

EENG 3520 Electronics II
Spring 2009
Tuesday & Thursday, 4:00 – 5:20 PM
Classroom: DP B227

Instructor: Dr. Shengli Fu

Office: DP B233

Phone: 940-891-6942

Email: fu@egw.unt.edu

TA: Adam Skelton, Tuesday & Thursday, 2:00 – 3:30 pm

Office Hours: Tuesday & Thursday from 2:30 to 3:30 pm or by appointment

Course Description

This course is a continuation of EENG 3510 (Electronics I). Topics include single- and multi-stage amplifier, differential amplifier, feedback, and frequency response. The goals of this course are to expand the students' knowledge of basic electronics, to provide the students the design and analysis of advanced analog electronics circuits, and to expose the students to a variety of tradeoffs for practical electronics design.

Textbooks

- *Required:* Adel S. Sedra and Kenneth C. Smith, Microelectronic Circuits, Fifth Edition, Oxford University Press, 2004, ISBN 0195142519.
- *Reference:* Richard Jaeger and Travis Blalock, Microelectronic Circuit Design, Second Edition, McGraw Hill, 2003, ISBN: 0072505036.

Prerequisites

EENG 3510 Electronics I.

Course Objectives

At the end of the class, the student should be able to:

- Describe the characteristics of single- and multi-stage amplifiers;
- Apply methods for the analysis of frequency response;
- Explain the advantage and disadvantage of feedback;
- Demonstrate the ability to design and implement a range of amplifiers;
- Simulate and analyze advance electronics circuits with PSPICE.

Grading Policies

In-class Quiz: 5%

Homework: 20% (NOT be accepted if late)

Project: 15%

Mid-term Exam: 30%

Final Exam: 30%

General Comments

- In-class quizzes will be given in class randomly throughout the semester, which serve as a mean for attendance record.

- You are expected to attend every lecture and responsible for announcements made in lecture, on the student access website, or via the class email list.
- Students are encouraged to discuss class material and homework in order to better understand concepts. However, all the homework you submit must be of your own. Homework assignments are to be turned in during class on the due date.
- The exams (midterm and final) are closed book with one page (8 ½ x 11) of notes allowed. Any request for “make-up” tests (midterm or final) will be subjected to university policy.
- Please turn off your cell phone during lecture. No food and drink in all classrooms and labs.
- It is the responsibility of students with certified disabilities to provide the instructor with appropriate documentation from the Dean of Students Office (see <http://www.unt.edu/oda>).

Class Schedule (tentative)

Week	Date	Topics	Reading & Assignment	HW Due
1	Jan. 20	Review Ch 1 and Ch 2	Ch.1, Ch. 2	
	Jan. 22	Review Ch 3 and Ch 5	Ch.3, Ch. 5	
2	Jan. 27	Ch. 6, Single-stage IC Amplifiers	Ch.4, 6.1, 6.2	HW1
	Jan. 29		6.3	
3	Feb. 3		6.4, 6.5	HW2
	Feb. 5		6.6	
4	Feb. 10		6.7	HW3
	Feb. 12		6.8	
5	Feb. 17	Project 1		HW4
	Feb. 19	Ch. 7, Differential and Multistage Amps.	7.1	
6	Feb. 24		7.2	Project 1
	Feb. 26		7.6	
7	Mar. 3		7.7	
	Mar. 5		7.7 (cont.)	HW5
8	Mar. 10	Review		
	Mar. 12	Mid-Term Exam		HW6
9	Mar. 17	<i>Spring Vacation</i>		
	Mar. 19			
10	Mar. 24	Project 2		
	Mar. 26	Ch. 8, Feedback	8.1, 8.2	
11	Mar. 31		8.3, 8.4	Project 2
	Apr. 2		8.5, 8.6	
12	Apr. 7		8.8, 8.9, 8.10	HW7
	Apr. 9		8.11	
13	Apr. 14	Project 3		

	Apr. 16	Ch. 14, Output Stages and Power Amps.	14.1, 14.2	HW8
14	Apr. 21		14.3, 14.4	
	Apr. 23		14.4, 14.5	Project 3
15	Apr. 28	Ch. 10, Digital CMOS Logic Circuits	10.1	
	Apr. 30		10.2	HW9
16	May 5	Review		
	May 7			
17	May 12	<i>Final Exam Week</i>		
	May 14			