



Course Weekly Outline

Course Lecturer	Yousif abd alwahab kheerallah			
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Title	Electric fundamental			
Course Coordinator				
Course Objective	Prepare the students to be able to calculate the currents in the DC and AC circuits			
Course Description	Prepare the student to interact with electrical devices is necessary to complete many projects in the engineering section of computers			
Textbook	BASIC ELECTRICAL ENGINEERING B.L. THERAJA A.K. THERAJA			
References	Principle of power system V.K. MEHTA Basic Electrical Engineering V.K. MEHTA			
Course Assessment	Term Exam	Project	Quizzes and Attendance	Final Exam
	30		10	60
General Notes				



Week	Date	Topics Covered	Number of Hours	Notes
1	19/12/2022	Electric Circuit & It's Element and symbols.	2 hours + 1 workout per week	
2	26/12/2022	The Direct Current Network. Kirchhoff's Laws		
3	2/1/2023	Series Circuits, Parallel Circuits, Series- Parallel Circuits , Open and Short Circuits		
4	9/1/2023	Conversion Of Delta To Star Connection.		
5	16/1/2023	Nodal Method		
6	23/1/2023	Loop Method.		
7	30/1/2023	Superposition Method.		
8	6/2/2023	Thevenin's Theorem		
9	13/2/2023	Norton theorem		
10	20/2/2023	Maximum Power Transfer Theorem		
11	27/2/2023	Reciprocity Theorem		
12	6/3/2023	The Alternating Current Network Generation of Alternating Current.		
13	13/3/2023	The Mean Values of Current and Voltage		
14	20/3/2023	The Effective Vales of Current and Voltage		
15	22/3/2023	Circuit Elements in the Phasor Domain		

16	3/4/2023	The Vector Diagram		
17	10/4/2023	Reviews for Complex Numbers.		
18	17/4/2023	Series and Parallel Ac Circuits		
19	24/4/2023	The Instantaneous, Mean and Reactive Power		
20	1/5/2023	Using Kirchhoff's law's.		
21	8/5/2023	Using Loops method.		
22	15/5/2023	Using Superposition's method.		
23	22/5/2023	Using Thevenin's theorem.		
24	29/5/2023	Using Norton's theorem.		
25	5/6/2023	3- Phase Current, 3- Phase System.		
26	12/6/2023	Solving 3-phase networks with balanced loads.		
27	19/6/2023	Electromagnetism, Permanent and artificial Magnets, The Magnetic Field, The flux density , The magnetic reluctance , The permeability , The mmf.		
28	26/6/2023	The implementation of B-II curves.		
29	3/7/2023	Transformers , The hysteresis losses: The eddy current.		
30	1/7/2023	Direct Current Machines, Direct Current Generators.		

Lecturer signature

Head of Department Signature