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 2023)

SRM INSTITUTE OF SCIENCE AND TECHNOLOGY

(Deemed to be University u/s 3 of UGC Act, 1956)

Kattankulathur, Chengalpattu District 603203,

Tamil Nadu, India

30. B.Tech. in Electronics and Communication Engineering

30. (a) Mission of the Department

Mission Stmt – 1	*Build an educational process that is well suited to local needs as well as satisfies the national and international accreditation requirements.*
Mission Stmt – 2	*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.*

30. (b) Program Educational Objectives (PEO)

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	*Create technologically innovative products that are economically viable and socially relevant.*
PEO – 3	*Develop an attitude toward pursuing knowledge and advanced education for sustained career advancement to adapt to emerging fields.*
PEO – 4	*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.*

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

	Mission Stmt. - 1	Mission Stmt. - 2	Mission Stmt. - 3
PEO - 1	*1*	*2*	*3*
PEO - 2	*3*	*3*	*3*
PEO - 3	*2*	*1*	*3*
PEO - 4	*3*	*3*	*3*

3 – High Correlation, 2 – Medium Correlation, 1 – Low Correlation

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

	Program Outcomes (PO)												Program Specific Outcomes (PSO)		
	1	2	3	4	5	6	7	8	9	10	11	12			
	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*	-	-	-	*3*	*3*	*2*	-	-	-	-	*3*	-	-
PEO - 2	-	-	*3*	*3*	*3*	*3*	-	-	*2*	-	*3*	-	-	*3*	-
PEO - 3	-	-	-	*3*	*3*	-	*2*	*2*	-	*2*	-	*3*	-	*2*	*3*
PEO - 4	-	-	-	-	-	-	-	*3*	*3*	*3*	*3*	-	-	-	*3*

3 – High Correlation, 2 – Medium Correlation, 1 – Low Correlation

PSO – Program Specific Outcomes (PSO)

PSO - 1	*Problem-Solving Skills: Should be able to associate the learning from the courses related to Microelectronics, Signal processing, Microcomputers, Embedded and Communication Systems to arrive at solutions to real world problems.*
PSO - 2	*Professional Skills: Should have the capability to develop competence in using electronic modern design tools (both software and hardware) for the design and analysis of complex electronic systems in furtherance to research activities.*
PSO - 3	*Successful Career and Entrepreneurship: Should be able to understand the need for new skills to accommodate the rapidly changing industry research pattern in this field to have a successful career and to sustain passion and zeal for real-world applications using optimal resources as an entrepreneur.*

30. (e) Program Structure: B.Tech. in Electronics and Communication Engineering

Humanities & Social Sciences including Management Courses (H)

Course Code	Course Title	Hours / Week L	T	P	C
21LEH101T	Communicative English	2	1	0	3
21LEH102T	Chinese	2	1	0	3
21LEH103T	French				
21LEH104T	German				
21LEH105T	Japanese				
21LEH106T	Korean				
21LEH107T	Spanish				
21GNH101J	Philosophy of Engineering	1	0	2	2
21PDH201T	Social Engineering	2	0	0	2
21GNH401T	Behavioral Psychology	2	1	0	3
				Total Credits	13

Basic Science Courses (B)

Course Code	Course Title	Hours / Week L	T	P	C
21PYB101J	Physics: Electromagnetic Theory, Quantum Mechanics, Waves and Optics	3	1	2	5
21CYB101J	Chemistry	3	1	2	5
21MAB101T	Calculus and Linear Algebra	3	1	0	4
21MAB102T	Advanced Calculus and Complex Analysis	3	1	0	4
21MAB201T	Transforms and Boundary Value Problems	3	1	0	4
21MAB203T	Probability and Stochastic Processes	3	1	0	4
21MAB302T	Discrete Mathematics	3	1	0	4
21BTB103T	Biology	2	0	0	2
				Total Credits	32

Engineering Science Courses (S)

Course Code	Course Title	Hours / Week L	T	P	C
21MES101L	Basic Civil and Mechanical Workshop	0	0	4	2
21MES102L	Engineering Graphics and Design	0	0	4	2
21EES101T	Electrical and Electronics Engineering	3	1	0	4
21CSS101J	Programming for Problem Solving	3	0	2	4
21CSS201T	Computer Organization and Architecture	3	1	0	4
21DCS201P	Design Thinking and Methodology	1	2	0	3
21CSS303T	Data Science	2	0	0	2
				Total Credits	21

Professional Core Courses (C)

Course Code	Course Title	Hours / Week L	T	P	C
21ECC101J	Electronic System and PCB Design	2	0	2	3
21ECC201T	Solid State Devices	3	0	0	3
21ECC202T	Analog and Linear Electronic Circuits	3	0	0	3
21ECC203T	Digital Logic Design	3	0	0	3
21ECC204T	Signal Processing	3	0	0	3
21ECC205T	Electromagnetic Theory and Interference	3	0	0	3
21ECC211L	Devices and Digital IC Laboratory	0	0	4	2
21ECC222L	Analog and Linear Electronic Circuits Laboratory	0	0	4	2
21ECC301P	Microprocessor, Microcontroller, and Interfacing Techniques	3	1	0	4
21ECC302T	Analog and Digital Communication	3	0	0	3
21ECC303T	VLSI Design and Technology	3	0	0	3
21ECC304T	Microwave and Optical Communication	3	0	0	3
21ECC311L	VLSI Design Laboratory	0	0	4	2
21ECC322L	Communication Laboratory	0	0	4	2
21ECC401T	Wireless Communication and Antenna Systems	3	0	0	3
21ECC402P	Computer Communication and Network Security	2	1	0	3
21CSC206T	Artificial Intelligence	2	1	0	3
				Total Credits	48

Non Credit Courses (M)

Course Code	Course Title	Hours / Week L	T	P	C
21PDM101L	Professional Skills and Practices	0	0	2	0
21PDM102L	General Aptitude	0	0	2	0
21PDM201L	Verbal Reasoning	0	0	2	0
21PDM202L	Critical and Creative Thinking Skills	0	0	2	0
21PDM301L	Analytical and Logical Thinking Skills	0	0	2	0
21PDM302L	Employability Skills and Practices	0	0	2	0
21CYM101T	Environmental Science	1	0	0	0
21LEM101T	Constitution of India	1	0	0	0
21LEM102T	Universal Human Values – Introduction	1	0	0	0
21LEM201T	Professional Ethics	1	0	0	0
21LEM202T	Universal Human Values-II: Understanding Harmony and Ethical Human Conduct	2	1	0	3
21LEM301T	Indian Art Form	1	0	0	0
21LEM302T	Indian Traditional Knowledge	1	0	0	0
21GNM101L	Physical and Mental Health using Yoga	0	0	2	0
21GNM102L	National Service Scheme	0	0	2	0
21GNM103L	National Cadet Corps	0	0	2	0
21GNM104L	National Sports Organization	0	0	2	0
				Total Credits	03

Open Elective Courses (O)
(Any 3 courses)

Course Code	Course Title	Hours / Week L	T	P	C
21ECO101T	Short Range Wireless Communication	3	0	0	3
21ECO102J	Electronic Circuits and Systems	2	0	2	3
21ECO103T	Modern Wireless Communication Systems	3	0	0	3
21ECO104J	PCB Design and Manufacturing	2	0	2	3
21ECO105T	Fiber Optics and Optoelectronics	3	0	0	3
21ECO106J	Embedded System Design using Arduino	2	0	2	3
21ECO107J	Embedded System Design using Raspberry Pi	2	0	2	3
21ECO108J	3D Printing Hardware and Software	2	0	2	3
				Total Credits	09

Project Work, Seminar, Internship in Industry / Higher Technical Institutions (P)

Course Code	Course Title	Hours / Week L	T	P	C
21GNP301L	Community Connect	0	0	2	1
21ECP302L	Project	0	0	6	3
21ECP303T	MOOC	3	0	0	
21ECP401L	Major Project	0	0	30	15
21ECP402L	Major Project	0	0	20	10
21ECP403L	Internship#	0	0	10	5
				Total Credits	19

Professional Elective Courses (E) *(Any 6 Courses)*					
Course Code	Course Title	Hours / Week L	T	P	C
Sub-Stream: Electronic System Engineering					
21ECE201J	Python and Scientific Python	2	0	2	3
21ECE202T	Micro- and Nano-Fabrication Technologies	3	0	0	3
21ECE203J	Smart Sensors and Devices for Agriculture	2	0	2	3
21ECE204T	Optoelectronics	3	0	0	3
21ECE205T	Flexible Electronics	3	0	0	3
21ECE212T	Control Systems: Theory and Applications	3	0	0	3
21ECE260T	Industrial Electronics	3	0	0	3
21ECE261T	Measurements and Instrumentation	3	0	0	3
21ECE262T	Low Power Sensors Technology	3	0	0	3
21ECE263T	Micro, Nano Electromechanical Devices	3	0	0	3
21ECE301T	Nanoscale Electronic Devices	3	0	0	3
21ECE302J	Real Time Operating Systems	2	0	2	3
21ECE303T	MEMS Technologies	3	0	0	3
21ECE304T	Cyber Physical System Framework	3	0	0	3
21ECE305J	Machine Learning Algorithms	2	0	2	3
21ECE361T	Consumer Electronics and Trouble shooting	3	0	0	3
21ECE362T	Quality and Reliability Engineering	3	0	0	3
21ECE363T	Electronic Packaging	3	0	0	3
21ECE366T	Digital Integrated Circuits and Synthesis	3	0	0	3
21ECE401T	Advanced Digital System Design	3	0	0	3
21ECE402T	Semiconductor Device Modeling	3	0	0	3
21ECE403T	Microwave Integrated Circuits	3	0	0	3
21ECE404T	Terahertz Devices and Applications	3	0	0	3
21ECE460T	Emerging Processor Based System Design	3	0	0	3
21ECE461T	Semiconductor Memory Design	3	0	0	3
21ECE463T	Scripting Language for Electronic Design Automation	3	0	0	3
21ECE464T	Statistical Analysis and Optimization for VLSI	3	0	0	3
21ECE468T	System and Network on Chip	3	0	0	3

Professional Elective Courses (E)					
Course Code	Course Title	Hours / Week L	T	P	C
Sub-Stream: Communication System Engineering					
21ECE220T	Wireless and Optical Sensors	3	0	0	3
21ECE221T	Radar and Navigational Aids	3	0	0	3
21ECE222T	Adhoc and Sensor Networks	3	0	0	3
21ECE223T	Satellite Communication and Broadcasting	3	0	0	3
21ECE224T	Cryptography and Network Security	3	0	0	3
21ECE225T	Optical Systems and Networks	3	0	0	3
21ECE320T	Software Defined Networks	3	0	0	3
21ECE321T	RF and Microwave Semiconductor Devices	3	0	0	3
21ECE322T	Data analytics using R	3	0	0	3
21ECE323T	Cyber Security	3	0	0	3
21ECE324T	Advanced Mobile Communication Systems	3	0	0	3
21ECE420T	Information Theory and Coding	3	0	0	3
21ECE421T	Wireless Communication Networks	3	0	0	3
Sub-Stream: Signal Processing					
21ECE240T	Wavelets and Signal Processing	3	0	0	3
21ECE241J	Audio and Speech Processing	2	0	2	3
21ECE242J	Pattern Recognition and Neural Networks	2	0	2	3
21ECE340J	Digital Image and Video Processing	2	0	2	3
21ECE341J	DSP System Design	2	0	2	3
21ECE364T	Digital Signal Processors, Architectures and Applications	3	0	0	3
21ECE440T	Adaptive Signal Processing	3	0	0	3
21ECE441T	Machine Perception with Cognition	3	0	0	3
21ECE442T	Multimedia Compression Techniques	3	0	0	3
				Total Credits	**18**

30. (f) Programme Articulation: B.Tech. in Electronics and Communication Engineering

Course Code	Course Name	Program Outcomes (PO)												PSO		
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
		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						2		2.8	2.5	
21ECC201T	Solid State Devices	3	2										1	1		
21ECC202T	Analog and Linear Electronic Circuits	2	2	3												3
21ECC203T	Digital Logic Design	3	2	2		3								3		
21ECC204T	Signal Processing	2	2.2	3	3											2.2
21ECC205T	Electromagnetic Theory and Interference	2.4	2.6													
21ECC211L	Devices and Digital IC Laboratory	3	2			1								1		
21ECC222L	Analog and Linear Electronic Circuits Laboratory	2		2		3										
21ECC301P	Microprocessor, Microcontroller, and Interfacing Techniques		3	3		3								2.7		
21ECC302T	Analog and Digital Communication	3	2.5	3		3							2	2.5	3	2.5
21ECC303T	VLSI Design and Technology		2.4	2.25										2	2	
21ECC304T	Microwave and Optical Communication	2.8	2	2	3									3	2	
21ECC311L	VLSI Design Laboratory	3	3			1								1		
21ECC322L	Communication Laboratory	2		2.5	3						3			3	2	
21ECC401T	Wireless Communication and Antenna Systems	3	2.3										2			3
21ECC402P	Computer Communication and Network Security	2.67	3	2												3
21ECE201J	Python and Scientific Python		2.7	3	2	3				3				3		2.7
21ECE202T	Micro- and Nano-Fabrication Technologies	3		2	2									3		2
21ECE203J	Smart Sensors and Devices for Agriculture	3		2		2		3					2	2		2
21ECE204T	Optoelectronics	2.8	2.7	2.67	2.67											2.4
21ECE205T	Flexible Electronics	3	3										3			
21ECE212T	Control Systems: Theory and Applications	3	2.8											1		
21ECE220T	Wireless and Optical Sensors	3	1	1.5												2
21ECE221T	Radar And Navigational Aids	2.8	2	3										2.3	2	
21ECE222T	Adhoc and Sensor Networks	3		2	3		3						2	1.5	2.3	
21ECE223T	Satellite Communication and Broadcasting	2.5	2	2.5										2.3	2	3
21ECE224T	Cryptography and Network Security	2.6	3	2												
21ECE225T	Optical Systems and Networks	3	2	2.5	2.5					3						3
21ECE240T	Wavelets and Signal Processing	2	2	2.25	1									1		2
21ECE241J	Audio and Speech Processing	3	2	2		3	1									2
21ECE242J	Pattern Recognition and Neural Networks	1.5	1	2.3	3	3									2	2.5
21ECE260T	Industrial Electronics	2.75	2	2	3									1.7	2	
21ECE261T	Measurements and Instrumentation	3	2	2	2								2	1		
21ECE262T	Low Power Sensors Technology	2.2		3										2.7		
21ECE263T	Micro, Nano Electro Mechanical Devices	2.4	2	2.75										3	2.7	3
21ECE301T	Nanoscale Electronic Devices	3	2.5			2.5								2		2.5
21ECE302J	Real Time Operating Systems	3	3	3		2								2		
21ECE303T	MEMS Technologies	2.2	2	3										2	2.8	
21ECE304T	Cyber Physical System Framework	3	2.2	3		3				3						
21ECE305J	Machine Learning Algorithms	3	1.3		3	1.8								1.4		
21ECE320T	Software Defined Networks	3												2.3	2	1
21ECE321T	RF and Microwave Semiconductor Devices	3	1.8	1.5										2		1
21ECE322T	Data Analytics using R		3	3		2								3		3
21ECE323T	Cyber Security		3	3										3		
21ECE324T	Advanced Mobile Communication Systems	3	2	2	2.5					3			3		2	
21ECE340J	Digital Image and Video Processing	2.6	2.3	2.3	3									2.6	2.5	1
21ECE341J	DSP System Design	1	2.3	3	2.5											2
21ECE361T	Consumer Electronics and Trouble shooting	2.75	2	2	3									1.7	2.5	
21ECE362T	Quality and Reliability Engineering	3	1.5	2												2
21ECE363T	Electronic Packaging	3	2										2.3	2.3		
21ECE364T	Digital Signal Processors, Architectures and Applications	2.2		3										2	2	
21ECE366T	Digital Integrated Circuits and Synthesis	3	2	3	1	2								1.5	2.7	

Course Code	Course Name	Program Outcomes (PO)												PSO		
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
		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
21ECE401T	Advanced Digital System Design	3	2	2.2		3								1		1
21ECE402T	Semiconductor Device Modeling	3	2	3												2
21ECE403T	Microwave Integrated Circuits	3	2	1.67												2
21ECE404T	Terahertz Devices and Applications	3	2.8	2	2			2						2.3	2	3
21ECE420T	Information Theory and Coding		3	3											2	
21ECE421T	Wireless Communication Networks	3	2.8	2	2			2						2.3	2	3
21ECE440T	Adaptive Signal Processing	3	2.2	2.75										2	1.5	1
21ECE441T	Machine Perception with Cognition	2.6	2	3	3									2	3	
21ECE442T	Multimedia Compression Techniques	3	2	2.3										1	1	2
21ECE460T	Emerging Processor based System Design		2	2.4	1.66	1.5									2	2
21ECE461T	Semiconductor Memory Design	2.8	2											1.8		
21ECE463T	Scripting Language for Electronic Design Automation	-	2	3	2.66	2										2
21ECE464T	Statistical Analysis and Optimization for VLSI	1	2	3	2.5											1.8
21ECE468T	System and Network on Chip		2.5	3	2	2								3		2
21GNP301L	Community Connect						3		3	3	2					
21ECP302L	Project	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
21ECP303T	MOOC	3	2											3		
21ECP401L	Major Project	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
21ECP402L	Major Project	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
21ECP403L	Internship	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	Program Average	2.69	2.24	2.48	2.44	2.37	2.00	2.33		3.00	3.00	2.00	2.15	2.08	2.18	2.19

30. (g) Implementation Plan: B.Tech. in Electronics and Communication Engineering

Semester – I

Course Code	Course Title	Hours / Week L	T	P	C
21LEH101T	Communicative English	2	1	0	3
21MAB101T	Calculus and Linear Algebra	3	1	0	4
21PYB101J	Physics: Electromagnetic Theory, Quantum Mechanics, Waves and Optics	3	1	2	5
21MES102L	Engineering Graphics and Design	0	0	4	2
21EES101T	Electrical and Electronics Engineering	3	1	0	4
21CYM101T	Environmental Science	1	0	0	0
21PDM101L	Professional Skills and Practices	0	0	2	0
21LEM101T	Constitution of India	1	0	0	0
				Total Credits	18

Semester – II

Course Code	Course Title	Hours / Week L	T	P	C
21LEH102T	Chinese	2	1	0	3
21LEH103T	French				
21LEH104T	German				
21LEH105T	Japanese				
21LEH106T	Korean				
21LEH107T	Spanish				
21GNH101J	Philosophy of Engineering	1	0	2	2
21MAB102T	Advanced Calculus and Complex Analysis	3	1	0	4
21CYB101J	Chemistry	3	1	2	5
21ECC101J	Electronic System and PCB Design	2	0	2	3
21CSS101J	Programming for Problem Solving	3	0	2	4
21BTB103T	Biology	2	0	0	2
21MES101L	Basic Civil and Mechanical Workshop	0	0	4	2
21PDM102L	General Aptitude	0	0	2	0
21GNM101L	Physical and Mental Health using Yoga	0	0	2	0
21GNM102L	National Service Scheme				
21GNM103L	National Cadet Corps				
21GNM104L	National Sports Organization				
				Total Credits	25

Semester – III

Course Code	Course Title	Hours / Week L	T	P	C
21MAB201T	Transforms and Boundary Value Problems	3	1	0	4
21PDH201T	Social Engineering	2	0	0	2
21CSS201T	Computer Organization and Architecture	3	1	0	4
21ECC201T	Solid State Devices	3	0	0	3
21ECC203T	Digital Logic Design	3	0	0	3
21ECC205T	Electromagnetic Theory and Interference	3	0	0	3
21ECC211L	Devices and Digital IC Laboratory	0	0	4	2
21LEM201T	Professional Ethics	1	0	0	0
21PDM201L	Verbal Reasoning	0	0	2	0
21LEM202T	Universal Human Values-II: Understanding Harmony and Ethical Human Conduct	2	1	0	3
				Total Credits	24

Semester – IV

Course Code	Course Title	Hours / Week L	T	P	C
21MAB203T	Probability and Stochastic Processes	3	1	0	4
21ECC202T	Analog and Linear Electronic Circuits	3	0	0	3
21ECC204T	Signal Processing	3	0	0	3
21ECC222L	Analog and Linear Electronic Circuits Laboratory	0	0	4	2
21CSC206T	Artificial Intelligence	2	1	0	3
E	Professional Elective-I				3
21DCS201P	Design Thinking and Methodology	1	2	0	3
21PDM202L	Critical and Creative Thinking Skills	0	0	2	0
				Total Credits	21

Semester – V

Course Code	Course Title	Hours / Week L	T	P	C
21MAB302T	Discrete Mathematics	3	1	0	4
21ECC301P	Microprocessor, Microcontroller, and Interfacing Techniques	3	1	0	4
21ECC303T	VLSI Design and Technology	3	0	0	3
21ECC311L	VLSI Design Laboratory	0	0	4	2
E	Professional Elective – II				3
O	Open Elective – I				3
21GNP301L	Community Connect	0	0	2	1
21PDM301L	Analytical and Logical Thinking Skills	0	0	2	0
21LEM301T	Indian Art Form	1	0	0	0
				Total Credits	20

Semester – VI

Course Code	Course Title	Hours / Week L	T	P	C
21CSS303T	Data Science	2	0	0	2
21ECC302T	Analog and Digital Communication	3	0	0	3
21ECC304T	Microwave and Optical Communication	3	0	0	3
21ECC322L	Communication Laboratory	0	0	4	2
E	Professional Elective – III				3
E	Professional Elective – IV				3
O	Open Elective – II				3
21ECP302L	Project	0	0	6	3
21ECP303T	MOOC	3	0	0	
21PDM302L	Employability Skills and Practices	0	0	2	0
21LEM302T	Indian Traditional Knowledge	1	0	0	0
				Total Credits	22

Semester – VII

Course Code	Course Title	Hours / Week L	T	P	C
21GNH401T	Behavioral Psychology	2	1	0	3
21ECC401T	Wireless Communication and Antenna Systems	3	0	0	3
21ECC402P	Computer Communication and Network Security	2	1	0	3
E	Professional Elective – V				3
E	Professional Elective – VI				3
O	Open Elective –III				3
				Total Credits	18

Semester - VIII

Course Code	Course Title	Hours / Week L	T	P	C
21ECP401L	Major Project	0	0	30	15
21ECP402L	Major Project	0	0	20	10
21ECP403L	Internship#	0	0	10	5
				Total Credits	15

#Students have to register either 21ECP401L or 21ECP402L and 21ECP403L both in eighth semester

SRM INSTITUTE OF SCIENCE AND TECHNOLOGY

(Deemed to be University u/s 3 of UGC Act, 1956)

Kattankulathur, Chengalpattu District 603203, Tamil Nadu, India