

**DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING
INDIAN INSTITUTE OF TECHNOLOGY ROORKEE**

Program Code: **30** **M.Tech. (RF and Microwave Engineering)**
 Department: **EC** **Electronics & Communication Engineering**
 Year: **II**

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
Semester- I (Autumn)														
1.	ECN-701A	Dissertation Stage–I (to be continued next semester)	DIS	12	-	-	-	-	-	-	-	-	100	-
		Total		12										
Note: Students can take 1 or 2 audit courses as advised by the supervisor, if required.														
Semester-II (Spring)														
1.	ECN-701B	Dissertation Stage–II (contd. From III semester)	DIS	18	-	-	-	-	-	-	-	-	100	-
		Total		18										

Summary					
Semester		1	2	3	4
Semester-wise Total Credits		18	20	12	18
Total Credits		68			

Program Elective Courses (RF and Microwave Engineering)

PECs FOR SEMESTER-I

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
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	-

Program Elective Courses (RF and Microwave Engineering)

PECs FOR SEMESTER-II

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
1.	ECN-541	Computational Techniques for Microwaves	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
2.	ECN-557	RF Power Amplifier and Transmitter Design	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
3.	ECN-548	RF & Microwave MEMS	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
4.	ECN-549	RF CMOS Transceiver Design	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
5.	ECN-550	Radar Signal Processing	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
6.	ECN-551	Adaptive Beam Forming and Smart Antennas	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
7.	ECN-552	Soft Computing Techniques for RF Engineering	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
8.	ECN-516	Advanced Digital Communication Techniques	PEC	3	3	0	0	3	0	15	-	35	50	-