

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

**Tentative Schedule: 2007-2008 First Semester (071)**

INSTRUCTORS	OFFICE	Section	PHONE	E-MAIL	OFFICE HOURS
Dr. A. Zidouri	0078	02 & 07	3677	<a href="mailto:malek@kfupm.edu.sa">malek@kfupm.edu.sa</a>	SM 9:00-10:00, 11:00-12:00 or by appointment

Web Site: <http://faculty.kfupm.edu.sa/ee/malek>

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

Wk	Date	Topics	Text	Laboratory/Tutorial
1	Sept. 08	Introduction, Basic Definitions, KCL, KVL	1.2 – 1.6	No Meeting
2	Sept. 15	Conservation of power, Series & Parallel Connection of Elements, Ohm's Law	1.7 – 1.8, 2.1 – 2.3	No Meeting
3	Sept. 22	Resistors in Series and in Parallel, Voltage and Current Division	2.4 – 2.6	<b>Exp #1</b> Resistors and Ohm's Law
4	Sept. 29	Source Transformation, Principle of Superposition	2.7, 3.1	<b>Exp #2</b> Kirchhoff's Laws
<i>Id Al-Fitr Vacation</i>				
5	Oct. 20	Node Voltage Method, Mesh Current Method	3.5, 3.6	<b>Problem Session # 1</b>
6	Oct. 27	Mesh Current Method, Thevenin Theorem,	3.6 (Cont.) 3.2	<b>Exp #3</b> Computer Simulation of DC Circuits
<i>Major Exam I * , Tue. 30<sup>th</sup> Oct.</i>				
7	Nov. 03	Norton Theorem, Maximum Power Transfer	3.3, 3.4	<b>Exp #3</b> Experimental Part
8	Nov. 10	Capacitors, Inductors, Series and Parallel Connections	5.1 – 5.2	<b>Exp #4</b> Current & Voltage Divider
9	Nov. 14	Sinusoidal Source, Complex Numbers, Frequency Domain (Phasor) Circuit.	6.1 – 6.3	No meeting
10	Nov. 24	Frequency Domain Analysis	6.4 – 6.5	<b>Exp#5</b> Superposition, Thevinin & Norton Theorems
11	Dec. 01	Power Concepts, Average Power	6.6	<b>Problem Session # 2</b>
<i>Major Exam II * , Mon, 3<sup>rd</sup> Dec.</i>				
12	Dec. 08	Power Factor, RMS Values	6.6 **	<b>Exp #6</b> Frequency Domain Analysis
<i>Id Al-Adha Vacation</i>				
13	Dec. 29	Commercial Power Distribution, Three Phase Circuits	6.9 **	<b>Exp #7</b> Max. Power Transfer
14	Jan 05	Three Phase Circuits, Star-Delta Connections	6.9 **	<b>Exp #8</b> Average and RMS Values
15	Jan. 12	Review		<b>Final Lab Exam</b>

**Grade Distribution:**

Design Problem	Quizzes	Major Exams	Laboratory	Final Exam
3 %	12 %	30 %	20 %	35 %

\* Location of major exams will be reserved and posted by the each section instructor.

\*\* Extra handout may be used if needed.

*This information and more are available on WebCT*

## **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

## **Important Points to Remember**

1. **Practice Problems:** Practice problems are to be solved completely by the students. solutions will be posted in **WebCT**.
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 from students affairs.
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.

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

This course supports the following five program outcomes out of eleven outcomes required by ABET Criterion 3 for accrediting engineering programs.

**Outcome 1:** An ability to apply knowledge of mathematics, science, and engineering to the analysis and design of electric circuits

**Outcome 2:** An ability to identify, formulate, and solve engineering problems in the area of circuits.

**Outcome 3:** An ability to use the techniques, skills, and modern programming tools such as PSPICE, necessary for engineering practice.

**Outcome 4:** An ability to function within multi-disciplinary teams

**Outcome 5:** An ability to design a system, components or process to meet desired needs within realistic constraints