MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR (M.P.)

(A Govt. Aided UGC Autonomous & NAAC Accredited Institute Affiliated to RGPV, Bhopal)

Department of Electronics Engineering
CO Attainment for the session January - June 2020

Semester	Course	CO	CO Statement	CO Direct Attainment	CO indirect Attainment	CO Attainment	Target CO Attainment	Status
Semester - IV	14040/200401 Electronics-II	CO1	**Design** the Tuned Amplifier with the given Parameters.	72.6	68.22	71.72	70	Achieved
		CO2	**Differentiate** between the Voltage and Power Amplifier.	73.3	75.19	73.68	70	Achieved
		CO3	**Design** the Multistage Amplifiers.	70.8	68.99	70.44	70	Achieved
		CO4	**Design** the Various Electronics Circuits using Operational Amplifier.	83.6	75.97	82.07	70	Achieved
		CO5	**Realize** Active Filters According to Butterworth and Chebysheb Polynomials.	92.27	69.77	87.77	70	Achieved
	140402/200402 Analog Communication	CO1	**Apply** the Concept of Multiplexing and Modulation in Communication Engineering	68.75	64.4	67.88	70	Not Achieved
		CO2	**Analyze** the Amplitude Modulation and Angle Modulation with their Waveforms	79.38	66.67	76.84	70	Achieved
		CO3	**Explain** the Generation and Detection for Various Modulation Techniques.	76.75	67.4	74.88	70	Achieved
		CO4	**Explain** the Working of Transmitter and Receiver.	87.38	63.64	82.63	70	Achieved
		CO5	**Evaluate** the Statistical Parameters for General PDF/CDF.	67.75	68.18	67.84	70	Not Achieved
		CO6	**Evaluate** the Effects of Noise on Different Modulation Techniques.	82.5	61.36	78.27	70	Achieved
	140403/200403 Communication Network	CO1	**Compute** the Various Parameters of Different Passive Networks.	71	65	69.8	NA	Not Achieved
		CO2	**Design** the Symmetrical and Asymmetrical Attenuators.	69.4	67	68.92	NA	Not Achieved
		CO3	**Synthesize** the Network for A Given Positive and Minimum Positive Real Function.	67.3	71	68.04	70	Achieved
		CO4	**Design** Passive Filters for the Given Specifications	73.46	69	72.57	70	Achieved
		CO5	**Analyze** the Characteristics of Various Transmission Lines.	55.74	71	58.79	70	Not Achieved
		CO6	**Calculate** the Impedance and SWR Graphically /Analytically.	54.98	69	57.78	70	Not Achieved
	140404	CO1	**Discuss** Performance Characteristics of an Instrument	87.13	75.97	84.90	70	Achieved

	Electronics Measurement and Instrumentation	CO2	**Explain** the Working Principle and Applications of Bridges and Transducers .	79.8	69.77	77.79	70	Achieved
		CO3	**Analyze** the Working Principle of Digital Instruments and Display Devices	89.4	75.19	86.56	70	Achieved
		CO4	**Measure** Different Parameters using Various Circuits.	80.675	68.99	78.34	70	Achieved
		CO5	**Design** of A/D and D/A Converter.	76.8	75.97	76.63	70	Achieved
Semester - VI	200602 Data Communication	CO1	**Examine** the Concept of Different Layers in Data Communication Networks	68.75	74	69	70	Not Achieved
		CO2	**Analyze** the Error and Flow Control in Communication Network	79.38	68.99	77.30	70	Achieved
		CO3	**Explain** the Concepts of MAC Layer	76.75	75.97	76.59	70	Achieved
		CO4	**Identify** the Different Type of Routing Used in IP	87.38	75.19	84.94	70	Achieved
		CO5	**Discuss** the Transport Mechanism in TCP/UDP	67.75	68.99	67.99	70	Not Achieved
	140601 Microprocessor and Interfacing	CO1	**Explain** the Architecture and Organization of 8085 Microprocessors.	70.5	75.97	71.59	70	Achieved
		CO2	**Develop** Assembly Language Programming Skill for 8085.	68.25	67	68	70	Not Achieved
		CO3	**Design** the Interfacing Circuitry of Memory and I/O Devices Using Interfacing Chips/Pics with 8085.	65.3	67.2	65.68	70	Not Achieved
		CO4	**Discuss** the Architecture and Organization of 8086 Microprocessors.	78.3	68	76.24	70	Achieved
		CO5	**Describe** the Instruction Set and Architecture of 8051 Microcontroller.	84.7	75.97	82.95	70	Achieved
	140602 Digital Signal Processing	CO1	**Analyze** Discrete Time System using Transform Methods.	88.77	75.19	86.05	75	Achieved
		CO2	**Compute** DFT Using FFT Algorithms.	47.5	68.99	51.79	70	Not Achieved
		CO3	**Design** IIR Filters.	73.25	75.97	73.79	70	Achieved
		CO4	**Design** FIR Filters.	96	75.19	91.84	80	Achieved
		CO5	**Apply** the Concept of Multi-Rate Signal Processing in Practical Applications.	92.75	68.99	87.99	80	Achieved
	140603 Optical Communication (DE-1)	CO1	**Explain** the Basic Elements of Optical Fiber Transmission.	79.3	75.97	78.63	70	Achieved
		CO2	**Discuss** Fiber Fabrication, Splicing and Optical Connectors.	73	71.2	72.64	70	Achieved
		CO3	**Describe** the Working of Optical Sources and Optical Detectors.	77.5	68.9	75.78	70	Achieved
		CO4	**Calculate** the Channel Impairments Like Losses and Dispersion.	73.5	65	71.8	70	Achieved

		CO5	**Discuss** Coherent Optical Transmission System and Optical Networks.	77.75	69.1	76.02	70	Achieved
	140613 Antenna and Wave Propagation(DE-1)	CO1	**Evaluate** Various Parameters of the Antenna.	79	75.19	78.24	70	Achieved
		CO2	**Analyze** the Design Parameters and Radiation Mechanism of Wire Antennas.	73	68.99	72.19	70	Achieved
		CO3	**Design** Antenna Array for the Given Radiation Characteristics.	72	75.97	72.79	70	Achieved
		CO4	**Analyze** the Design Parameters and Radiation Characteristics of Aperture and Special Antennas.	79	75.19	78.24	70	Achieved
		CO5	**Describe** Effects of Earth and its Atmosphere on Radio Wave Propagation.	86	68.99	82.59	70	Achieved
	140615 OC-1 (Intelligent Control)	CO1	**Explain** the Fundamental Principle Behind Adaptive Control.	65	75.97	67.19	70	Not Achieved
		CO2	**Estimate** Various Parameter of Control System Using Artificial Neural Network	67	75.19	68.63	70	Not Achieved
		CO3	**Apply** the Concept of Artificial Neural Network to the Field of Control	64	68.99	64.99	70	Not Achieved
		CO4	**Optimize** the Throughput of the System using Optimization Methods Like Genetic Algorithm	64	75.97	66.39	70	Not Achieved
		CO5	**Design** Fuzzy Logic Based Control System	61	71.2	63.04	70	Not Achieved
	140605 OC-2 (Embeded System)	CO1	**Explain** the Architecture of Embedded System and 8051	77.11	68.9	75.46	70	Achieved
		CO2	**Develop** Assembly Language Programming Skill for 8051	75.62	64.7	73.43	70	Achieved
		CO3	**Analyze** the Concept of Timer/Counters , Serial Communication and Interrupt Handling Process of 8051 Microcontroller	76.12	75.97	76.09	70	Achieved
		CO4	**Interface** Memory and I/O Devices with 8051 Microcontroller	88	68.99	84.19	70	Achieved
		CO5	**Interface** Arduino with LED, Switches, LDR, PWM 16 X 2 LCD, Serial , L-293D For Motor Interfacing ADC.	89.5	75.97	86.79	70	Achieved
Semester - VIII	BELL/BETL 801 Fiber Optics & Optical Communication	CO1	**Learn** the Basic Elements of Optical Fiber Transmission Link, Fiber Modes Configurations and Fabrication Techniques.	99	75.19	94.23	70	Achieved
		CO2	**Classify** Various Optical Sources, Fiber Splicing Techniques, Optical Connectors with their Principles	81.75	68.99	79.19	70	Achieved
		CO3	**Analyze** Different Optical Receivers and their Noise Performances	73.87	74.2	73.93	70	Achieved

		CO4	**Calculate** the Channel Impairments Like Losses and Dispersion	75.87	75.19	75.73	70	Achieved
		CO5	**Discuss** Coherent Optical Transmission System, the Installation and Performance Verification of Digital Optical Fiber Link	76.62	68.99	75.09	70	Achieved
		CO6	**Discriminate** Between Different Amplifiers and Learn Variety of Networking Aspects, FDDI, SONET, WDM	32	75.97	40.79	70	Not Achieved
	BELL/BETL 802 Satellite Communication	CO1	**Explain** Basic Concepts and Terminologies of Satellite Communication	85	71.2	82.24	70	Achieved
		CO2	**Calculate** the Link Power Budget.	72	68.9	71.38	70	Achieved
		CO3	**Analyse** the Different Multiple Access Schemes for Satellite Communication.	80.6	65	77.48	70	Achieved
		CO4	**Classify** Different Propagation Effects in Satellite	75	69.1	73.82	70	Achieved
		CO5	**Solve** Problems Related to Channel Coding Techniques.	60	67.2	61.44	70	Not Achieved
		CO6	**Distinguish** Different Satellite System	63	68.99	64.19	70	Not Achieved
	BELL/BETL 803 TV and RADAR Engineering	CO1	**Explain** the Various Components of the Composite Video Signal, TV Camera Tube, and Picture Tube.	74.4	75.97	74.71	70	Achieved
		CO2	**Characterize** Various Types of Monochrome and Color TV Systems.	85.8	75.19	83.67	70	Achieved
		CO3	**Analyze** Basic Factors Required for Successful Transmission and Reception of TV Signals	67	71	67.8	70	Not Achieved
		CO4	**Explain** the Advanced Topics in Digital TV and High Definition TV	95	75.97	91.19	70	Achieved
		CO5	**Evaluate** the Various Performance Factor Related to the RADAR.	72.4	75.19	72.95	70	Achieved
		CO6	**Explain** Target Detection and Tracking Using RADAR Systems.	75.3	68.99	74.03	70	Achieved
	BELL/BETL 804 Neural Networks and Fuzzy Systems	CO1	**Explain** the Basic Concepts of Neural Networks.	92.5	67.9	87.58	65	Achieved
		CO2	**Analyze** the Concept of Human Neural Structure and ANN.	86	71.2	83.04	65	Achieved
		CO3	**Analyze** the Various Feed Forward/Feedback Neural Networks.	65	68.9	65.78	65	Achieved
		CO4	**Examine** Different Learning Methodologies	74	64.7	72.14	65	Achieved
		CO5	**Explain** the Concept of Fuzziness Involved in Various Systems and Fuzzy Set Theory.	62.5	69	63.8	65	Not Achieved

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List of subjects and their CO whose target levels are not achieved (Session January-June 2020)

Semester	Subject Name	CO attainment (Target not Achieved)	Action Taken
Semester - IV	140402/200402 Analog Communication	CO1,CO5	• Additional Classes which will focused on specific CO
	140403/200403 Communication Network	CO1,CO2,CO5,CO6	
Semester - VI	200602 Data Communication	CO1,CO5	• More tutorials
	140601 Microprocessor and Interfacing	CO2,CO3	
	140602 Digital Signal Processing	CO2	• Solutions of previous year question papers
	140615 OC-1 (Intelligent Control)	CO1	
		CO2	• Additional classes by expert
		CO3	
		CO4	• Take care of CO distribution during question paper setting
		CO5	
Semester - VIII	BELL/BETL 801 Fiber Optics & Optical Communication	CO6	• Better attainment of these CO can be achieved by improving their weightage in question paper
	BELL/BETL 802 Satellite Communication	CO5,CO6	
	BELL/BETL 803 TV and RADAR Engineering	CO3	
	BELL/BETL 804 Neural Networks and Fuzzy Systems	CO5	