	National Institute of Technology Meghalaya An Institute of National Importance	CURRICULUM

Programme	**Bachelor of Technology in Electronics and Communication Engineering**	Year of Regulation	**2018-19**
Department	**Electronics and Communication Engineering**	Semester	**VI**

Course Code	Course Name	Credit Structure				Marks Distribution		
		L	T	P	C	CONTINUOS EVALUATION	VIVA	Total
EC 354	**RF & Microwave Engineering Laboratory**	**0**	**1**	**2**	**2**	**70**	**30**	**100**

Course Objectives		Course Outcomes		
	To develop the student's ability to understand the Microwave bench and filters.		CO1	Will develop understanding on Microwave bench and analyse microwave filter using simulation tool
	Develop the understanding of the characteristics of microwave devices.		CO2	Will develop understanding on microwave devices and analyse its characteristics
	To develop the analytical understanding of waveguides and their boundary condition.		CO3	Implement a waveguide using simulation tools and develop understanding on boundary condition
			CO4	

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
1	CO1	**3**	**3**	**2**	**1**	**3**	**1**	**1**	**1**	**3**	**1**	**2**	**2**	**2**	**2**	**1**
2	CO2	**2**	**2**	**2**	**2**	**3**	**1**	**1**	**1**	**3**	**1**	**2**	**2**	**2**	**2**	**1**
3	CO3	**2**	**2**	**2**	**2**	**3**	**1**	**1**	**1**	**3**	**1**	**2**	**2**	**3**	**3**	**1**
4	CO4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	CO5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	CO6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

SYLLABUS

No.	Content	Hours	COs
I	Introduction on Microwave Bench.	**14**	**CO1, CO2, CO3**
II	To Study Microstrip Band Pass and Band Stop Filters.		
III	To Plot V-I Characteristics Of Gunn Diode.		
IV	To Plot Mode Characteristics Of Reflex Klystron.		
V	To Study Fundamental Mode of Rectangular waveguide		
VI	To Study Effect of Metallic Post Loading on Rectangular waveguide		
VII	To Study Effect of Drilling Hole Along Broad Wall & Narrow Wall Direction of Waveguide Using Electromagnetic Boundary Condition		
	Total Hours	**14**	

Essential Readings

1. L. Samuel Y., "Microwave Devices and Circuits", PHI, 3rd Edition,2014
2. F. Gustrao, "RF & Microwave Engineering", Wiley, 2nd edition, 2012

Supplementary Readings

1. D. Annapurna and D. Sisir K., "Microwave Engineering", Tata McGraw-Hill, 3rd Edition, 2017
2. S. Merril I., "Introduction to Radar Systems", Tata McGraw-Hill, 3rd edition, 2014
3. R.S. Rao, "Microwave Engineering", PHI, 2nd Edition, 2012
4. D. M. Pozar, "Microwave Engineering", Wiley, 4th Edition, 2011