

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

M.Tech. (RF and Microwave Engineering)

Teaching Scheme					Contact Hours/Week			Exam Duration		Relative Weight (%)				
S. No.	Subject Code	Course Title	Subject Area	Credits	L	T	P	Theory	Practical	CWS	PRS	MTE	ETE	PRE
1st YEAR					Semester- I (Autumn)									
1.	ECN-531	Microwave Engineering	PCC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
2.	ECN-532	Advanced EMFT	PCC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
3.	ECN-530	Microwave Lab	PCC	2	0	0	3	0	0	-	100	-	-	-
4.		Elective – I	PEC	4	-	-	-	-	-	-	-	-	-	-
5.		Elective – II	PEC	4	-	-	-	-	-	-	-	-	-	-
		Total		18										
					Semester-II (Spring)									
1.	ECN-534	Antenna Theory & Design	PCC	4	3	1	0	3	0	20-35	0	20-30	40-50	0
2.	ECN-631	RF Receiver Design	PCC	4	3	1	0	3	0	20-35	0	20-30	40-50	0
3.	ECN-630	Wireless Comm. Lab.	PCC	2	0	0	3	0	0	0	100	0	0	0
4.	ECN-700	Seminar	SEM	2	-	-	-	-	-	-	-	-	100	-
5.		Elective – III	PEC	4	-	-	-	-	-	-	-	-	-	-
6.		Elective – IV	PEC	4	-	-	-	-	-	-	-	-	-	-
		Total		20										
2nd YEAR					Semester- I (Autumn)									
1.	ECN-701A	Dissertation Stage–I (to be continued next semester)	DIS	12	-	-	-	-	-	-	-	-	100	-
		Total		12										
					Semester-II (Spring)									
1.	ECN-701B	Dissertation Stage–II (contd. From III semester)	DIS	18	-	-	-	-	-	-	-	-	100	-
		Total		18										
		Total Credits		68										

Note: Students can take 1 or 2 audit courses as advised by the supervisor, if required.

Program Elective Courses (RF and Microwave Engineering)

Teaching Scheme					Contact Hours/Week			Exam Duration		Relative Weight (%)				
S. No.	Subject Code	Course Title	Subject Area	Credits	L	T	P	Theory	Practical	CWS	PRS	MTE	ETE	PRE
First Semester														
1.	ECN-542	Microwave Integrated Circuits	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
2.	ECN-543	High Power mm/THz Wave Engineering	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
3.	ECN-544	Advanced Radar Engineering	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
4.	ECN-539	Fiber Optic Systems	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
5.	ECN-554	Microwave and millimeter-wave Circuits	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
6.	ECN-555	Microwave Imaging	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
7.	ECN-511	Linear Algebra and Random Processes	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
8.	ECN-621	Introduction to Microwave Measurements	PEC	4	3	0	2	3	0	10-25	25	15-25	30-40	-
9.	ECN-622	Nonionizing Radiations and Health Risks	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
Second Semester														
10.	ECN-541	Computational Techniques for Microwaves	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
11.	ECN-557	RF Power Amplifier and Transmitter Design	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
12.	ECN-548	RF & Microwave MEMS	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
13.	ECN-549	RF CMOS Transceiver Design	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
14.	ECN-550	Radar Signal Processing	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
15.	ECN-551	Adaptive Beam Forming and Smart Antennas	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
16.	ECN-552	Soft Computing Techniques for RF Engineering	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
17.	ECN-524	Power Electronic Devices, Circuits and systems	PEC	4	3	1	0	3	0	25	-	25	50	-
18.	ECN-525	Hardware architecture for deep-learning	PEC	4	3	1	0	3	0	25	-	25	50	-
19.	ECN-526	Statistical Machine Learning for Variation-Aware Electronic Device and Circuit Simulation	PEC	4	3	1	0	3	0	25	-	25	50	-
20.	ECN-516	Advanced Digital Communication Techniques	PEC	3	3	0	0	3	0	15	-	35	50	-

21.	ECN-621	Introduction to Microwave Measurements	PEC	4	3	0	2	3	0	10-25	25	15-25	30-40	-
22.	ECN-622	Nonionizing Radiations and Health Risks	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
23.	ECN-634	Low Voltage CMOS Circuit Operation	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
24.	ECN-635	Magnetic Random Access Memory	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
25.	ECN-636	ADVANCED MILLIMETER-WAVE CHARACTERIZATION AND TECHNIQUES	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
26.	ECN-637	MICROWAVE PHOTONIC ICs	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
27.	ECN-638	RF INTEGRATED CIRCUIT DESIGN FOR mmWAVE RADIO	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-