COURSE SCHEDULE UNTIL THE FIRST MIDTERM TEST

LECTURE 1 (Sept. 4)		
MATERIAL	BOOK	RECOMMENDED
Charge and current	pp. 3-6	Example 1.1
Energy and voltage	pp. 6-8	
Resistors and independent sources	pp. 11-18	Exercise 1.7
Electric power	pp. 8-9, p. 10	WEX#1
Consistent units	p. 18-19	Example 1.5

LECTURE 2 (Sept. 9)		
MATERIAL	BOOK	RECOMMENDED
KCL	pp. 23-26	Example 1.11
KVL	pp. 26-28	Example 1.13
Elementary circuit analysis		WEX#2
Simplifying techniques	pp. 29-35	Examples 1.8, 1.9, 1.10
Resistive circuits	pp. 41-50	Examples 2.2, 2.3, 2.4

- For elementary circuit analysis solving linear equations is required background material. One standard way of doing it is to use matrix equations and determinants (see pp. 712-720 in the Appendix of the book). Alternatively, you can use MATHEMATICA (see the related material distributed electronically) to verify the homework problems.

LECTURE 3 (Sept. 11)		
MATERIAL	BOOK	RECOMMENDED
Controlled sources	pp. 53-57	Examples 2.6, 2.7
Load network	pp. 57-59	Example 2.8
Proportionality principle	pp. 60-62	Exercise 2.10
Superposition theorem	pp. 63-66	Example 2.11, Exercise 2.11

LECTURE 4 (Sept. 16)		
MATERIAL	BOOK	RECOMMENDED
Thevenin and Norton networks	pp. 66-75	Example 2.14
Source conversion	pp. 75-77	Example 2.16
Node Analysis introduction	see next lecture	

LECTURE 5 (Sept. 18)		
MATERIAL	BOOK	RECOMMENDED
Node analysis	pp. 132-136, 167-169	Exercise 4.6, WEX#4

- The general concept of the book, generating matrices directly from the circuit (matrix node analysis), is not required in this course. Our general concept is to generate circuit equations, and then solve them. In the process of obtaining the solution the student is free to use matrix description as an optional math tool.

LECTURE 6 (Sept. 23)		
MATERIAL	BOOK	RECOMMENDED
Mesh analysis	pp. 149-151, 157-162	Example 4.9, WEX#5
Delta-Wye transformations (self-study)	pp. 177-180	Example 4.16

- The general concept of the book, generating matrices directly from the circuit (matrix mesh analysis), is not required in this course. Our general concept is to generate circuit equations, and then solve them. In the process of obtaining the solution the student is free to use matrix description is an optional math tool.

LECTURE 7 (Sept. 25)		
MATERIAL	BOOK	RECOMMENDED
Real sources & Power transfer	pp. 86-93	
Amplifier Models	pp. 93-97	Example 3.4
Opamps, ideal opamps (review)	pp. 97-107	
Node analysis with opamps	pp. 174-176	Example 4.15

LECTURE 8 (Sep. 30)		
MATERIAL	BOOK	RECOMMENDED
Capacitors	pp. 191-200	
Inductors	pp. 204-209	Example 5.6

- The concept of displacement current is not needed
- Example 5.2 is not needed

LECTURE 9 (Oct. 2)		
MATERIAL	BOOK	RECOMMENDED
Capacitive circuits	pp. 200-203	Exercise 5.5
Differential circuit equations	pp. 213-217	Example 5.8

- It is required to generate the differential circuit equation only. Its solution will be discussed later.

LECTURE 10 (Oct. 7)
MIDTERM TEST #1 – covers material listed above under lectures 1-7