Attention Students!
New Course Starting Fall 2017

Undergraduate and graduate elective; 3 Credits

Instructor: Dr. Yu Huang, yu.huang@usu.edu

Schedule: Lectures, Wed & Fri 1:30-2:20pm; Labs, Thr 1:30-3:30pm

CRN: 54269 for undergraduates, 54271 for graduates (opens on 4/13/2017)

Prerequisites: BENG 3500 or permission of instructor and Admission to the Professional Engineering Program.

Highlights of Learning

- Computer-Aided Design (CAD)
- Good Manufacturing Practice (GMP) & cleanroom training
- Microfabrication
- Cell and tissue engineering
- Multiphysics Simulation
- Research Proposal

This is a fundamental course of bioMEMS (biological Micro-Electro-Mechanical Systems), meant to be an advanced undergraduate or entry-level graduate course in engineering or other relevant interdisciplinary program. The lecture introduces the concepts of miniaturization, materials and methods for microfabrication, principles of micro-engineering, and overviews of the application in biomedical research, including microfluidics, tissue engineering, cell-based and non-cell-based devices, and implantable systems. The lab session provides additional hands-on experience for design, fabrication and computer simulation of miniaturized system.