

DR. V.R.K WOMEN'S COLLEGE OF ENGINEERING AND TECHNOLOGY

Department of Electronics and Communication Engineering

CO Attainment

ACADEMIC YEAR: 2021-2022
YEAR & BRANCH: III YEAR ECE
SEMESTER: II SEMESTER
BATCH: 2019-2023
SUBJECT CODE: EC603PC
SUBJECT: VLSI DESIGN
FACULTY: E.SHIREESHA

Enter -1 for Absentees

TOTAL NO. OF STUDENTS REGISTERED FOR THE COURSE=6

S.NO	HALL TICKET NUMBER	NAME OF THE STUDENT	MID I Examination				MID II Examination				% of Attainment					Univ. Exam Mark	Univ. Exam Mark	CRITERIA FOR CO ATTAINMENT (Internal Exams)		CRITERIA FOR CO ATTAINMENT (University Exams)		
			Ass	Obj	Sub	Total	Ass	Obj	Sub	Total	CO1	CO2	CO3	CO4	CO5			Criteria	Level	Criteria	Level	
			5	10	10	25	5	10	10	25	100	100	100	100	100			75	100			
1	19H81A0401	ADEEN FATIMA	5	6	7	18	5	5	6	16	72	72	68	64	64	58	75	60 Percentage and above of appeared students Scoring >=50% of Total Marks for Each CO	68	60 Percentage and above of appeared students Scoring >=35% of Total Marks for Each CO	3	
	19H81A0402	SYEDA SUMMAIYA	5	7	7	19	5	6	6	17	76	76	72	68	68	66	84					
3	19H81A0403	TAYYABA TABASSUM	5	8	8	21	5	7	7	19	84	84	80	76	76	80	80					
4	19H81A0404	UZMA NAHID	5	6	6	17	5	6	6	17	68	68	68	72	68	24	58	40 to 59 Percentage and above of appeared students Scoring >=50% of Total Marks for Each CO	2	40 to 59 Percentage and above of appeared students Scoring >=35% of Total Marks for Each CO	2	
5	18H81A0404	UMM-E-KULSUM AMEENA SULTANA	5	8	7	20	5	6	7	18	80	80	76	72	72	2	22					
6	20H85A0401	SAMA MANISHA	5	6	6	17	5	7	7	19	68	68	72	76	76	20	38					
			No of students crossed the threshold level in Internal Examination (>=50%)								6	6	6	6	6			3	No of Students crossed the threshold level in External Examination (>=50%)			
			No of Students Appeared for the Examination								6	6	6	6	6			6	No of Students Appeared for the Examination			
			% of Students crossed the threshold level								100	100	100	100	100			50	% of Students crossed the threshold level			
			COs attainment Level								3	3	3	3	3			2	COs attainment Level			
			Average of COs attainment								3							2	Average of COs attainment			
			Course Outcome attainment of the class								2.25											



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R18 COURSE ATTAINMENT FOR ALL COURSES

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Year 1 - Semester 1		
Subject code	Course Name	ATTAINMENT
MA101BS	Mathematics-I	2
AP102BS	APPLIED PHYSICS	2.2
CS103ES	PROGRAMMING FOR PROBLEM SOLVING	2.25
ME104ES	ENGINEERING GRAPHICS	2.2
AP105BS	APPLIED PHYSICS LAB	3
CS106ES	PROGRAMMING FOR PROBLEM SOLVING LAB	2.25
MC109ES	ENVIRONMENTAL SCIENCE	3
Year 1 - Semester 2		
MA201BS	Mathematics-II	2.2
CH202BS	CHEMISTRY	2.5
subject code	BASIC ELECTRICAL ENGINEERING	2.25
ME205ES	ENGINEERING WORKSHOP	2.5
EN205HS	ENGLISH	2.5



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CH206BS	ENGINEERING CHEMISTRY LAB	2.5
EN207HS	ENGLISH LANGUAGE AND COMMUNICATION SKILLS LAB	3
EE208ES	BASIC ELECTRICAL ENGINEERING LAB	2.5
	Year 2 - Semester 1	
MA301PC	Electronic Devices And Circuits	2.5
EC302PC	Network Analysis And Transmission Lines	2.25
EC303PC	Digital System Design	3
EC304PC	Signals and Systems	2.5
EC305ES	Probability Theory And Stochastic Processes	2
EC306PC	Electronic devices and circuits lab	2.8
EC307PC	Digital System Design Lab	2.8
EC308ES	Basic Simulation Lab	2.5
MC309	Constitution of India	2.6
	Year 2 - Semester 2	
MA401BS	Laplace Transforms, Numerical Methods And Complex Variables	2.2
EC402PC	Electromagnetic Fields and Waves	2.5
EC403PC	Analog and Digital Communications	2.5
EC404PC	Linear IC Applications	3
EC405PC	Electronic Circuit Analysis	2.4
EC406PC	Analog and Digital Communications Lab	2.5
EC407PC	IC Applications Lab	2.6
EC408PC	Electronic Circuit Analysis Lab	2.2
MC409	Gender Sensitization Lab	2.5



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Year 3 – SEMESTER 1		
EC501PC	Microprocessors And Microcontrollers	2.2
EC502PC	Data Communications And Networks	2.5
EC503PC	Control Systems	2.5
SM504MS	Business Economics And Financial Analysis	2.4
EN508	Advanced Communication Skills Lab	2.5
EC513PE	Electronic Measurements and Instrumentation	2.1
EC505PC	Microprocessors And Microcontrollers Lab	2.5
EC506PC	Data Communications And Networks Lab	2.6
MC510	Intellectual Property Rights	2.4
Year 3 – SEMESTER 2		
MC609	Environmental Science	2.6
EC606PC	Scripting Languages Lab	2.8
EC601PC	Antennas and Wave Propagation	2.5
EC602 PC	Digital Signal Processing	2.4
EC603PC	Vlsi Design	2.25
EC613PE	Embedded System Design	2.5
EC604PC	Digital Signal Processing Lab	2.8
EC605PC	E-Cad Lab	2.8
Year 4 – SEMESTER 1		
EC701PC	Microwave And Optical Communications	2.6
EC712PE	Scripting Languages	2.6
EC723PE	Network Security and Cryptography	2.8
	Open Elective-2	2.6



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SM702MS	Professional Practice, Law & Ethics	2.6
EC703PC	Microwave And Optical Communications Lab	2.5
	Industrial Oriented Mini Project/ Summer	
EC704PC	Internship	2.8
EC706PC	Seminar	2.6
EC705PC	PROJECT STAGE - I	2.6
	Year 4 - SEMESTER 2	
EC811PE	Satellite Communications	2.6
EC821PE	System On Chip Architecture	2.8
	Total Quality Management	2.8
EC801PC	Project stage-2	2.6

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DEPARTMENT OF ELECTONICS AND COMMUNICATION ENGINEERING

CO-PO-PSO ATTAINMENT FOR 2019-2023 BATCH(R18)

I YEAR - I SEMESTER

Subject Code	Course Name	CO's	Outcomes	PROGRAM OUTCOMES (POs)												PSOs		
				1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
MA101BS	Mathematics - I	CO1	Write the matrix representation of a set of linear equations and to analyse the solution of the system of equations	3	2	1	2	2	3	3	2	2	2	2	2	2	2	0
		CO2	Find the Eigen values and Eigen vectors	3	2	2	2	2	2	2	2	2	1	2	1	2	2	0
		CO3	Reduce the quadratic form to canonical form using orthogonal transformations.	3	3	1	2	2	2	2	2	2	2	2	2	2	1	0
		CO4	Analyse the nature of sequence and series. Solve the applications on the mean value theorems.	3	3	2	1	2	2	2	1	2	1	2	2	2	1	0
		CO5	Evaluate the improper integrals using Beta and Gamma functions. Find the extreme	3	3	2	2	2	2	2	1	2	2	2	1	2	1	0



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			values of functions of two variables with/ without constraints.															
Average				3	2.6	2	1.8	2	2.2	2	1.6	2	2	2	2	2	1	0
Average with marks attainment				2	1.7	1	1.2	1	1.5	1	1.1	1.3	1	1.3	1	1.3	1	0
Subject Code	Course Name	CO's	Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
AP202BS	Applied Physics	CO1	The student would be able to learn the fundamental concepts on Quantum behaviour of matter in its micro state	3	2	2	2	3		1	2	3	2		3	3	2	
		CO2	The knowledge of fundamentals of Semiconductor physics, Optoelectronics, Lasers and fibre ,optics enable the students to apply to various system like communications solar cell, photo cells and so on	3		2	3	3	2	2	1	2	3		2	3	2	
		CO3	Knowledge in Optoelectronics	2			3	2		2		1	2		2	2	3	
		CO4	Design, characterization and study of properties of material help the students to prepare new materials for various engineering applications	3	1	2		2	1	2		2	1		2	3	2	



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		CO5	The course also helps the students to be exposed to the phenomena of electromagnetism and also to have exposure on magnetic materials and dielectric materials	1		1	1			1		1	1		2	2	2	
Average				2.4	1.5	2	2.3	3	1.5	2	1.5	1.8	2	0	2	2.6	2	0
Average marks with attainment				1.8	1.1	1	1.7	2	1.1	1	1.1	1.3	1	0	2	1.9	2	0
Subject Code	Course Name	CO's	Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
CS203ES	Programming for Problem Solving	CO1	To write algorithms and to draw flowcharts for solving problems.	3	3	2	3	2	2	2	2	2	2	2	2	2	1	2
		CO2	To convert the algorithms/flowcharts to C programs.	3	3	1	2	1	2	2	2	2	2	1	2	2	1	1
		CO3	To code and test a given logic in C programming language.	3	3	1	1	2	3	3	2	2	1	1	1	1	1	1
		CO4	To decompose a problem into functions and to develop modular reusable code.	3	2	2	2	2	2	3	2	1	2	1	2	1	2	1
		CO5	To use arrays, pointers, strings and structures to write C programs. Searching and sorting problems.	3	1		1	2	1	2	2	1	1	2	1	2	2	1



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Average				3	2.4	2	1.8	2	2	2	2	1.6	2	1.4	2	1.6	1	1.2
Average marks with attainment				2.3	1.8	1	1.4	1	1.5	2	1.5	1.2	1	1.1	1	1.2	1	0.9
Subject Code	Course Name	CO's	Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
ME204ES	Engineering Graphics	CO1	Preparing working drawings to communicate the ideas and information.	3	2	3	1	2	3	2	1	2	2	2	2	3	1	1
		CO2	Read, understand and interpret engineering drawings	2	2	3	1	3	2	2	2	2	2	2	2	2	3	2
		CO3	Development of Surfaces of Right Regular Solids, Prism, Cylinder, Pyramid and Cone,	1	1	3	1	2	1	1	2	2	1	2	1	1	2	0
		CO4	Understand the Principles of Isometric Projection.	2	3	2	2	2		2	2	2	1	2	2	3	1	0
		CO5	Knowledge to CAD Software Package Commands	1	2	2	2	2	2	3	2	1	2	2	1	1	2	0
Average				1.7	2	3	1.4	3	2	2	1.8	1.8	2	2	2	2.2	2	0
Average marks with attainment				1.2	1.5	2	1	2	1.5	1	1.3	1.3	1	1.5	1	1.6	1	0
Subject Code	Course Name	CO's	Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3



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AP205BS	Applied Physics Lab	CO1	Understand the V-I Characteristics of solar cell	3	2	2	2	1	1	2	2	2	2	1	1	3	2	0
		CO2	determine magnetic field along the axis of a current carrying coil.	3	2	2	2	1	1	2	0	1	2	1	1	3	1	0
		CO3	determine Hall co-efficient of a given semiconductor	3	2	2	2	1	1	2	2	1	2	1	1	3	2	0
		CO4	determine the bending losses of Optical fibres.	3	2	2	2	1	1	0	1	1	2	1	1	3	2	0
		CO5	determine the Quality factor of LCR Circuit.	3	2	2	2	1	1	1	1	1	2	1	1	3	1	0
Average				3	2	2	2	1	1	1	1.2	1.2	2	1	1	3	2	0
Average with marks attainment				3	2	2	2	1	1	1	1.2	1.2	2	1	1	3	2	0
Subject Code	Course Name	CO's	Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
CS206ES	Programming for Problem Solving Lab	CO1	formulate the algorithms for simple problems	3	3	2	2	2	2	2	2	2	2	2	2	3	2	2
		CO2	translate given algorithms to a working and correct program.	3	3	2	2	1	2	0	0	2	1	1	1	2	2	0
		CO3	correct syntax errors as reported by the compilers. Identify and correct logical errors encountered during execution.	3	3	2	2	1	1	2	0	2	2	0	0	3	2	0



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		CO4	represent and manipulate data with arrays, strings and structures and use pointers of different types	3	3	2	2	1	2	2	2	1	0	0	1	2	1	0
		CO5	create, read and write to and from simple text and binary files and modularize the code with functions so that they can be reused	3	3	2	2	1	1	0	1	1	1	1	0	0	1	0
Average				3	3	2	2	1	1.6	1	1	1.6	1	0.8	1	2	2	0.4
Average with marks attainment				2.3	2.3	2	1.5	1	1.2	1	0.8	1.2	1	0.6	1	1.5	1	0.3
Subject Code	Course Name	CO's	Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
MC209ES	Environmental Science	CO1	understand /evaluate / develop technologies on the basis of ecological principles and environmental regulations which inturn sustainable development	3	3	3	3	2	1	1	1	2	2	2	2	3	3	0
		CO2	Classify Living and Non-Living resources	3	3	3	3	2	1	-	-	2	1	2	2	2	2	0
		CO3	Define Biodiversity and Biotic Resources	3	3	3	3	2	2	1	-	1	2	2	2	3	3	0
		CO4	Understand the Environmental Pollution and Control Technologies	3	3	3	3	2	1	-	-	1	1	3	2	2	2	0



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		CO5	Understand Environmental Policy, Legislation & EIA	3	2	3	3	2	1	1	1	2	2	2	2	3	3	0
Average				3	2.8	3	3	2	1.2	1	1	1.6	1.6	2.2	2	2.6	2.6	0
Average with marks attainment				3	2.8	3	3	2	1.2	1	1	1.6	2	2.2	2	2.6	3	0

YEAR 1--SEMESTER 2

Subject Code	Course Name	CO's	Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
MA201BS	Mathematics - II	CO1	Identify whether the given differential equation of first order is exact or not	3	3	3	2	2	2	2	2	2	2	2	2	3	2	2
		CO2	Solve higher differential equation and apply the concept of differential equation to real world problems	3	3	3	3	2	1	2	2	2	2	1	1	2	2	2
		CO3	Evaluate the multiple integrals and apply the concept to find areas, volumes, centre of mass and Gravity for cubes, sphere and rectangular parallelopiped.	3	3	3	2	2	2	2	0	1	2	2	0	2	2	0



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		CO4	Evaluate the line, surface and volume integrals and converting them from one to another.	3	3	3	2	2	1	2	2	2	2	2	2	2	2	0
		CO5	Knowledge in Vector Integration	3	3	3	2	2	2	2	0	1	1	1	2	2	2	0
Average				3	3	3	2.2	2	1.6	2	1.2	1.6	2	1.5	1	2	2	0.8
Average with marks attainment				2.2	2.2	2	1.6	1	1.2	1	0.9	1.2	1	1.1	1	1.5	1	0.6
Subject Code	Course Name	CO's	Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
CH102BS	Chemistry	CO1	The knowledge of atomic, molecular and electronic changes, band theory related to conductivity.	3	2	2	1	2	1	1	2	2	2	1	2	1	1	0
		CO2	The required principles and concepts of electrochemistry, corrosion and in understanding the problem of water and its treatments	2	2	1	2	2	2	1	2	2	1	1	0	1	1	0
		CO3	The required skills to get clear concepts on basic spectroscopy and application to medical and other fields	2	2	1	1	2	1	2	0	0	1	2	1	1	1	1
		CO4	The knowledge of configurational and conformational molecules and reaction mechanisms	2	2	1	2	2	2	2	0	1	2	0	1	0	0	0



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		CO5	The knowledge of Spectroscopic techniques and applications	2	2	1	1	2	2	2	1	1	1	0	0	0	0	0
Average				2.2	2	1	1.4	2	1.6	2	1	1.2	1	0.8	1	0.6	1	0.2
Average with marks attainment				1.8	1.7	1	1.2	2	1.3	1	0.8	1	1	0.7	1	0.5	1	0.2
Subject Code	Course Name	CO's	Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
EE103ES	Basic Electrical Engineering	CO1	To analyze and solve electrical circuits using network laws and theorems.	3	3	3	2	3	2	2	2	2	2	2	2	3	2	1
		CO2	To understand and analyze basic Electric and Magnetic circuits	3	3	2	2	2	2	3	2	2	2	1	0	2	1	0
		CO3	To study the working principles of Electrical Machines	2	3	2	2	2	2	2	0	3	3	0	0	2	0	0
		CO4	To introduce components of Low Voltage Electrical Installations	2	2	2	2	2	2	1	0	3	1	1	2	0	0	0
		CO5	To understand the types of Batteries and Important Characteristics for Batteries.	2	2	2	3	2	2	1	1	1	1	1	2	0	2	0
Average				2.4	2.6	2	2.2	2	2	2	1	2.2	2	1	1	1.4	1	0.2
Average with marks attainment				2	2.2	2	1.8	2	1.7	2	0.8	1.8	2	0.8	1	1.2	1	0.2



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Subject Code	Course Name	CO's	Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
ME105ES	Engineering Workshop	CO1	Study and practice on machine tools and their operations.	2	3	2	2	2	2	2	2	1	3	2	2	3	2	2
		CO2	Practice on manufacturing of components using workshop trades including plumbing, fitting, carpentry, foundry,house wiring and welding	2	3	1	2	3	2	2	3	2	2	2	2	3	2	0
		CO3	Identify and apply suitable tools for different trades of Engineering processes including drilling,material removing, measuring,chiselling	1	2	2	2	3	2	2	1	2	3	1	2	3	2	1
		CO4	Explains the construction, function, use and application of different working tools, equipment and machines	2	2	2	1	3	2	1	1	2	1	1	2	2	1	0
		CO5	Apply basic electrical engineering knowledge for house wiring practice.	2	3	1	2	2	3	1	3	2	3	1	2	3	2	2
Average				1.8	2.6	2	1.8	3	2.2	2	2	1.8	2	1.4	2	2.8	2	1
Average with marks attainment				1.5	2.2	1	1.5	2	1.8	1	1.7	1.5	2	1.2	2	2.3	2	0.8
Subject Code	Course Name	CO's	Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3



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CH106BS	Engineering Chemistry Lab	CO3	Determination of physical properties like adsorption and viscosity.	2	2	2	2	1	2	2	1	2	2	1	2	2	1	0
		CO4	Calculation of Rf values of some organic molecules by TLC technique.	2	2	2	2	1	1	1	1	1	2	1	1	2	0	0
		CO5	Understand the Spectroscopic techniques and applications for important organic compounds.	2	2	2	2	1	1	1	1	1	2	1	1	2	0	0
Average				2	2	2	2	1	1.4	2	1.4	1.6	2	1.4	2	2	1	0.6
Average with marks attainment				1.7	1.7	2	1.7	1	1.2	1	1.2	1.3	2	1.2	1	1.7	1	0.5
Subject Code	Course Name	CO's	Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
EN107HS	English Language and Communication Skills Lab	CO1	Better understanding of nuances of English language through audio- visual experience and group activities	3	2	2	2	2	3	2	2	2	3	2	3	3	2	2
		CO2	Neutralization of accent for intelligibility	2	2	3	2	1	2	2	2	3	3	2	3	3	1	0
		CO3	Speaking skills with clarity and confidence which in turn enhances their employability skills	2	2	2	2	1	3	2	1	2	3	2	3	3	2	0



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		CO4	Able to spoken English and neutralize their mother tongue influence	2	2	2	2	1	2	2	1	1	3	1	3	2	2	0
		CO5	able to use language appropriately for public speaking and interviews	2	2	2	2	2	2	1	1	1	1	2	1	2	1	0
Average				2.2	2	2	2	1	2.4	2	1.4	1.8	3	1.8	3	2.6	2	0.4
Average with marks attainment				2.2	2	2	2	1	2.4	2	1.4	1.8	3	1.8	3	2.6	2	0.4
Subject Code	Course Name	CO's	Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
EE108ES	Basic Electrical Engineering Lab	CO1	Get an exposure to basic electrical laws.	3	2	2	2	2	2	2	2	2	2	2	1	2	2	0
		CO2	Understand the response of different types of electrical circuits to different excitations.	3	1	1	1	2	2	2	1	2	2	2	1	2	2	0
		CO3	Understand the measurement, calculation and relation between the basic electrical parameters.	3	3	2	2	2	2	2	2	1	1	2	2	2	1	0
		CO4	Understand the basic characteristics of transformers and electrical machines.	3	2	2	2	2	1	2	0	1	1	1	2	2	1	0
		CO5	Understand No-Load Characteristics of a Three-phase Alternator	2	1	2	2	2	1	2	0	1	1	1	0	2	2	0
Average				2.8	1.8	2	1.8	2	1.6	2	2	1.4	1	1.6	1	2	2	0



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Average with marks attainment	2.3	1.5	2	1.5	2	1.3	2	1.7	1.2	1	1.3	1	1.7	1	0
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YEAR 2--SEMESTER 1

			PROGRAM OUTCOMES (POs)												PSOs			
Subject Code	Course Name	CO 's	Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
EC301 PC	ELECTRO NIC DEVICES AND CIRCUITS	C O1	Know the characteristics of various components.	3	3	3	2	1	1	3	3	3	2	2	1	-	-	3
		C O2	Understand the utilization of components.	3	2	3	2	1	3	2	1	3	2	2	1	-	-	3
		C O3	Understand the biasing techniques	3	3	3	3	1	1	1	2	3	2	3	1	1	-	1
		C O4	Design and analyze small signal amplifier circuits.	3	3	3	2	1	3	3	2	3	2	2	1		1	3
		C O5	To understand the concepts of simulation by using Spice tool	3	3	3	2	1	3	3	2	3	2	2	1	-	-	3
Average				3	2.8	3	2.2	1	2.2	2.4	2	3	2	2.2	1	1	1	2.6
Average with Marks Attainment				2.5	2.33	2.5	1.8	0.83	1.83	2	1.7	2.5	1.67	1.8	0.8	0.83	1	2.2



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Su bject code	Course Name	C Os	Course Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
EC302 PC	NETWOR K ANALYSI S AND TRANSMI SSION LINES	C O1	Gain the knowledge on basic RLC circuits behavior.	3	3	3	3	2	1	1		1	2	2	3	3	3	1
		C O2	Analyze the transmission line parameters and configurations.	3	3	3	2	1	2		1	1	1	2	2	3	2	1
		C O3	Know the characteristics of two port network parameters.	3	3	3	3	1	1			1	1	3	3	2	2	1
		C O4	Compare circuit matrices of linear graphs and describe magnetic circuits	3	3	3	3	2	1	1		1	1	3	3	2	3	1
		C O5	Analyze the transmission line parameters and configurations.	3	3	3	2	2	1		1	2	1	3	2	3	3	1
Average				3	3	3	2.6	1.6	1.2	1	1	1.2	1.2	2.6	2.6	2.6	3	1
Average with Marks Attainment				2.25	2.25	2.25	2	1.2	0.9	0.8	0.8	0.9	0.9	2	2	1.95	2	0.8



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Subject code	Course Name	C Os	Course Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
EC3 03PC	DIGITAL SYSTEM DESIGN	C O1	Understand the numerical information in different forms and Boolean Algebra	3	3	3	3	2	1		-	2	2	2	3	3	3	3
		C O2	Postulates of Boolean algebra and to minimize combinational functions	2	3	3	2	2	1	1	-	2	2	2	3	2	2	1
		C O3	Design and analyze combinational and sequential circuits	3	3	3	3	2	1		1	2	2	2	3	3	2	1
		C O4	Illustrate reduction of logical expressions	3	2	3	3	2	1		-	3	2	3	3	3	2	1
		C O5	Known about the logic families and realization of logic gates.	3	3	3	2	2	1		-	2	2	2	3	3	2	1
Average				2.8	2.8	3	2.6	2	1	1	1	2.2	2	2.2	3	2.8	2	1.4
Average with Marks Attainment				2.8	2.8	3	2.6	2	1	1	1	2.2	2	2.2	3	2.8	2	1.4
Subject code	Course Name	C Os	Course Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
		C O1	Differentiate various signal functions.	3	2	2	3	2	1	1	-	-	1	2	2	1	2	1



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EC3 04PC	SIGNALS AND SYSTEMS	C O2	Represent any arbitrary signal in time and frequency domain.	3	3	3	3	2	1	-	-	1	1	2	2	2	1	
		C O3	Understand the characteristics of linear time invariant systems	2	3	3	2	1	1	-	1	1	2	2	1	1	1	
		C O4	Analyze the signals with different transform technique	2	3	3	2	2	1	1	-	2	2	2	2	1	1	
		C O5	Analyze discrete time signals and systems by using sppropriate	3	2	3	3	2	1	-	-	2	2	2	1	1	1	
Average				2.6	2.6	2.8	2.6	1.8	1	1	1	1	1.8	2	1.4	1.4	1	
Average with Marks Attainment				2.17	2.167	2.333	2.17	1.5	0.83	0.83	0.83	1.17	1.5	1.67	1.17	1.2	0.83	
Subject code	Course Name	C Os	Course Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
EC3 05ES	PROBABI LITY THEORY AND STOCHAS TIC	C O1	Understand the concepts of Random process and its characteristics	3	3	3	3	2	1			1	1	2	3	2	3	1
		C O2	Understand the response of linear time invariant system of random	3	3	3	3	1	1			1	1	2	3	3	3	1



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	PROCESS ES																	
		C O3	Determine the spectral and temporal characteristics of Random Signals.	3	3	2	3	1	2		1	1	2	2	3	3	2	1
		C O4	Understand the concepts of noise inCommunication systems.	3	3	3	3	1	1			1	1	1	3	3	3	-
		C O5	Create mathematical models for practical design problems and determine theoretical solutions to the created	3	3	3	3	2	1		1	1	1	1	3	2	3	1
Average				3	3	2.8	3	1.4	1.2		1	1	1.2	1.6	3	2.6	3	1
Average with Marks Attainment				2	2	1.87	2	0.93	0.8	0.7	0.7	0.7	0.8	1.1	2	1.73	2	0.7
Subject code	Course Name	C Os	Course Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
		C O1	Understand the diode and transistor characteristics,Input and Output characteristics of BJT	3	2	3	3	2	1	1	1	1	2	2	3	3	3	1



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EC3 06ES	ELECTRO NIC DEVICES AND CIRCUITS LAB	C O2	Verify the rectifier circuits using diodes and implement them using hardware and software	3	2	3	2	1	2		1	1	1	2	2	3	2	1
		C O3	Design various amplifiers like CE, CC, common source amplifiers and implement them using hardware and also observe their frequency responses	2	3	3	3	1	1	2	1	1	1	3	3	2	2	1
		C O4	Remember the concepts of unipolar junction transistor and observe its characteristics	2	3	3	3	2	1	1	1	1	1	3	3	2	3	1
		C O5	Understand the construction, operation and characteristics of JFET and MOSFET	3	3	3	2	2	1	1	1	2	1	3	2	3	3	1
Average				2.6	2.6	3	2.6	1.6	1.2	1.2	1	1.2	1.2	2.6	2.6	2.6	3	1
Average with Marks Attainment				2.43	2.43	2.8	2.4	1.49	1.12	1.1	0.9	1.1	1.1	2.4	2.4	2.43	2	0.9
Subject code	Course Name	C Os	Course Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
		CO 1	Knowledge and use of hardware description language (VHDL) for system modeling and	3	2	3	3	1	1	-	-	1	2	2	3	1	2	1



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EC3 07PC	DIGITAL SYSTEM DESIGN LAB		simulation. Describe and explain the operation of fundamental digital gates															
		CO 2	Student will be able to realize Boolean Expressions using Gates, logic gates using universal gates	3	3	3	3	2	1	-	1	-	2	2	3	2	1	1
		CO 3	Generation of clock using NAND / NOR	2	2	3	2	2	1	1	-	-	2	2	2	2	1	1
		CO 4	4 – bit Adder / Subtractor , 4 – bit gray to Binary and Binary to Gray converter	2	2	3	2	2	1	-	-	1	2	1	2	2	2	1
		CO 5	Student should able to Realize a sequence	3	2	3	3	2	1	-	-	-	1	2	3	2	2	1
Average				2.5	2.25	3	2.5	2	1	1	1	1	1.75	1.8	2.5	2	2	1
Average with Marks Attainment				2.33	2.1	2.8	2.33	1.87	0.93	0.9	0.9	0.9	1.63	1.7	2.3	1.87	1	0.9
Subject code	Course Name	C Os	Course Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
		C O1	Analyze various types basic operations on matrices,of signals and sequences such as addition	3	2	3	3	2	1				2	2	3	3	3	



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EC3 08ES	BASIC SIMULAT ION LAB	C O2	Apply convolution and correlation operations on different signals. Auto Correlation and Cross Correlation for	3	2	3	3	2	1				2	2	3	2	3		
		C O3	Verification of Linearity and Time Invariance properties of given continuous /discrete system	1	3	3	2	2	1	1			3	2	3	3	1		
		C O4	Computation of Unit sample, Unit step and Sinusoidal responses of the given	3	2	3	3	2	1			1	2	2	3	3	3		
		C O5	Verify the Sampling theorem. Waveform synthesis using Laplace Transform	3	2	3	3	2	1		1		2	2	3	3	3		
Average				2.6	2.2	3	2.8	2	1	1	1	1	2.2	2	3	2.8	3		
Average with Marks Attainment				2.17	1.83	2.5	2.3	1.67	0.83	0.8	0.8	0.8	1.83	1.7	2.5	2.33	2	0	
Subject code	Course Name	C Os	Course Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	
		C O1	To realize the significance of constitution of India to students from all walks of life and help them to understand the basic concepts of India	3	3	3	3	2	1	3	2	2	2	1	3	-	-	2	



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MC3 09	CONSTITUTION OF INDIA	C O2	To identify the importance of fundamental rights as well as	2.5	2.5	2.5	3	1	1	3	2	2	2	2	3	-	-	1
		C O3	To understand the functioning of Union, State and Local Governments in Indian federal system.	3	3	3	3	2	2	3	2	2	2	1	3	1	1	2
		C O4	To learn procedure and effects of emergency, composition and activities of election commission and amendment	2	2	2	2	2	2	3	2	2	2	2	2	-	-	2
		C O5	To learn procedure and effects of emergency, composition and activities of election commission and amendment procedure	3	2	2	3	2	2	3	2	2	2	1	2	-	-	2
		Average			2.6	2.38	2.4	2.8	1.8	1.8	3	2	2	2	1.5	2.5	1	1
Average with Marks Attainment			2.25	2.06	2.08	2.4	1.56	1.56	2.6	1.7	1.7	1.73	1.3	2.2	0.87	1	1.5	
PS O'S																		
Year 2 – SEMESTER 2				PROGRAM OUTCOMES (PO'S)														
Subject code	Course Name	C Os	Course Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3



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MA401 BS	LAPLACE TRANSFO R MS, NUMERIC AL METHOD S AND COMPLE X VARIABLES	C O1	Use the laplace transforms for solving ODE's	3	2	2	1	2	1	-	1	1	2	1	3	3	3	1
		C O2	Find the root of a given equation.	2	2	2	2	3	1	-	-	2	2	1	2	3	3	-
		C O3	Estimate the value for the given data using interpolation	2	2	2	3	3	1	-	1	3	2	1	2	3	2	1
		C O4	Find the numerical solutions for a given ODE's	3	2	1	3	1	1	1	1	3	1	1	3	3	3	1
		C O5	Analyze the complex functions with reference to their analyticity, integration using Cauchy's	3	2	2	2	2	1	-	1	2	2	-	3	3	3	1
Average				3	2	2	2	2	1	1	1	2	2	1	3	3	3	1
Average with Marks Attainment				2.2	1.47	1.47	1.5	1.47	0.73	0.7	0.7	1.5	1.47	0.7	2.2	2.2	2	0.7
Subject code	Course Name	C Os	Course Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
		C O1	Get the knowledge of basic laws,Concepts and proofs related to Electrostatic Fields and Magnetostatic Fields	3	2	3	3	2	1	1	1	2	1	3	3	3	2	1
		C O2	Distinguish between the static and time- variant	3	2	3	3	1	1	1	2	1	1	3	3	3	2	1



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EC4 02ES	ELECTRO M AGNETIC FIELDS AND WAVES	C O3	Analyze the wave equations forconductors, good dielectrics	2	3	3	3	2	1	-	1	1	1	3	2	3	3	1
		C O4	To analyze completely the rectangular waveguides, their mode characteristics	2	3	3	2	2	1	1	1	1	1	3	2	3	3	1
		C O5	Apply Maxwell’s equations to solutions of problems relating to transmission lines	3	3	3	2	2	1	1	1	1	1	3	3	3	3	1
		Average			2.6	2.6	3	2.6	1.8	1	1	1.2	1.2	1	3	2.6	3	3
Average with Marks Attainment				2.17	2.17	2.5	2.2	1.5	0.83	0.8	1	1	0.83	2.5	2.2	2.5	2	0.8
Subject code	Course Name	C Os	Course Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
		C O1	continuous wave and angle modulation and demodulation techniques	3	2	3	3	2	2	1	2	3	3	2	3	-	-	2
		C O2	continuous wave and angle modulation techniques	3	2	2	2	2	2	1	2	3	2	2	3	-	-	3



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EC4 03PC	ANALOG AND DIGITAL COMMUN IC ATIONS	C O3	Attain the knowledge about AM , FM Transmitters and Receivers	3	2	3	2	1	1	1	2	2	2	2	3	1	-	3
		C O4	Analyze and design the various Pulse Modulation Techniques.	3	2	2	2	2	1	1	2	3	2	2	3	-	-	3
		C O5	Understand the concepts of Digital Modulation Techniques and Baseband transmission	3	3	2	2	1	1	1	2	3	2	2	3	-	1	3
		Average			3	2.2	2.4	2.2	1.6	1.4	1	2	2.8	2.2	2	3	1	1
Average with Marks Attainment				2.5	1.83	2	1.8	1.33	1.17	0.8	1.7	2.3	1.83	1.7	2.5	0.83	1	2.3
Subject code	Course Name	C Os	Course Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
		C O1	A thorough understanding of operational amplifiers with linear integrated circuits.	3	3	3	3	2	1	1	-	2	-	2	3	2	2	1
		C O2	Attain the knowledge of functional diagrams and applications of IC 555 and	2	3	3	2	2	1	-	-	1	1	2	2	2	2	1



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EC4 04PC	LINEAR IC APPLICA TION S	C O3	Acquire the knowledge about the Data converters	3	2	3	2	2	1	1	-	1	1	2	3	3	2	1
		C O4	Classify various active filter configurations based on frequency	3	3	2	2	2	1		1	2	2	3	3	1	1	2
		C O5	Analyze and design non linear applications like multiplier, comparator	3	3	3	2	2	1	1	-	1	1	2	3	2	2	1
Average				2.8	2.8	2.8	2.2	2	1	1	1	1.4	1.25	2.2	2.8	2	2	1.2
Average with Marks Attainment				2.8	2.8	2.8	2.2	2	1	1	1	1.4	1.25	2.2	2.8	2	2	1.2
Subject code	Course Name	C Os	Course Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
EC40 5PC	ELECTRO NIC CIRCUIT ANALYSI S	C O1	To Design the multistage amplifiers	3	3	3	3	2	1	2		2	2	2	3	3	3	3
		C O2	To understand the concepts of HighFrequency Analysis of Transistors.	3	3	3	3	2	1	2		2	2	2	3	3	3	3
		C O3	feedback to improve the stability of amplifiers	2	3	3	2	2	1	1		2	2	2	3	2	2	1



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		C O4	Design and realize different classes of Power Amplifiers and tuned amplifiers	3	3	3	2	2	1	1	1	2	2	2	3	3	2	1
		C O5	Design Multivibrators and sweep circuits for various applications	3	2	3	2	2	1	1		3	2	3	3	3	2	1
Average				2.8	2.75	3	2.3	2	1	1.3	1	2.3	2	2.3	3	2.75	2	1.5
Average with Marks Attainment				2.24	2.2	2.4	1.8	1.6	0.8	1	0.8	1.8	1.6	1.8	2.4	2.2	2	1.2
Subject code	Course Name	C Os	Course Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
EC4 06PC	ANALOG AND DIGITAL COMMUNICATIONS LAB	C O1	Demonstrate generation and detection of analog and digital modulation techniques.	3	3	3	3	2	1	2	-	2	2	2	3	3	3	3
		C O2	Explain sampling PCM, delta modulation, adaptive delta modulation and superheterodyne receiver.	2	3	3	2	2	1	1	-	2	2	2	3	2	2	1
		C O3	Demonstrate generation and detection of analog and digital modulation	3	3	3	2	2	1	1	1	2	2	2	3	3	2	1



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		C O4	Pulse Amplitude Modulation & Demodulation	3	2	3	2	2	1	1	-	3	2	3	3	3	2	1
		C O5	Pulse Width Modulation & Demodulation	3	3	3	2	2	1	1	-	2	2	2	3	3	2	1
Average				2.8	2.8	3	2.2	2	1	1.2	1	2.2	2	2.2	3	2.8	2	1.4
Average with Marks Attainment				2.33	2.33	2.5	1.8	1.67	0.83	1	0.8	1.8	1.67	1.8	2.5	2.33	2	1.2
Subject code	Course Name	C Os	Course Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
EC40 7PC	IC APPLICA TIONS LAB	C O1	Design and analyse the various linear applications of op-am, Inverting and Non	3	3	3	3	2	1	1	1	2	1	3	2	3	2	1
		C O2	Design and analyse the various op-amp Integrator Circuit using IC 741.	3	3	3	2	2	1	1	1	1	1	3	3	2	3	1
		C O3	Design and analyse filter circuits using op-amp Active filter Applications-LPF,	3	3	2	3	2	1	1	1	1	2	3	3	3	3	1
		C O4	IC 741 waveform Generators- Sine, Square wave and Triangular Waves	3	2	3	3	2	1	1	1	1	1	2	3	2	3	1



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Average				3	2.6	2.8	2.8	2	1.2	1	1	1.2	1.2	2.8	2.8	2.6	3	1
Average with Marks Attainment				2.6	2.25	2.43	2.4	1.73	1.04	0.9	0.9	1	1.04	2.4	2.4	2.25	2	0.9
Subject code	Course Name	C Os	Course Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
EC4 08PC	ELECTRONIC CIRCUIT ANALYSIS LAB	C01	Comprehend the fundamentals of multistage amplifiers, feedback, power	3	2	3	3	2	1	-	-	-	2	2	3	3	3	1
		C02	Analyze the circuit design process and simulate the common base, common	3	2	3	3	2	1	-	-	-	2	2	3	2	3	
		C03	Analyze the circuit design process and simulate the RC Phase shift Oscillator Circuit Hartley and Colpitt's Oscillators circuit	2	3	3	2	2	1	1	-	-	3	2	3	3	1	
		C04	Acquaint with the design and simulate the RC coupled and Cascade amplifier circuits	3	2	3	3	2	1	-	-	1	2	2	3	3	3	
		Average		2.8	2.2	3	2.8	2	1	1	1	1	2.2	2	3	2.8	3	1



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Average with marks attainment

Average with marks attainment																			
				2.0	1.61	1.46			0.73			0.16			1.5	2.2	2.05	1.9	0.73
				5	3	2.2	0.5	7	0.73	7	3	73	1	1.5	2.2	2.05	1.9	0.73	
Subject code	Course Name	C Os	Course Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	
MC4 09HS	Gender Sensitization Lab	C 02	To provide an integrated and interdisciplinary approach to understand the social and cultural construction of gender that shapes the experiences of women and men in society	3	2	3	3	2	1	-	-	-	2	2	3	3	3	2	
		C 02	Students will be sensitized to basic dimensions of the biological, sociological, psychological and legal aspects of gender. This will be achieved through discussion of materials derived from research, facts, everyday life, literature, and film. Students will attain a finer grasp of how gender discrimination works in our society and how to counter it. Students will acquire insight into the gendered division of labour and its relation to politics and economics.	3	2	3	3	2	1	-	-	-	2	2	3	2	3		
		C 03	Men and women students and professionals will be better equipped to work and live together as equals	2	3	3	2	2	1	1	-	-	3	2	3	3	1		
		C 04	Students will develop a sense of appreciation of women in all walks of life. Through providing accounts of	3	2	3	3	2	1	-	-	1	2	2	3	3	3	3	1
C 05				3	2	3	3	2	1	-	1	-	2	2	3	3	3		



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			studies and movements as well as the new laws that provide protection and relief to women.															
Average				2.8	2.2	3	2.8	2	1	1	1	1	2.2	2	3	2.8	3	1.6
Average with Marks Attainment				2.33	1.83 3	2.5	2.33	1.6 67	0.83	0.8 8	0.83	0.8 3	1.83	1.7	2.5	2.33	2.2	1.33
Year 3 – SEMESTER 1				PROGRAM OUTCOMES (POs)												SOs		
Subject code	Course Name	C Os	Course Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
EC501 PC	MICROPROCESSORS AND MICROCONTROLLERS	C O1	Understands the internal architecture, organization and assembly language	3	2	2	2	2	1	-	1	2	2	2	2	3	2	1
		C O2	Understands the internal architecture, organization and assembly language programming of 8051/controllers	3	2	3	2	2	1	1	1	1	1	2	3	3	1	1
		C O3	Understands the interfacing techniques to 8086 and 8051 based systems	3	2	2	2	2	1	1	1	1	2	2	2	3	2	1



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		C O4	Understands the internal architecture of ARM processors	2	2	2	2	3	1		1	-	2	2	2	2	2	1
		C O5	Design electrical circuitry to the Microprocessor I/O ports in order to interface the processor to external devices	2	2	3	2	1	1	1	1	1	2	2	1	3	2	1
			Average	2.6	2	2.4	2	2	1	1	1	1.3	1.8	2	2	2.8	2	1
Average with Marks Attainment				1.9	1.46	1.7	1.	1.	0.	0.	0.	1.3						
				1	7	6	47	7	73	7	3	92	2	1.5	1.47	2.05	1.3	0.73
Subject code	Course Name	C Os	Course Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
EC5 02PC	DATA COMMUNICATIONS AND NETWORKS	C O1	Know the Categories and functions of various Data communication Networks	3	2	3	3	3	3	1	-	3	3	2	3	3	3	1
		C O2	Design and analyze various error detection techniques.	3	3	2	3	2	1	1	-	2	1	2	3	2	3	1



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		C O3	Demonstrate the mechanism of routing the data in network layer	3	3	3	3	2	1	1	-	2	1	2	3	3	3	1
		C O4	Know the significance of various Flow control and Congestion control Mechanisms	2	3	3	3	2	1	1	1	2	1	2	3	3	2	1
		C O5	Know the Functioning of various Application layer Protocols.	3	3	3	3	2	1	1	-	2	1	2	3	3	3	1
Average				2.8	2.8	2.8	3	2.2	1.4	1	1	2.2	1.4	2	3	2.8	3	1
Average with marks agttainment				2.3 3	2.33	2.3 3	2.5	1.83	1.17	0.8	0.8	1.1 8	1.1 7	1.7	2.5	2.33	2	0.8
Subj ect	Course Name	C Os	Course Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
		C O1	Understand the modeling of linear-time-invariant systems using transfer function and state space	3	3	3	2	3	1	1	-	2	2	1	3	3	2	1
		C O2	Understand the concept of stability and its assessment for linear-time invariant systems.	3	3	2	2	2	1	1	-	2	2	2	3	3	2	1



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EC5 03PC	CONTRO L SYSTEMS	C O3	Design simple feedback controllers.	2	3	3	3	1	3	1	1	2	1	1	2	3	3	2
		C O4	Employ time domain analysis to predict and diagnose transient performance parameters of the system for standard input functions.	3	3	3	2	2	1	1	-	2	2	2	3	3	2	1
		C O5	Formulate different types of analysis in frequency domain to explain the nature of stability of the system	3	3	3	2	2	1	1	-	2	2	2	3	3	2	1
		Average			2.8	3	2.8	2.2	2	1.4	1	1	2	1.8	1.6	2.8	3	2
Average with Marks Attainment				2.3 3	2.5	2.3 33	1.83	1.66 7	1.17	0.88	0.83	1.67	1.5	1.3	2.33	2.5	1.8	1
Subject code	Course Name	C Os	Course Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
		C O1	The students will understand the various Forms of Business and the impact of economic variables economic variables on the Business	3	3	3	2	1	2	1	1	2	2	2	3	-	-	3



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SM504 MS	BUSINESS ECONOMICS AND FINANCIAL ANALYSIS	C O2	The Demand, Supply, Production, Cost, Market Structure, Pricing aspects are	3	2	3	2	1	2	2	1	2	2	2	3	-	-	3
		C O3	The Students can study the firm's financial position by analysing	3	3	3	3	1	1	1	1	2	2	2	3	1	-	1
		C O4	uncertain business climate	3	3	2	2	1	2	1	1	2	2	2	3	-	1	3
		C O5	accounting and relevance of accounting principles	3	2	2	2	1	2	1	1	2	2	2	3	-	-	3
Average				3	2.6	2.6	2.2	1	1.8	1.2	1	2	2	2	3	1	1	2.6
		Average with Marks Attainment				2.4	2.08	2.08	1.8	0.8	1.44	0.8	1.6	1.6	2.4	0.8	1	2.1
Subject code	Course Name	C Os	Course Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
			Measure electrical parameters with	2	2	2	3	2	2	1	2	2	2	2	2	2	2	-



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EC5 13PE	ELECTRO NIC MEASUR EMENTS AND INSTRUM EN TATION	C 01	different meters and understand the basic definition of measuring parameters															
		C 02	Use various types of signal generators, signal analyzers for generating	3	3	3	3	2	1		1	2	2	1	2	3	1	2
		C 03	Operate an Oscilloscope to measure various signals.	2	2	2	3	2	-	-	1	1	1	-	2	-	-	-
		C 04	Measure various physical parameters by appropriately selecting the transducers	2	3	3	3	2	1		1	2	1	1	2	-	2	-
		C 05	Apply the complete knowledge of various electronics instruments	2	3	3	3	1	1	1	1	2	2	-1	2	-	1	
Average				2.2	2.6	2.6	3	1.8	1.25	1	1.2	1.8	1.6	0.8	2	2.5	1.5	2
Average with marks attainment				1.5 4	1.82	1.8 2	2 1	1 26	0. 88	. 7	8 4	1. 26	1.1 2	0.5	1.4	1.75	1.1	1.4



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Subject code	Course Name	C Os	Course Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
EC5 05PC	MICROPR OC ESSORS AND MICROC ONT ROLLERS LAB	C O1	Identify relevant information to supplement to the Microprocessor and Microcontroller course. Arithmetic,	3	3	3	3	1	2	2	3	2	1	2	3	-	-	2
		C O2	Set up programming strategies and select proper mnemonics and run their program on the training boards.	3	3	3	2	1	2	1	3	2	2	2	3	-	-	3
		C O3	Practice different types of programming Assembly Language Programs to Perform Arithmetic (Both Signed and Unsigned) 16 Bit Data Operations, Logical Operations (Byte and Bit Level Operations), Rotate, Shift, Swap and Branch Instructions Time delay Generation Using Timers of 8051. Serial Communication from / to 8051 to / from I/O devices	3	3	3	2	1	2	1	3	2	2	2	3	1	-	3
		C O4	procedures on Program Using Interrupts to Generate Square Wave 10 KHZ	3	2	2	2	2	2	1	3	2	2	2	3	-	-	3



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		C O5	7 Segment Display to 8051. Matrix Keypad to 8051, Sequence Generator	3	3	3	2	1	2	1	3	2	2	2	3	-	1	3
Average				3	2.8	2.8	2. 2	1. 2	2	1 .2	3	2	1.8	2	3	1	1	2.8
Average with Marks Attainment				2.5	2.33 3	2.3 33	1. 83	1 1	1 67	2. 1	1. 5	1. 67	1.5	1.7	2.5	0.83	0.8	2.33
Subject code	Course Name	C Os	Course Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
EC5 06PC	DATA COMMUN IC ATIONS AND NETWORKS LAB	C O1	Student will be able to understand network communication Student will be able to understand the	3	2	3	3	2	1	-	-	-	2	2	3	3	3	
		C O2	Student will be able to conduct experiments using Network Simulation software like NS-2, NSG-2.1 and Wire SHARK/equivalent	3	2	3	3	2	1	-	-	-	2	2	3	2	3	
		C O3	TCL Script to create two nodes and links between node transmit data between	2	3	3	2	2	1	1	-	-	1	2	3	3	1	



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		C O4	Student will understand the working principles of LAN and the concepts	3	2	3	3	2	1	-	-	1	2	2	3	3	3	
		C O5	Student shall understand Evaluate the performance of TCP, New Reno and	3	2	3	3	2	1	-	1	-	2	2	3	3	3	
Average				2.8	2.2	3	2.8	2	1	1	1	1	1.8	2	3	2.8	3	0
Average with Marks Attainment				2.4 3	1.90 7	2.6	2.73 43	1.0 3	0.87 9	0.8 7	0.87 9	1.5 6	1.7	2.6	2.43	2.3	0	
Subject code	Course Name	C Os	Course Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
EN508 HS	ADVANC ED COMMUN IC ATION SKILLS LAB	C O1	Acquire vocabulary and use it Contextually	3	3	3	3	2	1	-	-	-	2	2	3	3	3	
		C O2	Listen and speak effectively	3	2	3	3	2	1	-	-	-	2	2	3	2	3	
		C O3	Develop proficiency in academic reading and writing	3	3	3	2	2	1	1	-	-	1	2	3	3	1	



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		C O4	Increase possibilities of job prospects	3	2	3	3	2	1	-	-	1	2	2	3	3	3	
		C O5	Communicate confidently in formal and informal contexts	3	3	3	3	2	1	-	1	-	2	2	3	3	3	
Average				3	2.6	3	2.8	2	1	1	1	1	1.8	2	3	2.8	3	0
Average with Marks Attainment																		
				2.5	2.167	2.5	2.33	1.667	0.83	0.8	0.83	0.83	1.5	1.7	2.5	2.33	2.2	0
Subject code	Course Name	C Os	Course Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
MC5 10	Intellectual Property Rights-	C O1	Distinguish and Explain various forms of IPRs	3	3	2	3	2	1	1	-	2	2	2	3	1	2	1
		C O2	Identify criteria's to fit one's own intellectual work in particular form	3	3	3	3	2	1	-	-	2	1	2	3	2	2	
		C O3	Apply statutory provisions to protect particular form of IPRs.	2	3	3	2	2	2	1	-	1	2	2	3	1	2	2
		C O4	Identify procedure to protect different forms of IPRs national and international level	3	2	2	2	2	1	1	1	2	2	2	2	3	1	1

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		C O4	and traffic, diversity, techniques, frequency management	3	3	3	2	1	2			2	1	3	3	-	2	-
		C O5	Know the difference between cellular and Adhoc Networks	3	3	3	3	1	3			2	2	-1	2	-	1	
Average				2.8	3	3	2.8	1.8	1.8	1	1.3	2.2	1.8	1.3	2.6	2.5	2	2
Average with Marks Attainment				2.2 4	2.4	2.4	2.24	1.44	1.44	0.8	1.06	1.76	1.44	1	2.08	2	1.2	1.6
Subject code	Course Name	C Os	Course Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
EC6 03PC	VLSI DESIGN	C O1	The students understand the significance of Management in their Profession	3	2	3	3	3	3	3	1	2	3	2	3	3	3	2
		C O2	Understand the management concepts	2	2	3	3	2	2	2	1	2	3	2	2	2	2	1
		C O3	Analyze the concepts of management	3	3	3	3	2	1	2	1	2	1	2	2	3	2	1
		C O4	Development of managerial skills for eng	3	3	3	3	2	2	1	1	2	3	2	1	3	2	1
		C O5	Applications of concepts in practical aspe	3	3	3	3	2	2	2	1	2	3	2	2	3	2	1
Average				3	3	3	3	2	2	2	1	2	3	2	2	3	2	1
Average with Marks Attainment				2.2 5	2.25	2.25	2.25	1.5	1.5	1.5	0.75	1.5	2.25	1.5	1.5	2.25	1.5	0.75



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Subject code	Course Name	C Os	Course Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
EC6 04PC	DIGITAL SIGNAL PROCESSING LAB	C O1	Develop and Implement DSP algorithms in software using a computer language	3	3	2	3	2	1	1	-	2	2	2	2	3	2	1
		C O2	Generation of Sinusoidal Waveform / Signal based on Recursive Difference Equations	3	3	3	3	2	1	-	-	2	1	2	2	2	3	2
		C O3	Obtain Fourier series coefficients by formula and using FET and compare for half sine wave	2	3	3	3	2	2	1	-	1	2	2	2	3	3	2
		C O4	Analyze and Observe Magnitude and phase characteristics	3	3	3	3	2	1	-	-	1	1	3	2	2	2	2
		C O5	Generation of Narrow Band Signal through filtering	3	2	2	3	2	1	1	1	2	2	2	2	3	1	1
Average				2.8	2.8	2.6	3	2	1.2	1	1	1.6	1.6	2.2	2	2.6	2	1.6
Average with Marks Attainment				2.6	2.61	2.4	2	86	1	0	0	1	1.4	2.1	1.87	2.43	2.1	1.49

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EC60 6PC	SCRIPTIN G LANGUA GES LAB	C O1	Able to understand difference between Scripting languages and programming languages	3	2	3	3	2	1	1	-	-	2	2	3	3	3	2
		C O2	Able to gain some fluency programming in Ruby, Perl, TCL able to Write a Ruby script	3	2	3	3	2	1	-	-	-	2	2	3	2	3	2
		C O3	Write a Ruby script to accept a filename from the user print the extension of that	3	3	3	2	2	1	1	-	-	3	2	3	3	1	2
		C O4	Write a TCL script that multiplies the numbers from 1 to 10	3	3	3	3	2	1	-	-	1	2	2	3	3	3	2
		C O5	Write a Ruby script to check two temperatures and return	3	3	3	3	2	1	-	1	-	2	2	3	3	3	2
		Average			3	2.6	3	2.8	2	1	1	1	1	2.2	2	3	2.8	3
Average with Marks Attainment			2.8	2.427	2.8	2.61	1.867	0.93	0.9	0.93	2.05	1.9	2.8	2.61	2.4	1.87		
Subject code	Course Name	C Os	Course Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
		C O1	Based on this course, the Engineering graduate will understand /evaluate / develop technologies	3	3	3	3	2	1	1	1	2	2	2	2	3	3	2



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MC6 09	ENVIRON ME NTAL SCIENCE																	
		C O2	Appreciate the ethical, cross-cultural, and historical context of environmental issues	3	3	3	3	2	1	-	-	2	1	2	2	2	2	
		C O3	Reflect critically about their roles and identities as citizens, consumers and environmental actors	3	3	3	3	2	2	1	-	1	2	2	2	3	3	
		C O4	Appreciate that one can apply systems concepts and methodologies	3	3	3	3	2	1	-	-	1	1	3	2	2	2	2
		C O5	Appreciate key concepts from economic, political, and social analysis	3	2	3	3	2	1	1	1	2	2	2	2	3	3	2
Average				3	2.8	3	3	2	1.2	1	1	1.6	1.6	2.2	2	2.6	3	2
Average with Marks Attainment				2.6	2.427	2.6	2.6	1.733	1.049	0.875	0.397	1.39	1.3	1.9	1.73	2.25	2.3	1.73
Year 4 – SEMESTER 1				PROGRAM OUTCOMES (POs)												SOs		
Subject code	Course Name	C Os	Course Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3



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EC701 PC	MICROWAVE AND OPTICAL COMMUNICATIONS	C01	frequencies and derive the performance characteristics.	3	2	3	3	2	1	1	-	1	1	2	3	3	2	1
		C02	realize the need for solid state microwave sources and understand the principles of solid state devices	3	3	3	3	3	2	1	-	1	3	2	3	3	2	3
		C03	distinguish between the different types of waveguide and ferrite components, and select proper components for engineering applications	3	3	3	3	2	1	1	1	1	1	2	3	1	2	1
		C04	microwave component design and learn the measurement procedure of various	3	2	3	3	3	1	2	-	1	1	2	3	3	2	1
		C05	Understand the mechanism of light propagation through Optical Fibres.	3	3	3	2	3	1	1	-	1	1	2	3	3	2	1
		Average		2.8	3	3	3	2	1.2	1	1	2	1.2	2.2	2.6	1.2	1	1.2



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Average with Marks Attainment				2.4 3	2.6	2.6	2. 6	1. 73 3	1. 04	0 9	0. 8 7	1. 73	1.0 4	1.9	2.25	1.04	0.9	1.04
Subject code	Course Name	C Os	Course Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
EC723P E	Network Security and Cryptograp hy	C O1	Understand the basic concept of cryptography and network security,their mathematical models	3	3	3	3	2	1	1	-	2	1	2	2	1	1	1
		C O2	Able to describe network security fundamental concepts and principles	3	3	3	3	2	2		-	2	1	2	3	2	1	2
		C O3	Students will be able to encrypt and decrypt messages using block ciphers and network security technology and protocols	3	3	3	3	2	1	1	1	2	2	3	3	1	1	1
		C O4	Students will analyze key agreement algorithms to identify their weaknesses	2	3	3	3	2	1		-	2	1	2	2	1	1	1
		C O5	Able to identify and assess different types of threats, malware, spyware, viruses, vulnerabilities	3	3	3	3	2	1	1	-	2	1	2	3	1	1	1
Average				2.8	3	3	3	2	1. 2	1	1	2	1.2	2.2	2.6	1.2	1	1.2



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Average with Marks Attainment				2.6 1	2.8	2.8	2. 8	1. 86 7	1. 12	0 9	0. 9 3	1. 87	1.1 2	2.1	2.43	1.12	0.9	1.12
Subject code	Course Name	C Os	Course Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
EC712P E	SCRIPTIN G LANGUAG E	C O1	Understands basics of linux and linux networking	3	2	3	3	2	1	1	-	2	2	3	3	3	3	1
		C O2	Able to use Linux environment and program for automation	3	3	3	3	1	1	1	1	2	2	2	2	3	2	1
		C O3	Understand the concepts of scripting language	3	3	3	2	1	-	1	1	2	2	2	3	3	3	1
		C O4	Able to differentiate scripting and non scripting languages	3	3	3	3	1	1	1	-	2	3	1	3	3	3	1
		C O5	Able to Create and run scripts using PERL/TCI/Python	3	2	2	1	2	1	1			1	2	2	2	2	1
Average				3	2.6	2.8	4	4	1	1	1	2	2	2	2.6	2.8	2.6	1
Average with Marks Attainment				2.3	1.99 3	2.1 47	1. 84	1. 07 3	0. 77	0 8	0. 7 7	1. 53	1.5 3	1.5	1.99	2.15	2	0.77
Subject code	Course Name	C Os	Course Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3



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SM702 MS	PROFESSI ONAL PRACTIC E,LAW & ETHICS	C O1	The students will understand the importance of professional practice,	3	3	3	3	2	1	1	-	1	2	2	3	1	1	1
		C O2	Ethics in their personal lives and professional careers	3	3	3	3	2	1		-	1	1	2	3	1	1	1
		C O3	Understanding basic purpose of profession, professional ethics and various moral and social issues.	3	3	3	3	2	3	1	1	1	1	3	2	1	2	3
		C O4	Acquiring knowledge of various roles of Engineer In applying ethical principles at various professional levels	3	3	3	3	2	1	1	-	1	1	2	3	1	1	1
		C O5	Able to understand law relating to intellectual property	2	2	2	2	2	1	1	2	1	1	2	2	2	1	1
Average				2.8	2.8	2.8	2.8	2	1.4	1	1.5	1	1.2	2.2	2.6	1.2	1.2	1.4
Average with Marks Attainment				2.4	2.42	2.4	2.43	2.73	1.21	1.09	1.03	0.87	1.04	1.9	2.25	1.04	1	1.21
Subject code	Course Name	C Os	Course Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
		C O1	Verify characteristics of Reflex Klystron	3	3	3	3	2	1	-	-	-	2	2	3	3	3	1



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		C O2	Estimate the power measurements of RFComponents such as directional Couplers.	3	3	3	3	2	1	-	-	-	2	2	3	2	3	
EC7 03PC	MICROWAVE AND OPTICAL COMMUNICATIONS LAB	C O3	Analyze various parameters of Waveguide components	3	3	3	3	2	1	1	-	-	3	2	3	3	1	
		C O4	Demonstrate characteristics of various optical sources	3	3	3	3	2	1	-	-	1	2	2	3	3	3	
		C O5	Measure data Rate, Numerical Aperture and Losses in Optical Link	3	2	3	3	2	1	-	1	-	2	2	3	3	3	
Average				3	2.8	3	3	2	1	1	1	1	2.2	2	3	2.8	3	1.8
Average with Marks Attainment				2.5	2.33 3	2.5	2.5	1.66 7	0.83	0.8 8	0.8 3	0.83	1.8 3	1.7	2.5	2.33	2.2	1.5
Subject code	Course Name	C Os	Course Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
		C O1	Students will be able to practice	3	3	3	3	3	1	1	-	1	2	2	2	3	2	1
		C O2	Identify, discuss and justify the technical aspects of the chosen project with a comprehensive and systematicapproach.	3	3	3	3	3	2	-	1	1	1	1	3	3	3	1



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EC7 04PC	Industrial Oriented Mini Project/ Summer Internship	C O3	Reproduce, improve and refine technical aspects for engineering	3	3	3	3	2	1		-	1	1	2	3	3	2	1
		C O4	Work as an individual or in a team in development of technical projects	3	3	3	3	3	1	1	-	1	2	2	2	3	2	1
		C O5	Communicate and report effectively project related activities and findings	3	3	3	3	3	1		1	2	2	2	3	3	2	1
Average				3	3	3	3	2.8	1.2	1	1	1.2	1.6	1.8	2.6	3	2	1
Average with Marks Attainment							2.8	2.61	1.12	0.9	0.9	1.12	1.49					
Subject code	Course Name	C Os	Course Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
		C O1	Establish motivation for any topic of interest and develop a thought process for technical presentation.	3	3	3	2	3	1	1	-	-	2	2	3	2	2	1
		C O2	Organize a detailed literature survey and build a document	3	3	3	3	2	2	1	-	-	2	2	2	3	2	



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EC7 05PC	Seminar		with respect to technical publications															
		C O3	Analysis and comprehension of proof-of- concept and related data	3	3	3	3	2	1	1	-	-	2	2	2	3	3	3
		C O4	Effective presentation and improve soft s	2	3	3	2	2	1	1	-	1	2	2	2	2	2	1
		C O5	Make use of new and recent technology (e.g. Latex) for creating technical reports	3	3	3	3	2	1	1	1	-	2	2	2	3	2	1
Average				2.8	3	3	2.6	2.2	1.2	1	1	1	2	2	2.2	2.6	2	1.5
Average with Marks Attainment				2.43	2.6	2.6	2.25	1.907	1.049	0.87	0.87	1.73	1.7	1.91	2.25	1.9	1.3	
Subject code	Course Name	C Os	Course Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
		C O1	Demonstrate a sound technical knowledge of their selected project topic.	3	3	3	3	3	1	1	-	1	2	2	3	2	2	1
		C O2	Undertake problem identification, formulation and solution.	3	3	3	3	2	2		-	1	2	2	3	3	2	1



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EC706 PC	Project Stage-I	C O3	Design engineering solutions to complex problems utilising a systems approach.	3	3	3	3	2	1		-	-	2	2	3	3	3	3
		C O4	Conduct an engineering project	3	3	3	3	2	1	1	-	1	2	2	2	2	2	1
		C O5	Communicate with engineers and the community at large in written and oral forms	3	3	3	3	2	1		1	-	2	2	3	3	2	1
Average				3	3	3	3	2.2	1.2	1	1	1	2	2	2.8	2.6	2	1.4
Average with Marks Attainment				2.6	2.6	2.6	2.6	1.90	1.04	0.9	0.87	0.87	1.73	1.7	2.43	2.25	1.9	1.21

YEAR 4 SEMESTER 2

Subject code	Course Name	C Os	Course Outcomes	PROGRAM OUTCOMES (POs)												PSOs		
				1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
EC811P E		C O1	Understand basic concepts and frequency allocations for satellite communication, orbital	3	3	3	3	1	1	1	-	-	2	2	3	2	2	1
		C O2	Envision the satellite sub systems and design satellite links for specified C/N.	3	3	3	2	2	2	1	-	-	2	2	2	3	2	1



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	SATELLITE COMMUNICATIONS	C03	Understand the various multiple access techniques for satellite communication	3	3	2	3	2	1	1	-	-	2	2	2	3	3	3
		C04	Define orbital mechanics and launch meth	3	3	3	2	1	1	1	-	1	2	2	2	2	2	1
		C05	Known the concepts of LEO, GEO															
			Stationary Satellite Systems and satellite navigation	3	3	3	3	2	1	1	1	-	2	2	2	3	2	1
Average				3	3	2.8	2.6	1.6	1.2	1	1	1	2	2	2.2	2.6	2	1.4
Average with Marks Attainment																		
Subject code	Course Name	C Os	Course Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
	TOTAL QUALITY	C01	Explain quality standards and need for standardization	3	3	3	2	2	3	2	2	2	2	2	2	2	2	2
		C02	Implement quality measurement systems in various applications	3	2	3	3	2	2	2	2	2	2	2	2	2	2	2
		C03	Prepare and use control charts for SQC	3	3	3	2	1	2	1		3	2		2	2	2	



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	MANAGEMENT																		
		C04	Implement six sigma approach for various industrial applications	3	3	3	2	2	2	1		1	1	2	2	2	2		
		C05	Explain standards for total quality management	3	2	3	2	3	1	1		2	1	1	2	2	2	2	
		Average		3	2.43	3	2.2	2	2	1.4	2	2	1.6	1.8	2	2	2	2	
Average with Marks Attainment				2.6	2.105	2.6	1.91	1.73	1.73	1.2	1.73	1.39	1.5	1.73	1.73	1.7	1.73		
Subject code	Course Name	C Os	Course Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	
EC821PE	SYSTEM ON CHIP ARCHITECTURE	C01	Able to understand architectural features	3	3	2	2	2	2	2	2	2	2	2	3	3			
		C02	To acquire the knowledge on processor selection criteria and limitations	2	2	1		2	2	2					2	2	2	2	
		C03	To acquires the knowledge of memory architectures on SOC.	2	2	2	2		2				2	2		2	2	2	



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	C O4	Able to gain the knowledge of customization using case studies.	2	2	3			2		1	2		1	2	2	2	
	C O5	Understand the interconnection strategies and their customization on SOC	3	2	2	2	2	2	2	1		2	1				
Average			2.4	2.2	2	2	2	2	2	1.3	2	2	1.5	2.3	2.25	2	2
Average with Marks Attainment			2.24	2.053	1.867	1.87	1.867	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87

Subject code	Course Name	C Os	Course Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
CS80 2PC	PROJECT STAGE-2	C O1	Demonstrate a sound technical knowledge of their selected project topic.	3	3	3	3	3	1	1	-	-	2	2	3	2	2	1
		C O2	Undertake problem identification, formulation and solution.	3	3	3	3	3	2		-	-	2	2	3	3	2	1
		C O3	Design engineering solutions to complex problems utilizing a systems approach.	3	3	2	3	3	1	1	-	-	2	2	3	3	3	3
		C O4	Conduct an engineering project	2	3	2	2	3	1	1	-	1	2	2	2	2	2	1



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		C 05	Communicate with engineers and the community at large in written and oral forms	3	3	3	3	3	1	1	1	-	2	2	3	3	2	1
Average				2.8	3	2.6	2.8	3	1.2	1	1	1	2	2	2.8	2.6	2	1.4
Average with Marks Attainment				2.4 3	2.6	2.2 53	2.43	2.6	1.04	0.9	0.87	0.87	1.7 3	1.7	2.43	2.25	1.9	1.21



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MATHEMATICS-II	2.2	2.2	2.2	1.6	1.5	1.2	1.5	0.88	1.17	1.3	1.1	1.03	1.5	1.47	0.587
CHEMISTRY	1.83	1.667	1	1.2	1.7	1.3	1.3	0.83	1	1.2	0.7	0.67	0.5	0.5	0.167
BASIC ELECTRICAL ENGINEERING	2	2.167	1.8	1.8	1.8	1.7	1.5	0.83	1.83	1.5	0.8	1	1.2	0.83	0.167
ENGINEERING WORKSHOP	1.5	2.167	1.3	1.5	2.2	1.8	1.3	1.67	1.5	2	1.2	1.67	2.3	1.5	0.833
ENGLISH	1.67	1.667	1.8	1.7	1.3	2.3	1.3	1.17	1.83	2.2	1.2	2.5	2.5	1.33	0.667
ENGINEERING CHEMISTRY LAB	1.67	1.667	1.7	1.7	1.2	1.2	1.3	1.17	1.33	1.7	1.2	1.33	1.7	0.83	0.5
ENGLISH LANGUAGE AND COMMUNICATIONS SKILLS LAB	2.2	2	2.2	2	1.4	2.4	1.8	1.4	1.8	2.6	1.8	2.6	2.6	1.6	0.4
BEE LAB	2.33	1.5	1.5	1.5	1.7	1.3	1.7	1.67	1.17	1.2	1.3	1	1.7	1.33	0

YEAR/SEMESTER:II/I

Electronic Devices And Circuits	2.5	2.333	2.5	1.8	0.8	1.8	2	1.67	2.5	1.7	1.8	0.83	0.8	0.83	2.167
Network analysis and transmission lines	2.25	2.25	2.3	2	1.2	0.9	0.8	0.75	0.9	0.9	2	1.95	2	1.95	0.75



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Digital System Design	2.8	2.8	3	2.6	2	1	1	1	2.2	2	2.2	3	2.8	2.2	1.4
Signals and Systems	2.17	2.17	2.3	2.2	1.5	0.8	0.8	0.83	0.83	1.2	1.5	1.67	1.2	1.17	0.833
Probability Theory And Stochastic process	2	2	1.9	2	0.9	0.8	0.7	0.67	0.67	0.8	1.1	2	1.7	1.87	0.667
Electronic Devices and circuits lab	2.43	2.427	2.8	2.4	1.5	1.1	1.1	0.93	1.12	1.1	2.4	2.43	2.4	2.43	0.933
Digital System Design Lab	2.26	2.265	2.6	2.3	1.4	1	1	0.87	1.05	1	2.3	2.26	2.3	2.26	0.871
Basic Simulation Lab	2.18	1.8	2.5	2.3	1.2	0.9	0.9	0.8	0.87	1.8	1.7	2.5	2.3	2.2	0
Constitution of India	2.2	2.1	2.1	2.4	###	1.6	2.6	1.73	1.73	1.7	1.3	2.17	0.9	0.87	1.5

YEAR/SEMESTER:II/II

Laplace Transforms, Numer	2.2	1.467	1.5	1.5	1.5	0.7	0.7	0.73	1.47	1.5	0.7	2.2	2.2	2.2	0.733
Electromagnetic Fields and	2.2	2.2	2.5	2.2	###	0.8	0.8	1	1	0.8	2.5	2.17	2.5	2.17	0.833
Analog and Digital Commu	2.5	1.833	2	1.8	1.3	1.2	0.8	1.67	2.33	1.8	1.7	2.5	0.8	0.83	2.333
Linear IC Applications	2.8	2.8	2.8	2.2	2	1	1	1	1.4	1.3	2.2	2.8	2	1.8	1.2



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Electronic Circuit Analysis	2.24	2.2	2.4	1.8	1.6	0.8	1	0.8	1.8	1.6	1.8	2.4	2.2	1.84	1.2
Analog and Digital Commu	2.33	2.333	2.5	1.8	1.7	0.8	1	0.83	1.83	1.7	1.8	2.5	2.3	1.83	1.167
IC Applications Lab	2.6	2.253	2.4	2.4	1.7	1	0.9	0.87	1.04	1	2.4	2.43	2.3	2.43	0.867
Electronic Circuit Analysis Lab	2.05	1.613	2.2	2.1	1.5	0.7	0.7	0.73	0.73	1.6	1.5	2.2	2.1	1.91	0.733
Gender Sensitization Lab	2.33	1.833	2.5	2.3	1.7	0.8	0.8	0.83	0.83	1.8	1.7	2.5	2.3	2.17	1.333

YEAR/SEMESTER:III/I

Microprocessors And Micro	1.91	1.467	1.8	1.5	1.5	0.7	0.7	0.73	0.92	1.3	1.5	1.47	2.1	1.32	0.733
Data Communications And	2.33	2.333	2.3	2.5	1.8	1.2	0.8	0.83	1.83	1.2	1.7	2.5	2.3	2.33	0.833
Control Systems	2.33	2.5	2.3	1.8	1.7	1.2	0.8	0.83	1.67	1.5	1.3	2.33	2.5	1.83	1
Business Economics And Financial Analysis	2.4	2.08	2.1	1.8	0.8	1.4	1	0.8	1.6	1.6	1.6	2.4	0.8	0.8	2.08



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Advanced Communication Skills	2.5	2.167	2.5	2.3	1.7	0.8	0.8	0.83	0.83	1.5	1.7	2.5	2.3	2.17	0
Electronic measurements and instrumentation	1.54	1.82	1.8	2.1	1.3	0.9	0.7	0.84	1.26	1.1	0.5	1.4	1.8	1.05	1.4
Microprocessors And Micro	2.5	2.333	2.3	1.8	1	1.7	1	2.5	1.67	1.5	1.7	2.5	0.8	0.83	2.333
Data Communications And Networks Lab	2.43	1.907	2.6	2.4	1.7	0.9	0.9	0.87	0.87	1.6	1.7	2.6	2.4	2.25	0
Intellectual Property Rights	2.08	2.08	1.9	1.9	1.6	1	0.8	0.8	1.44	1.3	1.6	2.08	1.4	1.28	1

YEAR/SEMESTER:III/II

Environmental Science	2.6	2.427	2.6	2.6	1.7	1	0.9	0.87	1.39	1.4	1.9	1.73	2.3	2.25	1.733
Scripting Languages Lab	2.8	2.427	2.8	2.6	1.9	0.9	0.9	0.93	0.93	2.1	1.9	2.8	2.6	2.43	1.867
Antennas and Wave Propag	2.5	2	2.33	1.67	2	0.83	0.83	0	1.5	1.67	1.67	1.67	2.17	2	1.042
Digital Signal Processing	2.24	2.4	2.4	2.24	1.44	1.44	0.8	1.06	1.76	1.44	1.04	2.08	2	1.2	1.6



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Embedded system Design	2.2	2	2.3	2.1	2	1	1.2	1.4	1.2	2.4	2.2	2.6	2.2	2.8	2
Vlsi Design	2.25	2.25	2.25	2.25	1.5	1.5	1.5	0.75	1.5	2.25	1.5	1.5	2.25	1.5	0.75
Digital Signal Processing L	2.61	2.6133	2.43	2.8	1.87	1.12	0.933	0.933	1.493	1.49	2.05	1.87	2.43	2.053	1.4933
E-Cad Lab	2.43	2.427	2.4	2.2	1.7	0.93	0.933	0	1.633	1.9	1.68	2.43	2.2	2.24	0.933

YEAR/SEMESTER:IV/I

Microwave And Optical Co	2.43	2.6	2.6	2.6	1.73	1.04	0.87	0.87	1.73	1.04	1.91	2.25	1.04	0.867	1.04
Scripting Language	2.3	1.9933	2.15	1.84	1.07	0.77	0.767	0.767	1.53	1.53	1.53	1.993	2.15	1.993	0.7667
Network security and Cryptography	2.61	2.8	2.8	2.8	1.87	1.12	0.93	0.93	1.87	1.12	2.05	2.43	1.12	0.933	1.12
Professional Practice, Law&	2.43	2.4267	2.43	2.43	1.73	1.21	0.87	1.3	0.87	1.04	1.91	2.25	1.04	1.04	1.213
Microwave And Optical Co	2.5	2.3333	2.5	2.5	1.67	0.83	0.83	0.83	0.83	1.83	1.67	2.5	2.33	2.167	1.5
Industrial Oriented Mini Pro	2.8	2.8	2.8	2.8	2.61	1.12	0.933	0.933	1.12	1.49	1.68	2.43	2.8	2.053	0.933
Seminar	2.43	2.6	2.6	2.25	1.91	1.04	0.87	0.867	0.867	1.73	1.73	1.91	2.25	1.907	1.3



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PROJECT STAGE-I	2.6	2.6	2.6	2.6	1.91	1.04	0.87	0.87	0.87	1.73	1.73	2.43	2.25	1.907	1.213
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YEAR/SEMESTER:IV/II

Satellite Communications	2.6	2.1048	2.6	1.91	1.73	1.73	1.21	1.73	1.73	1.39	1.52	1.73	1.73	1.733	1.733
System On Chip Architecture	2.24	2.0533	1.87	1.87	1.87	1.87	1.87	1.24	1.87	1.87	1.4	2.18	2.1	1.867	1.867
Total Quality Management	2.6	2.1048	2.6	1.91	1.73	1.73	1.21	1.73	1.73	1.39	1.52	1.73	1.73	1.733	1.733
Project stage-2	2.48	2.6	2.25	2.427	2.6	1.04	0.867	0.87	0.87	1.73	1.73	2.43	2.253	1.9067	1.213
OVERALL ATTAINMENT	2.3	2.1469	2.21	2.06	1.6	1.18	1.09	1.02	1.36	1.5	1.56	1.99	1.93	1.662	0.975
80% OF ATTAINMENT	1.84	1.7175	1.77	1.64	1.28	0.94	0.87	0.82	1.09	1.2	1.25	1.6	1.54	1.329	0.78



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INDIRECT ASSESSMENT

CO-PO-PSO MAPPING(R18)

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

A) EXIT SURVEY

Respondent Name	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
ADEEN FATIMA	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
SYEDA SUMMAIYA	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
TAYYABA TABASSUM	3	3	3	3	3	3	2	3	3	3	2	2	3	3	3
UZMA NAHID	3	3	3	2	3	3	2	3	3	3	2	3	3	3	3
UMM-E-KULSUM AMEENA SULTANA	3	3	3	2	3	3	2	3	3	3	2	3	3	3	3
SAMA MANISHA	3	3	3	2	3	3	2	3	3	3	2	3	3	3	3
Average	3	3	3	2.5	3	3	2.3	3	3	3	2.3	2.8	3	3	3

B) ALUMNI SURVEY



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Respondent Name	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
ADEEN FATIMA	3	3	3	3	3	3	3	3	3	3	2	3	3	3	3
SYEDA SUMMAIYA	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
TAYYABA TABASSUM	3	3	3	3	3	3	3	3	3	3	3	2	3	3	2
UZMA NAHID	3	2	3	3	3	3	3	3	3	3	3	3	3	3	3
UMM-E-KULSUM AMEENA SULTANA	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
SAMA MANISHA	3	3	3	3	3	3	2	3	3	3	2	3	3	3	3
Average	3	2.8	3	3	3	3	2.8	3	3	3	2.6	2.8	3	3	2.8

C) PARENT SURVEY

[illegible]



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Average	3	3	3	2.5	3	2.8	2.5	3	2.8	3	2.2	2.8	3	3	3
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AVERAGE OF INDIRECT ASSESSMENT

SURVEY	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
EXIT SURVEY	3	3	3	2.5	3	3	2.3	3	3	3	2.3	2.8	3	3	3
ALUMNI SURVEY	3	2.8	3	3	3	3	2.8	3	3	3	2.6	2.8	3	3	2.8
PARENT SURVEY	3	3	3	2.5	3	2.8	2.5	3	2.8	3	2.2	2.8	3	3	3
AVERAGE OF INDIRECT ASSESSMENT	3	2.9	3	2.7	3	2.9	2.5	3	2.9	3	2.4	2.8	3	3	2.9
20% of Indirect ASSESSMENT	0.6	0.58	0.6	0.54	0.6	0.58	0.5	0.6	0.58	0.6	0.48	0.56	0.6	0.6	0.58

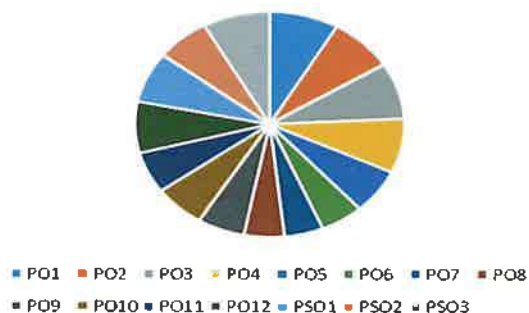


DR. V.R.K WOMEN'S COLLEGE OF ENGINEERING AND TECHNOLOGY

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FINAL Pos /PSOs Attainment													BATCH:2018-2022			REGULATION:R18		
ATTAINMENT	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			
DIRECT (80%)(A)	1.84	1.7	1.77	1.64	1.28	0.94	0.87	0.82	1.09	1.2	1.25	1.6	1.54	1.3	1.78			
INDIRECT (20%)(B)	0.6	0.58	0.6	0.54	0.6	0.58	0.5	0.6	0.58	0.6	0.48	0.56	0.6	0.6	0.58			
OVER ALL (A+B)	2.44	2.28	2.37	2.18	1.88	1.52	1.37	1.42	1.67	1.8	1.73	2.16	2.14	1.9	2.36			
OVER ALL(100 %)	81.3333333	76	79	72.6667	62.6667	50.6667	45.6667	47.3333	55.6667	60	57.6667	72	71.3333	63.3333	78.6667			

ECE DEPARTMENT FINAL ATTAINMENT
AY : 2022-2023



ECE FINAL ATTAINMENT
AY : 2022-2023

