

Canyon Crest Academy: Principles of Engineering

Level of Difficulty	Estimated Homework	Prerequisites
<input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Difficult <input type="checkbox"/> Very Difficult	0-30 minutes	<u>District</u> None <u>Department</u> Recommendation: Integrated Math I concurrent enrollment.

Course Description

Principles of Engineering (POE) is a foundation course in the Project Lead the Way (PLTW) Engineering pathway which exposes students to major concepts they'll encounter in a post-secondary engineering course of study. Topics related to Civil, Mechanical, Electrical and Aerospace Engineering will be covered. Students will develop problem-solving skills and apply their knowledge of research and design to create solutions to various challenges, document their work and communicate solutions.

Grading

A variety of assessments will be used including journal entries, projects and self and peer assessments. For example students will be assessed on their journal entries which include warm-up exercises to calculate the force on a bridge truss. Another example assessment includes student demonstration of a project implementing a mechanical, electrical, and control mechanism to sort different colored marbles. Another example assessment includes a student self-evaluation of the design of his or her material strength project. Another example assessment includes peer review and voting of students' simple machine energy transfer.

Syllabus Link

<http://cc.sduhsd.net/subsites/Tony-Mauro/>

Supplemental Information

10 credits

Meets high school graduation requirement for Practical Art or electives

Meets CSU/UC subject area "g" requirement