



THE OHIO STATE UNIVERSITY
COLLEGE OF ENGINEERING

Biomedical Engineering Capstone Design I

BIOMEDE 4901

Credit Hours:

3.00

Course Levels:

Undergraduate (1000-5000 level)

Course Components:

Lecture

Course Description:

First course in a two-course BME capstone sequence. Introduction to design principles; challenges of biomedical device design; projects focus on helping persons with disabilities.

Prerequisites and Co-requisites:

Prereq: Sr standing in BiomedE.

Course Goals / Objectives:

- A) Students will be able to develop and list engineering specifications from clinical needs; (4)
 - B) Students will be able to demonstrate engineering design and optimization for a new device in a team environment; (c)
 - C) Students will be able to take a problem from idea to drawing and physical prototype form using modern engineering tools; (2)
 - a) GE Reflectn Booknd LO: Engaged Citizenship & Intercultural Competency: Students consider public health, safety, welfare, global, cultural, social, environmental, & econ factors in applying eng design to produce solutions meeting specified needs.
 - b) GE Reflectn Booknd LO: Personal & Professional Development: Students individually assess and pursue personal professional growth in concert with project requirements and personal career goals.
 - GE Reflectn Booknd LO: Cultivate Engineering Mindset: Students develop an engineering mindset that demonstrates constant curiosity, makes connections between disparate bodies of information, and seeks opportunities to create value.
-

Course Topics:

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

Designation:

Required