

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					
Course Code	Course Name	L	T	P	Credits
EC-701	Advanced Electromagnetic Theory & Wave Propagation	3	0	0	3
EC-702	Fundamentals of THz Communication	3	0	0	3
EC-703	Antenna Theory for RF and THz Applications	3	0	0	3
EC-71x	Elective I	3	0	0	3
EC-72x	Elective II	3	0	0	3
EC-751	Microwave and THz Engineering Lab	0	0	3	2
EC-761	Seminar	0	0	2	1
Total Credits					18
Semester II					
Course Code	Course Name	L	T	P	Credits
EC-704	RF and THz Integrated Circuits Design	3	0	0	3
EC-705	Computational Electromagnetics	3	0	0	3
EC-706	Microwave and mm-Wave Measurement Techniques	3	0	0	3
EC-73x	Elective III	3	0	0	3
EC-74x	Elective IV	3	0	0	3
EC-752	Simulation and Measurement Lab	0	0	3	2
EC-762	Colloquium	0	0	2	1
Total Credits					18
Semester III					
Course Code	Course Name	L	T	P	Credits
EC-791	Project Phase-I	0	0	28	6
Total Credits					6
Semester IV					
Course Code	Course Name	L	T	P	Credits
EC-792	Project Phase-II	0	0	28	8
Total Credits					8

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Elective I
EC-711: RF and Microwave Integrated Circuits
EC-712: Dielectric Resonator based Components
EC-713: Microwave Remote Sensing
EC-714: Satellite Communication
EC-715: Microwave Digital Communication
EC-716: THz Integrated Circuits
EC-717: Advanced Signal Processing for HF Applications
EC-718: Wireless Networking
Elective II
EC-721: EM Signal Processing
EC-722: High Power Millimeter/Terahertz Wave Engineering
EC-723: Radar Engineering and Applications
EC-724: Adaptive Beam Forming and Smart Antennas
EC-725: Microwave and Optoelectronic Devices
EC-726: Green Communications
EC-727: MIMO Communications
EC-728: Detection and Estimation Theory
Elective III
EC-731: Artificial Engineered Materials
EC-732: Microwave and mm-Wave MEMS
EC-733: RF Energy Harvesting and Applications
EC-734: RF Microelectronics
EC-735: EMI/EMC
EC-736: High Power THz Radiation Sources
EC-737: Electronic Infrastructure for Tera Scale Communication
EC-738: Machine Learning for RF and THz
Elective IV
EC-741: Optimization Techniques in Engineering
EC-742: Soft Computing Techniques in Engineering Applications
EC-743: Optical Communication System
EC-744: Microwave Imaging Systems
EC-745: Guided Wave Optical Components and Devices
EC-746: Large Scale Sensing Arrays for Imaging
EC-747: Light-wave Technology
EC-748: THz Radar Technology