

R 25 Regulations

Course Structures

Electronics and Communication Engineering

Academic Year: 2025-26

I-Year, Semester-I

S.No	Course Code	Course Title	L	T	P	Credits
1		Matrices and Calculus	3	1	0	4
2		Advanced Engineering Physics	3	0	0	3
3		Programming for Problem Solving	3	0	0	3
4		Introduction to Electrical Engineering	2	0	0	2
5		Engineering Drawing and Computer Aided Drafting	2	0	2	3
6		English for Skill Enhancement	3	0	0	3
7		Advanced Engineering Physics Lab	0	0	2	1
8		Programming for Problem Solving Lab	0	0	2	1
9		English Language and Communication Skills Lab	0	0	2	1
10		Induction Programme				
		Total Credits	16	1	8	21

I-Year, Semester-II

S.No	Course Code	Course Title	L	T	P	Credits
1		Ordinary Differential Equations and Vector Calculus	3	1	0	4
2		Engineering Chemistry	3	0	0	3
3		Python Programming	3	0	0	3
4		Data Structures	3	0	0	3
5		Network Analysis and Synthesis	3	0	0	3
6		Python Programming Lab	0	0	2	1
7		Engineering Chemistry Lab	0	0	2	1
8		Data Structures Lab	0	0	2	1
9		Electrical Engineering Lab	0	0	2	1
10		Engineering Workshop	0	0	2	1
		Total Credits	15	1	10	21

II-Year, Semester-I

S.No	Course Code	Course Title	L	T	P	Credits
1		Probability Theory and Stochastic Processes	3	0	0	3
2		Signals and Systems	3	0	0	3
3		Electronic Devices and Circuits	3	0	0	3
4		Digital Logic Design	3	0	0	3
5		Control Systems	2	0	0	2
6		Innovation and Entrepreneurship	2	0	0	2
7		Modeling and Simulation Lab	0	0	2	1
8		Electronic Devices and Circuits Lab	0	0	2	1
9		Digital Logic Design Lab	0	0	2	1
10		Linux and Shell Scripting	0	0	2	1
		Total Credits	16	0	8	20

II-Year, Semester-II

S.No	Course Code	Course Title	L	T	P	Credits
1		Numerical Methods and Complex Variables	3	0	0	3
2		Electromagnetic Fields and Transmission Lines	3	0	0	3
3		Analog and Digital Communications	3	0	0	3
4		Linear and Digital IC Applications	3	0	0	3
5		Electronic Circuit Analysis	3	0	0	3
6		Computational Mathematics Lab	0	0	2	1
7		Analog and Digital Communications Lab	0	0	2	1
8		Linear and Digital IC Applications Lab	0	0	2	1
9		Electronic Circuit Analysis Lab	0	0	2	1
10		Web and Mobile Applications	0	0	2	1
11		Basics of Environmental Science	0	0	0	0
		Total Credits	15	0	10	20

III-Year, Semester-I

S.No	Course Code	Course Title	L	T	P	Credits
1		Digital Signal Processing	3	0	0	3
2		RISC and Microcontroller Architectures	3	0	0	3
3		CMOS VLSI Design	3	0	0	3
4		Professional Elective – I	3	0	0	3
5		Open Elective - I	2	0	0	2
6		RISC and Microcontroller Interfacing Laboratory	0	0	2	1
7		CMOS VLSI Design Laboratory	0	0	2	1
8		Digital Signal Processing Laboratory	0	0	2	1
9		Field based Research Project	0	0	4	2
10		FPGA based System Design	0	0	2	1
11		Indian Knowledge System	1	0	0	1
		Total Credits	14	0	12	21

III-Year, Semester-II

S.No	Course Code	Course Title	L	T	P	Credits
1		Antenna Design and Wave Propagation	3	0	0	3
2		IoT Architectures and Protocols	3	0	0	3
3		Business Economics and Financial Analysis	3	0	0	3
4		Professional Elective – II	3	0	0	3
5		Open Elective – II	2	0	0	2
6		Advanced Communications Laboratory	0	0	2	1
7		IoT Architectures and Protocols Laboratory	0	0	2	1
8		VLSI Design Verification Laboratory	0	0	2	1
9		Advanced English Communication Skills Lab	0	0	2	1
10		45G Practical Lab / Robotic Lab / Drone lab	0	0	2	1
11		Gender Sensitization lab / Human Values and Professional Ethics	1	0	0	1
		Total Credits	15	0	10	20

IV-Year, Semester-I

S.No	Course Code	Course Title	L	T	P	Credits
1		Microwave and Optical Communications	3	0	0	3
2		Embedded System Design	3	0	0	3
3		Fundamentals of Management for Engineers	3	0	0	3
4		Professional Elective – III	3	0	0	3
5		Professional Elective – IV	3	0	0	3
6		Open Elective – III	2	0	0	2
7		Microwave and Optical Communications Laboratory	0	0	2	1
8		Embedded System Design Laboratory	0	0	2	1
9		Industry Oriented Mini Project / Internship	0	0	4	2
		Total Credits	17	0	8	21

IV-Year, Semester-II

S.No	Course Code	Course Title	L	T	P	Credits
1		Professional Elective – V	3	0	0	3
2		Professional Elective – VI	3	0	0	3
3		Project Work	0	0	28	14
		Total Credits	6	0	28	20

Professional Electives

Professional Elective-I

Course Code	Course Title
	Computer Organization & Operating Systems
	Data Communications and Computer Networks
	Electronic Measurements and Instrumentation
	Sustainability for Electronics

Professional Elective-II

Course Code	Course Title
	Digital Image Processing
	Low Power VLSI Design
	Wireless Communication Networks
	Biomedical Instrumentation

Professional Elective-III

Course Code	Course Title
	Fundamentals of Artificial Intelligence
	Image and Video Processing
	Mobile Communications and Networks
	Design for Testability

Professional Elective-IV

Course Code	Course Title
	Deep Learning
	Satellite Communications
	CMOS Analog IC Design
	Real Time Operating Systems

Professional Elective-V

Course Code	Course Title
	DSP Processors and Architectures
	Multimedia Database Management Systems
	Cloud Computing
	5G and beyond Communication

Professional Elective-VI

Course Code	Course Title
	Block chain Technology
	System on Chip Architecture
	Wireless sensor Networks
	Network Security and Cryptography