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

Shaikh S. Ahmed, PhD  
Associate Professor  
Department of Electrical and Computer Engineering  
Office: Engineering E-222  
Telephone: (618) 453-7630  
Email: ahmed@siu.edu

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

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


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}  
- Cascodes 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.