

# King Fahd University Of Petroleum & Minerals

## Electrical Engineering Department

### **EE-204 Fundamentals of Electric Circuits**

#### Tentative Schedule: 2003-2004 First Semester (031)

INSTRUCTOR	OFFICE	PHONE	E-MAIL	OFFICE HOURS
Noman Tasadduq	7/130	4714	noman@kfupm.edu.sa	<b>U. T. 9:00-10:30 AM</b>

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

Wk	Date	Topics	Text	Laboratory/Tutorial
1	13 – 17 Sep.	Introduction, Basic Definitions, KCL, KVL	1.2 – 1.6	No Meeting
2	20 – 25 Sep.*	Conservation of power, Series & Parallel Connection of Elements, Ohm's Law	1.7 – 1.8, 2.1 – 2.3	No Meeting
3	27 Sep. – 1 Oct.	Resistors in Series and in Parallel, Voltage and Current Division	2.4 – 2.6	<b>Exp #1</b> Resistors and Ohm's Law
4	4 – 8 Oct.	Source Transformation, Principle of Superposition	2.7, 3.1	<b>Exp #2</b> Kirchhoff's Laws
5	11 – 15 Oct.	Thevenin Theorem, Norton Theorem	3.2 – 3.3	<b>Problem Session # 1</b>
<i>Major Exam I (1.2 – 3.1)</i>			<i>Oct. 21, 2003</i>	
6	18 – 22 Oct.	Maximum Power Transfer, Node Voltage Method	3.4 – 3.5	<b>Exp #3</b> Computer Simulation of DC Circuits
7	25 – 29 Oct.	Node Voltage Method, Mesh Current Method	3.5 (Cont.) – 3.6	<b>Exp #3</b> Experimental Part
8	1 – 5 Nov.	Capacitors, Inductors, Series and Parallel Connections	5.1 – 5.2	<b>Exp #4</b> Current & Voltage Divider
9	8 – 12 Nov.	Sinusoidal Source, Complex Numbers, Frequency Domain (Phasor) Circuit.	6.1 – 6.3	<b>Exp #5</b> Superposition, Thevenin & Norton Theorems
10	30 Nov – 3 Dec	Frequency Domain Analysis	6.4 – 6.5	No Meeting
11	6 – 10 Dec.	Power Concepts, Average Power	6.6	<b>Problem Session # 2</b>
<i>Major Exam II (3.2 – 6.5)</i>			<i>Dec. 16, 2003</i>	
12	13 – 17 Dec.	Power Factor, RMS Values	6.6 + Handout	<b>Exp #6</b> Frequency Domain Analysis
13	20 – 24 Dec.	Commercial Power Distribution, Three Phase Circuits	6.9 + Handout	<b>Exp #7</b> Max. Power Transfer
14	27 – 31 Dec.	Three Phase Circuits, Star-Delta Connections	6.9 + Handout	<b>Exp #8</b> Average and RMS Values
15	3 – 7 Jan.	Review		<b>Final Lab Exam</b>
<i>Final Examination</i>				

#### Grade Distribution:

Design Problem	Quizzes	Two Major Exams	Laboratory	Final Exam
<b>5 %</b>	<b>10 %</b>	<b>15 % Each</b>	<b>20 %</b>	<b>35 %</b>

## List of Homework problems:

<b>HW # 1</b>	<b>Ch. 1:</b>	1.3-1, 1.4-5, 1.5-5, 1.6-2, 1.6-6, 1.7-2, 1.8-2
<b>HW # 2</b>	<b>Ch. 2:</b>	2.2-5, 2.2-7, 2.3-2, 2.3-8, 2.4-3, 2.4-10, 2.5-7, 2.5-11
<b>HW # 3</b>	<b>Ch. 2: &amp; Ch. 3:</b>	<b>Ch.2:</b> 2.6-4, 2.7-3, 2.7-5, <b>Ch.3:</b> 3.1-2, 3.1-4, 3.2-2, 3.2-4
<b>HW # 4</b>	<b>Ch. 3:</b>	3.2-6, 3.2-12, 3.3-2, 3.3-4, 3.3-6, 3.3-12
<b>HW # 5</b>	<b>Ch. 3:</b>	3.5-2, 3.5-7, 3.6-2, 3.6-7
<b>HW # 6</b>	<b>Ch. 5:</b>	5.1-3, 5.1-6, 5.1-8, 5.2-3, 5.2-6, 5.2-8, 5.4-2
<b>HW # 7</b>	<b>Ch. 6:</b>	6.1-1(b,f), 6.1-2(a,f,g), 6.2-1(d,f), 6.2-5(b,d)
<b>HW # 8</b>	<b>Ch. 6:</b>	6.3-4, 6.3-7, 6.4-4, 6.4-7, 6.4-12
<b>HW # 9</b>	<b>Ch. 6:</b>	6.4-16, 6.4-17, 6.5-1, 6.5-4, 6.5-8

## Important Points to Remember

1. **Home-work:** The homework assignment is to be solved completely by the students. Homework solutions will be posted in **building 26**, in the bulletin board between rooms 248 & 249. Homework **solutions will also be posted in the network.**
2. **Problem Sessions:** All problem sessions will be held during the lab periods.
3. **Lab. Makeup:** No lab makeup will be allowed without an official excuse.
4. **Attendance:** According to the university regulations, any student that 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 of the date of the official excuse. The instructor may not accept late excuses.