

Electronics and Telecommunication Engineering
Course Outcomes of All Courses of B.E. Third Semester

Subject	CO No.	CO Statements	Blooms Level
3ECT01 Engineering Mathematics III	3ETC01.1	Apply Laplace transform to solve differential equation.	Applying (L3)
	3ETC01.2	Apply the knowledge of vector calculus to solve physical problems.	Applying (L3)
	3ETC01.3	Apply the knowledge of complex analysis.	Applying (L3)
	3ETC01.4	Apply the knowledge of Numerical analysis.	Applying (L3)
	3ETC01.5	Apply the concepts of Difference Equations and Partial Differential Equations.	Applying (L3)
	3ETC01.6	Apply the concepts of Difference Equations and Partial Differential Equations.	Applying (L3)
3ETC02 Electronic Devices and Circuits	3ETC02.1	Apply the principles of PN Junction diode and filters (C, L, LC) to design rectifiers, voltage regulators and wave-shaping circuits.	Understanding (L2)
	3ETC02.2	Examine the response of wave shaping circuits, including RC filters, Clipping and Clamping circuits for step, pulse, square and sinusoidal	Analyzing (L4)
	3ETC02.3	Utilise the Characteristics and parameters of BJT, JFET, MOSFET and UJT for switching and amplification applications.	Applying (L3)
	3ETC02.4	Assess the roll of feedback in amplifiers in oscillator circuits using BJT and its impact on the frequency stability and analyze the performance of single stage and multi stage amplifier circuits using BJT for signal.	Analyzing (L4)
3ETC03 Digital System Design	3ETC03.1	Apply Boolean algebra to simplify logic functions, minimize expressions, perform number system conversions, and execute arithmetic operations.	Applying (L3)
	3ETC03.2	Design combinational and sequential circuits using logic gates, MSI chips, and programmable logic devices	Applying (L3)
	3ETC03.3	Analyze digital logic families based on characteristics such as noise margin, propagation delay, and power dissipation.	Analyzing (L4)
	3ETC03.4	Implement semiconductor memory architectures and programmable logic devices in digital system design.	Applying (L3)

3ETC04 Electromagnetic Waves	3ETC04.1	Understand the coordinate systems and vector integrals.	Understanding (L2)
	3ETC04.2	Derive all four Maxwell's equations for steady and time varying fields and apply them to find boundary conditions.	Applying (L3)
	3ETC04.3	Apply the Maxwell's equations to find the characteristics of Uniform Plane Waves.	Applying (L3)
	3ETC04.4	Apply the Maxwell's equations to derive radiation resistance of Hertzian Dipole, Quarter wave Monopole and Half-wave Dipole antennas.	
3ETC05 Object Oriented Programming	3ETC05.1	Explain the basics of object-oriented programming concepts such as data types, functions, classes, objects, constructors, inheritance, overloading etc.	Understanding (L2)
	3ETC05.2	Design, implement, test, and debug simple programs in C++.	Applying(L3)
	3ETC05.3	Demonstrate how the class mechanism supports encapsulation and information hiding.	Applying (L3)
	3ETC05.4	Discuss the implementation of Java programming concepts	Understanding (L2)
3ETC06 Electronic Devices and Circuits Lab	3ETC06.1	Apply the basics of diode and Zener diode to obtain the characteristics and its use as rectifier and voltage regulator	Applying (L3)
	3ETC06.2	Verify and analyze clipper circuit as wave shaping circuits and their responses to various signals.	Analyzing (L4)
	3ETC06.3	Realise effect of positive and negative feedback theory for circuit as an oscillator and amplifier.	Applying (L3)
	3ETC06.4	Analyze characteristics of JFET and UJT	Analyzing (L4)
3ETC07 Digital System Design Lab	3ETC07.1	Apply practically the concepts of digital electronics.	Applying (L3)
	3ETC07.2	Apply the operation of various logic gates and their implementation on combinational design using digital IC's.	Applying (L3)
	3ETC07.3	Design and implement various combinational logic circuits.	Analyzing (L4)
	3ETC07.4	Design and implement various sequential logic circuits.	Applying (L3)

3ETC08 Object Oriented Programming Lab	3ETC08.1	Justify the basics of object-oriented design and the concepts of encapsulation, abstraction, inheritance, and polymorphism	Understanding (L2)
	3ETC08.2	Design, implement, test, and debug simple programs in an object-oriented programming language.	Applying(L3)
	3ETC08.3	Describe how the class mechanism supports encapsulation and information hiding	Applying (L3)
	3ETC08.4	Design and test the implementation of C++ and java programming concepts	Applying (L3)
3ETC09 Electronic Workshop Lab	3ETC09.1	Understand measuring devices, types of cables and connectors, diodes, and sensors	Understanding(L2)
	3ETC09.2	Apply knowledge of measuring devices to RLC circuits, diodes, transistors, switches, and cables	Apply(L2)
	3ETC09.3	Analyze circuits using simulation software	Analyze(L3)
	3ETC09.4	Apply basic knowledge of component to design and hardware implementation	Evaluate (L4)


PAQIC




HOD, EXTC