

Planning and Quality Assurance Affairs

Form (A)

Course Specifications

General Information

Course name	Electric Circuits (1)
Course number	ITCC1301
Faculty	
Department	
Course type	College Needs
Course level	1
Credit hours (theoretical)	3
Credit hours (practical)	0
Course Prerequisites	

Course Objectives

1 - State basic principles of electric circuits
2 - Define, analyze and solve problems related to DC and AC circuits
3 - define inductive capacitive and resonance circuits

Intended Learning Outcomes

Knowledge and Understanding	* the basic ideas of electricity as edefinition of electron ac current dc current voltage ohm
	* ac electricity and static electricity
Professional Skills	* provide the ability to the student to analyse and calculate v,i,R in each branch in the circuit

Course Contents

1 - current , voltage, and simple voltaic cell
2 - resistance and effect of temperature on the resistance
3 - resistance in parallel and in series
4 - open and short circuits
5 - kirchhoff current and voltage laws, nodal superposition thevenin, norton, source conversion, delta star
6 - star delta, introduction to electrostatic electric field
7 - capacitors inductors
8 - introduction to magnetism and electro magnetism
9 - emf and faradays law lag lead phase
10 - ac circuits R,L,C.RL.RC.RLC CIRCUITS
11 - RESONANCE AND BANDWIDTH

Teaching and Learning Methods

1 - Lectures
2 - discussion techniques

Students Assessment

<u>Assessment Method</u>	<u>TIME</u>	<u>MARKS</u>
Mid-term exam I	6th week	20
Class Work	During the 16 weeks	10
Final Exam	16th week	50

Books and References

Essential books	ELECTRICAL TECHNOLOGY THERAJA
Recommended books	CHARLES ALEXANDER FUNDAMENTAL OF ELECTRIC CIRCUITS