



# EGR 111

## Foundations of Engineering I

### Course Description

This course is an introduction to the engineering profession, ethics and disciplines.

### Course Corequisite

Foundations of Engineering I Laboratory (EGR 111L)

### Specific Course Requirements

### Textbook Requirements

See current semester textbook list at <http://www.physics.sfasu.edu/docs/books.pdf>

### Course Objectives

This course is an introduction to the engineering profession, ethics and disciplines. The course will stress the development of skills in teamwork, problem solving, logic processing, algorithm development, estimation, design, and drawing. There will be an emphasis on computer applications and programming, digital logic, Computer Aided Drafting (CAD) tools, and communication. Topics include Newton's laws, unit conversions, statistics, computers, Excel, basic graphics skills, visualization, and orthographic drawings. Software used: CAD, Windows, Office, and the Internet. (3 semester hours; 2 hours lecture and 2 hours lab per week) This course is part of an [articulation agreement with Texas A&M University](#).

### Student Learning Outcomes

- To learn about the requirements to be a professional engineer
- To develop engineering teamwork skills
- To be able to identify good engineering ethics
- To learn about the most popular engineering disciplines
- To learn the fundamentals of engineering drafting

### Course Content

- The Engineer
- Engineering Ethics
- Problem Solving
- Understanding Computers
- Introduction to Design and CAD
- Engineering Communications
- Numbers
- Tables and Graphs
- Statistics
- Newton's Laws
- Thermodynamics
- Rate Processing
- SI System of Unit

### Course Assessment

The course assessment may use any or all of the following evaluation tools: exam scores, classroom participation, homework average, quizzes, and team projects. The lecture and laboratory grades are combined and the same grade will be recorded for both lecture and laboratory.