

# **Fundamentals of Engineering for Transfer - Problem Solving and Design**

# **ENGR 1188**

#### **Credit Hours:**

1.50

#### **Course Levels:**

Undergraduate (1000-5000 level)

#### **Course Components:**

Lecture

Lab

#### **Course Description:**

Introduction engineering problem solving and design through a hands-on design build project; teamwork; written, oral and visual communications; project management.

#### **Prerequisites and Co-requisites:**

Prereq: Engr 1186 and 1187. Concur: Math 1141 or Math 1151 or above, or equiv.

#### Course Goals / Objectives:

- Understand and gain experience with the elements of engineering problem solving and design as applied to various discipline in engineering
- Experience material from a range of engineering disciplines through selected hands-on laboratory experiences
- Develop professional skills for success in engineering, including teamwork and written, oral, and visual communications
- Have an introductory level knowledge of project management (e.g. scheduling, budgeting, reporting)
- Complete a term-length, design-build project which serves as a cornerstone experience. Project is to reinforce
  use of numerical problem solving, engineering documentation, graphics and visualization and teamwork
  skills

### **Course Topics:**

- Introduction to Course and Overview
- Engineering Problem Solving Fundamentals
- Engineering Design Process Fundamentals
- Introduction to Project Management
- Design/Build Project Preparation Exercises
- Design/Build Project(Project to make use of both Problem Solving and CAD knowledge)

# **Designation:**

Required