

Department of Electronics and Communication Engineering
National Institute of Technology Silchar, Silchar, Assam, India
M. Tech. in RF and Terahertz Communications

Course Structure

Semester I					
Subject Codes	Course Name	L	T	P	Credits
EC 5301	Advanced Electromagnetic Theory & Wave Propagation	3	0	0	3
EC 5302	Fundamentals of THz Communication	3	0	0	3
EC 5303	Antenna Theory for RF and THz Applications	3	0	0	3
EC 5304	Microwave and THz Engineering Lab	0	0	3	2
EC 533X	Elective I	3	0	0	3
EC 534X	Elective II	3	0	0	3
EC 5310	Seminar	0	0	2	1
Total Credits					18
Semester II					
Subject Codes	Course Name	L	T	P	Credits
EC 5311	RF and THz Integrated Circuits Design	3	0	0	3
EC 5312	Computational Electromagnetics	3	0	0	3
EC 5313	Microwave and mm-Wave Measurement Techniques	3	0	0	3
EC 5314	Simulation and Measurement Lab	0	0	3	2
EC 535X	Elective III	3	0	0	3
EC 536X	Elective IV	3	0	0	3
EC 5320	Colloquium	0	0	2	1
Total Credits					18
Semester III					
Subject Codes	Course Name	L	T	P	Credits
EC 6398	Project Phase-I	0	0	28	6
Total Credits					6
Semester IV					
Subject Codes	Course Name	L	T	P	Credits
EC 6399	Project Phase-II	0	0	28	8
Total Credits					8

Elective I
EC 5331: RF and Microwave Integrated Circuits
EC 5332: Dielectric Resonator based Components
EC 5333: Microwave Remote Sensing
EC 5334: Satellite Communication
EC 5335: Microwave Digital Communication
EC 5336: THz Integrated Circuits
EC 5337: Advanced Signal Processing for HF Applications
EC 5338: Wireless Networking
Elective II
EC 5341: EM Signal Processing
EC 5342: High Power Millimeter/Terahertz Wave Engineering
EC 5343: Radar Engineering and Applications
EC 5344: Adaptive Beam Forming and Smart Antennas
EC 5345: Microwave and Optoelectronic Devices
EC 5346: Green Communications
EC 5347: MIMO Communications
EC 5348: Detection and Estimation Theory
Elective III
EC 5351: Artificial Engineered Materials
EC 5352: Microwave and mm-Wave MEMS
EC 5353: RF Energy Harvesting and Applications
EC 5354: RF Microelectronics
EC 5355: EMI/EMC
EC 5356: High Power THz Radiation Sources
EC 5357: Electronic Infrastructure for Tera Scale Communication
EC 5358: Machine Learning for RF and THz
Elective IV
EC 5361: Optimization Techniques in Engineering
EC 5362: Soft Computing Techniques in Engineering Applications
EC 5363: Optical Communication System
EC 5364: Microwave Imaging Systems
EC 5365: Guided Wave Optical Components and Devices
EC 5366: Large Scale Sensing Arrays for Imaging
EC 5367: Light-wave Technology
EC 5368: THz Radar Technology