ECE 421/521 Analog Integrated Circuit Design I Syllabus September 2013

Course Description


Schedule--Fall Quarter 2013
Monday and Wednesday 4:40 - 6:30 on campus

Course Outcomes

Fluency with diode, BJT and MOS structures and models. Design using real devices.
If you can’t fix it, feature it: design using device non-linearity.
Fluency with the basic analog building blocks: bias, feedback, v to i, output.
Single-ended to differential circuits and techniques
Familiarity with the use of a circuit simulator to support analog IC design
Introduction to Analog Integrated Electronics Projects
Ownership of a basic project in personal analog design portfolio.

Supplementary Textbook: any old edition of Gray and Meyer

The goal of this class is lead students on the first steps down a path to a lifetime journey as an analog designer.

Course structure: weekly study guides with homework assignments and prep material for upcoming exercises.

Class structure: 4 one-hour lectures per week. Roughly 2 hours per week of textbook work, one hour of interactive design work, and one hour exploring a current analog design using specific examples from an extensive portfolio.

One In-Class midterm exam, project reports, and final project progress report.

Grading: midterm, weekly ungraded and graded exercises, in-class project work, and final project progress report. Class attendance is necessary for success.