COURSE OUTCOMES AND CO-PO-PSO ARTICULATION MATRIX

BATCH 2020-24

SUBJECT NAME	Basic Electronics	SUBJECT CODE	18ELN14/24
	CO STATEMENTS		
CO1	Describe the operation of diodes, BJT and FET. Describe general operating principles of SCR's and its application		
CO2	Design and explain the construction of rectifiers, regulators, amplifiers and Oscillators.		
CO3	Explain the working and design different types of operational amplifiers.		
CO4	Explain the working and design of fixed voltage IC regulator using 7805 and Astable oscillator using timer IC 555. Understand the basic principle of operation of communication system and mobile phones.		
CO5	Recall and explain the different number system and their conversions. Construct simple combinational and sequential circuits using flipflops		

CO- PO-PSO MAPPING:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	2	2											2		
CO2	2	2	2										2		
CO3	2	2	2										2		
CO4	2		2										2		
CO5	2	2											2		

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COURSE OUTCOMES AND CO-PO-PSO ARTICULATION MATRIX BATCH 2020-24

SUBJECT NAME	Transform calculus, Fourier Series and Numerical Techniques	SUBJECT CODE	18MAT31
FACULTY NAME	Mrs. Chaitra A C		
	CO STATEMENTS		
CO1	Use Laplace transform and inverse Laplace transform in solving differential/ integral equation arising in network analysis, control systems and other fields of engineering.		
CO2	Demonstrate Fourier series to study the behaviour of periodic functions and their applications in system communications, digital signal processing and field theory.		
CO3	Make use of Fourier transform and Z-transform to illustrate discrete/continuous function arising in wave and heat propagation, signals and systems.		
CO4	Solve first and second order ordinary differential equations arising in engineering problems using single step and multistep numerical methods.		
CO5	Determine the externals of functional using calculus of variations and solve problems arising in dynamics of rigid bodies and vibrational analysis.		

CO- PO-PSO MAPPING:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	3	2													
CO2	3	2													
CO3	3	2													
CO4	3	2													
CO5	3	2													

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SJB Institute of Technology
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COURSE OUTCOMES AND CO-PO-PSO ARTICULATION MATRIX BATCH 2020-24

SUBJECT NAME	Network Theory	SUBJECT CODE	18EC32
FACULTY NAME	Dr. Vijayakumar T		
	CO STATEMENTS		
CO1	Distinguish the networks and discuss various circuit analysis techniques.		
CO2	Analyze the circuit parameters during switching transients and apply Laplace transform to solve the given network		
CO3	Apply network theorems to solve a given network.		
CO4	Evaluate the frequency response for resonant circuits and the network parameters for two port networks		

CO- PO-PSO MAPPING:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	1	2	1										1		
CO2	1	2	1										1		
CO3	1	2	1										1		
CO4	2	2	1										1		

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COURSE OUTCOMES AND CO-PO-PSO ARTICULATION MATRIX BATCH 2020-24

SUBJECT NAME	Electronic Devices	SUBJECT CODE	18EC33
FACULTY NAME	Mr. Bhaskar B		
	CO STATEMENTS		
CO1	Understand the principles of semiconductor Physics		
CO2	Understand the principles and characteristics of different types of semiconductor devices		
CO3	Understand the fabrication process of semiconductor devices		
CO4	Utilize the mathematical models of semiconductor junctions and MOS transistors for circuits and systems.		

CO- PO-PSO MAPPING:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	2	2											2		
CO2	2	2											2		
CO3	2	2											2		
CO4	2	2											2		

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COURSE OUTCOMES AND CO-PO-PSO ARTICULATION MATRIX BATCH 2020-24

SUBJECT NAME	Digital System Design	SUBJECT CODE	18EC34
FACULTY NAME	Dr. Ravikumar A V		
	CO STATEMENTS		
CO1	Explain the concept of combinational and sequential logic circuits.		
CO2	Analyze and design the combinational logic circuits.		
CO3	Describe and characterize flip-flops and its applications.		
CO4	Design the sequential circuits using SR, JK, D, T flip-flops and Mealy & Moore machines.		
CO5	Design applications of Combinational & Sequential Circuits.		

CO- PO-PSO MAPPING:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	2	1											2		
CO2	1	1	3										2		
CO3	1	2	2										2		
CO4	2	1	2										2		
CO5	1	2	3										2		

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COURSE OUTCOMES AND CO-PO-PSO ARTICULATION MATRIX BATCH 2020-24

SUBJECT NAME	Computer Organization & Architecture	SUBJECT CODE	18EC35
FACULTY NAME	Dr. Komala M / Mrs. Jyothi H		
	CO STATEMENTS		
CO1	Understand the basic Organization of computer, operational functional units and processor performance and analyze different instructions and addressing modes.		
CO2	Identifying the input output devices and utilization of interrupts, controlling devices and memory		
CO3	Understand, analyze and design the various memory systems		
CO4	Analyzing the execution of complete instructions through hardwired and micro programmed Control		

CO- PO-PSO MAPPING:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	2	3	2										2		
CO2	2	2	2										2	2	
CO3	2	2											2		
CO4	2	3	2										2		

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COURSE OUTCOMES AND CO-PO-PSO ARTICULATION MATRIX BATCH 2020-24

SUBJECT NAME	Power Electronics & Instrumentation	SUBJECT CODE	18EC36
FACULTY NAME	Dr. Rekha K R		
	CO STATEMENTS		
CO1	Build and Test circuits using Power Electronics Devics		
CO2	Analyze and design controlled rectifier, DC to DC converters, DC to AC inverters and SMPS.		
CO3	Define instrument errors and develop circuits for multirange Ammeters, Voltmeters and Bridges to measure passive component values and frequency		
CO4	Describe the principle of operation of Digital instruments and PLCs		
CO5	Use Instrumentation amplifier for measuring physical parameters and transducer		

CO- PO-PSO MAPPING:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	2	2											2		
CO2	2	3											2		
CO3	2	2											2		
CO4	2	2											2		
CO5	2	2											2		

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Bengaluru-560060

COURSE OUTCOMES AND CO-PO-PSO ARTICULATION MATRIX BATCH 2020-24

SUBJECT NAME	Electronic Devices & Instrumentation Laboratory	SUBJECT CODE	18ECL37
FACULTY NAME	Dr. K Somashekar, Dr. Anitha P, Mrs. Anushree R Dr. Sunitha Y N, Mr. Bhaskar B (B1 & B2), Dr. K R Rekha (B3), Mr. Rahul (B1), Mrs. Latha S (B2)		
	CO STATEMENTS		
CO1	Understand the characteristics of various electronic devices and measurement of parameter		
CO2	Design and test simple electronic circuits		
CO3	Use of circuit simulation software for the implementation and characterization of electronic circuits and devices		

CO- PO-PSO MAPPING:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	3	2		2									2		
CO2	2	2	3	3									2		
CO3	2	2		2	3								2		

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COURSE OUTCOMES AND CO-PO-PSO ARTICULATION MATRIX BATCH 2020-24

SUBJECT NAME	Digital System Design Laboratory	SUBJECT CODE	18ECL38
FACULTY NAME	Dr. Ravikumar A V & Mr. Darshan B D Dr. Komala M & Dr. Shilpa K Gowda		
	CO STATEMENTS		
CO1	Demonstrate the truth table of various expressions and combination circuits using logic gates.		
CO2	Design and test various combination circuits such as adders, subtractors, comparators, mux and demuxer.		
CO3	Construct flip flop using universal gates.		
CO4	Explain operation of counter and shift registers.		
CO5	Simulate serial adder and binary multiplier.		

CO- PO-PSO MAPPING:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	2	2	2										2		
CO2	3	3	3										2		
CO3		2	2										2		
CO4			3									3	2		
CO5		2	3		3							3	2		

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COURSE OUTCOMES AND CO-PO-PSO ARTICULATION MATRIX BATCH 2020-24

SUBJECT NAME	Complex Analysis, Probability and Statistical Methods	SUBJECT CODE	18MAT41
FACULTY NAME	Mrs. Chaitra A C		
	CO STATEMENTS		
CO1	Use the concepts of analytic function and complex potentials to solve the problems arising in electromagnetic field theory		
CO2	Utilize conformal transformation and complex integral arising in aerofoil theory, fluid flow visualization and image processing		
CO3	Apply discrete and continous probability distributions in analysing the probability models arising in engineering field.		
CO4	Make use of correlation and regression analysis to fit a suitable mathematical model for the statistical data.		
CO5	Construct joint probability distributions and demonstrate the validity of testing the hypothesis.		

CO- PO-PSO MAPPING:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	2	2											2		
CO2	2	2											2		
CO3	2	2											2		
CO4	2	2											2		
CO5	2	2											2		

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Bengaluru-560060

COURSE OUTCOMES AND CO-PO-PSO ARTICULATION MATRIX BATCH 2020-24

SUBJECT NAME	Analog Circuits	SUBJECT CODE	18EC42
FACULTY NAME	Dr. K R Rekha / Mrs. Uma S		
	CO STATEMENTS		
CO1	Understand and analyse the characteristics of BJTs and FETs.		
CO2	Design and analyze BJT and FET amplifier circuits		
CO3	Design and analyse sinusoidal oscillators and power amplifiers		
CO4	Understand the functioning of linear ICs		
CO5	Design of Linear IC based circuits		

CO- PO-PSO MAPPING:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	3	2										1	3		
CO2	3	2	1									1	3	1	
CO3	3	2	1									1	3	1	
CO4	3	2										1	3		
CO5	3	2	1									1	3	1	

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Bengaluru-560060

COURSE OUTCOMES AND CO-PO-PSO ARTICULATION MATRIX BATCH 2020-24

SUBJECT NAME	Control Systems	SUBJECT CODE	18EC43
FACULTY NAME	Dr. Shilpa K Gowda / Mrs. Latha S		
	CO STATEMENTS		
CO1	Develop the mathematical model of mechanical and electromechanical systems.		
CO2	Derive transfer function for a given control system using signal flow graph and block diagram reduction methods.		
CO3	Determine the time domain specifications for first and second order systems.		
CO4	Analyze the stability of a system using Routh-Hurwitz Criterion, Nyquist plots, bode plots and Root-locus techniques		
CO5	Develop a control system model in continuous and discrete time domain using state variable methods		

CO- PO-PSO MAPPING:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	3	2	2	-	-	-	-	-	-	-	-	-	3	-	-
CO2	2	3	-	-	-	-	-	-	-	-	-	-	2	-	-
CO3	3	2	-	-	-	-	-	-	-	-	-	-	2	-	-
CO4	2	3	2	2	-	-	-	-	-	-	-	-	3	2	-
CO5	2	3	-	2	-	-	-	-	-	-	-	-	3	2	-

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COURSE OUTCOMES AND CO-PO-PSO ARTICULATION MATRIX BATCH 2020-24

SUBJECT NAME	Engineering Statistics & Linear Algebra	SUBJECT CODE	18EC44
FACULTY NAME	Mr. Bhaskar B		
	CO STATEMENTS		
CO1	Understand Single and Multiple Random Variables, and their extension to Random Processes.		
CO2	Compute the quantitative parameters for the functions of single and Multiple Random Variables and Processes.		
CO3	Familiarize with the concept of Vector spaces and orthogonality with qualitative insight into applications.		
CO4	Compute the quantitative parameters for Matrices and Linear Transformations.		

CO- PO-PSO MAPPING:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	3	2	1	-	-	-	-	-	-	-	1	2	2	-	1
CO2	3	2	2	-	-	-	-	-	-	-	1	2	2	-	1
CO3	3	2	1	-	2	-	-	-	-	-	2	2	2	-	1
CO4	3	1	2	-	2	-	-	-	-	-	2	2	2	-	1

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COURSE OUTCOMES AND CO-PO-PSO ARTICULATION MATRIX BATCH 2020-24

SUBJECT NAME	Signals & Systems	SUBJECT CODE	18EC45
FACULTY NAME	Mr. Rahul Rai / Dr. Lakshminarayan M		
	CO STATEMENTS		
CO1	Understand & describe the different types of signals and systems.		
CO2	Verify the properties of continuous and discrete time systems.		
CO3	Comprehend the knowledge of LTI systems and compute the response of a Continuous and Discrete LTI system using convolution.		
CO4	Determine the spectral characteristics of continuous and discrete time signal using Fourier analysis.		
CO5	Apply the knowledge of Z-transforms to analyse discrete systems in frequency domain.		

CO- PO-PSO MAPPING:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	2				2			1	2	1			3	1	
CO2	2	1											3	1	
CO3	2	1			2			1	2	1			3	1	
CO4	2	1											3	1	
CO5	2	1			2			1	2	1			3	1	

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Bengaluru-560060

COURSE OUTCOMES AND CO-PO-PSO ARTICULATION MATRIX BATCH 2020-24

SUBJECT NAME	Microcontroller	SUBJECT CODE	18EC46
FACULTY NAME	Dr. Ravikumar A V/ Mrs. Pushpalatha G		
	CO STATEMENTS		
CO1	Familiarize the basic architecture of 8051 microcontroller		
CO2	Analyze Assembly level programs using 8051 microcontroller Instruction set.		
CO3	Understand the Interrupt system, operation of Timers/counters and serial port of 8051		
CO4	Program the 8051 microcontroller using Assembly Level and C Language		
CO5	Interface peripheral devices using 8051 I/O ports.		

CO- PO-PSO MAPPING:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	3	2	-	-	-	-	-	-	-	-	-	1	2	-	-
CO2	3	2	-	-	-	-	-	-	-	-	-	-	2	-	-
CO3	3	2	-	-	-	-	-	-	-	-	-	-	2	-	-
CO4	3	2	-	-	1	-	-	-	-	-	-	-	2	-	-
CO5	3	2	1	-	1	-	-	-	-	-	-	-	2	-	-

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COURSE OUTCOMES AND CO-PO-PSO ARTICULATION MATRIX BATCH 2020-24

SUBJECT NAME	Microcontroller Lab	SUBJECT CODE	18ECL47
FACULTY NAME	Mr. Rahul Rai, Mrs. Anushree R, Dr. AVR (A1 & A2) Mrs. Pushpalatha G, Mrs. Nithya S, Dr. MK (B1)		
	CO STATEMENTS		
CO1	Demonstrate ability to handle data transfer, arithmetic operations, counters and Boolean and logical instructions using assembly language programming		
CO2	Understand and design of experiments using call and return instructions, code conversion, delay programs and serial port programs		
CO3	Interface different input and output devices to 8051 and control them using Assembly language programs		
CO4	Interface the serial devices to 8051 and do the serial transfer using C programming.		

CO- PO-PSO MAPPING:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	3	2			2			1	1	1			3	1	
CO2	3	2	2	2	2			1	1	1			3	2	
CO3	3	2	2		2			1	1	1			3	2	
CO4	2	2	2		2			1	1	1			3	2	

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Bengaluru-560060

COURSE OUTCOMES AND CO-PO-PSO ARTICULATION MATRIX BATCH 2020-24

SUBJECT NAME	Analog Circuits Lab	SUBJECT CODE	18ECL48
FACULTY NAME	Dr. KRR(A1), Ms. Geethanjali N, Mrs. Divyashree Y V, Dr. Sunitha Y N(A1&A2) Dr. Lakshminarayan N, Mrs. Uma S, Dr. SYN (B1), Dr. TVK (B2)		
	CO STATEMENTS		
CO1	Design analog circuits using BJT/FET and evaluate their performance		
CO2	Design analog circuits using opamps for different applications		
CO3	Simulate and analyze analog circuits for different electronics applications		

CO- PO-PSO MAPPING:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	3	2	2	1				2	2	1			3	2	
CO2	3	2	2	1				2	2	1			3	2	
CO3	3	2	2	1				2	2	1			3	2	

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