



Biomedical Microtransducers

BIOMEDE 5668

Credit Hours:

3.00 - 3.00

Course Levels:

Undergraduate (1000-5000 level)

Graduate (5000-8000 level)

Course Components:

Lecture

Course Description:

Examination of the Micro-Electro-Mechanical-Systems (MEMS) as a tool for detecting signals or performing functions for biomedical research and clinical purposes.

Prerequisites and Co-requisites:

Prereq: Sr or Grad standing in Engineering, or permission of instructor.

Course Goals / Objectives:

- Describe the working principles of natural transductions
 - Identify the transduction principles of engineering microsensors and microactuators
 - Design micro/nanofabrication process for creating components of microtransducers
 - Design and fabricate simple transduction components for certain biomedical application
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Course Topics:

- Natural transduction
 - microsensors and micoractuators
 - micro-nanofabrication techniques
 - transducer design and application
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Designation:

Elective