ACADEMIC CURRICULA

UNDERGRADUATE INTEGRATED POST GRADUATE DEGREE PROGRAMMES

(With exit option of Diploma)

(Choice Based Flexible Credit System)

Regulations 2021

Volume - 1

(Revised on July 2024)



SRM INSTITUTE OF SCIENCE AND TECHNOLOGY

(Deemed to be University u/s 3 of UGC Act, 1956)
Kattankulathur, Chengalpattu District 603203,
Tamil Nadu, India



SRM INSTITUTE OF SCIENCE AND TECHNOLOGY Kattankulathur, Chengalpattu District 603203, Tamil Nadu, India

32. B.Tech. in Electronics and Communication Engineering with Specialization in Cyber Physical System

32. (a) Mission of the Department

IIVIISSION SIIIII – I	Build an educational process that is well suited to local needs as well as satisfies the national and international accreditation requirements.
	Attract the qualified professionals and retain them by building an environment that fosters work freedom and empowerment.
Mission Stmt – 3	With the right talent pool, create knowledge and disseminate, get involved in collaborative research with reputed universities and produce competent graduands.

32. (b) Program Educational Objectives (PEO)

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PEO – 1	Apply the acquired knowledge and skills in solving real-world engineering problems, considering national/global and societal issues such as health, environment, and safety.
PEO – 2	Design Intelligent systems, which are economically feasible and socially relevant for smart control and computing.
PEO – 3	Develop an attitude toward pursuing knowledge and advanced education for sustained career advancement to adapt to emerging fields.
PEO <mark>– 4</mark>	Demonstrate leadership qualities and effective communication skills to work in a team of enterprising people in a multidisciplinary and multicultural environment with strong adherence to professional ethics.

32. (c) Mission of the Department to Program Educational Objectives (PEO) Mapping

		Mission Stmt 1	Mission Stmt 2	Mission Stmt 3
PEO - 1	7	1	2	3
PEO - 2		3	3	3 –
PEO - 3		2	Property St. 1	3
PEO - 4		3	3	3

^{3 –} High Correlation, 2 – Medium Correlation, 1 – Low Correlation

32. (d) Mapping Program Educational Objectives (PEO) to Program Outcomes (PO)

				5 To 60	Pro	gram Ou	tcomes (PO)	EB	. 3.			Prog	Program Specific							
1 2 3 4 5		5	6	7	8	9	10	11	12	Out	comes (F	PSO)									
	Engineering Knowledge	Problem Analysis	Design/development of solutions	Conduct investigations of complex problems	Modern Tool Usage	The engineer and society	Environment & Sustainability	Ethics	Individual & Team Work	Communication	Project Mgt. & Finance	Life Long Learning	PSO-1	PSO-2	PSO-3						
PEO - 1	3	3	-	ساريا	Ų.	3	3 –	2	7	1	(4)	-	3	- /	-						
PEO - 2		Y	3	- 3	3	3	-	-	2		3	١.		3	-						
PEO - 3	,		-	3	3	-	2	2	-	2	-	3	+	2	3						
PEO - 4	-			-	1	-	-	3	3	3	3	_+	J-4	-	3						

^{3 –} High Correlation, 2 – Medium Correlation, 1 – Low Correlation

PSO - Program Specific Outcomes (PSO)

1 30 - 1 10gi	ram specific outcomes (150)
PSO - 1	Problem solving skills: Should be able to understand and explain cyber-physical system component architectures and their implementation in a wide range of domains such as transportation, defense, energy and industrial automation, health and biomedical, agricultural and critical infrastructure.
	Professional skills: Should be able to analyze existing cyber-physical systems and to evaluate the security of cyber-physical systems according to industry recognized security frameworks and present findings and recommendations.
	Successful Career and Entrepreneurship: Should be able to explain how the interdisciplinary fields such as Information Technology, Electrical & Computer Engineering, Mechanical Engineering, and Cybersecurity relate to cyber-physical systems.

32. (e) Program Structure: B.Tech. in Electronics and Communication Engineering with Specialization in Cyber Physical System

	Humanities & Social Sciences						Basic Science Courses (B)				
	including Management Courses (H)					Course	Course				
Course	Course					Code	Title	V			
Code	Title	١ ٧	vee		_		Physics: Electromagnetic Theory	L	-	Р	Ü
21I FH101T	Communicative English	2	1					3	1	2	5
		_	_	Ŭ				3	1	2	5
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21LEH104T	German	2	1	_	2			2	1	0	1
21LEH105T	Japanese	2	'	U	3		Analysis	3	1	U	4
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1	Engineering Science Courses (S)										
Course	Course						(Any 3 courses)			,	
Code	Course										
21MEC1011 1	Pagis Civil and Machanical Workshap	L	0	-		Code	Title	-			_
			_			21FCO101T	Short Pange Wireless Communication	_			
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				-	-			2	0	2	3
		2		0	2			3	0	0	
	To	otal	Cre	dits	21			2	0	2	3
Non Credit Courses (M)								2	0	2	3
		Н	our	s /							
									-	_	
Code	Little	L			С	21ECO1091			•	,	
21PDM101L 1	Professional Skills and Practices	0	0					olai	Cred	JILS	09
21PDM102L 1			_				Professional Core Courses (C)			,	
21PDM201L 1			_		0	Course	Course				
21PDM202L ¹	Critical and Creative Thinking Skills					Code	Title	1			_
						21FCC101.I	Flectronic System and PCR Design	2			
0400440001 1					_						
21PDM302L 1		_	Λ			21ECC201T 2	Solid State Devices	3			
21CYM101T 1	Environmental Science	1		_	_				0		3
21CYM101T ¹ 21LEM101T ¹	Environmental Science Constitution of India	1	0	0	0	21ECC202T	Analog and Linear Electronic Circuits Digital Logic Design	3	-	0	3
21CYM101T ¹ 21LEM101T ¹ 21LEM102T ¹	Environmental Science Constitution of India Universal Human Values – Introduction	1 1 1	0	0	0	21ECC202T 21ECC203T	Analog and Linear Electronic Circuits Digital Logic Design	3	0	0	3
21CYM101T ¹ 21LEM101T ¹	Environmental Science Constitution of India Universal Human Values – Introduction Professional Ethics	1 1 1	0	0	0	21ECC202T 21ECC203T 21ECC204T ²	Analog and Linear Electronic Circuits Digital Logic Design Signal Processing Electromagnetic Theory and	3 3	0	0 0	3 3
21CYM101T ¹ 21LEM101T ¹ 21LEM102T ¹ 21LEM201T ¹	Environmental Science Constitution of India Universal Human Values – Introduction Professional Ethics Universal Human Values-II:	1 1 1 1	0 0 0	0 0 0	0 0 0	21ECC202T 21ECC203T 21ECC204T ² 21ECC205T	Analog and Linear Electronic Circuits Digital Logic Design Signal Processing Electromagnetic Theory and Interference	3 3 3	0 0 0	0 0 0 0	3 3 3
21CYM101T1 21LEM101T1 21LEM102T1 21LEM201T1 21LEM202T1	Environmental Science Constitution of India Universal Human Values – Introduction Professional Ethics Universal Human Values-II: Understanding Harmony and Ethical Human Conduct	1 1 1 1	0 0 0	0 0 0	0 0 0	21ECC202T 21ECC203T 21ECC204T ² 21ECC205T	Analog and Linear Electronic Circuits Digital Logic Design Signal Processing Electromagnetic Theory and Interference Devices and Digital IC Laboratory	3 3 3	0 0 0	0 0 0 0	3 3 3
21CYM101T1 21LEM101T1 21LEM102T1 21LEM201T1 21LEM202T1 21LEM301T1	Environmental Science Constitution of India Universal Human Values – Introduction Professional Ethics Universal Human Values-II: Understanding Harmony and Ethical Human Conduct Indian Art Form	1 1 1 1 2	0 0 0 1	0 0 0	0 0 0 0	21ECC202T 21ECC203T 21ECC204T ² 21ECC205T 21ECC211L ¹	Analog and Linear Electronic Circuits Digital Logic Design Signal Processing Electromagnetic Theory and Interference Devices and Digital IC Laboratory Analog and Linear Electronic Circuits	3 3 3 0	0 0 0 0	0 0 0 0 4	3 3 3 2
21CYM101T1 21LEM101T1 21LEM102T1 21LEM201T1 21LEM202T1 21LEM301T1 21LEM302T1	Environmental Science Constitution of India Universal Human Values – Introduction Professional Ethics Universal Human Values-II: Understanding Harmony and Ethical Human Conduct Indian Art Form Indian Traditional Knowledge	1 1 1 1 2	0 0 0 1	0 0 0	0 0 0 0	21ECC202T 21ECC203T 21ECC204T ² 21ECC205T 21ECC211L ¹ 21ECC222L ¹	Analog and Linear Electronic Circuits Digital Logic Design Signal Processing Electromagnetic Theory and Interference Devices and Digital IC Laboratory Analog and Linear Electronic Circuits Laboratory	3 3 3 0 0	0 0 0 0	0 0 0 0 4 4	3 3 3 2 2
21CYM101T1 21LEM101T1 21LEM201T1 21LEM201T1 21LEM202T1 21LEM301T1 21LEM302T1 21LEM302T1	Environmental Science Constitution of India Universal Human Values – Introduction Professional Ethics Universal Human Values-II: Understanding Harmony and Ethical Human Conduct Indian Art Form Indian Traditional Knowledge Physical and Mental Health using Yoga	1 1 1 1 2	0 0 0 1	0 0 0	0 0 0 0	21ECC202T 21ECC203T 21ECC204T ² 21ECC205T 21ECC211L ¹ 21ECC222L ¹	Analog and Linear Electronic Circuits Digital Logic Design Signal Processing Electromagnetic Theory and Interference Devices and Digital IC Laboratory Analog and Linear Electronic Circuits Laboratory Microprocessor, Microcontroller, and	3 3 3 0 0	0 0 0 0	0 0 0 0 4 4	3 3 3 2 2
21CYM101T1 21LEM101T1 21LEM201T1 21LEM201T1 21LEM202T1 21LEM301T1 21LEM302T1 21GNM101L1 21GNM102L1	Environmental Science Constitution of India Universal Human Values – Introduction Professional Ethics Universal Human Values-II: Understanding Harmony and Ethical Human Conduct Indian Art Form Indian Traditional Knowledge Physical and Mental Health using Yoga National Service Scheme	1 1 1 1 2 1 1	0 0 0 1 0 0	0 0 0 0 0	0 0 0 3 0	21ECC202T 21ECC203T 21ECC204T ² 21ECC205T 21ECC211L ¹ 21ECC222L ¹ 21ECC301P ³	Analog and Linear Electronic Circuits Digital Logic Design Signal Processing Electromagnetic Theory and Interference Devices and Digital IC Laboratory Analog and Linear Electronic Circuits Laboratory Microprocessor, Microcontroller, and Interfacing Techniques	3 3 3 0 0	0 0 0 0 0	0 0 0 0 0 4 4 0	3 3 3 2 2 4
21CYM101T1 21LEM101T1 21LEM201T1 21LEM201T1 21LEM301T1 21LEM301T1 21LEM302T1 21GNM101L1 21GNM103L1	Environmental Science Constitution of India Universal Human Values – Introduction Professional Ethics Universal Human Values-II: Understanding Harmony and Ethical Human Conduct Indian Art Form Indian Traditional Knowledge Physical and Mental Health using Yoga National Service Scheme National Cadet Corps	1 1 1 1 2 1 1	0 0 0 1 0 0	0 0 0 0 0	0 0 0 3 0	21ECC202T 21ECC203T 21ECC204T ² 21ECC205T 21ECC211L ¹ 21ECC222L ¹ 21ECC301P ³ 21ECC302T	Analog and Linear Electronic Circuits Digital Logic Design Signal Processing Electromagnetic Theory and Interference Devices and Digital IC Laboratory Analog and Linear Electronic Circuits Laboratory Microprocessor, Microcontroller, and Interfacing Techniques Analog and Digital Communication	3 3 3 0 0 3 3	0 0 0 0 0 1	0 0 0 0 0 4 4 0	3 3 3 2 2 2 4 3 3
21CYM101T1 21LEM101T1 21LEM201T1 21LEM201T1 21LEM202T1 21LEM301T1 21LEM302T1 21GNM101L1 21GNM102L1	Environmental Science Constitution of India Universal Human Values – Introduction Professional Ethics Universal Human Values-II: Understanding Harmony and Ethical Human Conduct Indian Art Form Indian Traditional Knowledge Physical and Mental Health using Yoga National Service Scheme National Cadet Corps National Sports Organization	1 1 1 2 2 1 1 1	0 0 0 1 0 0 0	0 0 0 0 0 0	0 0 0 3 0 0	21ECC202T 21ECC203T 21ECC204T 2 21ECC205T 21ECC211L 1 21ECC222L 1 21ECC301P 2 21ECC302T 21ECC303T 2	Analog and Linear Electronic Circuits Digital Logic Design Signal Processing Electromagnetic Theory and Interference Devices and Digital IC Laboratory Analog and Linear Electronic Circuits Laboratory Microprocessor, Microcontroller, and Interfacing Techniques Analog and Digital Communication VLSI Design and Technology	3 3 3 0 0 3 3 3	0 0 0 0 0 1 0	0 0 0 0 0 4 4 4	3 3 3 2 2 2 4 3 3 3
21CYM101T1 21LEM101T1 21LEM201T1 21LEM201T1 21LEM202T1 21LEM301T1 21LEM302T1 21GNM101L1 21GNM102L1 21GNM103L1 21GNM104L1	Environmental Science Constitution of India Universal Human Values – Introduction Professional Ethics Universal Human Values-II: Understanding Harmony and Ethical Human Conduct Indian Art Form Indian Traditional Knowledge Physical and Mental Health using Yoga National Service Scheme National Sports Organization Telephone Indian Structure Indian Structure Indian In	1 1 1 1 2 1 1 1	0 0 0 1 0 0 0	0 0 0 0 0	0 0 0 3 0 0 0	21ECC202T 21ECC203T 21ECC204T ² 21ECC205T 21ECC211L ¹ 21ECC301P ² 21ECC302T 21ECC303T ² 21ECC304T ² 21ECC304T ² 21ECC311L ¹	Analog and Linear Electronic Circuits Digital Logic Design Signal Processing Electromagnetic Theory and Interference Devices and Digital IC Laboratory Analog and Linear Electronic Circuits Laboratory Microprocessor, Microcontroller, and Interfacing Techniques Analog and Digital Communication VLSI Design and Technology Microwave and Optical Communication VLSI Design Laboratory	3 3 3 0 0 3 3 3 3	0 0 0 0 0 1 0 0 0	0 0 0 0 0 4 4 4 0 0 0 0 0	3 3 3 2 2 4 3 3 3 2
21CYM101T1 21LEM101T1 21LEM201T1 21LEM201T1 21LEM202T1 21LEM301T1 21LEM302T1 21GNM101L1 21GNM102L1 21GNM103L1 21GNM104L1	Environmental Science Constitution of India Universal Human Values – Introduction Professional Ethics Universal Human Values-II: Understanding Harmony and Ethical Human Conduct Indian Art Form Indian Traditional Knowledge Physical and Mental Health using Yoga National Service Scheme National Cadet Corps National Sports Organization Tek, Seminar, Internship in Industry / High	1 1 1 1 2 1 1 1	0 0 0 1 0 0 0	0 0 0 0 0	0 0 0 3 0 0 0	21ECC202T 21ECC203T 21ECC204T 2 21ECC205T 21ECC211L 1 21ECC222L 1 21ECC301P 2 21ECC302T 21ECC302T 21ECC304T 2	Analog and Linear Electronic Circuits Digital Logic Design Signal Processing Electromagnetic Theory and Interference Devices and Digital IC Laboratory Analog and Linear Electronic Circuits Laboratory Microprocessor, Microcontroller, and Interfacing Techniques Analog and Digital Communication VLSI Design and Technology Microwave and Optical Communication VLSI Design Laboratory Communication Laboratory	3 3 3 0 0 3 3 3 3	0 0 0 0 0 1 0 0	0 0 0 0 0 4 4 4 0 0 0	3 3 3 2 2 2 4 3 3 3
21CYM101T1 21LEM101T1 21LEM201T1 21LEM201T1 21LEM202T1 21LEM301T1 21LEM302T1 21LEM302T1 21GNM101L1 21GNM103L1 21GNM104L1	Environmental Science Constitution of India Universal Human Values – Introduction Professional Ethics Universal Human Values-II: Understanding Harmony and Ethical Human Conduct Indian Art Form Indian Traditional Knowledge Physical and Mental Health using Yoga National Service Scheme National Cadet Corps National Sports Organization Tek, Seminar, Internship in Industry / High Institutions (P)	1 1 1 1 1 2 1 1 1 0	0 0 0 1 0 0	0 0 0 0 0 0	0 0 0 3 0 0 0	21ECC202T 21ECC203T 21ECC204T ² 21ECC205T 21ECC211L ¹ 21ECC301P ¹ 21ECC302T 21ECC303T ² 21ECC304T ² 21ECC304T ² 21ECC311L ¹ 21ECC31L ¹	Analog and Linear Electronic Circuits Digital Logic Design Signal Processing Electromagnetic Theory and Interference Devices and Digital IC Laboratory Analog and Linear Electronic Circuits Laboratory Microprocessor, Microcontroller, and Interfacing Techniques Analog and Digital Communication VLSI Design and Technology Microwave and Optical Communication VLSI Design Laboratory Communication Laboratory Wireless Communication and Antenna	3 3 3 0 0 3 3 3 3	0 0 0 0 0 1 0 0 0	0 0 0 0 0 4 4 4 0 0 0 0 0	3 3 3 2 2 4 3 3 3 2
21CYM101T1 21LEM101T1 21LEM201T1 21LEM201T1 21LEM202T1 21LEM301T1 21LEM302T1 21LEM302T1 21GNM101L1 21GNM103L1 21GNM104L1 Project Work Course	Environmental Science Constitution of India Universal Human Values – Introduction Professional Ethics Universal Human Values-II: Understanding Harmony and Ethical Human Conduct Indian Art Form Indian Traditional Knowledge Physical and Mental Health using Yoga National Service Scheme National Cadet Corps National Sports Organization Tek, Seminar, Internship in Industry / High Institutions (P) Course	1 1 1 1 1 2 1 1 1 1 0	0 0 0 1 1 0 0 Cree	0 0 0 0 0 0	0 0 0 3 0 0 0	21ECC202T 21ECC203T 21ECC204T ² 21ECC205T 21ECC211L ¹ 21ECC301P ² 21ECC302T 21ECC303T ² 21ECC304T ² 21ECC304T ² 21ECC311L ¹	Analog and Linear Electronic Circuits Digital Logic Design Signal Processing Electromagnetic Theory and Interference Devices and Digital IC Laboratory Analog and Linear Electronic Circuits Laboratory Microprocessor, Microcontroller, and Interfacing Techniques Analog and Digital Communication VLSI Design and Technology Microwave and Optical Communication VLSI Design Laboratory Communication Laboratory Wireless Communication and Antenna Systems	3 3 3 0 0 3 3 3 3 0 0	0 0 0 0 0 1 0 0 0 0 0	0 0 0 0 4 4 0 0 0 0 0 4 4 4	3 3 3 2 2 4 3 3 3 2 2 2
21CYM101T1 21LEM101T1 21LEM201T1 21LEM201T1 21LEM202T1 21LEM301T1 21LEM302T1 21LEM302T1 21GNM101L1 21GNM103L1 21GNM104L1	Environmental Science Constitution of India Universal Human Values – Introduction Professional Ethics Universal Human Values-II: Understanding Harmony and Ethical Human Conduct Indian Art Form Indian Traditional Knowledge Physical and Mental Health using Yoga National Service Scheme National Cadet Corps National Sports Organization Tek, Seminar, Internship in Industry / High Institutions (P)	1 1 1 1 1 2 1 1 1 1 0	0 0 0 1 0 0 Cree Fech	0 0 0 0 0 0	0 0 0 0 0 0 0	21ECC202T 21ECC203T 21ECC204T ² 21ECC205T 21ECC211L ¹ 21ECC301P ¹ 21ECC302T 21ECC303T ² 21ECC304T ² 21ECC304T ² 21ECC311L ¹ 21ECC31L ¹	Analog and Linear Electronic Circuits Digital Logic Design Signal Processing Electromagnetic Theory and Interference Devices and Digital IC Laboratory Analog and Linear Electronic Circuits Laboratory Microprocessor, Microcontroller, and Interfacing Techniques Analog and Digital Communication VLSI Design and Technology Microwave and Optical Communication VLSI Design Laboratory Communication Laboratory Wireless Communication and Antenna Systems Computer Communication and Network	3 3 3 0 0 3 3 3 3 0 0	0 0 0 0 0 1 0 0 0 0 0	0 0 0 0 4 4 0 0 0 0 0 4 4 4	3 3 3 2 2 4 3 3 3 2 2 2
21CYM101T1 21LEM101T1 21LEM201T1 21LEM201T1 21LEM202T1 21LEM301T1 21LEM302T1 21LEM302T1 21GNM101L1 21GNM103L1 21GNM104L1 Project Work Course	Environmental Science Constitution of India Universal Human Values – Introduction Professional Ethics Universal Human Values-II: Understanding Harmony and Ethical Human Conduct Indian Art Form Indian Traditional Knowledge Physical and Mental Health using Yoga National Service Scheme National Cadet Corps National Sports Organization Tr. K, Seminar, Internship in Industry / High Institutions (P) Course Title	1 1 1 1 1 2 1 1 1 1 0	0 0 0 1 0 0 Cree Fech	0 0 0 0 0 0 2	0 0 0 3 0 0 0	21ECC202T 21ECC203T 21ECC204T ² 21ECC205T 21ECC211L ¹ 21ECC301P ² 21ECC302T 21ECC302T 21ECC304T ² 21ECC304T ² 21ECC304T ² 21ECC311L ¹ 21ECC322L ¹ 21ECC401T ²	Analog and Linear Electronic Circuits Digital Logic Design Signal Processing Electromagnetic Theory and Interference Devices and Digital IC Laboratory Analog and Linear Electronic Circuits Laboratory Microprocessor, Microcontroller, and Interfacing Techniques Analog and Digital Communication VLSI Design and Technology Microwave and Optical Communication VLSI Design Laboratory Communication Laboratory Wireless Communication and Antenna Systems Computer Communication and Network Security	3 3 3 0 0 3 3 3 3 0 0 0	0 0 0 0 0 1 0 0 0 0 0 0 0 0	0 0 0 0 4 4 0 0 0 0 4 4 0	3 3 3 2 2 4 3 3 3 2 2 2 3
21CYM101T1 21LEM101T1 21LEM201T1 21LEM201T1 21LEM202T1 21LEM301T1 21LEM302T1 21LEM302T1 21GNM101L1 21GNM102L1 21GNM104L1 Project Wol Course Code 21GNP301L 21ECP302L	Environmental Science Constitution of India Universal Human Values – Introduction Professional Ethics Universal Human Values-II: Understanding Harmony and Ethical Human Conduct Indian Art Form Indian Traditional Knowledge Physical and Mental Health using Yoga National Service Scheme National Cadet Corps National Sports Organization Tr. **K, Seminar, Internship in Industry / High Institutions (P) Course Title 1 Community Connect	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0 0 0 1 0 0 0 Cree	0 0 0 0 0 0 2	0 0 0 0 3 0 0 0 0 0 0 0 0 0	21ECC202T 21ECC203T 21ECC204T ² 21ECC205T 21ECC211L ¹ 21ECC301P ¹ 21ECC302T 21ECC304T ² 21ECC304T ² 21ECC31L ¹ 21ECC31L ¹ 21ECC32L ¹	Analog and Linear Electronic Circuits Digital Logic Design Signal Processing Electromagnetic Theory and Interference Devices and Digital IC Laboratory Analog and Linear Electronic Circuits Laboratory Microprocessor, Microcontroller, and Interfacing Techniques Analog and Digital Communication VLSI Design and Technology Microwave and Optical Communication VLSI Design Laboratory Communication Laboratory Wireless Communication and Antenna Systems Computer Communication and Network Security Artificial Intelligence	3 3 3 0 0 3 3 3 3 0 0 0 3 2 2	0 0 0 0 0 1 0 0 0 0 0 0 0 0	0 0 0 0 4 4 0 0 0 0 0 4 4 4 0	3 3 3 2 2 4 3 3 3 2 2 2 3 3
21CYM101T1 21LEM101T1 21LEM201T1 21LEM201T1 21LEM201T1 21LEM301T1 21LEM302T1 21LEM302T1 21GNM101L1 21GNM102L1 21GNM104L1 Project Wol Course Code 21GNP301L 21ECP302L 21ECP303T	Environmental Science Constitution of India Universal Human Values – Introduction Professional Ethics Universal Human Values-II: Understanding Harmony and Ethical Human Conduct Indian Art Form Indian Traditional Knowledge Physical and Mental Health using Yoga National Service Scheme National Cadet Corps National Sports Organization Tr. **K, Seminar, Internship in Industry / High Institutions (P) Course Title 1 Community Connect 1 Project 1 MOOC	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0 0 0 0 0 0 0 Creek	0 0 0 0 0 0 2 dits	0 0 0 0 0 0 0 0 0 0 0 0 0 1 3	21ECC202T 21ECC203T 21ECC204T ² 21ECC205T 21ECC211L ¹ 21ECC301P ² 21ECC302T 21ECC302T 21ECC304T ² 21ECC304T ² 21ECC304T ² 21ECC311L ¹ 21ECC322L ¹ 21ECC401T ²	Analog and Linear Electronic Circuits Digital Logic Design Signal Processing Electromagnetic Theory and Interference Devices and Digital IC Laboratory Analog and Linear Electronic Circuits Laboratory Microprocessor, Microcontroller, and Interfacing Techniques Analog and Digital Communication VLSI Design and Technology Microwave and Optical Communication VLSI Design Laboratory Communication Laboratory Wireless Communication and Antenna Systems Computer Communication and Network Security Artificial Intelligence	3 3 3 0 0 3 3 3 3 0 0 0 3 2 2	0 0 0 0 0 1 0 0 0 0 0 0 0 0	0 0 0 0 4 4 0 0 0 0 0 4 4 4 0	3 3 3 2 2 4 3 3 3 2 2 2 3 3
21CYM101T1 21LEM101T1 21LEM201T1 21LEM201T1 21LEM201T1 21LEM301T1 21LEM302T1 21LEM302T1 21GNM101L1 21GNM102L1 21GNM104L1 Project World Course Code 21GNP301L 21ECP303T 21ECP401L	Environmental Science Constitution of India Universal Human Values – Introduction Professional Ethics Universal Human Values-II: Understanding Harmony and Ethical Human Conduct Indian Art Form Indian Traditional Knowledge Physical and Mental Health using Yoga National Service Scheme National Sports Organization Tr. K, Seminar, Internship in Industry / High Institutions (P) Course Title 1 Community Connect 1 Project 1 MOOC 1 Major Project	1 1 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0 0 0 0 0 0 0 Cree Fech	0 0 0 0 0 0 2 dits	0 0 0 0 0 0 0 0 0 0 0 1 3 al	21ECC202T 21ECC203T 21ECC204T ² 21ECC205T 21ECC211L ¹ 21ECC301P ² 21ECC302T 21ECC302T 21ECC304T ² 21ECC304T ² 21ECC304T ² 21ECC311L ¹ 21ECC322L ¹ 21ECC401T ²	Analog and Linear Electronic Circuits Digital Logic Design Signal Processing Electromagnetic Theory and Interference Devices and Digital IC Laboratory Analog and Linear Electronic Circuits Laboratory Microprocessor, Microcontroller, and Interfacing Techniques Analog and Digital Communication VLSI Design and Technology Microwave and Optical Communication VLSI Design Laboratory Communication Laboratory Wireless Communication and Antenna Systems Computer Communication and Network Security Artificial Intelligence	3 3 3 0 0 3 3 3 3 0 0 0 3 2 2	0 0 0 0 0 1 0 0 0 0 0 0 0 0	0 0 0 0 4 4 0 0 0 0 0 4 4 4 0	3 3 3 2 2 4 3 3 3 2 2 2 3 3
21CYM101T1 21LEM101T1 21LEM201T1 21LEM201T1 21LEM201T1 21LEM301T1 21LEM302T1 21LEM302T1 21GNM101L1 21GNM102L1 21GNM104L1 Project Work Course Code 21GNP301L 21ECP302L 21ECP303T 21ECP401L 21ECP402L	Environmental Science Constitution of India Universal Human Values – Introduction Professional Ethics Universal Human Values-II: Understanding Harmony and Ethical Human Conduct Indian Art Form Indian Traditional Knowledge Physical and Mental Health using Yoga National Service Scheme National Sports Organization Tr. K, Seminar, Internship in Industry / High Institutions (P) Course Title 1 Community Connect 1 Project 1 MOOC 1 Major Project 1 Major Project 1 Major Project	1 1 1 1 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0 0 0 0 0 0 0 Creek Feek D) 0	0 0 0 0 0 2 dits	0 0 0 0 0 0 0 0 0 0 3 al 15 10	21ECC202T 21ECC203T 21ECC204T ² 21ECC205T 21ECC211L ¹ 21ECC301P ² 21ECC302T 21ECC302T 21ECC304T ² 21ECC304T ² 21ECC304T ² 21ECC311L ¹ 21ECC322L ¹ 21ECC401T ²	Analog and Linear Electronic Circuits Digital Logic Design Signal Processing Electromagnetic Theory and Interference Devices and Digital IC Laboratory Analog and Linear Electronic Circuits Laboratory Microprocessor, Microcontroller, and Interfacing Techniques Analog and Digital Communication VLSI Design and Technology Microwave and Optical Communication VLSI Design Laboratory Communication Laboratory Wireless Communication and Antenna Systems Computer Communication and Network Security Artificial Intelligence	3 3 3 0 0 3 3 3 3 0 0 0 3 2 2	0 0 0 0 0 1 0 0 0 0 0 0 0 0	0 0 0 0 4 4 0 0 0 0 0 4 4 4 0	3 3 3 2 2 4 3 3 3 2 2 2 3 3
21CYM101T1 21LEM101T1 21LEM201T1 21LEM201T1 21LEM201T1 21LEM301T1 21LEM302T1 21LEM302T1 21GNM101L1 21GNM102L1 21GNM104L1 Project World Course Code 21GNP301L 21ECP303T 21ECP401L	Environmental Science Constitution of India Universal Human Values – Introduction Professional Ethics Universal Human Values-II: Understanding Harmony and Ethical Human Conduct Indian Art Form Indian Traditional Knowledge Physical and Mental Health using Yoga National Service Scheme National Sports Organization Tr. K, Seminar, Internship in Industry / High Institutions (P) Course Title 1 Community Connect 1 Project 1 MOOC 1 Major Project 1 Internship#	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0 0 0 0 0 0 0 Creek Fech	0 0 0 0 0 2 dits	0 0 0 0 0 0 0 0 0 0 3 al 15 10 5	21ECC202T 21ECC203T 21ECC204T ² 21ECC205T 21ECC211L ¹ 21ECC301P ² 21ECC302T 21ECC302T 21ECC304T ² 21ECC304T ² 21ECC304T ² 21ECC311L ¹ 21ECC322L ¹ 21ECC401T ²	Analog and Linear Electronic Circuits Digital Logic Design Signal Processing Electromagnetic Theory and Interference Devices and Digital IC Laboratory Analog and Linear Electronic Circuits Laboratory Microprocessor, Microcontroller, and Interfacing Techniques Analog and Digital Communication VLSI Design and Technology Microwave and Optical Communication VLSI Design Laboratory Communication Laboratory Wireless Communication and Antenna Systems Computer Communication and Network Security Artificial Intelligence	3 3 3 0 0 3 3 3 3 0 0 0 3 2 2	0 0 0 0 0 1 0 0 0 0 0 0 0 0	0 0 0 0 4 4 0 0 0 0 0 4 4 4 0	3 3 3 2 2 2 4 3 3 3 2 2 2 3 3
21CYM101T1 21LEM101T1 21LEM201T1 21LEM201T1 21LEM202T1 21LEM301T1 21LEM302T1 21LEM302T1 21GNM101L1 21GNM102L1 21GNM104L1 Project Wol	Environmental Science Constitution of India Universal Human Values – Introduction Professional Ethics Universal Human Values-II: Understanding Harmony and Ethical Human Conduct Indian Art Form Indian Traditional Knowledge Physical and Mental Health using Yoga National Service Scheme National Sports Organization Tr. K, Seminar, Internship in Industry / High Institutions (P) Course Title 1 Community Connect 1 Project 1 MOOC 1 Major Project 1 Internship#	1 1 1 1 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0 0 0 0 0 0 0 Creek Fech	0 0 0 0 0 2 dits	0 0 0 0 0 0 0 0 0 0 3 al 15 10 5	21ECC202T 21ECC203T 21ECC204T ² 21ECC205T 21ECC211L ¹ 21ECC301P ² 21ECC302T 21ECC302T 21ECC304T ² 21ECC304T ² 21ECC304T ² 21ECC311L ¹ 21ECC322L ¹ 21ECC401T ²	Analog and Linear Electronic Circuits Digital Logic Design Signal Processing Electromagnetic Theory and Interference Devices and Digital IC Laboratory Analog and Linear Electronic Circuits Laboratory Microprocessor, Microcontroller, and Interfacing Techniques Analog and Digital Communication VLSI Design and Technology Microwave and Optical Communication VLSI Design Laboratory Communication Laboratory Wireless Communication and Antenna Systems Computer Communication and Network Security Artificial Intelligence	3 3 3 0 0 3 3 3 3 0 0 0 3 2 2	0 0 0 0 0 1 0 0 0 0 0 0 0 0	0 0 0 0 4 4 0 0 0 0 0 4 4 4 0	3 3 3 2 2 4 3 3 3 2 2 2 3 3

	Professional Elective Courses (E) (Any 6 Courses)						Professional Elective Courses (E)				
Course Code	Course		Hours / Week			Course	Course		Hours / Week		
Code	Title	Course Week Course Course Course Course Course Week L T P C Interest of Cyber Physical 2 0 2 3 215CF352T High Performance Computing for Cyber 3 0 0 3									
21ECE250J	Sensors and Actuators for Cyber Physical System	2	0	2	3	21ECE352T	High Performance Computing for Cyber Physical System	3	0	0	3
21ECE251T	Embedded and Implanted Devices for	3	٥	0	3	21ECE450T	Design of Cyber Physical System	3	3 0 0 3	3	
ZIECEZJII	Cyber Physical System	J	U	U	J	21ECE451T	Cyber Physical Interface and Automation	3	0	0	3
21ECE304T	Cyber Physical System Framework	3	0	0	3	21ECE452T	Cloud and Distributed Systems for Cyber	3	0	0	2
21ECE323T	Cyber Security	3	0	0	3	216064321	Physical System	3	U	U	٥
21ECE252J	Cyber Physical Control System	2	0	2	3	21ECE453T	Mobile Cyber Physical System	3	0	0	3
21ECE350T	Real Time Cyber Physical System	3	0	0	3		7	otal	Cre	dits	18
21ECE351T	Unsupervised Intelligence in Cyber Physical System	3	0	0	3		****				



32. (f) Programme Articulation: B.Tech. in Electronics and Communication Engineering with Specialization in Cyber Physical System

					F	rogra	ım Ou	tcome	s (PO))					PSO	
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
Course Code	Course Name	Engineering Knowledge	Problem Analysis	Design/development of solutions	Conduct investigations of complex problems	Modern Tool Usage	The engineer and society	Environment & Sustainability	Ethics	Individual & Team Work	Communication	Project Mgt. & Finance	Life Long Learning	PSO-1	PSO-2	PSO-3
21ECC101J	Electronic System and PCB Design	3	2.5	2.67	-	3	-	٠.,	-	-	-	2	-	2.8	2.5	-
	Solid State Devices	3	2	-	-	-		-		-	-	-	1	1	-	-
	Digital Logic Design	3	2	2		3	-	-		7,00		-	-	3	-	-
	Electromagnetic Theory and Interference	2.4	2.6		1.0	Ť	-	-	-				-	-	-	_
21FCC211I	Devices and Digital IC Laboratory	3	2	11	1.	1	7.	-	-	-		4_		1	-	-
	Analog and Linear Electronic Circuits	2	2	3	-				A .	-				-	_	3
	Signal Processing	2	2.2	3	3		-			-	_					2.2
	Analog and Linear Electronic Circuits Laboratory	2	-	2	-	3		N.	14	Û	Ă,	-			-	-
	Microprocessor, Microcontroller, and Interfacing Techniques	6-6	3	3	77	3	-	-	1		1	×		2.67	-	-
	VLSI Design and Technology	T	2.4	2.25	15	- 3	-	-	-	_	-	7.7	-	2	2	-
	VLSI Design Laboratory	3	- 3	777		1	-	-	-	-	-	-	١ -	1	1	-
	Analog and Digital Communication	3	2.5	3		3	_	_	_	_			2	2.5	3	2.5
	Microwave and Optical Communication	2.8	2	2	3	-	45-7-5	-	-	_		-		3	2	
	Communication Laboratory	2.0	-	2.5	3	4.55	-	_		-	3			3	2	
21FCC401T	Wireless Communication and Antenna Systems	3	2.3	2.0	3		-		1	257	-		2	-	-	3
21ECC402P	Computer Communication and Network Security	2.67	3	2	1	ď	e de Total		3	4		-	7) -	-	3
21ECE250J	Sensors and Actuators for Cyber Physical System	3	2.5	3	3	3	52	2	12		-	-	2	3	3	2
ZIECEZSII	Embedded and Implanted Devices for Cyber Physical System	1	2	3	F.	2	110	14		1	2	-	2	ķ -		3
21ECE304T	Cyber Physical System Framework	3	2.2	3	-	3	4	-	-	3	-		-	-	-	-
21ECE323T	Cyber Security	-	3	3	-	-	-	-	-	-	-		-	3		-
2 <mark>1ECE25</mark> 2J	Cyber Physical Control System	3	2.67	2	-	-	-	-	-	-	-	- 1	-	-	-	-
	Real Time Cyber Physical System	-	-	3	_	-	-	3	-	-	7-		2	- 1	3	-
21E <mark>CE351T</mark>	Unsupervised Intelligence in Cyber Physical System	3	2	3	-	3	-	-	1	-/	ا ستس	7-	٧.	Z	-	-
	High Performance Computing for Cyber Physical System	3	2	3	K	1.67	-	-			, <		-			1
	Design of Cyber Physical System	3	2.33	3	3	3	_		-		<u> </u>	2	1-	3	3	2
21ECE451T	Cyber Physical Interface and Automation	2	3	2	4-7	1	-	-7	4	1.6	1	-	3		-	-
21ECE452T	Cloud and Distributed Systems for Cyber Physical System	2	3	2.6	-	-	2	الب		꾋	ر٠	2		<i>,</i> 4	1	ı
21ECE453T	Mobile Cyber Physical System	2.2	2	3	-	-	-	-	-	-	74		-	-	-	-
21GNP301L	Community Connect						3		3	3	2		F		-	
21ECP302L		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
21ECP303T		3	2										_	3		
	Major Project	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	Major Project	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
21ECP403L		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
ZILUF4USL								2.50	<u>-</u>			2.00			2.56	
	Program Average	2.09	2.41	∠.00	3.00	2.41	2.00	2.00	-	1.87	2.00	2.00	2.00	2.30	2.00	2.09

32. (g) Implementation Plan: B.Tech. in Electronics and Communication Engineering with Specialization in Cyber Physical System

	Semester – I						Semester – II				
Course	Course	Н	ours	s /		Course	Course	H	lours	s /	Τ
Code	Title	٧	Veel			Course	Title	١	Nee		
Code	Title	L	Τ	Ρ	С	Code	riue	L	Т	Р	(
21LEH101T	Communicative English	2	1	0	3	21LEH102T	Chinese				
21MAB101T	Calculus and Linear Algebra	3	1	0	4	21LEH103T	French				
21PYB101J	Physics: Electromagnetic Theory,	3	1	2	5	21LEH104T	German				
ZIPYBIUIJ	Quantum Mechanics, Waves and Optics	3	1	2	o o	21LEH105T	Japanese	2	1	0	١.
21MES102L 1	Engineering Graphics and Design	0	0	4	2	21LEH106T	Korean				
	Electrical and Electronics Engineering	3	1	0	4	21LEH107T	Spanish				
	Environmental Science	1	0	0	0	21LEH108T					
	Professional Skills and Practices	0	0	2	0	21GNH101J		1	0	2	t
	Constitution of India	1	0	0	0		Advanced Calculus and Campley	'	U		t
ZILLIVITOTT		otal	-			21MAB102T	Analysis	3	1	0	1
		Jiai	CIE	นแจ	10	21CYB101J		3	1	2	t
	Semester – III					21ECC101J		2	0	2	
Course	Course	Н	ours	s /					_		
Course	Course Title	٧	Veel	k		21CSS101J		3	0	2	
Code	Title	L	Τ	Р	С	21BTB103T	Biology	2	0	0	
0444450045	Transforms and Boundary Value	_	,			21MES101L		0	0	4	
21MAB201T	Problems	3	1	0	4	21PDM102L		0	0	2	
21PDH209T ¹		2	0	0	2	21GNM101L	Physical and Mental Health using Yoga	1			1
	Computer Organization and Architecture	3	1	0	4	21GNM102L	National Service Scheme		_	_	1
	Solid State Devices	3	0	0	3	21GNM103L		0	0	2	
		3	0	0	3	21GNM104L					1
	Digital Logic Design		-	_		ZTGINIVITO4L		Total	C=0.	4:40	t
	Electromagnetic Theory and Interference	3	0	0	3			Total	Cre	uits	14
	Devices and Digital IC Laboratory	0	0	4	2		Semester – IV				
	Professional Ethics	1	0	0	0	Course	Course	H	lours	s /	
21PDM201L ¹	Verbal Reasoning	0	0	2	0		Course	١	Nee	k	
	Universal Human Values-II:					Code	Title	L	Т	Р	
21LEM202T 1	Understanding Harmony and Ethical	2	1	0	3	21MAB203T	Probability and Stochastic Processes	3	1	0	
	Human Conduct						Analog and Linear Electronic Circuits	3	0	0	t
	To	otal	Cre	dits	24		Signal Processing	3	0	0	t
							Analog and Linear Electronic Circuits		U	U	Т
	Semester – V			,		21ECC222L 1		0	0	4	
	Course	Н	ours	s /			Laboratory				+
Course	Course					24CCC20CT	Autificial Intelligence	2	1	Λ	
Course Code	Course Title	۷	Vee				Artificial Intelligence	2	1	0	
Code	Title	L	Τ	Р	С	Ε	Professional Elective-I				
Code 21MAB302T	Title Discrete Mathematics	L 3	Vee T 1		C 4	E 21DCS201P ¹	Professional Elective-I Design Thinking and Methodology	1	2	0	
Code 21MAB302T	Title Discrete Mathematics Microprocessor, Microcontroller, and	L 3	T 1	P 0	4	E 21DCS201P ¹	Professional Elective-I Design Thinking and Methodology Critical and Creative Thinking Skills	1 0	2	0 2	
Code 21MAB302T 21ECC301P 1	Title Discrete Mathematics Microprocessor, Microcontroller, and Interfacing Techniques	L	Τ	Р		E 21DCS201P ¹	Professional Elective-I Design Thinking and Methodology Critical and Creative Thinking Skills	1	2	0 2	
Code 21MAB302T 21ECC301P 1	Title Discrete Mathematics Microprocessor, Microcontroller, and	L 3	T 1	P 0	4	E 21DCS201P ¹	Professional Elective-I Design Thinking and Methodology Critical and Creative Thinking Skills	1 0	2	0 2	
Code 21MAB302T 21ECC301P 1 21ECC303T 2	Title Discrete Mathematics Microprocessor, Microcontroller, and Interfacing Techniques VLSI Design and Technology	3 3	T 1	P 0 0	4 4 3	E 21DCS201P ¹ 21PDM202 ¹	Professional Elective-I Design Thinking and Methodology Critical and Creative Thinking Skills	1 0 Total	2 0 Cre	0 2 dits	
Code 21MAB302T 21ECC301P ¹ 21ECC303T ² 21ECC311L ¹	Title Discrete Mathematics Microprocessor, Microcontroller, and Interfacing Techniques VLSI Design and Technology VLSI Design Laboratory	3 3 3	T 1 1	P 0 0	4 4 3 2	E 21DCS201P ¹	Professional Elective-I Design Thinking and Methodology Critical and Creative Thinking Skills	1 0 Total	2 0 Cre	0 2 dits	
Code 21MAB302T 21ECC301P 1 21ECC303T 2 21ECC311L 1 E	Title Discrete Mathematics Microprocessor, Microcontroller, and Interfacing Techniques VLSI Design and Technology VLSI Design Laboratory Professional Elective – II	3 3 3	T 1 1	P 0 0	4 4 3 2 3	E 21DCS201P ¹ 21PDM202 ¹	Professional Elective-I Design Thinking and Methodology Critical and Creative Thinking Skills Semester – VI	1 0 Total	2 0 Credours	0 2 dits	3 2
Code 21MAB302T 21ECC301P 1 21ECC303T 2 21ECC311L 1 E O	Title Discrete Mathematics Microprocessor, Microcontroller, and Interfacing Techniques VLSI Design and Technology VLSI Design Laboratory Professional Elective – II Open Elective – I	3 3 0	T 1 1 0 0	P 0 0 4	4 4 3 2 3 3	E 21DCS201P ¹ 21PDM202 ¹ Course Code	Professional Elective-I Design Thinking and Methodology Critical and Creative Thinking Skills Semester – VI Course Title	1 0 Total	2 0 Credours Nee	0 2 dits	3 2
Code 21MAB302T 21ECC301P 1 21ECC303T 2 21ECC311L 1 E O 21GNP301L 1	Title Discrete Mathematics Microprocessor, Microcontroller, and Interfacing Techniques VLSI Design and Technology VLSI Design Laboratory Professional Elective – II Open Elective – I Community Connect	3 3 0 0	T 1 1 0 0 0 0	P 0 0 4 2	4 4 3 2 3 3 1	E 21DCS201P 1 21PDM202 1 Course Code 21CSS303T	Professional Elective-I Design Thinking and Methodology Critical and Creative Thinking Skills Semester – VI Course Title Data Science	Total H V L 2	2 0 Credours Nee	0 2 dits	
Code 21MAB302T 21ECC301P 21ECC303T 21ECC311L E O 21GNP301L 21PDM301L	Title Discrete Mathematics Microprocessor, Microcontroller, and Interfacing Techniques VLSI Design and Technology VLSI Design Laboratory Professional Elective – II Open Elective – I Community Connect Analytical and Logical Thinking Skills	3 3 0	T 1 1 0 0 0 0 0 0 0	P 0 0 4 2 2	4 4 3 2 3 3 1 0	E 21DCS201P 1 21PDM202 1 Course Code 21CSS303T 21ECC302T	Professional Elective-I Design Thinking and Methodology Critical and Creative Thinking Skills Semester – VI Course Title Data Science Analog and Digital Communication	1 0 Total	2 0 Cree Nee	0 2 dits k P 0	
Code 21MAB302T 21ECC301P ¹ 21ECC303T ² 21ECC311L ¹ E O 21GNP301L ¹ 21PDM301L ¹	Title Discrete Mathematics Microprocessor, Microcontroller, and Interfacing Techniques VLSI Design and Technology VLSI Design Laboratory Professional Elective – II Open Elective – I Community Connect Analytical and Logical Thinking Skills Indian Art Form	3 3 0 0 0	T 1 1 0 0 0 0 0 0 0 0	P 0 0 0 4 2 2 2 0 0	4 4 3 2 3 3 1 0 0	E 21DCS201P 1 21PDM202 1 Course Code 21CSS303T 21ECC302T 21ECC304T 2	Professional Elective-I Design Thinking and Methodology Critical and Creative Thinking Skills Semester – VI Course Title Data Science Analog and Digital Communication Microwave and Optical Communication	1 0 Total	2 0 Cree	0 2 dits	3 2
Code 21MAB302T 21ECC301P ¹ 21ECC303T ² 21ECC311L ¹ E O 21GNP301L ¹ 21PDM301L ¹	Title Discrete Mathematics Microprocessor, Microcontroller, and Interfacing Techniques VLSI Design and Technology VLSI Design Laboratory Professional Elective – II Open Elective – I Community Connect Analytical and Logical Thinking Skills Indian Art Form	3 3 0 0	T 1 1 0 0 0 0 0 0 0 0	P 0 0 0 4 2 2 2 0 0	4 4 3 2 3 3 1 0 0	E 21DCS201P 1 21PDM202 1 Course Code 21CSS303T 21ECC302T 21ECC304T 2	Professional Elective-I Design Thinking and Methodology Critical and Creative Thinking Skills Semester – VI Course Title Data Science Analog and Digital Communication Microwave and Optical Communication Communication Laboratory	1 0 Total	2 0 Cree Nee	0 2 dits k P 0	
Code 21MAB302T 21ECC301P¹ 21ECC303T² 21ECC311L¹ E O 21GNP301L¹ 21PDM301L¹	Title Discrete Mathematics Microprocessor, Microcontroller, and Interfacing Techniques VLSI Design and Technology VLSI Design Laboratory Professional Elective – II Open Elective – I Community Connect Analytical and Logical Thinking Skills Indian Art Form	3 3 0 0 0	T 1 1 0 0 0 0 0 0 0 0	P 0 0 0 4 2 2 2 0 0	4 4 3 2 3 3 1 0 0	E 21DCS201P 1 21PDM202 1 Course Code 21CSS303T 21ECC302T 21ECC302L 1 E	Professional Elective-I Design Thinking and Methodology Critical and Creative Thinking Skills Semester – VI Course Title Data Science Analog and Digital Communication Microwave and Optical Communication Communication Laboratory Professional Elective – III	1 0 Total	2 0 Cree	0 2 dits	
Code 21MAB302T 21ECC301P 21ECC303T 21ECC311L E O 21GNP301L 21PDM301L 1	Title Discrete Mathematics Microprocessor, Microcontroller, and Interfacing Techniques VLSI Design and Technology VLSI Design Laboratory Professional Elective – II Open Elective – I Community Connect Analytical and Logical Thinking Skills Indian Art Form	3 3 0 0 0	T 1 1 0 0 0 0 0 0 0 0	P 0 0 0 4 2 2 2 0 0	4 4 3 2 3 3 1 0 0	E 21DCS201P 1 21PDM202 1 Course Code 21CSS303T 21ECC302T 21ECC304T 2 21ECC322L 1	Professional Elective-I Design Thinking and Methodology Critical and Creative Thinking Skills Semester – VI Course Title Data Science Analog and Digital Communication Microwave and Optical Communication Communication Laboratory	1 0 Total	2 0 Cree	0 2 dits	
Code 21MAB302T 21ECC301P ¹ 21ECC303T ² 21ECC311L ¹ E O 21GNP301L ¹ 21PDM301L ¹ 21LEM301T ¹	Title Discrete Mathematics Microprocessor, Microcontroller, and Interfacing Techniques VLSI Design and Technology VLSI Design Laboratory Professional Elective – II Open Elective – I Community Connect Analytical and Logical Thinking Skills Indian Art Form To	3 3 0 0 0 1	T 1 1 0 0 0 0 0 0 0 0	0 0 4 2 2 0 dits	4 4 3 2 3 3 1 0 0	E 21DCS201P 1 21PDM202 1 Course Code 21CSS303T 21ECC302T 21ECC302L 1 E	Professional Elective-I Design Thinking and Methodology Critical and Creative Thinking Skills Semester – VI Course Title Data Science Analog and Digital Communication Microwave and Optical Communication Communication Laboratory Professional Elective – III	1 0 Total	2 0 Cree	0 2 dits	
Code 21MAB302T 21ECC301P ¹ 21ECC303T ² 21ECC311L ¹ E O 21GNP301L ¹ 21PDM301L ¹ 21LEM301T ¹ Course	Title Discrete Mathematics Microprocessor, Microcontroller, and Interfacing Techniques VLSI Design and Technology VLSI Design Laboratory Professional Elective – II Open Elective – I Community Connect Analytical and Logical Thinking Skills Indian Art Form To Semester – VII Course	3 3 0 0 0 1 otal	1 1 0 0 0 0 0 Cree	P 0 0 0 4 2 2 2 0 0 ddits	4 4 3 2 3 3 1 0 0	E 21DCS201P 1 21PDM202 1 Course Code 21CSS303T 21ECC302T 21ECC302L 1 E E O	Professional Elective-I Design Thinking and Methodology Critical and Creative Thinking Skills Semester – VI Course Title Data Science Analog and Digital Communication Microwave and Optical Communication Communication Laboratory Professional Elective – III Professional Elective – IV Open Elective – II	1 0 Total	2 0 Cree	0 2 dits	
Code 21MAB302T 21ECC301P ¹ 21ECC303T ² 21ECC311L ¹ E O 21GNP301L ¹ 21PDM301L ¹ 21LEM301T ¹	Title Discrete Mathematics Microprocessor, Microcontroller, and Interfacing Techniques VLSI Design and Technology VLSI Design Laboratory Professional Elective – II Open Elective – I Community Connect Analytical and Logical Thinking Skills Indian Art Form To	0 0 1 0 0 1	1 0 0 0 0 0 Cred	P 0 0 0 4 2 2 0 0 dits	4 4 3 2 3 3 1 0 0 20	E 21DCS201P 1 21PDM202 1 Course Code 21CSS303T 21ECC302T 21ECC302L 1 E E O 21ECP302L 1	Professional Elective-I Design Thinking and Methodology Critical and Creative Thinking Skills Semester – VI Course Title Data Science Analog and Digital Communication Microwave and Optical Communication Communication Laboratory Professional Elective – III Professional Elective – IV Open Elective – III Project	1 0 Total H 1 2 2 3 3 3 0 0 0	2	0 2 dits 8/ k P 0 0 0 4	
Code 21MAB302T 21ECC301P1 21ECC303T2 21ECC311L1 E	Title Discrete Mathematics Microprocessor, Microcontroller, and Interfacing Techniques VLSI Design and Technology VLSI Design Laboratory Professional Elective – II Open Elective – I Community Connect Analytical and Logical Thinking Skills Indian Art Form To Semester – VII Course Title	3 3 0 0 0 1 1 0 1 V	1 0 0 0 0 0 Cree T	P 0 0 4 2 2 0 0 dits	4 4 3 2 3 3 1 0 0 20	E 21DCS201P 1 21PDM202 1 Course Code 21CSS303T 21ECC302T 21ECC302L 1 E 0 21ECP302L 1 21ECP303T 1	Professional Elective-I Design Thinking and Methodology Critical and Creative Thinking Skills Semester – VI Course Title Data Science Analog and Digital Communication Microwave and Optical Communication Communication Laboratory Professional Elective – III Professional Elective – IV Open Elective – III Project MOOC	1 0 Total H 1 2 2 3 3 3 0 0 0 0 3 3	2	0 2 dits s/k P 0 0 0 4	
Code 21MAB302T 21ECC301P 1 21ECC303T 2 21ECC311L 1 E O 21GNP301L 1 21PDM301L 1 21LEM301T 1 Course Code 21GNH401T	Title Discrete Mathematics Microprocessor, Microcontroller, and Interfacing Techniques VLSI Design and Technology VLSI Design Laboratory Professional Elective – II Open Elective – I Community Connect Analytical and Logical Thinking Skills Indian Art Form To Semester – VII Course Title Behavioral Psychology	3 3 0 0 0 1 1 0 1 V L	1 0 0 0 0 0 Cred	P 0 0 0 4 2 2 0 0 dits	4 4 3 2 3 3 1 0 0 20	E 21DCS201P 1 21PDM202 1 Course Code 21CSS303T 21ECC302T 21ECC302L 1 E 0 21ECP302L 1 21ECP303T 1 21PDM302L 1	Professional Elective-I Design Thinking and Methodology Critical and Creative Thinking Skills Semester – VI Course Title Data Science Analog and Digital Communication Microwave and Optical Communication Communication Laboratory Professional Elective – III Professional Elective – IV Open Elective – III Project MOOC Employability Skills and Practices	1 0 Total H 1 2 2 3 3 3 0 0 0	2	0 2 dits 8 / k P 0 0 4	
Code 21MAB302T 21ECC301P 1 21ECC303T 2 21ECC311L 1 E O 21GNP301L 1 21PDM301L 1 21LEM301T 1 Course Code 21GNH401T	Title Discrete Mathematics Microprocessor, Microcontroller, and Interfacing Techniques VLSI Design and Technology VLSI Design Laboratory Professional Elective – II Open Elective – I Community Connect Analytical and Logical Thinking Skills Indian Art Form To Semester – VII Course Title Behavioral Psychology Wireless Communication and Antenna	3 3 0 0 0 1 1 0 1 V	1 0 0 0 0 0 Cree T	P 0 0 4 2 2 0 0 dits	4 4 3 2 3 3 1 0 0 20	E 21DCS201P 1 21PDM202 1 Course Code 21CSS303T 21ECC302T 21ECC302L 1 E 0 21ECP302L 1 21ECP303T 1 21PDM302L 1	Professional Elective-I Design Thinking and Methodology Critical and Creative Thinking Skills Semester – VI Course Title Data Science Analog and Digital Communication Microwave and Optical Communication Communication Laboratory Professional Elective – III Professional Elective – IV Open Elective – III Project MOOC Employability Skills and Practices Indian Traditional Knowledge	1 0 Total H	2	0 2 dits S/k P 0 0 4	
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