Introduction to Engineering – Core

1 Semester - Dual Enrollment Fall or Spring

Course Description

The Introduction to Engineering course is a course designed to introduce the profession, ethics, and diversity of the field of engineering to students. The course will expose students to the various engineering disciplines: Biological Engineering, Civil Engineering, Chemical Engineering, Computer Science, Construction Management, Electrical Engineering, Environmental Engineering, Industrial Engineering, Mechanical Engineering, and Petroleum Engineering. Specifically, this course will emphasize that the engineer is a team worker who needs strong skills in technical problem solving, engineering design, ethical decision making, and communicating to diverse audiences.

Course Objectives

- Demonstrate an understanding of academic honesty and ethics pertaining to the profession of engineers.
- Demonstrate effective communication skills, through team working, oral presentations, and good written communication.
- Demonstrate an awareness of the connections between engineering and the wider world.
- Use the engineering design process to create, test, and redesign discipline specific projects to gain better appreciation of the diverse engineering fields.

Assessing Performance

Students are assessed by obtaining weekly grades on the following: Work Ethic, Quizzes, Lab Reports, Presentations, and Reflections.

Course Essentials

Equipment	Cost/Unit
Consumable material	$1,500
Reusable material	$1,500
Classroom set of computers	$0 if you already have some, $500-600 per computer if you need to purchase

Fall or Spring Semester

Unit 1: Ethics and the Field of Engineering	Engineering Creed, Ethical dilemma situations and discussions
Unit 2: Communication, Teamwork, and Work Ethic	Oral, Written, Technological, and Visual communication, Value of Work Ethic
Unit 3: Engineering Design Process	Understand and explore the engineering design process
Unit 4-13: Examination of Disciplines	Guest Speaker, Hands-on project, Presentation of results