand tools
- Draft using computers and programs to create drawing prints
- Model objects using computers to create using a 3D printer / CNC machine.
- Design and improve upon others designs.
- Compete to complete – Challenges.

Requirements:

All students must complete the following requirements before beginning to make a project.

1. Complete all assignments.
2. Complete all tests.
3. Demonstrate machinery knowledge before printing a project.
4. Wear safety glasses and observe all safety procedures while in the shop area.

Grades:

Grades will be earned with the following:

90%-100%=A; 80%-89%=B; 70%-79%=C; 60%-69%=D; < 59%=F

Points will be available in the following categories:

Class participation and effort	25%
Assignments	25%
Projects	50%

Standards used for grading:

EN01 Use effective communication skills with a variety of audiences.

EN02 Exhibit integrity and professionalism in engineering cluster occupations.

EN03 Use technology such as computers and design software to solve engineering problems.

EN04 Understand and use applied mathematics and science for engineering cluster careers.

EN05 Develop and implement a career plan within the engineering cluster occupations.

EN06 Use teamwork, critical thinking and problem solving skills to address complex problems in engineering.

EN07 Understand the role of engineering in society throughout history and how it is affected by economics, regulations, politics, and corporate culture.

EN08 Apply design principles and life-cycle methodology to create products, systems, and processes using appropriate technology.

EN09 Understand the impact personal characteristics, such as creativity, resourcefulness, the ability to visualize and the ability to think abstractly have on engineers and their ability to design.

EN10 Understand and adhere to safety, health, and environmental standards and regulations.

Student Expectations: Be Safe! Be Ready to Learn! Be Respectful! Work Together!