

ACADEMIC CURRICULA

POST GRADUATE DEGREE PROGRAMMES

Master of Technology

(Choice Based Flexible Credit System)

Regulations 2021

Volume – 21 Curriculum



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

26 M.Tech in Information Security and Cyber Forensics

26. (a) Department Vision Statement

Stmnt - 1	<i>To Nurture as globally recognizable department in imparting the student's high-quality education and providing high confidence, unique knowledge and research experience in the field of networking, cyber security, forensics, information technology, cognitive computing and internet of things.</i>
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26. (b) Department Mission Statement

Stmnt - 1	<i>To provide world-class IT professionals with appropriate industry and research-based curriculum.</i>
Stmnt - 2	<i>To train the students, that leads to entrepreneurship and develop societal need-based industries.</i>
Stmnt - 3	<i>To nourish the students as socially responsible professionals by providing them training in personality development, ethics, and leadership program.</i>

26. (c) Program Education Objectives (PEO)

PEO - 1	<i>Graduates will be able to demonstrate their knowledge and skills acquired in Computer Science and Engineering domain</i>
PEO - 2	<i>Graduates will be able to successfully pursue their research in reputed institutions</i>
PEO - 3	<i>Graduates will have the proficiency to adapt, contribute and innovate new technologies and systems in their job domains with appropriate professional skills</i>
PEO - 4	<i>Graduates will be ethically and socially responsible solution providers and entrepreneurs in Computer Science and other engineering disciplines.</i>
PEO - 5	<i>Graduates will have the ability to excel in their career producing outstanding contribution in Computer Science with cybersecurity domain.</i>

26. (d) Consistency of PEO's with Mission of the Department

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

26. (e) PO – Program Outcomes

PO - 1	<i>An ability to independently carry out research /investigation and development work to solve practical problems.</i>
PO - 2	<i>An ability to write and present a substantial technical report/document.</i>
PO - 3	<i>Students should be able to demonstrate a degree of mastery over the area as per the specialization of the program. The mastery should be at a level higher than the requirements in the appropriate bachelor program.</i>

26. (f) Consistency of PEO's with Program Outcomes (PO)

	Program Outcomes (PO)		
	1	2	3
PEO - 1	3	2	3
PEO - 2	3	3	2
PEO - 3	2	2	2
PEO - 4	2	2	2
PEO - 5	2	2	3

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

26. (g) Programme Structure: M.Tech Information Security and Cyber Forensics

Professional Core Courses (C)							Professional Elective Courses (E) (7 Course only)						
Course Code	Course Title	Hours/Week			C		Course Code	Course Title	Hours/Week			C	
		L	T	P					L	T	P		
21MAC504T	Number Theory	3	1	0	4		21CSE531T	Cyber Security Operations	2	1	0	3	
21CSC503T	Security Service Management	3	1	0	4		21CSE532T	Network Management and Protocols	2	1	0		
21CSC572J	Applied Malware Analysis	3	0	2	4		21CSE533T	Firewalls and Access Controls	2	1	0		
21CSC526J	Cyber Forensic and Incident Response	3	0	2	4		21CSE534T	Network Programming and Management	2	1	0	3	
21CSC527J	Ethical Hacking and Vulnerability Assessment	3	0	2	4		21CSE535T	Network Intrusions and Computer Forensics	2	1	0		
21IPC501J ²	Research Methodology	2	1	2	4		21CSE536T	Mobile Forensics	2	1	0	3	
21CSC601T ¹	Case Studies	3	0	0	3		21CSE537T	Digital Forensics	2	1	0		
Total Credits					27		21CSE538T	Security Scripting and Analysis	2	1	0		
							21CSE539T	Principles of Secure Coding Principles	2	1	0	3	
							21CSE540T	Android Security and Design Internals	2	1	0		
							21CSE626T ³	Hacker Techniques and Incident Handling	3	0	0	3	
							21CSE628T ³	Cyber Law and Ethics	3	0	0		
							21CSE629T ³	Wireless Security	3	0	0	3	
							21CSE600T ¹	Journal Publication	0	0	0		
							21CSE630T ³	Operating System Internals	3	0	0	3	
							21CSE631T ³	Risk Assessment and Security Audit	3	0	0		
Total Credits					21		Total Credits						
							Course Delivery by online mode (³)						
Course Code	Course Title	Hours/Week			C		Course Code	Course Title	Hours/Week			C	
		L	T	P					L	T	P		
21CSP501L	Specialization Project (OR)	0	0	40	20		21CSE626T ³	Hacker Techniques and Incident Handling	3	0	0	3	
21CSP502L	Specialization Project	0	0	30	15		21CSE628T ³	Cyber Law and Ethics	3	0	0	3	
21CSP503L	Domain Internship	0	0	10	5		21CSE629T ³	Wireless Security	3	0	0	3	
Total Credits					20		21CSE630T ³	Operating System Internals	3	0	0	3	
							21CSE631T ³	Risk Assessment and Security Audit	3	0	0	3	
							Assessment by Open Book Examination (²)						
Course Code	Course Title	Hours/Week			C		Course Code	Course Title	Hours/Week			C	
		L	T	P					L	T	P		
21CSO621T	Cyber Security	3	0	0	3		21IPC501J ²	Research Methodology	2	1	2	4	
21CSO622T	Big Data Analytics	3	0	0	3								
21CSO623T	Data Sciences	3	0	0	3								
Total Credits					3								
100% assessment by the Department (¹)													
21CSC601T ¹	Case Studies	3	0	0	3								
21CSE600T ¹	Journal Publication	0	0	0	3								

All elective courses may be studied under MOOC platform

¹ 100% assessment by the Department

² Assessment by Open Book Examination

³ Course Delivery through online mode

26. (h) Implementation Plan: M.Tech Information Security and Cyber Forensics

Semester - I								Semester - II							
Code	Course Title	Hours/Week						Code	Course Title	Hours/Week					
		L	T	P	C					L	T	P	C		
21MAC504T	Number Theory	3	1	0	4			21CSC526J	Cyber Forensic and Incident Response	3	0	2	4		
21CSC503T	Security Service Management	3	1	0	4			21CSC527J	Ethical Hacking and Vulnerability Assessment	3	0	2	4		
21CSC572J	Applied Malware Analysis	3	0	2	4			21CSE533T	Firewalls and Access Controls	2	1	0			
21IPC501J ²	Research Methodology	2	1	2	4			21CSE534T	Network Programming and Management	2	1	0			
21CSE531T	Cyber Security Operations	2	1	0				21CSE535T	Network Intrusions and Computer Forensics	2	1	0			
21CSE532T	Network Management and Protocols	2	1	0				21CSE536T	Mobile Forensics	2	1	0			
Total Credits							19	21CSE537T	Digital Forensics	2	1	0			
								21CSE538T	Security Scripting and Analysis	2	1	0			
								21CSE539T	Principles of Secure Coding Principles	2	1	0			
								21CSE540T	Android Security and Design Internals	2	1	0			
								Total Credits							17
Semester - III								Semester - IV							
Code	Course Title	Hours/Week						Code	Course Title	Hours/Week					
		L	T	P	C					L	T	P	C		
	Open Elective	3	0	0	3			21CSP501L	Specialization Project	0	0	40	20		
21CSE626T ³	Hacker Techniques and Incident Handling	3	0	0				(OR)							
21CSE628T ³	Cyber Law and Ethics	3	0	0				21CSP502L	Specialization Project	0	0	30	15		
21CSE629T ³	Wireless Security	3	0	0				21CSP503L	Domain Internship	0	0	10	5		
21CSE600T ¹	Journal Publication	0	0	0				Total Credits							20
21CSE630T ³	Operating System Internals	3	0	0				# Students must register either 21CSP501L or 21CSP502L and 21CSP503L both in fourth semester							
21CSE631T ³	Risk Assessment and Security Audit	3	0	0											
21CSC601T ¹	Case Studies	3	0	0	3										
Total Credits							15								

26. (i) Program Articulation Matrix: M.Tech Information Security and Cyber Forensics

Course Code	Course Name	Programme Outcomes		
		1	2	3
21MAC504T	Number Theory	3	3	-
21CSC503T	Security Service Management			
21CSC572J	Applied Malware Analysis	1	2	3
21CSC526J	Cyber Forensic and Incident Response	1.8	1.3	2
21CSC527J	Ethical Hacking and Vulnerability Assessment	2	2	3
21CSC601T	Case Studies			
21CSE531T	Cyber Security Operations			
21CSE532T	Network Management and Protocols			
21CSE533T	Firewalls and Access Controls			
21CSE534T	Network Programming and Management			
21CSE535T	Network Intrusions and Computer Forensics			
21CSE536T	Mobile Forensics			
21CSE537T	Digital Forensics			
21CSE538T	Security Scripting and Analysis			
21CSE539T	Principles of Secure Coding Principles			
21CSE540T	Android Security and Design Internals			
21CSE626T	Hacker Techniques and Incident Handling	2	2	3
21CSE628T	Cyber Law and Ethics	1.6	3	1.3
21CSE629T	Wireless Security	1.8	2.6	1.8
21CSE630T	Operating System Internals	1.8	2.2	1.8
21CSE631T	Risk Assessment and Security Audit	1	2	3
21CSE600T	Journal Publication			
21IPC501J	Research Methodology	3	2.6	
	Open Elective			
21CSP501L	Specialization Project			
21CSP502L	Specialization Project			
21CSP503L	Domain Internship			
Program Average				



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