

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

<b>Subject</b>	<b>CO No.</b>	<b>CO Statements</b>	<b>Blooms Level</b>
7ETC01 Cryptography and Network Security	7ETC01.1	Analyze concepts of security and ciphers	Analyzing (L4)
	7ETC01.2	Interprete the working of encryption and decryption algorithms	Understanding (L2)
	7ETC01.3	Apply authentication functions and hash algorithms	Applying (L3)
	7ETC01.4	Understand the concepts of email and transport security	Understanding (L2)
7ETC02 Digital Image & Video Processing	7ETC02.1	Demonstrate the general terminology and basics of digital image processing, Elements of Visual Perception, image sampling and quantization etc., Examine various types of images.	Understanding (L2)
	7ETC02.2	Analyze and implement digital image processing algorithms. Develop spatial filtering and other filtering techniques for preprocessing of images.	Analyzing (L4)
	7ETC02.3	Implement the intensity transformations and various image transforms, Fourier transform for image processing in frequency domain and filtering techniques in Fourier Domain.	Applying (L3)
	7ETC02.4	Evaluate the methodologies for image segmentation, Compression and restoration etc. Also design Image processing techniques with practical approach.	Evaluating (L6)
7ETC03 Project Management and Entrepreneurship	7ETC03.1	Understand basic concept of Project management.	Understanding (L2)
	7ETC03.2	Attain the knowledge of cost estimation & working capital.	Applying (L3)
	7ETC03.3	Prepare Cost Sheets, balance sheets and Cash Flow statements.	Applying (L3)
	7ETC03.4	Understand the Entrepreneurial competencies & traits.	Understanding (L2)
	7ETC03.5	Discuss the Management skills for Entrepreneurs.	Understanding (L2)
	7ETC03.6	Understand Social Entrepreneurship.	Understanding (L2)

7ETC04 Mobile Communication and Networks	7ETC04.1	Explain basic concept of Cellular systems and standards	Understanding (L2)
	7ETC04.2	Apply knowledge of signal propagation models to predict wireless communication performance in different environments.	Applying (L3)
	7ETC04.3	Implement multiple access techniques in mobile communication and demonstrate advanced knowledge of MIMO through practical applications	Applying (L3)
	7ETC04.4	Describe the concept of rake receiver and Know various Mobile Communication Systems and standards	
7ETC05 Introduction to MEMS	7ETC05.1	Apply the concepts of MEMS for project, research and academic work.	Applying (L3)
	7ETC05.2	Analyze the miniaturization issues and MEMS Materials	Analyzing (L4)
	7ETC05.3	Evaluate the principles of solid mechanics in MEMS/NEMS, sensors and actuators	Evaluating (L5)
	7ETC05.4	Elaborate fabrication modules of MEMS for Electronics, automotive and medical application	Creating (L6)
7ETC06 Cryptography and Network Security LAB	7ETC06.1	To evaluate working of ciphers	Evaluating (L5)
	7ETC06.2	To analyze encryption and decryption algorithms	Analyzing (L4)
	7ETC06.3	To experiment with authentication and hash functions	Applying (L3)
	7ETC06.4	To Apply the concepts of network security	Applying (L3)
7ETC07 Digital Image & Video Processing Lab	7ETC07.1	Demonstrate the image formation and apply the basic operations and histogram equalization on an image.	Applying (L3)
	7ETC07.2	Apply the gray scale image in spatial domain and apply arithmetic and logical operations on gray scale image.	Analyzing (L4)
	7ETC07.3	Implement the thresholding techniques and frequency domain filtering on the gray scale image. Implement the morphological operations and edge detection operations on an image.	Applying (L3)
	7ETC07.4	Create a Video from images frames and implement and Video object detection and tracking for an application.	Applying (L3)

7ETC08 Project Management and Entrepreneurship LAB	7ETC08.1	To analyze technical feasibility, Environmental and market feasibility.	Analysing(L4)
	7ETC08.2	To interpret quickly about a new industry, technology, market.	Understanding (L2)
	7ETC08.3	To apply academic knowledge to the problems faced by entrepreneurial firms in a context of uncertainty, costing and financial statement.	Applying (L3)
	7ETC08.4	To interpret different theories and models of entrepreneurship.	Understanding (L2)
7ETC09 Seminar	7ETC09.1	Deliver seminar content logically to ensure clarity in objectives and coherence in information flow.	Analysing (L4)
	7ETC09.2	Demonstrate in-depth understanding of the seminar topic by explaining key concepts with clarity and elaboration.	Applying (L3)
	7ETC09.3	Apply effective presentation and communication techniques to engage the audience professionally.	Applying (L3)
	7ETC09.4	Create clear and visually appealing presentation materials to enhance understanding.	Creating (L6)
	7ETC09.5	Analyse and respond to audience queries with logical reasoning and critical thinking.	Analysing (L4)

  
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