

ELEC 306 ELECTRONICS I FALL 2013

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Text: "MICROELECTRONICS CIRCUIT ANALYSIS AND DESIGN", 4th Edition, Neaman, McGraw Hill, 2010

Course Outline:

<u>Week</u>	<u>Topic</u>	<u>Reading</u>	<u>Homework Problems</u>
25 Aug	Semiconductors PN Junction	1.1-1.2	1.1, 1.4, 1.18, 1.19, 1.20
01 Sep	Diodes Chap 1 Review	1.3 – 1.5	1.38, 1.42, 1.47
08 Sep	Diode Circuits	2.1 – 2.4	2.1, 2.3, 2.17, 2.19, 2.31, 2.34, 2.36, 2.44, 2.45
15 Sep	Exam 1 {Chap 1, 2} Exam Review		
22 Sep	MOS Field Effect Transistor	3.0 – 3.1	3.1, 3.3, 3.4, 3.5,
29 Sep	MOSFET DC Analysis	3.2 – 3.3	3.26, 3.30, 3.31, 3.38
06 Oct	The MOSFET Amplifier Three Basic Amplifiers	4.0 – 4.1 4.2 – 4.4	4.1, 4.10, 4.13, 4.14, 4.15
13 Oct	EXAM 2 {Chap 3, 4} Exam Review		
20 Oct	Basic Bipolar Junction Transistor	5.0	
27 Oct	BJT DC Analysis	5.1 - 5.2	5.1, 5.6, 5.13, 5.17, 5.23, 5.25, 5.27
03 Nov	Basic BJT Applications BJT Biasing	5.3 – 5.5	5.51, 5.52a, 5.62, 5.79, 5.83
10 Nov	BJT Amplifiers	6.0 – 6.3	6.1, 6.2, 6.5, 6.8, 6.16, 6.21a,b,c, 6.22
17 Nov	Three Basic Amplifiers	6.4 – 6.10	6.44, 6.51, 6.75
24 Nov	THANKSGIVING		
01 Dec	EXAM 3 {Chap 5, 6} Exam Review		
08 Dec	Review / Problems FINAL EXAM		SCCC 1300 on 14 Dec 2013 CGC TBD

Course Objectives

1. Introduction to semiconductors.
2. Introduction to and application of Diodes, Bipolar Transistors and Field Effect Transistors.

Grading Policy

1. Students will be graded on everything that is required to be turned in.
2. Work turned in after the assigned due date will not be accepted and will receive a grade of zero, unless a prior arrangement is made.
3. If you will be absent on the day of an assignment arrange to have a classmate turn in your work for you.
4. All exams are scheduled well in advance. Due to the potential unfairness of "makeup" exams, they will only be given in extreme circumstances.
5. Your final grade in the course will be determined as follows:

<u>Event</u>	<u>% of Final grade</u>
Exam 1	20%
Exam 2	20%
Exam 3	20%
Final Exam	25%
Homework/Projects	15%

6. A = 90-100, B = 80-89, C = 70-79, D = 60-69, F = 59 or below

Homework

1. Homework will be collected and graded for effort and completeness at the end of each topic.
2. Exact due dates will be provided in class.
3. You may obtain assistance when doing your homework and group study is encouraged. Copying of homework is not the same as assistance. Your homework is a graded assignment and must be your own work.

Attendance

1. College policy dictates the reporting of student absences from class. It is your responsibility to inform me of any schedule conflicts or excused absences that will result in your missing class.
2. It is college policy that a grade of **F** may be awarded to a student if that student misses more than 20% of the course meetings (excused or unexcused). For this course **7 classes** constitutes 20% of the class meetings.

Classroom Decorum

1. No food or drink is permitted in the classrooms of this building.
2. Proper attire is encouraged and ECE department policy prohibits hats, cutoffs, shorts, tank tops, and feet without socks in class.

Special Accommodations

1. Students currently documented or anticipate being documented as Learning Disabled (LD), as having Attention Deficit Disorder (ADD), or with another condition for which you might need special accommodation during the semester must provide written documentation of the condition and of the accommodation needed to me within two weeks of the semester start. You may then choose, by notifying the instructor before the start of each exam or assignment, whether you will need any accommodation. Notification after the start of an exam or last minute notification on an assignment will not be accepted. **Please Note:** To request academic accommodations (for example, a note taker), students must also register with Academic Support/Special Services, 953-1820, located in Thompson Hall. It is the campus office responsible for reviewing documentation provided by students requesting academic accommodations, and for accommodations planning in cooperation with students and instructors, as needed and consistent with course requirements.