

**Instructor** Dr. Abdullah M. Al-Shaalan . .

**Office** 2 C 1 1 2

**Text Book** *Introduction to Electricity, Electronics and Electromagnetics*,  
Fifth Edition, 2002. (By: Robert L. Boylestad and Louis Nashelsky)

The following chapters and sections will be covered:

**Chapter 2 - DC Networks**

2.5 Resistance and Ohm's Law

2.8 Series DC Networks

**Chapter 3 - Series / Parallel DC Networks, Theorems and Storage Elements**

3.2 Series/Parallel Networks

3.3 Current Sources

3.5 Multisource Networks

3.7 Network Theorems

**Chapter 4 - AC Networks**

4.2 Sinusoidal (AC) Waveform

4.4 Effective (RMS) Values

4.5 Average Values

4.7 The R, L, C Elements

4.8 Phasors and Complex Numbers

4.9 Series (AC) Networks

4.10 Parallel (AC) Networks

**Chapter 5 - AC Network Theorems, Polyphase Systems and Resonance**

5.2 Series/Parallel (AC) Networks

5.3 Multisource (AC) Networks

5.4 Network Theorems

5.8 Power (AC)

5.9 Polyphase Systems

**Chapter 6 - Electromagnetism**

6.4 Transformers

**Chapter 7 - Generators and Motors**

7.2 DC Generators

7.3 DC Motors

7.4 AC Generators

**Grading**

Attendance	10
Two midterm exams	30
Homeworks + Quizzes	20