Design and Professional Practice I, Biomedical

MATSCEN 4381.02

Credit Hours: 3.00 - 3.00

Course Levels: Undergraduate (1000-5000 level)

Course Components: Lecture

Course Description: First course in a two-course MSE Senior Design sequence with a biomedical engineering emphasis. Introduction to design principles; challenges of biomedical device design; projects focus on helping persons with disabilities.

Prerequisites and Co-requisites: Prereq: 3141, 3151, 3331, and enrollment as MatSEng-BS major. Prereq or concur: 3261, 3271, or 3331.

Course Goals / Objectives:
- Students will be able to abstract engineering specifications from clinical needs by applying various design analysis methods
- Students will be able to demonstrate engineering design and optimization by building a small medical device in a team environment;
- Students will be able to make a professional presentation and write a technical team report

Course Topics:
- Design Process
- Design Projects
- Physiology, team-building, device needs finding and specifications

Designation: Required