

Advanced Microsystem Design

Dr. Huikai Xie

Department of Electrical Engineering
University of Florida

Lecture 1 Introduction and Orientation

- Agenda:
 - Introduction
 - Syllabus
 - Overview: MEMS research at UF

- **Instructor: Prof. Hui-Kai Xie**
 - Dept. of Electrical and Computer Engineering
 - Office: 221 Benton Hall
 - Email: hkx@ufl.edu
 - Phone: 846-0441
 - Office hours: 1:50-3pm MWF

- **TA: Hongwei Qu, hwqu@ufl.edu; 392-1049; 136 Larsen Hall**

- **Guest Instructors:**
 - Prof. Toshi Nishida (nishida@ufl.edu)
 - Prof. Mark Sheplak (sheplak@ufl.edu)

Syllabus (1)

- **COURSE TITLE:** EEL6935: Special Topics -- **Advanced Microsystem Design and Manufacturing**
- **INSTRUCTOR:** Dr. Hui-Kai Xie; 221 Benton; 8460441; Email: hkx@ufl.edu
- **CREDITS:** 3
- **PREREQUISITE:** EEL5225 or permission of instructor
- **MEETING ROOM:** Psychology Building, PSY 287
- **MEETING TIME:** 12:50-1:40pm (6th period), MWF
- **TEXTBOOK:** No required textbook. Lecture notes and supplemental materials will be handed out.
- **WWW site:** <http://www.mems.ece.ufl.edu/EEL6935>

Syllabus (2)

- **GRADING:** 25% Homework, 25% Test, 50% Project, no final exam
- **HOMEWORK:** Homework problems will be assigned on a weekly or biweekly basis. Late homework is only accepted with permission of instructor, and will be graded with a 20% reduction per day.
- **PROJECT:** Project topics will be provided. Students can also propose new topics. Team projects are encouraged.

(Proposal writing 15% + proposal presentation 15% + final presentation 30% + final report 40%)
- **SOFTWARE:** Coventorware, PSPICE, Matlab

Syllabus: Objectives

1. To develop expertise in the MEMS field through studying in depth advanced micro/nano fabrication technologies, various microsystems and MEMS packaging;
2. To obtain hands-on experience on MEMS design and problem-solving skills through case studies which are closely tied with the ongoing research at UF;
3. To keep students updated on the state-of-art progress in the MEMS field; and
4. To gain experience on proposal writing through supervised, peer-reviewed projects.