

ACADEMIC CURRICULA
UNDERGRADUATE/ INTEGRATED
POST GRADUATE DEGREE
PROGRAMMES

(With exit option of Diploma)

(Choice Based Flexible Credit System)

Regulations 2021

Volume – 1

(Updated on July 2025)



SRM
INSTITUTE OF SCIENCE & TECHNOLOGY
(Deemed to be University u/s 3 of UGC Act, 1956)

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Kattankulathur, Chengalpattu District 603203,

Tamil Nadu, India

21. B.Tech. in Computer Science and Engineering with Specialization in Blockchain Technology

21. (a) Mission of the Department

Mission Stmt – 1	To impart knowledge in cutting edge Computer Science and Engineering technologies in par with industrial standards.
Mission Stmt – 2	To collaborate with renowned academic institutions to uplift innovative research and development in Computer Science and Engineering and its allied fields to serve the needs of society
Mission Stmt – 3	To demonstrate strong communication skills and possess the ability to design computing systems individually as well as part of a multidisciplinary teams.
Mission Stmt – 4	To instill societal, safety, cultural, environmental, and ethical responsibilities in all professional activities
Mission Stmt – 5	To produce successful Computer Science and Engineering with specialization of block chain technology graduates with personal and professional responsibilities and commitment to lifelong learning

21. (b) Program Educational Objectives (PEO)

PEO – 1	Graduates will be able to perform in technical/managerial roles ranging from design, development, problem solving to production support in software industries and R&D sectors.
PEO – 2	Graduates will be able to successfully pursue higher education in reputed institutions.
PEO – 3	Graduates will have the ability to adapt, contribute and innovate new technologies and systems in the key domains of Computer Science and Engineering.
PEO – 4	Graduates will be ethically and socially responsible solution providers and entrepreneurs in Computer Science and other engineering disciplines.
PEO – 5	Graduates will possess the additional skills in Ethereum, hyper ledger, business models and smart contracts

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

	Mission Stmt. - 1	Mission Stmt. - 2	Mission Stmt. - 3	Mission Stmt. - 4	Mission Stmt. - 5
PEO - 1	3	-	-	-	-
PEO - 2	-	-	2	-	-
PEO - 3	-	3	3	-	-
PEO - 4	-	-	-	2	-
PEO - 5	-	-	-	-	3

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

21. (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	PSO-1	PSO-2	PSO-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			
PEO - 1	3	-	-	1	-	2	-	3	2	3	-	-	3	-	-
PEO - 2	-	2	2	-	3	-	3	2	-	-	-	-	-	2	-
PEO - 3	-	3	3	2	-	-	-	-	-	2	-	3	-	2	3
PEO - 4	-	2	3	-	-	3	2	-	2	-	2	2	-	2	3
PEO - 5	2	-	-	3	3	2	-	-	-	-	-	-	-	-	3

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

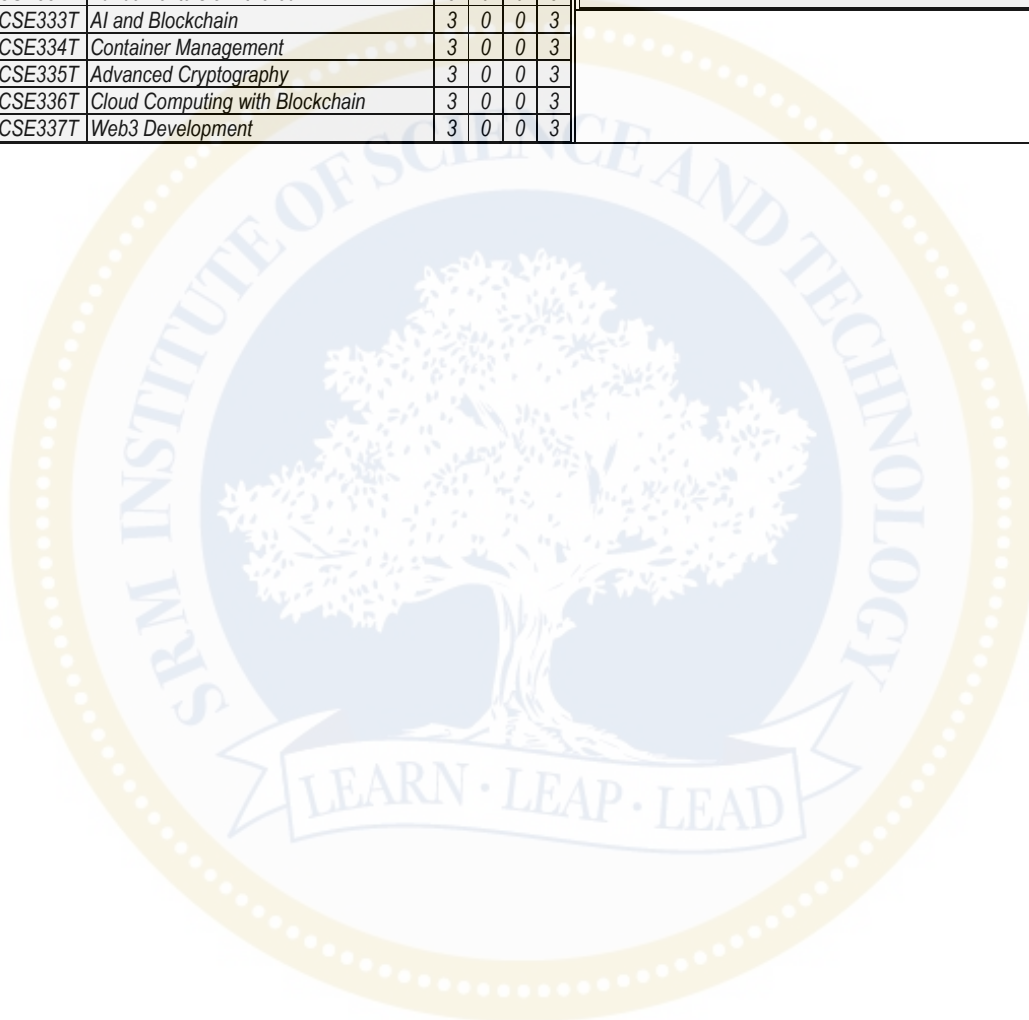
PSO – Program Specific Outcomes (PSO)

PSO - 1	To understand, analyze, design, and develop computing solutions by applying fundamental concepts of computer science and engineering.
PSO - 2	To apply computing principles, skills and practices to develop solutions using logical and reasoning skills, for real-life problems.
PSO - 3	To understand the concepts, technology and tools used in blockchain for implementing solutions to real-world problems.

21. (e) Program Structure: B.Tech. in Computer Science and Engineering with Specialization in Blockchain Technology

Humanities & Social Sciences including Management Courses (H)						Basic Science Courses (B)				
Course Code	Course Title	Hours / Week			C	Course Code	Course Title	Hours / Week		
		L	T	P				L	T	P
21LEH101T	Communicative English	2	1	0	3	21MAB101T	Calculus and Linear Algebra	3	1	0
21LEH102T	Chinese					21BTB102T	Introduction to Computational Biology	2	0	0
21LEH103T	French					21MAB102T	Advanced Calculus and Complex Analysis	3	1	0
21LEH104T	German					21MAB201T	Transforms and Boundary Value Problems	3	1	0
21LEH105T	Japanese	2	1	0	3	21CYB101J	Chemistry	3	1	2
21LEH106T	Korean					21PYB102J	Semiconductor Physics and Computational Methods	3	1	2
21LEH107T	Spanish					21MAB204T	Probability and Queueing Theory	3	1	0
21LEH108T	Russian					21MAB302T	Discrete Mathematics	3	1	0
21GNH101J	Philosophy of Engineering	1	0	2	2	Total Credits			32	
21PDH209T ¹	Social Engineering	2	0	0	2					
21GNH401TA	Behavioral Psychology	2	1	0	3					
Total Credits					13					
Engineering Science Courses (S)						Professional Core Courses (C)				
Course Code	Course Title	Hours / Week			C	Course Code	Course Title	Hours / Week		
		L	T	P				L	T	P
21EES101T	Electrical and Electronics Engineering	3	1	0	4	21CSC101T	Object Oriented Design and Programming	2	1	0
21MES101L ¹	Basic Civil and Mechanical Workshop	0	0	4	2	21CSC201J	Data Structures and Algorithms	3	0	2
21MES102L ¹	Engineering Graphics and Design	0	0	4	2	21CSC202J	Operating Systems	3	0	2
21CSS101J	Programming for Problem Solving	3	0	2	4	21CSC203P ¹	Advanced Programming Practice	3	1	0
21CSS201T	Computer Organization and Architecture	3	1	0	4	21CSC204J	Design and Analysis of Algorithms	3	0	2
21DCS201P ¹	Design Thinking and Methodology	1	2	0	3	21CSC205P ¹	Database Management Systems	3	1	0
21CSS303T	Data Science	2	0	0	2	21CSC206T	Artificial Intelligence	2	1	0
Total Credits					21	21CSC301T	Formal Language and Automata	3	0	0
						21CSC302J	Computer Networks	3	0	2
						21CSC303J	Software Engineering and Project Management	2	0	2
						21CSC304J	Compiler Design	2	0	2
						21CSC305T	Blockchain using Cryptography	3	0	0
						Total Credits			42	
Open Elective Courses (O) (Any 3 courses)						Non Credit Courses (M)				
Course Code	Course Title	Hours / Week			C	Course Code	Course Title	Hours / Week		
		L	T	P				L	T	P
21CSO351T	Web Programming	2	1	0	3	21PDM101L ¹	Professional Skills and Practices	0	0	2
21CSO352T	Python Programming	2	1	0	3	21PDM102L ¹	General Aptitude	0	0	2
21CSO353T	Mobile Application Development	2	1	0	3	21PDM201L ¹	Verbal Reasoning	0	0	2
21CSO354T	Data Analytics	2	1	0	3	21PDM202L ¹	Critical and Creative Thinking Skills	0	0	2
Total Credits					09	21PDM301L ¹	Analytical and Logical Thinking Skills	0	0	2
						21PDM302L ¹	Employability Skills and Practices	0	0	2
						21CYM101T ¹	Environmental Science	1	0	0
						21LEM101T ¹	Constitution of India	1	0	0
						21LEM102T ¹	Universal Human Values – Introduction	1	0	0
						21LEM201T ¹	Professional Ethics	1	0	0
						21LEM202T ¹	Universal Human Values-II: Understanding Harmony and Ethical Human Conduct	2	1	0
						21LEM301T ¹	Indian Art Form	1	0	0
						21LEM302T ¹	Indian Traditional Knowledge	1	0	0
						21GNM101L ¹	Physical and Mental Health using Yoga			
						21GNM102L ¹	National Service Scheme	0	0	2
						21GNM103L ¹	National Cadet Corps			
						21GNM104L ¹	National Sports Organization			
						Total Credits			03	
Project Work, Seminar, Internship in Industry / Higher Technical Institutions (P)										
Course Code	Course Title	Hours / Week			C					
		L	T	P						
21GNP301L ¹	Community Connect	0	0	2	1					
21CSP302L ¹	Project	0	0	6	3					
21CSP303T ¹	MOOC	3	0	0						
21CSP401L	Major Project	0	0	30	15					
21CSP402L	Major Project	0	0	20	10					
21CSP403L	Internship#	0	0	10	5					
Total Credits					19					

Professional Elective Courses (E) (Any 8 Courses)							Professional Elective Courses (E)						
Course Code	Course Title	Hours / Week			C		Course Code	Course Title	Hours / Week			C	
		L	T	P					L	T	P		
21CSE231T	Fundamentals of Blockchain	3	0	0	3		21CSE338T	Trust based computing	3	0	0	3	
21CSE232T	IoT and Blockchain	3	0	0	3		21CSE402P	Intelligent Systems for IoT Applications	2	1	0	3	
21CSE233T	Distributed Systems and Applications	3	0	0	3		21CSE431T	Building Private Blockchain	3	0	0	3	
21CSE234T	Principles of Cryptography	3	0	0	3		21CSE432T	Blockchain Technology with Hyperledger	3	0	0	3	
21CSE306P	Applied Generative AI	2	1	0	3		21CSE433T	Blockchain Business Models	3	0	0	3	
21CSE314P	Mastering Blockchain: Foundations to Consensus	2	1	0	3		21CSE434T	Distributed Ledger Technology	3	0	0	3	
21CSE315P	Data Orchestration and Management in Cloud Ecosystems	2	1	0	3		21CSE435T	Smart Contracts and Application Development	3	0	0	3	
21CSE331T	Cryptocurrencies and Blockchain Technology	3	0	0	3		21CSE436T	Bitcoin Essentials and Use Cases	3	0	0	3	
21CSE332T	Fundamentals of Ethereum	3	0	0	3		21CSE437T	Decentralized Applications on Blockchain	3	0	0	3	
21CSE333T	AI and Blockchain	3	0	0	3		21CSE438T	Web Security	3	0	0	3	
21CSE334T	Container Management	3	0	0	3		Total Credits						24
21CSE335T	Advanced Cryptography	3	0	0	3								
21CSE336T	Cloud Computing with Blockchain	3	0	0	3								
21CSE337T	Web3 Development	3	0	0	3								



21. (f) **Programme Articulation: B.Tech. in Computer Science and Engineering with Specialization in Blockchain Technology**

[illegible]

21. (g) Implementation Plan: B.Tech. in Computer Science and Engineering with Specialization in Blockchain Technology

Semester – I						
Course Code	Course Title	Hours / Week			C	
		L	T	P		
21LEH102T	Chinese					
21LEH103T	French					
21LEH104T	German					
21LEH105T	Japanese	2	1	0	3	
21LEH106T	Korean					
21LEH107T	Spanish					
21LEH108T	Russian					
21GNH101J	Philosophy of Engineering	1	0	2	2	
21MAB101T	Calculus and Linear Algebra	3	1	0	4	
21CYB101J	Chemistry	3	1	2	5	
21BTB102T	Introduction to Computational Biology	2	0	0	2	
21CSS101J	Programming for Problem Solving	3	0	2	4	
21MES101L ¹	Basic Civil and Mechanical Workshop	0	0	4	2	
21PDM101L ¹	Professional Skills and Practices	0	0	2	0	
21GNM101L ¹	Physical and Mental Health using Yoga					
21GNM102L ¹	National Service Scheme	0	0	2	0	
21GNM103L ¹	National Cadet Corps					
21GNM104L ¹	National Sports Organization					
Total Credits						22

Semester – II						
Course Code	Course Title	Hours / Week			C	
		L	T	P		
21LEH101T	Communicative English	2	1	0	3	
21MAB102T	Advanced Calculus and Complex Analysis	3	1	0	4	
21PYB102J	Semiconductor Physics and Computational Methods	3	1	2	5	
21MES102L ¹	Engineering Graphics and Design	0	0	4	2	
21EES101T	Electrical and Electronics Engineering	3	1	0	4	
21CSC101T	Object Oriented Design and Programming	2	1	0	3	
21CYM101T ¹	Environmental Science*	1	0	0	0	
21PDM102L ¹	General Aptitude*	0	0	2	0	
21LEM101T ¹	Constitution of India	1	0	0	0	
Total Credits						21

Semester – IV						
Course Code	Course Title	Hours / Week			C	
		L	T	P		
21MAB204T	Probability and Queueing Theory	3	1	0	4	
21CSC204J	Design and Analysis of Algorithms	3	0	2	4	
21CSC205P ¹	Database Management Systems	3	1	0	4	
21CSC206T	Artificial Intelligence	2	1	0	3	
E	Professional Elective-I				3	
21PDH209T ¹	Social Engineering	2	0	0	2	
21PDM202L ¹	Critical and Creative Thinking Skills	0	0	2	0	
21LEM202T ¹	Universal Human Values-II: Understanding Harmony and Ethical Human Conduct	2	1	0	3	
Total Credits						23

Semester – VI						
Course Code	Course Title	Hours / Week			C	
		L	T	P		
21CSS303T	Data Science	2	0	0	2	
21CSC303J	Software Engineering and Project Management	2	0	2	3	
21CSC304J	Compiler Design	2	0	2	3	
E	Professional Elective – III				3	
E	Professional Elective – IV				3	
O	Open Elective – II				3	
21CSP302L ¹	Project	0	0	6	3	
21CSP303T ¹	MOOC	3	0	0		
21PDM302L ¹	Employability Skills and Practices	0	0	2	0	
21LEM302T ¹	Indian Traditional Knowledge	1	0	0	0	
Total Credits						20

Semester - VIII						
Course Code	Course Title	Hours / Week			C	
		L	T	P		
21CSP401L	Major Project	0	0	30	15	
21CSP402L	Major Project	0	0	20	10	
21CSP403L	Internship#	0	0	10	5	
Total Credits						15

Semester – VII						
Course Code	Course Title	Hours / Week			C	
		L	T	P		
21GNH401TA	Behavioral Psychology	2	1	0	3	
E	Professional Elective – V				3	
E	Professional Elective – VI				3	
E	Professional Elective – VII				3	
E	Professional Elective – VIII				3	
O	Open Elective –III				3	
Total Credits						18

Semester – VIII						
Course Code	Course Title	Hours / Week			C	
		L	T	P		
21CSP401L	Major Project	0	0	30	15	
21CSP402L	Major Project	0	0	20	10	
21CSP403L	Internship#	0	0	10	5	
Total Credits						15

#Students have to register either 21CSP401L or 21CSP402L and 21CSP403L both in eighth semester

#Students have to register either 21CSP401L or 21CSP402L and 21CSP403L both in eighth semester