

ENGR 100 Introduction to Engineering

3 Units (2 lecture + 1 lab)

Prerequisite: Trigonometry

Course Description: This course explores the branches of engineering, the functions of an engineer, and the industries in which engineers work. The course explains the engineering education pathways and explores effective strategies for students to reach their full academic potential. The course presents an introduction to the methods and tools of engineering problem solving and design including experimentation, data analysis, computer and communication skills, and the interface of the engineer with society and engineering ethics. A spreadsheet program (Microsoft Excel) and a high-level computer language (MATLAB/FREEMAT) are an integral part of the course.

Learning Outcomes: By the end of this course, students should be able to

1. Describe the role of engineers in society and classify the different engineering branches, the functions of an engineer, and industries in which they work.
2. Identify and describe academic pathways to bachelor's degrees.
3. Develop and apply effective strategies to succeed academically.
4. Explain engineering ethical principles and standards.
5. Demonstrate knowledge of effective practices for writing technical engineering documents and making oral presentations.
6. Analyze engineering problems using the engineering design process.
7. Demonstrate teamwork skills in working on an engineering design team.

Resource Links:

[Course Syllabus:](#) lecture content and course schedule, textbook info, course requirements, etc.

[Course Documents:](#) Lab handouts, problem sets, content review slides, etc.

[Lab Overviews:](#) list of lab descriptions and learning objectives

[Lecture Videos:](#) videos used for Fall 2016