

**Southern Illinois University at Carbondale**  
**Fall 2011**  
**Syllabus: ECE 446 Electronic Circuit Design**

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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:** TBA

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

**Course Topics:**

Introduction {1 class/ chap 1}  
Device Fundamentals {2 classes/ chaps 2, 4, 6}  
BJT biasing and amplifiers {2 classes/ chap 5}  
MOS biasing and amplifiers {2 class/ chap 7}  
Cascode and Current Mirrors (Single-stage amplifiers) {5 classes/ chap 9}  
Differential amplifiers {6 classes/ chap 10}  
Frequency response of amplifiers {6 classes/ chap 11}  
Feedback: circuits and stability {6 classes/ chap 12}  
Output Stages and Power Amplifiers {3 classes/ chap 13}  
Analog Filters {3 classes/ chap 14}  
Tuned amplifiers and oscillators {3 classes/ notes will be provided if covered}

**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.