



National Institute of Technology Meghalaya
An Institute of National Importance

CURRICULUM

Programme	Bachelor of Technology in Electronics and Communication Engineering	Year of Regulation	2018
Department	Electronics and Communication Engineering	Semester	I/II

Course Code	Course Name	Credit Structure				Marks Distribution	
		L	T	P	C	Continuous Evaluation	Total
EC 151	Basic Electronics Engineering Lab	0	0	2	1	100	100
Course Objectives	To develop the student's ability to apply the basic principles of electronics in circuit designing.	Course Outcomes	CO1	Verify the V-I characteristics of p-n junction diode, schottky diode, zener diode (Voltage Regulation), LED and study of rectifier and filtering Circuits.			
	To develop the student's ability to design circuits based on diode, transistor and digital logic ICs.		CO2	Study the characteristics and switching action of BJT in CE, CB and CC mode.			
	To develop the student's ability to communicate effectively the knowledge of electronics and communication systems.		CO3	Interpret the truth tables of logic gates and Demorgan's theorems for digital electronics circuits.			
			CO4	Work in teams to plan and execute the creation of complex Digital systems.			

No.	COs	Mapping with Program Outcomes (POs)												Mapping with PSOs			
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4
1	CO1	3	1	1	0	1	0	0	1	1	0	0	0	3	0	3	3
2	CO2	3	1	1	0	1	1	1	2	1	0	0	0	2	0	2	3
3	CO3	3	2	2	1	1	1	1	2	1	0	0	0	2	3	2	3
4	CO4	1	1	1	1	0	3	3	1	1	3	0	0	2	3	2	3

SYLLABUS

No.	List of Experiments	Hours	COs
I	I-V characteristics of forward biased P-N junction Diode	12	CO1, CO2, CO3 & CO4
II	Reverse characteristics of Zener Diode		
III	Zener Diode as a reference Diode.		
IV	Half-wave rectifier using diode		
V	Full-wave rectifier using diode		
VI	Bridge rectifier.		
VII	Truth Table verification of Logic Gates.		
VIII	Design of basic logic gates using NAND & NOR gates		
IX	Input & output characteristics of BJT in CB mode		
X	Input & output characteristics of BJT in CE mode		
Total Hours		12	

Essential Readings

1. Basic Electronics, Chattopadhyay & Rakshit, New Age Publisher, 2009

Supplementary Readings

1. Electronics Principles, Albert P. Malvino, Publisher: Tata McGraw-Hill, 2010
2. Electronics Devices, Thomas L. Floyd, Publisher: Pearson Education, 2008