

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)

SRM INSTITUTE OF SCIENCE AND TECHNOLOGY

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

Kattankulathur, Chengalpattu District 603203,

Tamil Nadu, India

22. B.Tech. in Computer Science and Engineering with Specialization in Cloud Computing

22. (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 graduates with personal and professional responsibilities and commitment to lifelong learning

22. (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 Computer Science and Engineering with Cloud computing discipline knowledge of computing, networking, and intelligent storage system.

22. (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	-	-	-	1
PEO - 2	-	-	2	-	-
PEO - 3	-	3	3	-	-
PEO - 4	-	-	-	2	3
PEO - 5	-	-	-	3	-

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

22. (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	-	-	2	2	2
PEO - 2	-	2	2	-	3	-	3	2	-	-	-	-	2	2	2
PEO - 3	-	3	3	2	-	-	-	-	-	2	-	3	2	3	2
PEO - 4	-	2	3	-	-	3	2	-	2	-	2	2	3	3	3
PEO - 5	-	-	-	-	-	3	-	-	3	3	3	3	3	3	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	Ability to Develop an application and integrate in Cloud Computing Platform

22. (e) Program Structure: B.Tech. in Computer Science and Engineering with Specialization in Cloud Computing

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					
21LEH103T	French					
21LEH104T	German					
21LEH105T	Japanese	2	1	0	3	
21LEH106T	Korean					
21LEH107T	Spanish					
21LEH108T	Russian					
21GNH101J	Philosophy of Engineering	1	0	2	2	
21PDH209T ¹	Social Engineering	2	0	0	2	
21GNH401TA	Behavioral Psychology	2	1	0	3	
Total Credits 13						

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

Non Credit Courses (M)						
Course Code	Course Title	Hours / Week				
		L	T	P	C	
21PDM101L ¹	Professional Skills and Practices	0	0	2	0	
21PDM102L ¹	General Aptitude	0	0	2		
21PDM201L ¹	Verbal Reasoning	0	0	2		
21PDM202L ¹	Critical and Creative Thinking Skills	0	0	2		
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	3	
21LEM301T ¹	Indian Art Form	1	0	0	0	
21LEM302T ¹	Indian Traditional Knowledge	1	0	0	0	
21GNM101L ¹	Physical and Mental Health using Yoga	0	0	2	0	
21GNM102L ¹	National Service Scheme					
21GNM103L ¹	National Cadet Corps					
21GNM104L ¹	National Sports Organization					
Total Credits 03						

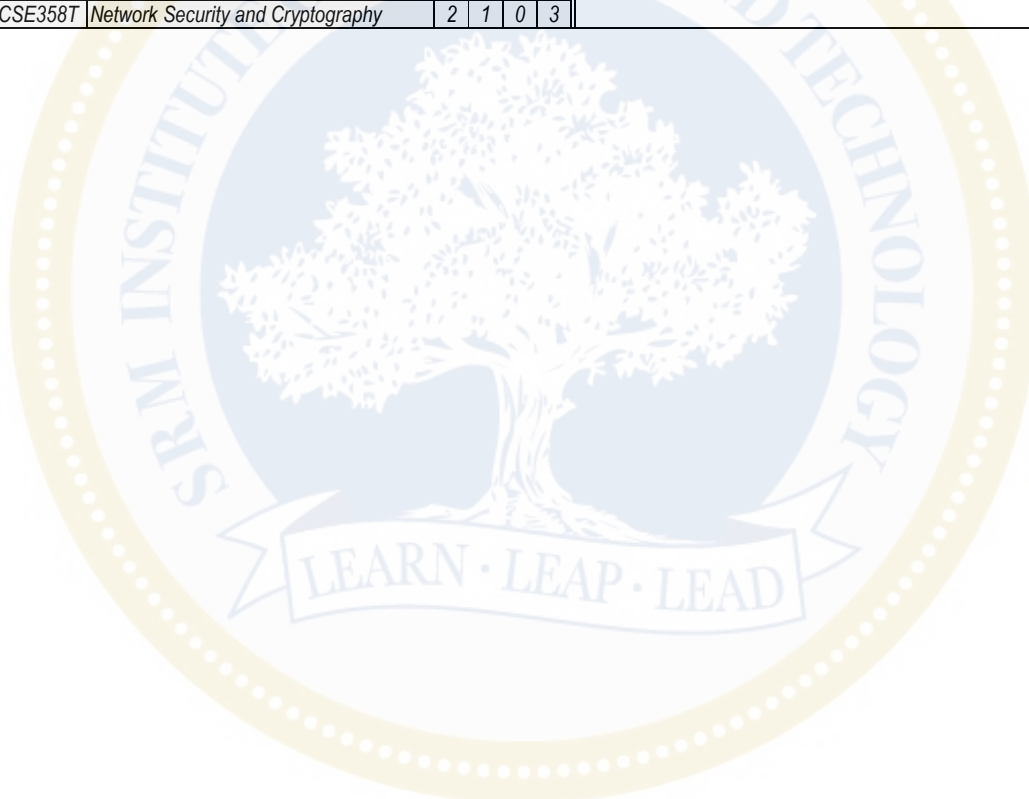
Basic Science Courses (B)					
Course Code	Course Title	Hours / Week			
		L	T	P	C
21PYB102J	Semiconductor Physics and Computational Methods	3	1	2	5
21CYB101J	Chemistry	3	1	2	5
21MAB101T	Calculus and Linear Algebra	3	1	0	4
21MAB102T	Advanced Calculus and Complex Analysis	3	1	0	4
21MAB206T	Numerical Methods and Analysis	3	1	0	4
21MAB204T	Probability and Queueing Theory	3	1	0	4
21MAB302T	Discrete Mathematics	3	1	0	4
21BTB102T	Introduction to Computational Biology	2	0	0	2
Total Credits 32					

Professional Core Courses (C)					
Course Code	Course Title	Hours / Week			
		L	T	P	C
21CSC101T	Object Oriented Design and Programming	2	1	0	3
21CSC201J	Data Structures and Algorithms	3	0	2	4
21CSC202J	Operating Systems	3	0	2	4
21CSC203P ¹	Advanced Programming Practice	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
21CSC301T	Formal Language and Automata	3	0	0	3
21CSC302J	Computer Networks	3	0	2	4
21CSC303J	Software Engineering and Project Management	2	0	2	3
21CSC316J	Cloud Architecture and Protocols	2	0	2	3
21CSC314P ¹	Big Data Essentials	2	1	0	3
Total Credits 42					

Open Elective Courses (O) (Any 3 courses)					
Course Code	Course Title	Hours / Week			
		L	T	P	C
21CSO351T	Web Programming	2	1	0	3
21CSO352T	Python Programming	2	1	0	3
21CSO353T	Mobile Application Development	2	1	0	3
21CSO354T	Data Analytics	2	1	0	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 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	
21CSP402L	Major Project	0	0	20	
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				Course Code	Course Title	Hours / Week			
		L	T	P	C			L	T	P	C
21CSE261T	Fundamentals of Cloud Computing	2	1	0	3	21CSE359T	Information Storage and Management	2	1	0	3
21CSE262T	Communication Systems Engineering	2	1	0	3	21CSE360TA	Parallel Computing and GPU Programming	2	1	0	3
21CSE253T	Internet of Things	2	1	0	3	21CSE402P ¹	Intelligent Systems for IoT Applications	2	1	0	3
21CSE263T	Digital Communication Systems	2	1	0	3	21CSE461T	Cloud Security	2	1	0	3
21CSE306P ¹	Applied Generative AI	2	1	0	3	21CSE463T	Cloud Strategy Planning and Management	2	1	0	3
21CSE315P ¹	Data Orchestration and Management in Cloud Ecosystems	2	1	0	3	21CSE465T	Cloud Application Development	2	1	0	3
21CSE329T	Service Oriented Architecture and Microservices	2	1	0	3	21CSE466T	Network Design and Management	2	1	0	3
21CSE330T	Cloud Architecture	2	1	0	3	21CSE455T	Social Network Analysis	2	1	0	3
21CSE363T	Cloud Services Solution Architect	2	1	0	3	21CSE456T	Software Defined Networks	2	1	0	3
21CSE364T	Data Centric Networking and System Design	2	1	0	3	21CSE454T	Computer Vision	2	1	0	3
21CSE354T	Full Stack Web Development	2	1	0	3	21CSE458T	Wireless and Mobile Communication	2	1	0	3
21CSE355T	Data Mining and Analytics	2	1	0	3	21CSE459T	Wireless Sensor Networks	2	1	0	3
21CSE356T	Natural Language Processing	2	1	0	3	21CSE460T	Network Protocols and Algorithms	2	1	0	3
21CSE357T	Distributed Computing	2	1	0	3	Total Credits					24
21CSE358T	Network Security and Cryptography	2	1	0	3						



22. (f) **Programme Articulation: B.Tech. in Computer Science and Engineering with Specialization in Cloud Computing**

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
21CSS101J	Programming for Problem Solving	2	3	-	-	-	-	-	-	-	-	2	-	3	-	
21CSS303T	Data Science	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-
21CSS201T	Computer Organization and Architecture	3	2	-	-	-	-	-	-	-	-	-	-	1	2	1
21CSC201J	Data Structures and Algorithms	2	3	3	1	-	-	-	-	-	-	-	-	1	1	2
21CSC101T	Object Oriented Design and Programming	-	2	2	-	2	-	-	-	-	-	3	-	2	2	2
21CSC204J	Design and Analysis of Algorithms	2	1	2	1	-	-	-	-	-	3	-	3	3	1	-
21CSC202J	Operating Systems	3	3	3	2	-	-	-	-	-	-	3	2	-	-	-
21CSC303J	Software Engineering and Project Management	-	3	2	-	-	-	-	-	2	-	2	-	3	-	-
21CSC203P	Advanced Programming Practice	3	2	2	1	2	-	-	-	1	-	-	-	2	-	-
21CSC301T	Formal Language and Automata	2	2	2	-	-	-	-	-	-	-	-	-	-	3	-
21CSC302J	Computer Networks	3	-	-	2	3	-	-	-	-	-	-	-	1	-	-
21CSC205P	Database Management Systems	3	2	2	-	-	-	-	-	-	-	-	2	1	-	-
21CSC206T	Artificial Intelligence	1	2	3	-	-	-	-	-	-	-	-	1	2	-	-
21CSC316J	Cloud Architecture and Protocols	3	2	-	-	3	-	-	-	-	-	-	-	2	-	3
21CSC314P	Big Data Essentials	2	-	-	3	3	-	-	-	-	-	-	-	-	-	3
21CSE261T	Fundamentals of Cloud Computing	3	2	-	2	2	-	-	-	-	-	-	3	-	3	3
21CSE262T	Communication Systems Engineering	3	-	-	3	-	-	-	-	-	-	-	3	-	-	-
21CSE253T	Internet of Things	1	2	1	3	1	2	-	-	-	-	-	-	-	-	2
21CSE263T	Digital Communication Systems	2	3	-	-	-	-	-	-	-	-	-	3	-	-	-
21CSE329T	Service Oriented Architecture and Microservices	2	3	2	-	-	-	-	-	-	-	-	3	-	-	-
21CSE330T	Cloud Architecture	3	-	-	2	-	-	-	-	-	-	-	-	-	-	3
21CSE363T	Cloud Services Solution Architect	2	3	-	3	-	-	-	-	-	-	-	-	-	-	3
21CSE364T	Data Centric Networking and System Design	-	2	-	3	-	-	-	-	-	-	-	-	-	-	3
21CSE354T	Full Stack Web Development	-	2	2	-	2	-	-	-	-	-	-	3	-	-	2
21CSE355T	Data Mining and Analytics	1	2	-	-	3	-	-	-	-	-	-	2	-	-	-
21CSE356T	Natural Language Processing	3	3	2	3	3	-	-	-	-	-	-	2	-	-	-
21CSE357T	Distributed Computing	-	-	2	2	2	-	-	-	-	-	-	2	-	-	-
21CSE358T	Network Security and Cryptography	2	3	2	-	2	-	-	-	-	-	-	2	-	-	-
21CSE359T	Information Storage and Management	-	3	3	-	1	-	-	-	-	-	-	1	2	-	-
21CSE360TA	Parallel Computing and GPU Programming	1	1	1	1	2	-	-	-	-	-	-	-	3	-	-
21CSE461T	Cloud Security	3	2	3	-	-	-	-	-	-	-	-	-	-	-	3
21CSE463T	Cloud Strategy Planning and Management	3	3	-	3	-	-	-	-	-	-	-	-	-	-	3
21CSE465T	Cloud Application Development	3	-	3	-	2	-	-	-	-	-	-	-	-	-	3
21CSE466T	Network Design and Management	2	3	-	3	-	-	-	-	-	-	-	2	-	-	-
21CSE455T	Social Network Analysis	2	3	2	3	3	-	-	-	-	-	-	-	2	2	2
21CSE456T	Software Defined Networks	1	1	1	3	1	2	-	-	-	-	-	2	-	-	-
21CSE454T	Computer Vision	2	2	1	1	1	-	-	-	-	-	-	3	-	2	-
21CSE458T	Wireless and Mobile Communication	1	2	2	-	-	-	-	-	-	-	-	1	-	-	-
21CSE459T	Wireless Sensor Networks	1	2	2	-	-	-	-	-	-	-	-	1	-	-	-
21CSE460T	Network Protocols and Algorithms	1	2	1	-	-	-	-	-	-	-	-	1	-	-	-
21GNP301L	Community Connect	-	-	-	-	-	-	-	-	3	-	-	3	-	-	-
21CSP302L	Project	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3
21CSP303T	MOOC	2	2	2	2	2	2	2	2	2	2	2	-	2	2	2
21CSP401L	Major Project	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
21CSP402L	Major Project	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
21CSP403L	Internship	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Program Average		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3

Semester – I					
Course Code	Course Title	Hours / Week			C
		L	T	P	
21LEH102T	Chinese	2	1	0	3
21LEH103T	French				
21LEH104T	German				
21LEH105T	Japanese				
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	0	0	2	0
21GNM102L ¹	National Service Scheme				
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 – III					
Course Code	Course Title	Hours / Week			C
		L	T	P	
21MAB206T	Numerical Methods and Analysis	3	1	0	4
21DCS201P ¹	Design Thinking and Methodology	1	2	0	3
21CSS201T	Computer Organization and Architecture	3	1	0	4
21CSC201J	Data Structures and Algorithms	3	0	2	4
21CSC202J	Operating Systems	3	0	2	4
21CSC203P ¹	Advanced Programming Practice	3	1	0	4
21LEM201T ¹	Professional Ethics	1	0	0	0
21PDM201L ¹	Verbal Reasoning	0	0	2	0
Total Credits					23

Semester – V					
Course Code	Course Title	Hours / Week			C
		L	T	P	
21MAB302T	Discrete Mathematics	3	1	0	4
21CSC301T	Formal Language and Automata	3	0	0	3
21CSC302J	Computer Networks	3	0	2	4
21CSC314P ¹	Big Data Essentials	2	1	0	3
E	Professional Elective – II				3
O	Open Elective – I				3
21GNP301L ¹	Community Connect	0	0	2	1
21PDM301L ¹	Analytical and Logical Thinking Skills	0	0	2	0
21LEM301T ¹	Indian Art Form	1	0	0	0
Total Credits					21

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
21CSC316J	Cloud Architecture and Protocols	2	0	2	3
E	Professional Elective – III				3
E	Professional Elective – IV				3
O	Open Elective – II				3