King Fahd University of Petroleum & Minerals
Department of Electrical Engineering
EE-204 Fundamentals of Electric Circuits

Tentative Schedule: 2011-2012 First Semester (111)

INSTRUCTORS	OFFICE	Sec	PHONE	E-MAIL	OFFICE HOURS
Dr. Oualid Hammi	**0012-5**	**10**	**7394**	**ohammi@kfupm.edu.sa**	**SMW: 9:00AM-9:50AM**

Text: ***FUNDAMENTALS OF ELECTRIC CIRCUIT ANALYSIS***, Clayton Paul, Wiley & Sons. Inc., 2001

Wk	Date	Topics	Text	Laboratory/Tutorial
1	10 Sept.	Introduction, Basic Definitions, KCL, KVL	1.2 – 1.6	**No Meeting**
2	17 Sept.	Conservation of power, Series & Parallel Connection of Elements, Ohm's Law	1.7 – 1.8, 2.1 – 2.3	**Exp #1:** Electrical Circuits Simulation using Multisim Electronics Workbench
3	25 Sept.	Resistors in Series and in Parallel, Voltage and Current Division	2.4 – 2.6	**Exp #2:** Resistors & OHM'S Law
4	1 Oct.	Source Transformation, Principle of Superposition	2.7, 3.1	**Exp #3:** Kirchhoff's Laws
5	8 Oct.	Thevenin Theorem, Norton Theorem	3.2 – 3.3	**Problem Session # 1**
Major Exam I, Wednesday, 12 October 2011 @ 6:30 pm – 8:30 pm. Location: B59-R2015*				
6	15 Oct.	Maximum Power Transfer, Node Voltage Method	3.4	**Exp #4:** Current and Voltage Divider Rules
7	22 Oct.	Node Voltage Method, Mesh Current Method	3.5 (Cont.) – 3.6	**Exp#5:** Superposition Theorem
8	29 Oct.	Capacitors, Inductors, Series and Parallel Connections	5.1 – 5.2	**To be announced**
9	12 Nov.	Sinusoidal Source, Complex Numbers, Frequency Domain (Phasor) Circuit.	6.1 – 6.3	**Exp #6:** THEVENIN / NORTON Theorems and Maximum Power Transfer
10	19 Nov.	Frequency Domain Analysis	6.4 – 6.5	**Problem Session # 2**
*Major Exam II * , Wednesday, 23 November 2011 @ 6:30 pm – 8:30 pm. Location: B59-R2015*				
11	26 Nov.	Power Concepts, Average Power	6.6	**Exp #7:** The Oscilloscope and Function Generator
12	3 Dec.	Power Factor, RMS Values	6.6	**Exp #8:** Frequency Domain Analysis
13	10 Dec.	Commercial Power Distribution, Three Phase Circuits	6.9	**Exp #9:** Maximum Power Transfer
14	17 Dec.	Three Phase Circuits, Star-Delta Connections	6.9	**Exp #10:** Average and RMS Values
15	24 Dec.	Review		**Final Lab Exam**
	31 Dec.-2 Jan	Review		

Grade Distribution:

Class Work* (Quizzes+Assignments)	Major I**	Major II**	Laboratory	Final Exam (Comprehensive)
(12+3)=15 %	**15 %**	**15 %**	**20 %**	**35 %**

* The quizzes and assignments will be prepared by each instructor for his section(s).

** Locations of major exams will be reserved and posted by each section instructor.

Note: All exams are coordinated.

Course Outcomes

Upon the successful completion of this course, you should be able to

1. apply knowledge of mathematics, science, and engineering to the analysis and design of electric circuits
2. identify, formulate, and solve engineering problems in the area of circuits.
3. use the techniques, skills, and modern programming tools such as PSPICE, necessary for engineering practice.
4. function within multi-disciplinary teams
5. design a system, components or process to meet desired needs within realistic constraints

Important Points to Remember

1. **Practice Problems:** Practice problems are to be solved completely by the students and should not be submitted. Solutions will be posted on **WebCT.**
2. **Problem Sessions**: All problem sessions will be held during the lab periods by the lab instructors.
3. **Lab. Makeup:** Lab makeup are NOT allowed without an official excuse from students affairs.
4. **Attendance:** According to the university regulations, any student who exceeds 20% of the scheduled class meeting without an official excuse will receive a grade of DN in the course.
5. **Official excuses**: All official excuses must be submitted to the instructor no later than one week after the date of the excuse. The instructor has the right to reject late excuses.

Practice Problems

	Problems
1	1.3-1, 1.8-21, 1.4-5, 1.5-5, 1.6-2, 1.6-6, 1.7-2
2	2.2-5, 2.2-7, 2.3-2, 2.3-8, 2.4-31, 2.4-10, 2.5-7, 2.5-11
3	2.6-4, 2.7-3, 3.1-2, 3.1-4, 3.2-2, 3.2-4, 3.2-6, 3.2-12
4	3.3-2, 3.3-4, 3.3-6, 3.3-121
5	3.5-2, 3.5-7, 3.6-2, 3.6-7
6	5.1-3, 5.1-6, 5.1-8, 5.2-3, 5.2-6, 5.2-8, 5.4-2
7	6.1-1, 6.2-2, 6.2-5
8	6.3-4, 6.3-7, 6.4-4, 6.4-7, 6.4-12
9	6.4-16, 6.4-17, 6.5-1, 6.5-4, 6.5-8
10	6.6-1, 6.6-5, 6.6-14, 6.6-17, 6.6-21, 6.9-4