Electronics Workshop

Course Code	19EC3251	Year	I	Semester	II
Course Category	Program Core	Branch	ECE	Course Type	Lab
Credits	1.5	L-T-P	0-0-3	Prerequisites	BEEE
Continuous Internal Evaluation:	25	Semester End Evaluation:	50	Total Marks:	75

Course Outcomes	
Upon successful completion of the course, the student will be able to	
CO1	Decode the Resistance values & tolerances.
CO2	Understand and use RPS, voltmeter, ammeter, multimeter, function generator and CRO.
CO3	Study and use breadboard for various circuit wiring.
CO4	Fabricate simple circuits on a PCB and test them.
CO5	Understand various hardware parts of a computer.
CO6	Complete a hobby project and test it.

Contribution of Course Outcomes towards achievement of Program Outcomes & Strength of correlations (H:High, M: Medium, L:Low)

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3		3		2	3			2				2	2
CO2	3		3		2	3			2				2	2
CO3	3		3		2	3			2				2	2
CO4	3		3		2	3			2				2	2
CO5	3		3		2	3			2				2	2
CO6	3		3		2	3			2		3	2	2	2

Syllabus

Expt. No.	Contents	Mapped CO
I	Study of resistance color codes, identification of active and passive Electronic components.	CO1
II	Study and use of Bread Board Trainer Kit.	CO3
III	Study of multimeter and CRO.	CO2
IV	Study of function Generator and Regulated Power supply.	CO2
V	Soldering of Electronic components on PCBs.	CO4
VI	Function of diode as a switch.	CO2
VII	Different types of batteries.	CO2
VIII	Voltage measurement using solar panel.	CO2
IX	Battery charger using microcontroller.	CO5
X	Study of Computer system hardware.	CO5
XI	Mini Hobby Project	CO6

Learning Resources

Text Books

1. Electronics Lab Manual –Volume-1-PHI- KA NAVAS Fifth Edition 2. laboratory Manual for Introductory Electronics Experiments- New Age International(P) Ltd
e- Resources & other digital material
1. http://www.circuitstoday.com/simple-electronics-projects-and-circuits 2. https://study.com/academy/lesson/what-is-computer-hardware-components-definition