

<b>Department of Electrical Engineering</b>			
<b>Electrical &amp; Electronics Circuits Lab. (63294)</b>			
<b>Total Credits</b>	<b>1</b>		
<b>major compulsory</b>			
<b>Prerequisites</b>	P1 : Electronics (63293) OR Electrical Circuits (67212) OR Electrical and Electronic Circuits (63291) OR Electrical Circuits / Industrial (63210) OR Electronics (67222) OR Electrical Circuits (65260) P11Synch. : Electronics (63293)		
<b>Course Contents</b>			
Electrical and Electronics lab has been prepared to equip the students with the necessary practical and theoretical knowledge of electrical and electronic principles. During the lab the students become familiar with Ohms law, Network Theorem, Characteristics of AC circuit, Capacitors in AC circuits, RLC Series and parallel, Three phase circuits, Types of Diodes, Rectifier diode, Half wave rectifier, Bridge rectifier, zener diode, Testing the layering and rectifying of bipolar transistor, Characteristic of the transistor.			
<b>Intended Learning Outcomes (ILO's)</b>		<b>Student Outcomes (SO's)</b>	<b>Contribution</b>
1	Ability to design and conduct experiments, analyze and interpret data	B	40 %
2	An ability to identify, formulate, and solve electrical and electronics system problems.	E	20 %
3	An ability to function on multidisciplinary teams	D	20 %
4	An ability to communicate effectively	G	20 %
<b>Textbook and/ or References</b>			
Electrical and Electronics Lab Manual.			
<b>Assessment Criteria</b>		<b>Percent (%)</b>	
Laboratory Work		70 %	
Final Exam		30 %	
<b>Course Plan</b>			
<b>Week</b>	<b>Topic</b>		
1	Introduction to Circuits		
2	Ohms Law & Resistors-Series and Parallel Connection		
3	Network Theorems		
4	Characteristics in AC circuits		
5	Capacitor in the AC circuits		
6	RLC Series & Paralle		
7	Three-Phase Alternating Current		
8	Practical Exam		
9	Diode characteristics		
10	ZENER DIODEs		
11	Bipolar transistors		
12	Bipolar transistors as amplifiers		
13	Final Exam Theoretical		