

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

Program Code: **XYZ M.Tech. (Terahertz Communication and Sensing)**
 Department: **EC Department of Electronics and 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	Thesis 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	Thesis Stage-II (continued 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 for M.Tech. (Terahertz Communication and Sensing)

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-502	High Frequency Measurements and Instrumentation	PEC	4	3	1	-	3	-	20-35	-	20-30	40-50	-
2.	ECN-514	Detection and Estimation Theory	PEC	4	3	1	-	3	-	20-35	-	20-30	40-50	-
3.	ECN-554	Microwave and Millimeter-Wave Circuits	PEC	4	3	1	-	3	-	20-35	-	20-30	40-50	-
4.	ECN-602	Terahertz Communication Systems	PEC	4	3	1	-	3	-	20-35	-	20-30	40-50	-
5.	ECN-603	Millimeter-Wave and Terahertz Antenna Design	PEC	4	3	1	-	3	-	20-35	-	20-30	40-50	-
6.	ECN-604	High Speed Semiconductor Devices	PEC	4	3	1	-	3	-	20-35	-	20-30	40-50	-
7.	ECN-605	Surface Electromagnetics	PEC	4	3	1	-	3	-	20-35	-	20-30	40-50	-
8.	ECN-606	High-Frequency Dielectric Guides	PEC	4	3	1	-	3	-	20-35	-	20-30	40-50	-
9.	ECN-607	Terahertz Sensing and Imaging	PEC	4	3	1	-	3	-	20-35	-	20-30	40-50	-
10.	ECN-618	Wireless Technologies: 5G and Beyond	PEC	4	3	1	-	3	-	20-35	-	20-30	40-50	-
11.	ECN-620	Advanced Wireless Communication	PEC	4	3	1	-	3	-	20-35	-	20-30	40-50	-
12.	ECN-622	Nonionizing Radiations and Health Risks	PEC	4	3	1	-	3	-	20-35	-	20-30	40-50	-
13.	ECN-637	Microwave Photonic ICs	PEC	4	3	1	-	3	-	20-35	-	20-30	40-50	-