

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

<b>Subject</b>	<b>CO No.</b>	<b>CO Statements</b>	<b>Blooms Level</b>
6ETC01 Communication Network	6ETC01.1	Classify types of network devices, OSI and TCP/IP model.layers and their functions.	Understanding (L2)
	6ETC01.2	Illustrate basic functions of data link control and media access control protocol.	Understanding (L2)
	6ETC01.3	Analyze routing strategies for an IP based network.	Analyzing (L4)
	6ETC01.4	Compair the concepts of reliable and unreliable transfer protocols in TCP and UDP and Demonstrate application layer Protocols.	Understanding (L2)
6ETC02 Computer Architecture	6ETC02.1	Describe the working and the performance parameters of the computers	Understanding (L2)
	6ETC02.2	Design efficient ALU operations using processor organization, number formats, and IEEE 754 standards.	Applying (L3)
	6ETC02.3	Analyze micro-operation control unit, hardwired vs. micro-program control unit, and microinstruction execution	Applying (L3)
	6ETC02.4	Apply memory management concepts in system design.	Applying (L3)
	6ETC02.5	Describe I/O organization and parallel processing concepts in system design	Understanding (L2)
6ETC03 Satellite Communication	6ETC03.1	Apply satellite communication principles to solve engineering problems	Applying(L3)
	6ETC03.2	Utilize fundamental theories of orbital mechanics and link budget analysis	Applying(L3)
	6ETC03.3	Analyze satellite subsystems, propagation effects, and system performance	Analyzing (L4)
	6ETC03.4	Explain satellite-based communication VSAT and GPS systems	Undersatnding(L2)

6ETC03 CMOS Design	6ETC03.1	Apply CMOS circuit concepts to analyze transistor operation, inverter behavior, and switching characteristics	Applying (L3)
	6ETC03.2	Construct CMOS layouts and stick diagrams using lambda-based design rules.	Applying (L3)
	6ETC03.3	Analyze CMOS circuit performance parameters, including delay models, power consumption, and interconnect effects.	Analyzing (L4)
	6ETC03.4	Implement combinational circuit designs using CMOS logic families, transmissions gates, and pass transistor logic.	Applying (L3)
	6ETC03.5	Design sequential circuits such as latches, flip-flops, and memory elements using CMOS technology.	Applying (L3)
	6ETC03.6	Utilize Domino and NORA dynamic logic methods for CMOS circuit implementation.	Applying (L3)
6ETC05 Engineering Economics	6ETC05.1	Understand the basic principles of engineering economics, including microeconomics, macroeconomics, utility analysis, and demand-supply theories, to understand their role in economic decision-making.	Understanding (L2)
	6ETC05.2	Demonstrate the application of production theories, cost analysis, and price determination to solve real-world engineering and industrial problems.	Applying (L3)
	6ETC05.3	Analyze depreciation methods, break-even analysis, and banking functions to determine their impact on financial sustainability and engineering projects.	Analyzing (L4)
	6ETC05.4	Evaluate time value of money concepts, cash flow techniques, and project evaluation methods to analyze financial alternatives and make informed investment decisions.	Evaluating (L5)
6FEEP06 Energy Audit and Management	6FEEP06.1	Discuss energy scenario and it's management.	Applying (L3)
	6FEEP06.2	Conduct the energy audit of different systems.	Applying (L3)
	6FEEP06.3	Determine the economics of energy conservation	Applying (L3)
	6FEEP06.4	Discuss various energy Conservation methods & their case studies	Applying (L3)
	6FEEP06.5	Explain fundamentals of Harmonics.	Applying (L3)

6ETC06 Communication Network Lab	6ETC06.1	Categorize different networking devices and topologies	Analyzing (L4)
	6ETC06.2	Configure computer networks using different devices and topologies To construct and configure a network.	Applying (L3)
	6ETC06.3	Implement computer network for sharing various resources	Applying (L3)
	6ETC06.4	Configure Wireless network	Applying (L3)
6ETC07 Electronics Circuit Design Lab	6ETC07.1	Design and verify CMOS layouts for logic gates and sequential circuits using ASIC tools.	Analyzing (L4)
	6ETC07.2	Analyze timing and performance of CMOS circuits through simulations.	Analyzing (L4)
	6ETC07.3	Write and simulate Verilog code for combinational circuits like decoders and multiplexers.	Applying (L3)
	6ETC07.4	Write and simulate Verilog code for sequential circuits like flip-flops, counters, and sequence detectors.	Analyzing (L4)
6ETC08 Python Programming Lab	6ETC08.1	Implement fundamental Python programming concepts to solve problems	Applying(L3)
	6ETC08.2	Apply file handling and string operations to solve real-world problems.	Applying(L3)
	6ETC08.3	Demonstrate proficiency in data manipulation using Python collections	Applying (L3)
	6ETC08.4	Analyze data using Python	Analyzing(L4)
6ETC09 Mini Project	6ETC09.1	Identify problems based on societal /research needs	Analyzing (L4)
	6ETC09.2	Apply Knowledge and skill to solve societal problems in a group	Applying (L3)
	6ETC09.3	Develop interpersonal skills to work as member of a group or leader	Applying (L3)
	6ETC09.4	Analyze the impact of solutions in societal and environmental context for sustainable development	Analyzing (L4)
	6ETC09.5	Conclude project presentation with results and management principles	Evaluating (L5)

  
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HOD, EXTC