

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 & 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

24. B.Tech. in Computer Science and Engineering with Specialization in Cybersecurity

24. (a) Mission of the Department

| | |
|------------------|---|
| Mission Stmt – 1 | <i>To impart knowledge in cutting edge Computer Science and Engineering technologies in par with industrial standards.</i> |
| Mission Stmt – 2 | <i>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</i> |
| Mission Stmt – 3 | <i>To demonstrate strong communication skills and possess the ability to design computing systems individually as well as part of a multidisciplinary teams.</i> |
| Mission Stmt – 4 | <i>To instill societal, safety, cultural, environmental, and ethical responsibilities in all professional activities</i> |
| Mission Stmt – 5 | <i>To Identify and address the Knowledge, Professional Skills, Professional Aptitude in the field of Cyber security</i> |

24. (b) Program Educational Objectives (PEO)

| | |
|---------|--|
| PEO – 1 | <i>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.</i> |
| PEO – 2 | <i>Graduates will be able to successfully pursue higher education in reputed institutions.</i> |
| PEO – 3 | <i>Graduates will have the ability to adapt, contribute and innovate new technologies and systems in the key domains of Computer Science and Engineering.</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 be able to obtain Job orientations / proficiencies / skills in the field of cyber security and digital forensics.</i> |

24. (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

24. (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 |
| PEO - 2 | - | 2 | 2 | - | 3 | - | 3 | 2 | - | - | - | - | 2 | - | - |
| PEO - 3 | - | 3 | 3 | 2 | - | - | - | - | - | 2 | - | 3 | - | 2 | - |
| PEO - 4 | - | 2 | 3 | - | - | 3 | 2 | - | 2 | - | 2 | 2 | - | 2 | - |
| PEO - 5 | - | - | - | - | - | 3 | - | - | 3 | 3 | 3 | 3 | - | - | 3 |

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

PSO – Program Specific Outcomes (PSO)

| | |
|---------|--|
| PSO - 1 | <i>To understand, analyse, design, and develop computing solutions by applying fundamental concepts of computer science and engineering.</i> |
| PSO - 2 | <i>To apply computing principles, skills and practices to develop solutions using logical and reasoning skills, for real life problems.</i> |
| PSO - 3 | <i>To identify and utilize cyber security principles to create secure infrastructure</i> |

24. (e) Program Structure: B.Tech. in Computer Science and Engineering with Specialization in Cybersecurity

| Humanities & Social Sciences including Management Courses (H) | | | | | | | |
|--|--|-----------------|---|---|----|--|--|
| Course Code | Course Title | Hours / Week | | | C | | |
| | | L | T | P | | | |
| 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 | | |
| 21GNH401T | Behavioral Psychology | 2 | 1 | 0 | 3 | | |
| Total Credits | | | | | 13 | | |
| Engineering Science Courses (S) | | | | | | | |
| Course Code | Course Title | Hours / Week | | | C | | |
| | | L | T | P | | | |
| 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 | | | C | | |
| | | L | T | P | | | |
| 21PDM101L ¹ | Professional Skills and Practices | 0 | 0 | 2 | | | |
| 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 | 0 | | |
| 21LEM101T ¹ | Constitution of India | 1 | 0 | 0 | 0 | | |
| 21LEM102T ¹ | Universal Human Values – Introduction | 1 | 0 | 0 | 0 | | |
| 21LEM201T ¹ | Professional Ethics | 1 | 0 | 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 | | | | | | |
| 21GNM102L ¹ | National Service Scheme | | | | | | |
| 21GNM103L ¹ | National Cadet Corps | 0 | 0 | 2 | 0 | | |
| 21GNM104L ¹ | National Sports Organization | | | | | | |
| Total Credits | | | | | 03 | | |

| Basic Science Courses (B) | | | | | | | |
|--|--|-----------------|---|----|----|--|--|
| Course Code | Course Title | Hours / Week | | | C | | |
| | | L | T | P | | | |
| 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 | | | C | | |
| | | L | T | P | | | |
| 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 | | |
| 21CSC310J | Malware Analysis | 2 | 0 | 2 | 3 | | |
| 21CSC308T | Security Risk Management Principles | 3 | 0 | 0 | 3 | | |
| Total Credits | | | | | 42 | | |
| 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 | | | |
| 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 | | |
| Open Elective Courses (O) (Any 3 courses) | | | | | | | |
| Course Code | Course Title | Hours/ Week | | | C | | |
| | | L | T | P | | | |
| 21CSO270T | Cyber Security | 2 | 1 | 0 | 3 | | |
| 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 | | |

| 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 | | |
| 21CSE229J | Check point System Administration | 2 | 0 | 2 | 3 | | 21CSE387J | Hacker Techniques, Tools, and Incident Handling | 2 | 0 | 2 | 3 | |
| 21CSE281T | Cryptography and Network Security | 2 | 1 | 0 | 3 | | 21CSE399J | Comprehensive Linux for All | 2 | 0 | 2 | 3 | |
| 21CSE282T | Information Security | 3 | 0 | 0 | 3 | | 21CSE485T | Database Security | 2 | 1 | 0 | 3 | |
| 21CSE283T | Cyber Law | 2 | 1 | 0 | 3 | | 21CSE486T | Operation System Security | 2 | 1 | 0 | 3 | |
| 21CSE381T | Forensics And Incident Response | 2 | 1 | 0 | 3 | | 21CSE487T | Cyberwarfare | 2 | 1 | 0 | 3 | |
| 21CSE382T | Security Management | 2 | 1 | 0 | 3 | | 21CSE488T | Hacker Mind: Profiling the IT Criminal | 2 | 1 | 0 | 3 | |
| 21CSE383T | Security Governance, Risk and compliance | 2 | 1 | 0 | 3 | | 21CSE489T | Mobile and Wireless Security | 2 | 1 | 0 | 3 | |
| 21CSE384J | Security Audit and Risk Assessment | 2 | 0 | 2 | 3 | | 21CSE490J | Windows and Linux Internals | 2 | 0 | 2 | 3 | |
| 21CSE385J | Advanced Malware Analysis | 2 | 0 | 2 | 3 | | 21CSE491T | Cyber Crime and Digital Forensics | 2 | 1 | 0 | 3 | |
| 21CSE386J | Penetration Testing and Vulnerability Assessment | 2 | 0 | 2 | 3 | | 21CSE492T | Cyber Crimes and Cyber Security | 2 | 1 | 0 | 3 | |
| | | | | | | | Total Credits | | | | | | 24 |



24. (f) Programme Articulation: B.Tech. in Computer Science and Engineering with Specialization in Cybersecurity

| 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 |
| 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 | - |
| 21CSC310J | Malware Analysis | - | 2 | - | - | - | - | 2 | - | - | 3 | - | 3 | - | - | 3 |
| 21CSC308T | Security Risk Management Principles | - | 3 | - | - | - | - | - | - | - | - | 2 | - | - | - | 3 |
| 21CSC504J | Android Malware Analysis | - | - | - | - | - | - | 2 | - | - | 3 | - | - | - | - | 3 |
| 21CSC308T | Security Risk Management Principles | - | 3 | - | - | - | - | - | - | - | - | - | 2 | - | - | 3 |
| 21CSE281T | Cryptography and Network Security | 2 | 2 | - | - | - | - | - | - | - | - | - | - | - | - | 3 |
| 21CSE282T | Information Security | - | - | 2 | - | - | - | - | 2 | - | - | - | - | - | - | 3 |
| 21CSE283T | Cyber Law | - | - | - | - | 2 | - | 2 | - | - | - | - | - | - | - | 3 |
| 21CSE229J | Check Point System Administration | - | 1 | 2 | 3 | 2 | - | - | - | - | - | - | - | - | - | 3 |
| 21CSE381T | Forensics And Incident Response | - | - | 2 | - | - | - | - | 2 | - | - | - | - | - | - | 3 |
| 21CSE382T | Security Management | - | - | 2 | - | 2 | - | - | - | - | - | - | - | - | - | 3 |
| 21CSE383T | Security Governance, Risk and compliance | 2 | 2 | - | 2 | - | - | - | - | - | - | - | - | - | - | 3 |
| 21CSE384J | Security Audit and Risk Assessment | - | 2 | 2 | - | - | - | - | 2 | - | - | - | - | - | - | 3 |
| 21CSE385J | Advanced Malware Analysis | - | 2 | 2 | - | 2 | - | - | - | - | - | - | - | - | - | 3 |
| 21CSE386J | Penetration Testing and Vulnerability Assessment | - | 2 | 2 | - | 2 | - | - | - | - | - | - | - | - | - | 3 |
| 21CSE387J | Hacker Techniques, Tools, and Incident Handling | - | 2 | - | - | 2 | - | - | - | - | - | - | - | - | - | 3 |
| 21CSE399J | Comprehensive Linux for All | 3 | - | 2 | 2 | 3 | - | - | - | - | - | - | - | - | - | - |
| 21CSE485T | Database Security | - | 2 | - | - | 2 | - | - | 2 | - | 2 | - | - | - | - | 3 |
| 21CSE486T | Operation System Security | 2 | - | 3 | - | 3 | - | - | - | - | - | - | - | - | - | 3 |
| 21CSE487T | Cyberwarfare | - | - | 2 | - | - | - | - | 2 | - | - | - | - | - | - | 3 |
| 21CSE488T | Hacker Mind: Profiling the IT Criminal | - | - | 2 | - | 2 | - | - | - | - | - | 3 | - | - | - | 3 |
| 21CSE489T | Mobile and Wireless Security | 2 | - | 3 | - | 3 | - | - | - | - | - | - | - | - | - | 3 |
| 21CSE490J | Windows and Linux Internals | - | - | 2 | - | - | - | - | 2 | - | - | - | - | - | - | 3 |
| 21CSE491T | Cyber Crime and Digital Forensics | 2 | - | 3 | - | 3 | - | - | - | - | - | - | - | - | - | 3 |
| 21CSE492T | Cyber Crimes and Cyber Security | - | 2 | 2 | - | - | - | - | 2 | - | - | - | - | - | - | 3 |
| 21CSE531T | Cyber Security Operations | - | 2 | - | - | - | - | 2 | - | - | 3 | - | 3 | - | - | 3 |
| 21CSE532T | Network Management and Protocols | - | 3 | - | - | 3 | - | - | - | - | - | 3 | - | - | - | 3 |
| 21CSE533T | Firewalls and Access Controls | - | - | - | - | - | - | 2 | - | - | 3 | - | - | - | - | 3 |
| 21CSE534T | Network Programming and Management | - | 3 | - | - | - | - | - | - | - | - | - | 2 | - | - | 3 |
| 21CSE535T | Network Intrusions and Computer Forensics | 2 | 2 | - | - | - | - | - | - | - | - | - | - | - | - | 3 |
| 21CSE536T | Mobile Forensics | - | - | 2 | - | - | - | 2 | - | - | - | - | - | - | - | 3 |
| 21CSE537T | Digital Forensics | - | - | - | - | 2 | - | 2 | - | - | - | - | - | - | - | 3 |
| 21CSE538T | Security Scripting and Analysis | - | - | 2 | - | - | - | 2 | - | - | - | - | - | - | - | 3 |
| 21CSE539T | Principles of Secure Coding Principles | - | - | 2 | - | 2 | - | - | - | - | - | - | - | - | - | 3 |
| 21CSE540T | Android Security and Design Internals | 2 | 2 | - | 2 | - | - | - | - | - | - | - | - | - | - | 3 |
| 21CSP302L | Project | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 21CSP303T | MOOC | 2 | 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 | 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 |

24. (g) Implementation Plan: B.Tech. in Computer Science and Engineering with Specialization in Cybersecurity

| Semester – I | | | | | | |
|--|--|--------------|---|----|----|--|
| Course Code | Course Title | Hours / Week | | | | |
| | | 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 | | | | |
| | | 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 | | | | |
| | | 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 | | | | |
| | | L | T | P | | |
| 21CSS303T | Data Science | 2 | 0 | 0 | 2 | |
| 21CSC303J | Software Engineering and Project Management | 2 | 0 | 2 | 3 | |
| 21CSC310J | Malware Analysis | 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 | | | | |
| | | 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 | | | | | | |

| Semester – III | | | | | | |
|------------------------|--|--------------|---|---|---|--|
| Course Code | Course Title | Hours / Week | | | | |
| | | 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 | | | | |
| | | 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 | |
| 21CSC308T | Security Risk Management Principles | 3 | 0 | 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 – VII | | | | | | |
| Course Code | Course Title | Hours / Week | | | | |
| | | L | T | P | | |
| 21GNH401T | 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 | | | | | | |



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