

Southern Illinois University at Carbondale
Fall 2010
Syllabus: ECE 446 Electronic Circuit Design

Instructor:

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Office Hours: MWF 3:00–4:30 PM, and by appointment.

Lecture: MWF 11:00–11:50 AM, ENGR. A-222

Labs: Flexible (to be decided later)

Textbook: Behzad Razavi, *Fundamentals of Microelectronics*, 1st edition, Wiley, January 28, 2008.

Course Topics:

Introduction {1 class}
Device Fundamentals {2 classes}
BJT biasing and amplifiers {2 classes}
MOS biasing and amplifiers {1 class}
Cascode and Current Mirrors (Single-stage amplifiers) {6 classes}
Differential amplifiers {6 classes}
Frequency response of amplifiers {6 classes}
Feedback: circuits and stability {6 classes}
Output Stages and Power Amplifiers {3 classes}
Analog Filters {3 classes}
Tuned amplifiers and oscillators {3 classes}

Evaluation:

Quizzes (best 5/7)	20%
Homework	15%
Midterm Exam	20%
Final Exam	30%
Lab	15%

Note:

1. Students are responsible for all announcements made in the class.
2. Emphasis will be given on the *conceptual understanding* of the subject-matter rather than on memorization of equations.