ELEC 5820/6820 MEMS Technology
Course Syllabus

Prerequisites: senior standing or department approval (5820)
Course Objectives: (1) to understand the operation principles of MEMS Devices, (2) to understand the various micromachining techniques used to fabricate MEMS devices and (3) to become familiar with a wide variety of MEMS application areas such as MEMS sensors, RF MEMS, Optical MEMS, and Fluidic MEMS.
Instructor: Dr. Robert Dean (office: 222 Broun Hall, 844-1838, deanron@auburn.edu)
Schedule: Class: MWF (10:00am-10:50pm) BR 107, Office Hours: MW (3:00pm-4:00pm) and by appointment.
Textbook (recommended): *Foundations of MEMS, Sec. Ed.*, Chang Liu, Prentice-Hall, 2012.
Class Website: www.eng.auburn.edu/~deanron/MEMS_Tech.htm. Note: I plan to post .pdf versions of my teaching notes on the class website.
Special Needs: Any student who needs special accommodations should make an appointment to discuss their needs as soon as possible. Accommodations for special needs will be made in accordance with the official policies of Auburn University.

Grading Policy
Grades will be assigned on a 10% scale (90-100:A, 80-89:B, etc…) based on the point scale presented below

Item	Points	Tentative Date
Exam 1	100	Late September
Exam 2	100	Early December
HW/Quizzes	100	Various
Project	50	6820 only
Final Exam	200	Tuesday, Dec. 8 (8:00am)

Other Important Dates
Monday, Sep. 7 – Labor Day
Friday, Oct 16 – Fall Beak
Friday, Oct 30 – Professor Travel Day
Nov 23–Nov 27 – Thanksgiving break

Exams
Exams will cover material presented during class lectures, assignments performed as homework and reading assignments. Exams will be closed book and closed note. Calculators can be used on all exams. Laptop and notebook computers cannot be used on any exam. Although exams are worth 100 points toward the final grade, bonus questions *might* be given, such as derivations or proofs, for extra points. Missed exams can only be made up if the absence was due to a university excused absence (illness, job interview, conference travel, etc…). When possible, let the instructor know ahead of time if an exam will be missed due to an excused absence.

Homework and Quizzes
Homework will be given, occasionally, throughout the semester. The due dates for homework assignments will be given on the days that the assignments are given. Late homework will not be accepted, unless due to an excused absence (illness, job interview, conference travel, etc…). Homework assignments **must be** submitted either done professionally on engineering paper (front side only) or printed from a computer. Multipage homeworks **must be** submitted with the pages stapled together. "Done professionally" includes all axes labeled, correct units, answers clearly identified, calculations shown, etc… Homework assignments will be handed out in class AND posted on the class website.

Computer Resources
Some Homework assignments may require the use of engineering software tools, such as PSPICE, MATLAB, and/or EXCEL. These tools are available on the College of Engineering Workstations (e.g., BR 123).

Class Attendance
Class attendance will not affect grading except as previously stated under Exams and Homework and Quizzes. If a student knows that he or she will be absent for an excused absence, such as a job interview or to attend a conference, please let the instructor know ahead of time if possible.

Class Etiquette
The instructor is here to teach and the students are here to learn. Therefore it is important to maintain a classroom atmosphere that fosters learning. Therefore:

(1) do not use cell phones during class
(2) do not read newspapers during class
(3) arrive on time
(4) do not leave early (except after completing an exam) unless you notify the instructor before class of a need to leave early that day
(5) minimize disruptive behavior (such as non class related conversations)
(6) come prepared to learn
(7) laptop/notebook computers and/or audio recording devices can be used to take notes

Academic Honesty
Students are expected to do their own work. Students may work together on homework assignments; however, each student must submit their own work for a homework assignment. Representation of someone else's work as their own will result in a zero on the assignment and possible further disciplinary action by Auburn University. Quizzes and Exams must be exclusively the work of the student submitting the work for grading.

Inclement Weather

Auburn University may announce campus closings due to expected or occurring inclement weather, such as hurricanes or ice storms. These campus closings, as well as tornado warnings, are officially excused absences from class.

Contingency Plan

If normal class activities or computer lab availability are disrupted due to many students or the instructor experiencing illness or an emergency situation (such as severe weather), the syllabus and other course plans and assignments may be modified to allow completion of the course. If this occurs, an addendum to your syllabus and/or course assignments will replace the original materials.