Zarqa University

Faculty of Engineering
Department: Electrical Engineering
Course title: Electrical Circuits-II (0904212)

Prerequisite: Electrical Circuits-I (0904211)
Instructor: TBD
Lecture's time: TBD
Office Hours: TBD

Course description:

This course covers the fundamentals of electric circuit calculations, analysis, AC circuit, RLC circuit analysis, circuit analysis nodal, superposition, thevenin, Norton ,power max. transformer circuit and calculation power calculated .3phase circuit and connections and faults.

Aims of the course:

1- Straight forward coverage of the basics of electrical components and circuits.
2- Understand the circuit analysis, Application and Troubleshooting.
3- Understand the construction, characteristics and behavior of circuit.
4- Study Transformer circuit and calculations.
5- Calculate active, reactive power and power factor.
6- Describe the basic 3 phase and connection.
7- Design and construct resonance and filter circuit.
8- Analyze three phase systems.

Intended Learning Outcomes (ILOs): Electrical circuit 2

1) Application skills - with ability to apply math and physics to understand the principles of AC electrical circuit and three phase systems.
2) Analysis skills – with ability to Use advanced circuit analysis to construct and analyze various types of electrical equivalent circuits.
3) Evaluate Skills - with ability to compare and contrast various types of power calculation based on their performance analysis and applications. And deal with finding and repairing faults
4) Create skills – with ability to Design tuning circuit and various types of electrical transformer devices.

Course structures:

Week	C. Hrs	ILOs	Topics	Teaching Procedure	Assessment methods
1	3	1	AC introductio	Example solution	board
2	3	1	AC circuit	Example solution	Board
3	3	2	RC circuit	Example solution	board
4	3	2	RL circuit	Example solution	board
5	3	2	RLC circuit	Example solution	board
6	3	2,4	Resonance circuit	Example solution	board
7	3	2	Nodal and superposition circuit analysis	Example solution	Board
8			EXAM		
9	3	2,1	Thevenin and Norton circuit analysis	Example solution	board
10	3	4,2,1	Transformers' circuit	Example solution	board
11	3	3,1	Power	Example solution	board
12	3	3,1	Power	Example solution	board
13	3	1,3,2	3 phase circuit and star delta connection	Example solution	board
14	3	1,3,2	3 phase circuit and star delta connection	Example solution	board
15	3	3	Faults and revision	Example solution	
16			Final exam		

References: Thomas L. floyd

Assessment Methods:

Methods	Grade	Date
First exam	20	**TBD**
Secend exam	20	**TBD**
Quiz exam and homwork	10	
Final exam	50	