



H-Form ECE 449

| A Brief Course Description | | | |
|------------------------------|---|-----------------|-------------|
| College | Engineering | | |
| Department/ Program | Electrical Engineering – Electronics Engineering Program | | |
| Course Name | Micro-electromechanical Devices | | |
| Course Code | ECE 449 | | |
| Year / Level | 5/9 | | |
| Credit Hours | 3 | | |
| Contact Hours | Lecture: 3 | Lab/Tutorial: 0 | Training: 0 |
| Language | English | | |
| Track | <input type="checkbox"/> University <input type="checkbox"/> College <input type="checkbox"/> Department <input checked="" type="checkbox"/> Program | | |
| | <input type="checkbox"/> Required <input checked="" type="checkbox"/> Elective | | |
| Pre-requisites Course | ECE 344 | | |
| Co-Requests | - | | |
| Course Description | Introduction to microsystem design, material properties, microfabrication technologies, structural behavior, sensing methods, fluid flow, microscale transport, noise, and amplifiers feedback systems. Design of microsystems (sensors, actuators, and sensing/control systems) of a variety of types, (e.g., optical MEMS, bioMEMS, inertial sensors) (e.g., sensitivity, signal- to-noise) using a realistic microfabrication process. Modeling and simulation in the design process. Design and Fabrication of practical MEMS examples. | | |