

# KVR, KVR & MKR COLLEGE: KHAJIPALEM KHAJIPALEM - 522329, Bapatla District (A.P) (Re- Accredited by NAAC "B++" Grade With CGPA: 2.81

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# **DEPARTMENT OF ELECTRONICS**

# **COURSE OUTCOMES**

S. N O	DEPAR TMENT	COU RSE COD E	COURSE NAME	CO NUM BER	COURSE OUTCOMES
1	ELECT RONIC S		BASIC CIRCUIT THEORY	1	Apply the knowledge of basic circuital laws and simplify the dc and ac networks using reduction techniques.
				2	Analyze the dc and ac circuits using mesh and nodal analysis and network simplification theorems. Analyze the series and parallel resonant circuits.
				3	Infer and evaluate transient response, steady state response of series, parallel and compound circuits.
				4	Develop Laplace transformed network for steady state and transient analysis.
				5	Analyze dc and ac circuits and time domain response using P-Spice
		DI EI	ELECTRO NIC DEVICES AND CIRCUITS	1	Ability to analyze PN junctions in semiconductor devices under various conditions.
	ELECT RONIC S			2	Ability to design and analyze simple rectifiers and voltage regulators using diodes. Ability to describe the behavior of special purpose diodes.
				4	Ability to design and analyze simple BJT and MOSFET circuits.
			DIGITAL ELECTRO NICS	1	Have a thorough understanding of the fundamental concepts and techniques used in digital electronics
				2	To understand and examine the structure of various number systems and its application in digital design.
				3	The ability to understand, analyze and design various combinational and sequential circuits.
				4	Ability to identify basic requirements for a design application and propose a cost effective solution
				5	The ability to identify and prevent various hazards and timing problems in a digital design.
				6	To develop skill to build, and troubleshoot digital circuits.
	ELECT RONIC S		ANALOG AND DIGITAL IC APPLICATI ONS	1	Understand the basic building blocks of Op-Amp.
				2	Illustrate DC and AC performance characteristics of Op-amp
				3	Analyze linear and non-linear applications of Op-Amp.
				4	Aanalyze the operation & characteristics of data converters.
				5	Examine various 74XX ICs.

			1	Identify the basic elements of a communication system
	ELECT RONIC S	ANALOG	2	Analyse baseband signals in time domain and in frequency domain
		AND DIGITAL COMMUNI	3	Compare and contrast various analog and digital modulation and demodulation techniques
		CATION	4	Evaluate the performance of modulation and demodulation techniques in various transmission environments Explain the importance of
			5	synchronisation in communication systems
			1	Describe the architecture & organization of 8085 & 8086 Microprocessor.
			2	Understand and classify the instruction set of 8085/8086 microprocessor and distinguish the use of different instructions and apply it in assembly language programming.
	ELECT	MICROPR OCESSOR	3	Relate the addressing modes used in the instructions
	RONIC	AND SYSTEMS	4	Realize the interfacing of memory & various I/O devices with 8085/8086 microprocessor.
			5	Familiarise the architecture and operation of Programmable Interface Devices and realize the programming & interfacing of it with 8085 microprocessor
			6	Interface various pheripheral IC's with Intel 8085/8086 microprocessor for its various applications.
			1	Understand the basics of Microcontroller
				Understand architecture
	ELECT RONIC	MICRO CONTROL LER AND	2	of PIC microcontroller
	S	INTERFACI NG	3	Ability to interface with various peripherals
		No	4	Understand the product requirement based on
			5	Understand the concept of peripherals
	ELECT RONIC S		1	Identify the various IC fabrication methods.
			2	Express the Layout of simple MOS circuit using Lambda based design rules.
		VLSI	3	Apply the Lambda based design rules for subsystem design.
		DESIGN	4	Differentiate various FPGA architectures.
			5	Design an application using Verilog HDL.
			6	Concepts of modelling a digital system using Hardware Description Language
	ELECT RONIC S	DATA COMMUNI CATION	1	Student will be able to understand network communication using the layered concept, Open System Interconnect (OSI) and the Internet Model.
		AND NETWORKI NG	2	Student will be able to understand various types of transmission media, network devices; and parameters of evaluation of performance for each media and device.

				3	Student will be able to understand the concept of flow control, error control and LAN protocols; to explain the design of, and algorithms used in, the physical, data link layers.
				4	Student will understand the working principles of LAN and the concepts behind physical and logical addressing, subnetting and supernetting.
				5	Student shall understand the functions performed by a Network Management System and to analyze connection establishment and congestion control with respect to TCP Protocol.
				6	Student shall understand the principles and operations behind various application layer protocols like HTTP, SMTP, FTP.

## **DEPARTRMENT OF ELECTRONICS PSO'S:**

## PO1

Utilize the basic knowledge in mathematics, science and engineering in Electronics and Communication Engineering field.

# • PO2

Identify, formulate and solve complex problems to achieve demonstrated conclusions using mathematical principles and engineering sciences.

#### PO3

Design system components that meet the requirement of public safety and offer solutions to the societal and environmental concerns.

# PO4

Apply research based knowledge to design and conduct experiments, analyze, synthesize and interpret the data pertaining to Electronics and Communication Engineering problems and arrive at valid conclusions.

# PO5

Construct, choose and apply the techniques, resources and modern engineering tools required for Electronics and Communication Engineering applications.

#### PO6

Apply the contextual knowledge to assess societal, health, safety and cultural issues and endure the consequent responsibilities relevant to the professional engineering practice.

#### PO7

Examine the impact of engineering solutions in global and environmental contexts and utilize the knowledge for sustained development.

## PO8

Develop consciousness of professional, ethical and social responsibilities as experts in the field of Electronics and Communication Engineering.

#### PO9

Perform effectively as a member/leader in multidisciplinary teams.

#### PO10

Communicate the engineering activities to engineering society for documentation and presentation.

## PO11

Demonstrate knowledge and understanding of the engineering and management principles to manage projects in multidisciplinary environment.

#### PO12

Demonstrate resourcefulness for contemporary issues and lifelong learning.