

Course Announcement – Fall 2010

EE 777D BioMEMS and Applications

Days: Monday and Wednesday
Time: 12:30pm – 1:45pm
CRN: 17351
Location: 215 Wallace Hall
Instructor: Dr. Shalini Prasad, EECS Department
Shaliniprasad1@gmail.com
951-329-1650

Cr. Hours: 3

Textbooks: Fundamentals of Bio-MEMS and Medical Microdevices, S.S. Saliterman, Wiley-Interscience, SPIE Press, 2006, ISBN: 08945977-1 (required).

Fundamentals of Microfabrication, The Science of Miniaturization, Marc J. Madou, CRC Press, 2nd Ed, ISBN: 0-8493-0826-7 (optional).

Description: This course gives a comprehensive overview of the basic materials and methods involved in developing hybrid devices for applications as sensors and diagnostics tools in healthcare and the environment. The materials section involves an analysis of silicon-based devices and polymer-based devices. The methods section covers the key features of micro fabrication and soft lithography. The methods of integration of microstructures for specific sensor applications will be studied. The material covered will familiarize the students with the sensors currently in use or under development, how they operate, and under what circumstances they can be useful. This course includes a project in application specific evaluation and analysis of BioMEMS devices.

Pre-requisites: EE 282