VIGNAN'S INSTITUTE OF MANAGEMENT AND TECHNOLOGY FOR WOMEN

(An Autonomous Institution)

[Sponsored by Lavu Educational Society, Affiliated to JNTUH & Approved by AICTE, New Delhi]

Kondapur (V), Ghatkesar (M), Medchal-Malkajgiri (D) - 501 301. Phone: 96529 10002/3

Department of Electronics and Communication Engineering

Regulation: VR24

III B. Tech II Semester

COURSE TITLE: ANTENNAS AND WAVE PROPAGATION **COURSE CODE:** EC601PC

Upon completing this course, the students will be able to

CO No.	COURSE OUTCOME STATEMENT	BT Level
CO1	Understand the parameter consideration viz antenna efficiency, beam efficiency etc.	2
CO2	Design antenna and field evaluation under various conditions	6
CO3	Understand the array system of the different antennas , will gain knowledge of about means of propagation of EM WAVES i.e., free space propagation	2
CO4	Understand the design issues, operations of fundamental antennas like yagi-uda, horn antenna etc..	2
CO5	Design a lens structure and also the bench setup for antenna parameter measurements	6

MAPPING

CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
CO1	3	2	3	3	3	3	3	-	2	3	2	3	3	3	1
CO2	2	2	3	3	2	2	2	-	2	3	2	2	2	2	-
CO3	3	3	3	3	2	1	2	-	2	1	2	2	3	2	1
CO4	3	3	3	3	2	2	1	-	2	3	2	1	3	2	1
CO5	3	3	3	3	2	2	2	-	2	3	2	2	3	2	2
Average	**2.8**	**2.6**	**3**	**3**	**2.2**	**2**	**2**	**-**	**2**	**2.6**	**2**	**2**	**2.8**	**2.2**	**1.25**

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III B. Tech II Semester

COURSE TITLE: DIGITAL SIGNAL PROCESSING COURSE CODE: EC602PC

Upon completing this course, the students will be able to

CO No.	COURSE OUTCOME STATEMENT	BT Level
CO1	Students will be able to understand LTI system characteristics and Multirate signal processing.	2
CO2	Students will be able to represent inter-relationship between DFT and various transforms.	3
CO3	Students will be able to design a digital IIR filter for a given specification.	6
CO4	Students will be able to design a digital FIR filter for a given specification.	6
CO5	Students will be able to acknowledge the significance of various filter structures and effects of round off errors.	2

MAPPING

CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
CO1	3	2	3	2	2	-	-	-	-	2	2	3	2	3	-
CO2	1	2	3	3	2	-	-	-	-	2	2	3	3	1	-
CO3	3	2	3	3	2	-	-	-	-	2	2	3	3	3	-
CO4	3	2	3	3	2	-	-	-	-	2	2	3	3	3	1
CO5	3	3	3	3	2	-	-	-	-	3	2	3	3	3	1
Average	**2.6**	**2.2**	**3**	**2.8**	**2**	**-**	**-**	**-**	**-**	**2.2**	**2**	**3**	**2.8**	**2.6**	**1**

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III B. Tech II Semester

COURSE TITLE: CMOS VLSI DESIGN **COURSE CODE:** EC603PC

Upon completing this course, the students will be able to

CO No.	COURSE OUTCOME STATEMENT	BT Level
CO1	Understand operation of a MOS transistor	2
CO2	Understand down to physical level and relate the knowledge to the development of its operational equations	2
CO3	Analyze and implement various logic gates and circuits, using MOS Transistors	4
CO4	Design circuit components and verify their performance using simulation tools	6
CO5	Design static CMOS Combinational circuits	6

MAPPING

CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
CO1	3	2	3	2	2	1	1	-	1	2	-	-	3	1	1
CO2	3	3	3	2	2	1	1	-	1	1	-	-	2	1	1
CO3	1	2	2	3	2	3	2	-	-	1	-	-	1	2	-
CO4	3	3	3	2	2	1	1	-	1	1	-	-	2	1	1
CO5	3	3	3	2	2	1	1	-	1	1	-	-	2	1	1
Average	**2.6**	**2.6**	**2.8**	**2.2**	**2**	**1.4**	**1.2**	**-**	**1**	**1.2**	**-**	**-**	**2**	**1.2**	**1**

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III B. Tech II Semester

COURSE TITLE: EMBEDDED SYSTEM DESIGN COURSE CODE: EC623PE

Upon completing this course, the students will be able to

CO No.	COURSE OUTCOME STATEMENT	BT Level
CO1	Identify the hardware and software components of an embedded system	2
CO2	Choose appropriate embedded system architecture for the given application	3
CO3	Modify programs for optimized performance of an embedded system and validate	3
CO4	Describe the basics of OS and RTOS	2
CO5	Understand embedded firmware design approach	2

MAPPING

CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
CO1	2	2	-	-	1	-	-	-	-	-	-	-	2	1	-
CO2	3	3	-	-	-	-	-	-	1	-	-	2	1	2	-
CO3	3	3	3	2	1	-	-	-	1	-	-	1	2	1	-
CO4	3	3	3	2	-	-	-	-	-	-	-	1	1	1	-
CO5	3	2	-	-	-	-	-	-	-	-	-	-	1	1	-
Average	**2.8**	**2.6**	**3**	**2**	**1**	**-**	**-**	**-**	**1**	**-**	**-**	**1.33**	**1.4**	**1.2**	**-**

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III B. Tech II Semester

COURSE TITLE: JAVA PROGRAMMING **COURSE CODE: IT611OE**

After completion of this course the student will able to

CO No.	COURSE OUTCOME STATEMENT	BT Level
CO1	Able to solve real world problems using OOP techniques	3
CO2	Able to understand the use of abstract classes.	2
CO3	Able to solve problems using java collection framework and I/o classes	3
CO4	Able to develop multithreaded applications with synchronization.	6
CO5	Able to develop applets for web applications, Able to design GUI based applications	6

MAPPING

CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
CO1	2	2	2	2	1	-	-	-	-	2	-	3	3	2	1
CO2	3	3	3	3	3	-	-	-	2	2	-	3	3	3	1
CO3	3	3	3	3	3	-	-	-	3	2	-	3	3	3	1
CO4	3	3	3	3	3	-	-	-	3	2	-	3	3	3	1
CO5	3	3	3	3	3	-	-	-	2	1	-	3	3	2	1
Average	**2.8**	**2.8**	**2.8**	**2.8**	**2.6**	**-**	**-**	**-**	**2.5**	**1.8**	**-**	**3**	**3**	**2.6**	**1**

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Regulation: VR24

III B. Tech II Semester

COURSE TITLE: DIGITAL SIGNAL PROCESSING LABORATORY **COURSE CODE: EC604PC**

After completion of this course the student will able to

CO No.	COURSE OUTCOME STATEMENT	BT Level
CO1	Develop and Implement DSP algorithms in software using a computer language such as C with TMS320C6713 floating point Processor.	3
CO2	Develop various DSP Algorithms using MATLAB Software package.	3
CO3	Analyze and Observe Magnitude and phase characteristics (Frequency response Characteristics) of digital IIR-Butterworth, Chebyshev filters.	4
CO4	Analyze and Observe Magnitude and phase characteristics (Frequency response Characteristics) of digital FIR filters using window techniques.	4
CO5	Design and Analyze Digital Filters using FDA Tool.	6

MAPPING

CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
CO1	3	2	3	3	2	-	-	-	-	2	2	3	3	3	1
CO2	3	2	3	3	2	-	-	-	-	2	2	3	2	3	1
CO3	1	3	2	2	1	-	-	-	-	3	1	3	3	1	-
CO4	3	2	3	3	2	-	-	-	-	2	2	3	3	3	1
CO5	3	2	3	3	2	-	-	-	-	2	2	3	3	3	1
Average	**2.6**	**2.2**	**2.8**	**2.8**	**1.8**	**-**	**-**	**-**	**-**	**2.2**	**1.8**	**3**	**2.8**	**2.6**	**1**

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III B. Tech II Semester

COURSE TITLE: CMOS VLSI DESIGN LABORATORY **COURSE CODE:** EC605PC

After completion of this course the student will able to

CO No.	COURSE OUTCOME STATEMENT	BT Level
CO1	Understand the physical design process of Digital Integrated Circuits.	2
CO2	Describe procedure for designing of programmable circuits.	2
CO3	Demonstrate the ability to use various EDA tools for digital system design	3
CO4	Implement various combinational and sequential circuits using VHDL on FPGA.	3
CO5	Implement schematic and layout of various digital CMOS logic circuits using EDA tools.	6

MAPPING

CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
CO1	3	3	2	2	2	-	-	-	-	3	-	3	3	2	-
CO2	3	3	2	3	3	-	-	-	-	3	-	3	3	2	-
CO3	2	3	1	3	3	-	-	-	-	3	-	3	3	2	-
CO4	2	3	2	3	3	1	1	1	1	3	2	3	3	2	1
CO5	2	3	2	2	2	1	1	1	1	3	2	3	3	2	1
Average	**2.4**	**3**	**1.8**	**2.6**	**2.6**	**1**	**1**	**1**	**1**	**3**	**2**	**3**	**3**	**2**	**1**

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III B. Tech II Semester

COURSE TITLE: ADVANCED COMMUNICATION LABORATORY **COURSE CODE: EC606PC**

After completion of this course the student will able to

CO No.	COURSE OUTCOME STATEMENT	BT Level
CO1	The ability to analyze and simulate antenna performance	4
CO2	Generation of different types of signals using Vector Signal Generator	6
CO3	Study the features of Network and spectrum analyzer	1
CO4	Simulate the Radiation resistance for different antennas using HFSS/ ADS/ MATLAB and compare the measurement using Network analyzer.	6
CO5	Reading analog and digital sensors data using UART Using ICONT setup.	3

MAPPING

CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
CO1	3	3	2	2	2	1	-	-	2	2	-	-	3	2	1
CO2	3	3	2	2	2	1	-	-	2	1	-	-	2	3	2
CO3	2	3	2	2	2	2	-	-	1	2	-	-	3	3	2
CO4	3	3	3	2	2	1	-	-	1	1	-	-	2	2	2
CO5	3	2	2	2	2	1	-	-	2	2	-	-	3	1	1
Average	**2.8**	**2.8**	**2.2**	**2**	**2**	**1.2**	**-**	**-**	**1.6**	**1.6**	**-**	**-**	**2.6**	**2.2**	**1.6**

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III B. Tech II Semester

COURSE TITLE: **INDUSTRY ORIENTED MINI PROJECT** **COURSE CODE:** **EC607PC**

Upon completion of this project, the student will be able to

CO No.	COURSE OUTCOME STATEMENT	BT Level
CO1	Choose short research projects in a team under the direction of members of the faculty	6
CO2	Prepare detailed report describing the project and results.	3
CO3	Perform fabrication work of new experimental set up/devices or develop software packages	6
CO4	Justify the project by making an oral presentation before an evaluation committee	5

MAPPING

CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
CO1	2	2	2	-	-	-	-	-	2	-	-	-	1	1	1
CO2	-	-	-	-	-	-	-	-	-	2	-	-	1	-	1
CO3	1	2	2	2	1	1	1	1	-	-	-	-	-	1	1
CO4	-	-	-	-	-	-	-	-	-	2	-	-	1	1	-
Average	**1.5**	**2**	**2**	**2**	**1**	**1**	**1**	**1**	**2**	**2**	**-**	**-**	**1**	**1**	**1**

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III B. Tech II Semester

COURSE TITLE: ENVIRONMENTAL SCIENCE COURSE CODE: MC608BS

Based on this course, the Engineering graduate will

CO No.	COURSE OUTCOME STATEMENT	BT Level
CO1	Understand technologies on the basis of ecological principles and environmental regulations	2
CO2	Evaluate technologies on the basis of ecological principles and environmental regulations	5
CO3	Develop technologies on the basis of ecological principles and environmental regulations	6
CO4	Understand the impacts of developmental activities and mitigation measures	2
CO5	Understand the importance of ecological balance for sustainable development	2

MAPPING

CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
CO1	1	1	-	1	2	3	3	2	2	3	2	3	-	-	2
CO2	-	1	1	1	1	3	3	2	1	3	2	3	-	-	1
CO3	1	-	1	1	2	3	2	1	2	3	2	3	-	-	2
CO4	1	1	1	1	2	2	3	2	2	2	1	2	-	-	2
CO5	1	1	1	2	2	2	3	2	2	3	2	2	-	-	2
Average	**1**	**1**	**1**	**1.2**	**1.8**	**2.6**	**2.8**	**1.8**	**1.8**	**2.8**	**1.8**	**2.6**	**-**	**-**	**1.8**