BME 322: Sensors and Nanodevices in BME

Biomedical Engineering

Introduction to fundamentals and major types of sensor systems, scaling laws of device, miniaturization, and detection mechanisms, including molecular capture mechanisms; electrical, optical, and mechanical transducers; micro-array analysis of biomolecules; semiconductor and metal nanosensors; microfluidic systems; and microelectromechanical systems (MEMS, BioMEMS) design, fabrication and applications for biomedical engineering.

3 Credits

Prerequisites

- BME 311: Biomechanics

Instruction Type(s)

- Lecture: Lecture for BME 322

Subject Areas

- Bioengineering and Biomedical Engineering