# 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 AND TECHNOLOGY

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

Kattankulathur, Chengalpattu District 603203,

Tamil Nadu, India

## 30. B.Tech. in Computer Science and Business System

### 30. (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 provide a platform to adapt and work with innovative tools and techniques related to the business decision making process.* |

### 30. (b)  Program Educational Objectives (PEO)

| | |
|---|---|
| PEO – 1 | *Graduates will be able to perform in technical / managerial roles by thorough understanding of contemporary technologies* |
| PEO – 2 | *Graduates will be able to successfully pursue higher education in reputed institutions where information technology businesses are a priority* |
| PEO – 3 | *Graduates will be able to apply technology abstraction and common business principles* |
| PEO – 4 | *Graduates will be able to demonstrate innovation abilities.* |
| PEO – 5 | *Graduates will be able to demonstrate ethics and responsibility and have accumulated life values* |

### 30. (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 | 2 | - | - |
| PEO - 3 | 1 | - | 3 | - | 3 |
| PEO - 4 | - | 3 | - | - | 2 |
| PEO - 5 | - | - | - | 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 | 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 | - | - | - | 3 | - | - | - | - | - | 2 | - | - | 2 | - |
| PEO - 2 | - | 2 | 2 | - | 3 | - | 3 | 2 | - | - | - | - | 2 | - | - |
| PEO - 3 | - | - | - | - | - | 3 | - | - | - | - | 3 | 2 | - | - | 3 |
| PEO - 4 | - | - | - | 3 | - | - | - | - | - | 3 | 3 | | - | - | - |
| PEO - 5 | - | - | - | - | 3 | - | - | 3 | 2 | - | - | 2 | - | - | - |

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

### PSO – Program Specific Outcomes (PSO)

| | |
|---|---|
| PSO - 1 | *To understand, analyse, design, and develop computing solutions by applying fundamental concepts of computer science and engineering* |
| PSO - 2 | *Ability to create innovative Software for business and service orientations* |
| PSO - 3 | *Ability to demonstrate personal, organizational and entrepreneurship skills through critical thinking, engage themselves in life-long learning by following innovations in business, science & technology.* |

**30. (e) Program Structure: B.Tech. in Computer Science and Business System**

## Humanities & Social Sciences including Management Courses (H)

| Course Code | Course Title | 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 |
| 21GNH401T | Behavioral Psychology | 2 | 1 | 0 | 3 |
| 21MGH101T | Fundamentals of Economics | 3 | 0 | 0 | 3 |
| 21MGH102T | Fundamentals of Management | 3 | 0 | 0 | 3 |
| 21MGH103T | Basics of Accounting and Costing | 2 | 1 | 0 | 3 |
| 21MGH201T | Human Resource Management | 2 | 0 | 0 | 2 |
| 21MGH202T | Financial Management | 2 | 0 | 0 | 2 |
| 21MGH203J | Market Research | 2 | 0 | 2 | 3 |
| 21MGH301T | Introduction to Innovation, Intellectual Property Management and Entrepreneurship | 3 | 0 | 0 | 3 |
| 21MGH302T | Business Strategy | 3 | 0 | 0 | 3 |
| 21MGH303P [1] | IT project Management | 2 | 1 | 0 | 3 |
| 21MGH401T | Entrepreneurship and Family Business Management | 3 | 0 | 0 | 3 |
| 21MGH402T | Services Science and Service Operations Management | 3 | 0 | 0 | 3 |
| **Total Credits** | | | | | **44** |

## Non Credit Courses (M)

| Course Code | Course Title | L | T | P | C |
|---|---|---|---|---|---|
| 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 | 0 |
| 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 | 0 | 0 | 2 | 0 |
| 21GNM103L [1] | National Cadet Corps | | | | |
| 21GNM104L [1] | National Sports Organization | | | | |
| **Total Credits** | | | | | **03** |

## Basic Science Courses (B)

| Course Code | Course Title | L | T | P | C |
|---|---|---|---|---|---|
| 21PYB102J | Semiconductor Physics and Computational Methods | 3 | 1 | 2 | 5 |
| 21MAB101T | Calculus and Linear Algebra | 3 | 1 | 0 | 4 |
| 21MAB210T | Statistical Modeling | 3 | 1 | 0 | 4 |
| 21MAB301T | Probability and Statistics | 3 | 1 | 0 | 4 |
| 21MAB302T | Discrete Mathematics | 3 | 1 | 0 | 4 |
| **Total Credits** | | | | | **21** |

## Professional Core Courses(C)

| Course Code | Course Title | 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 |
| 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 |
| 21CSC304J | Compiler Design | 2 | 0 | 2 | 3 |
| **Total Credits** | | | | | **35** |

## Open Elective Courses (O)
*(Any 1 courses)*

| Course Code | Course Title | 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** | | | | | **03** |

## Engineering Science Courses (S)

| Course Code | Course Title | L | T | P | C |
|---|---|---|---|---|---|
| 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 [1] | Design Thinking and Methodology | 1 | 2 | 0 | 3 |
| 21CSS303T | Data Science | 2 | 0 | 0 | 2 |
| **Total Credits** | | | | | **17** |

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

| Course Code | Course Title | 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 | 15 |
| 21CSP402L | Major Project | 0 | 0 | 20 | 10 |
| 21CSP403L | Internship# | 0 | 0 | 10 | 5 |
| **Total Credits** | | | | | **19** |

| Professional Elective Courses (E) (Any 7 Courses) | | Hours / week | | | | Professional Elective Courses (E) | | Hours / week | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Course Code | Course Title | L | T | P | C | Course Code | Course Title | L | T | P | C |
| 21CSE251T | Digital Image Processing | 3 | 0 | 0 | 3 | 21CSE358T | Network Security and Cryptography | 2 | 1 | 0 | 3 |
| 21CSE253T | Internet of Things | 2 | 1 | 0 | 3 | 21CSE359T | Information Storage and Management | 2 | 1 | 0 | 3 |
| 21CSE221T | Python Programming for Data Analytics | 2 | 1 | 0 | 3 | 21CSE362T | Cloud Computing | 2 | 1 | 0 | 3 |
| 21CSE269T | Java Programming | 2 | 1 | 0 | 3 | 21CSE374T | Machine Learning for Enterprise | 3 | 0 | 0 | 3 |
| 21CSE282T | Information Security | 3 | 0 | 0 | 3 | 21CSE421T | Business Intelligence and Analytics | 2 | 1 | 0 | 3 |
| 21CSE314T | Computational Statistics | 3 | 0 | 0 | 3 | 21CSE424T | Deep Learning for Data Analytics | 2 | 1 | 0 | 3 |
| 21CSE315T | Conversational Systems | 2 | 1 | 0 | 3 | 21CSE451T | Pattern Recognition Techniques | 2 | 1 | 0 | 3 |
| 21CSE316T | Cognitive Science and Analytics | 3 | 0 | 0 | 3 | 21CSE453T | Speech Recognition | 2 | 1 | 0 | 3 |
| 21CSE317T | Behavioral Economics | 2 | 1 | 0 | 3 | 21CSE456T | Software Defined Networks | 2 | 1 | 0 | 3 |
| 21CSE318T | Computational Finance and Modeling | 2 | 1 | 0 | 3 | 21CSE458T | Wireless and Mobile Communication | 2 | 1 | 0 | 3 |
| 21CSE319T | Advance Finance | 2 | 1 | 0 | 3 | 21CSE459T | Wireless Sensor Networks | 2 | 1 | 0 | 3 |
| 21CSE352T | Neuro Fuzzy and Genetic Programming | 2 | 1 | 0 | 3 | 21CSE481T | Information Visualization | 2 | 1 | 0 | 3 |
| 21CSE353T | Augmented, Virtual and Mixed Reality | 2 | 1 | 0 | 3 | 21CSE483T | Robotics and Embedded Systems | 3 | 0 | 0 | 3 |
| 21CSE354T | Full Stack Web Development | 2 | 1 | 0 | 3 | 21CSE484T | Enterprise Systems | 3 | 0 | 0 | 3 |
| 21CSE355T | Data Mining and Analytics | 2 | 1 | 0 | 3 | 21CSE419T | Usability Design of Software Applications | 3 | 0 | 0 | 3 |
| 21CSE356T | Natural Language Processing | 2 | 1 | 0 | 3 | 21CSE420T | IT Workshop using Scilab | 2 | 1 | 0 | 3 |
| 21CSE357T | Distributed Computing | 2 | 1 | 0 | 3 | | | | **Total Credits** | | 21 |

## 30. (f) Programme Articulation: B.Tech. in Computer Science and Business System

| 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 |
| 21MGH101T | Fundamentals of Economics | 2 | 3 | 2 | 3 | 2 | - | 2 | 2 | 2 | 2 | 2 | - | - | - | - |
| 21MGH102T | Fundamentals of Management | 2 | 2 | 3 | 2 | 2 | 3 | 2 | - | 2 | 2 | 2 | 2 | - | 2 | 2 |
| 21MGH103T | Basics of Accounting and Costing | 2 | 3 | 2 | 3 | 3 | 2 | 3 | 2 | 2 | 3 | 3 | 3 | - | 2 | 1 |
| 21MGH201T | Human Resource Management | - | 3 | 3 | - | 2 | 1 | - | 3 | - | - | 3 | 2 | - | - | 3 |
| 21MGH202T | Financial Management | - | 3 | - | 3 | - | - | - | 1 | 2 | - | 3 | 3 | - | 2 | 3 |
| 21MGH203J | Market Research | - | - | - | - | 2 | 2 | - | 2 | 2 | 2 | - | 1 | - | 2 | 3 |
| 21MGH301T | Introduction to Innovation, Intellectual Property Management and Entrepreneurship | 3 | 3 | 2 | 2 | 3 | 2 | 1 | 1 | 2 | 2 | 3 | 2 | - | 2 | 2 |
| 21MGH302T | Business Strategy | 2 | 2 | 2 | - | - | 3 | 2 | 2 | 2 | 1 | 3 | 2 | - | - | 2 |
| 21MGH303P | IT project Management | - | 2 | - | 3 | - | - | - | 3 | - | - | 3 | - | - | - | 2 |
| 21MGH401T | Entrepreneurship and Family Business Management | 2 | 2 | 3 | - | - | - | - | 1 | 2 | 2 | 2 | - | - | 2 | 3 |
| 21MGH402T | Services Science and Service Operations Management | 3 | 3 | 2 | 2 | - | 1 | - | 1 | - | 1 | 1 | - | - | - | 2 |
| 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 | - | - |
| 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 | - |
| 21CSC304J | Compiler Design | 3 | 3 | 2 | 3 | 2 | - | - | - | - | - | - | - | - | 1 | - |
| 21CSC206T | Artificial Intelligence | 1 | 2 | 3 | - | - | - | - | - | - | - | - | - | 1 | 2 | - |
| 21CSE251T | Digital Image Processing | 3 | 3 | 3 | 3 | - | - | - | - | - | - | - | - | 2 | 3 | - |
| 21CSE253T | Internet of Things | 2 | 3 | 1 | 3 | 1 | 2 | - | - | - | - | - | - | - | - | - |
| 21CSE221T | Python Programming for Data Analytics | - | - | - | - | - | - | - | - | - | - | - | 2 | - | - | - |
| 21CSE269T | Java Programming | 2 | 1 | 2 | 1 | - | - | - | - | - | 3 | - | - | 2 | - | - |
| 21CSE282T | Information Security | - | - | 2 | - | - | - | - | - | - | - | - | - | - | - | - |
| 21CSE314T | Computational Statistics | 2 | 3 | 2 | 3 | 1 | - | - | - | - | - | - | - | 1 | 1 | - |
| 21CSE315T | Conversational Systems | 3 | 3 | 2 | 1 | - | - | - | - | - | - | - | - | - | - | - |
| 21CSE316T | Cognitive Science and Analytics | 2 | 3 | 3 | - | - | - | - | - | - | - | - | - | 1 | - | - |
| 21CSE317T | Behavioral Economics | - | 2 | - | 2 | 1 | 2 | 1 | 2 | 2 | 2 | 2 | - | - | 2 | 2 |
| 21CSE318T | Computational Finance and Modeling | 1 | 2 | 3 | 2 | 2 | - | 3 | - | 2 | - | 2 | 2 | - | - | 3 |
| 21CSE319T | Advance Finance | 2 | 3 | 3 | 2 | 3 | - | 1 | 2 | 2 | - | 3 | - | - | - | 1 |
| 21CSE352T | Neuro Fuzzy and Genetic Programming | 3 | 3 | - | - | 3 | - | - | - | - | - | - | - | - | 2 | - |
| 21CSE353T | Augmented, Virtual and Mixed Reality | 3 | - | 3 | - | 2 | - | - | 2 | - | - | - | - | - | - | 2 |
| 21CSE354T | Full Stack Web Development | 3 | 2 | 2 | - | - | - | - | - | - | - | - | - | 2 | - | - |
| 21CSE355T | Data Mining and Analytics | 1 | 2 | - | - | 3 | - | - | - | - | - | - | - | - | - | - |
| 21CSE356T | Natural Language Processing | 3 | 3 | 2 | 3 | 3 | - | - | - | - | - | - | - | 2 | - | - |
| 21CSE357T | Distributed Computing | - | - | 3 | 3 | 3 | - | - | - | - | - | - | - | 2 | - | - |
| 21CSE358T | Network Security and Cryptography | 2 | 3 | 3 | - | 2 | - | - | - | - | - | - | - | - | - | - |
| 21CSE359T | Information Storage and Management | - | - | - | - | - | - | - | - | - | - | - | - | 2 | 2 | - |
| 21CSE362T | Cloud Computing Technologies | 2 | - | 3 | - | 3 | - | - | - | - | - | - | - | - | - | - |
| 21CSE374T | Machine Learning for Enterprise | 3 | 1 | 3 | 1 | - | - | - | - | - | - | - | - | 1 | 1 | - |
| 21CSE419T | Usability Design of Software Applications | 3 | 2 | - | - | - | - | - | - | - | - | - | - | 2 | 2 | - |
| 21CSE420T | IT Workshop using Scilab | 3 | 2 | - | - | - | 2 | 3 | - | 1 | - | - | - | 2 | 3 | - |
| 21CSE421T | Business Intelligence and Analytics | - | - | - | - | - | - | - | - | - | - | - | - | 2 | 2 | 2 |
| 21CSE424T | Deep Learning for Data Analytics | - | - | - | - | - | - | - | - | - | - | - | - | 2 | 2 | 2 |
| 21CSE451T | Pattern Recognition Techniques | 3 | 2 | 2 | - | 2 | - | - | - | - | - | - | - | - | 2 | 2 |
| 21CSE453T | Speech Recognition | 3 | 2 | 3 | 2 | - | - | - | - | - | - | - | - | - | 3 | - |

| 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 |
| 21CSE456T | Software Defined Networks | 2 | 3 | 1 | 3 | 1 | 2 | - | - | - | - | - | - | - | - | - |
| 21CSE458T | Wireless and Mobile Communication | 1 | 3 | 2 | - | - | - | - | - | - | - | - | - | - | - | - |
| 21CSE459T | Wireless Sensor Networks | 1 | 3 | 2 | - | - | - | - | - | - | - | - | - | - | - | - |
| 21CSE481T | Information Visualization | 2 | 3 | - | - | - | - | - | - | - | - | - | - | 2 | 1 | - |
| 21CSE483T | Robotics and Embedded Systems | 3 | 3 | 3 | 2 | 1 | - | - | 3 | 1 | - | - | - | 2 | 3 | - |
| 21CSE484T | Enterprise Systems | 3 | - | 2 | 2 | 3 | 1 | 1 | - | - | - | - | 2 | 2 | 2 | - |
| 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 | 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 |
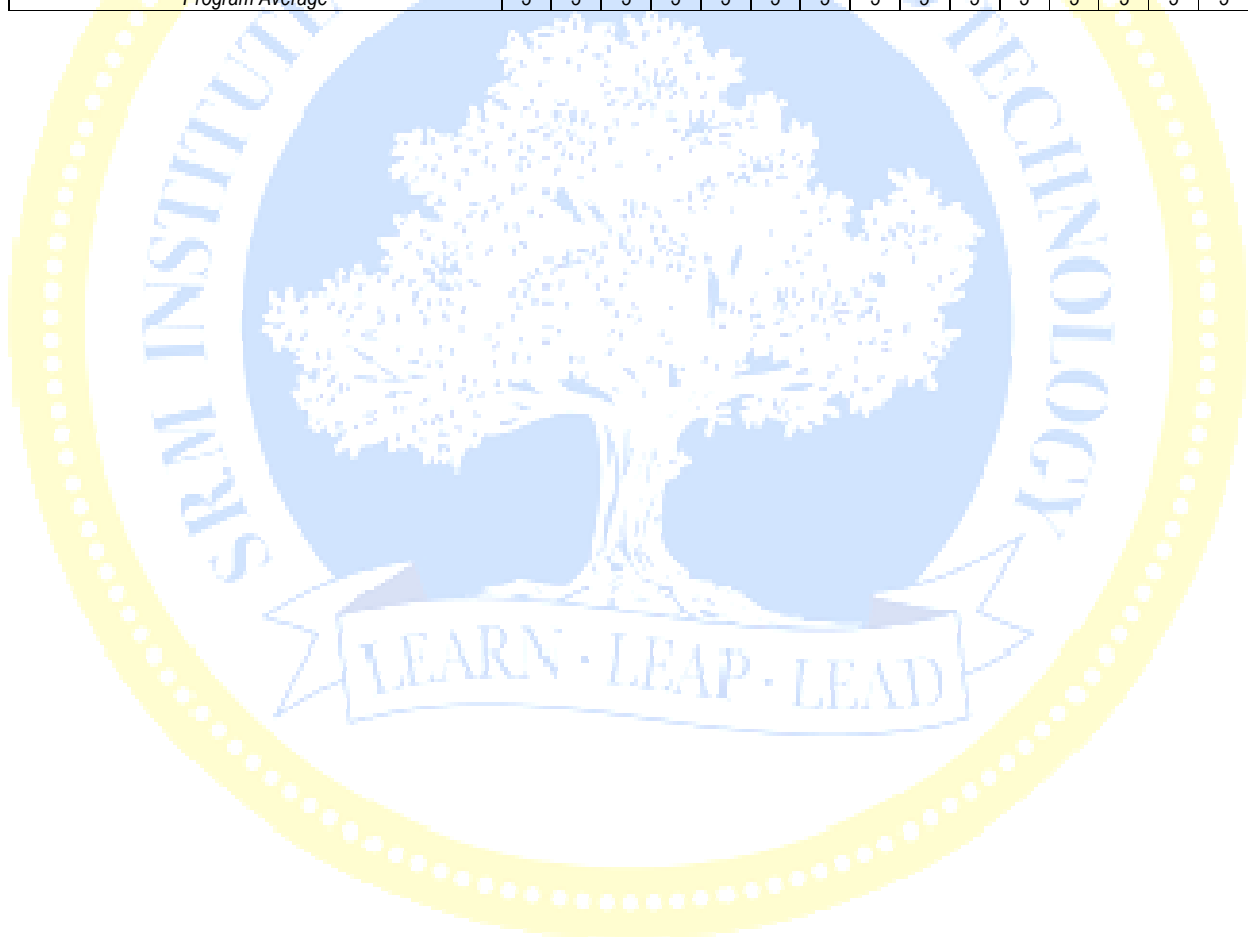
## 30. (g) Implementation Plan: B.Tech. in Computer Science and Business System

### Semester – I

| Course Code | Course Title | L | T | P | C |
|---|---|---|---|---|---|
| 21LEH101T | Communicative English | 2 | 1 | 0 | 3 |
| 21EES101T | Electrical and Electronics Engineering | 3 | 1 | 0 | 4 |
| 21MGH101T | Fundamentals of Economics | 3 | 0 | 0 | 3 |
| 21MGH102T | Fundamentals of Management | 3 | 0 | 0 | 3 |
| 21MAB101T | Calculus and Linear Algebra | 3 | 1 | 0 | 4 |
| 21CSS101J | Programming for Problem Solving | 3 | 0 | 2 | 4 |
| 21PDM101L [1] | Professional Skills and Practices | 0 | 0 | 2 | 0 |
| 21CYM101T [1] | Environmental Science* | 1 | 0 | 0 | 0 |
| 21LEM101T [1] | Constitution of India | 1 | 0 | 0 | 0 |
| | **Total Credits** | | | | **21** |

### Semester – II

| Course Code | Course Title | L | T | P | C |
|---|---|---|---|---|---|
| 21LEH102T | Chinese | | | | |
| 21LEH103T | French | | | | |
| 21LEH104T | German | | | | |
| 21LEH105T | Japanese | 2 | 1 | 0 | 3 |
| 21LEH106T | Korean | | | | |
| 21LEH107T | Spanish | | | | |
| 21LEH108T | Russian | | | | |
| 21MGH103T | Basics of Accounting and Costing | 2 | 1 | 0 | 3 |
| 21GNH101J | Philosophy of Engineering | 1 | 0 | 2 | 2 |
| 21MAB301T | Probability and Statistics | 3 | 1 | 0 | 4 |
| 21PYB102J | Semiconductor Physics and Computational Methods | 3 | 1 | 2 | 5 |
| 21CSC101T | Object Oriented Design and Programming | 2 | 1 | 0 | 3 |
| 21PDM102L [1] | General Aptitude* | 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** | | | | **20** |

### Semester – III

| Course Code | Course Title | L | T | P | C |
|---|---|---|---|---|---|
| 21MGH201T | Human Resource Management | 2 | 0 | 0 | 2 |
| 21MGH202T | Financial Management | 2 | 0 | 0 | 2 |
| 21MAB210T | Statistical Modeling | 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 |
| 21LEM201T [1] | Professional Ethics | 1 | 0 | 0 | 0 |
| 21PDM201L [1] | Verbal Reasoning | 0 | 0 | 2 | 0 |
| | **Total Credits** | | | | **23** |

### Semester – IV

| Course Code | Course Title | L | T | P | C |
|---|---|---|---|---|---|
| 21PDH209T [1] | Social Engineering | 2 | 0 | 0 | 2 |
| 21MGH203J | Market Research | 2 | 0 | 2 | 3 |
| 21MAB302T | Discrete Mathematics | 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 |
| 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** | | | | **26** |

### Semester – V

| Course Code | Course Title | L | T | P | C |
|---|---|---|---|---|---|
| 21MGH301T | Introduction to Innovation, Intellectual Property Management and Entrepreneurship | 3 | 0 | 0 | 3 |
| 21MGH302T | Business Strategy | 3 | 0 | 0 | 3 |
| 21CSC301T | Formal Language and Automata | 3 | 0 | 0 | 3 |
| 21CSC302J | Computer Networks | 3 | 0 | 2 | 4 |
| 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** | | | | **20** |

### Semester – VI

| Course Code | Course Title | L | T | P | C |
|---|---|---|---|---|---|
| 21MGH303P [1] | IT project Management | 2 | 1 | 0 | 3 |
| 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 |
| 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 – VII

| Course Code | Course Title | L | T | P | C |
|---|---|---|---|---|---|
| 21GNH401T | Behavioral Psychology | 2 | 1 | 0 | 3 |
| 21MGH401T | Entrepreneurship and Family Business Management | 3 | 0 | 0 | 3 |
| 21MGH402T | Services Science and Service Operations Management | 3 | 0 | 0 | 3 |
| E | Professional Elective – V | | | | 3 |
| E | Professional Elective – VI | | | | 3 |
| E | Professional Elective – VII | | | | 3 |
| | **Total Credits** | | | | **18** |

### Semester - VIII

| Course Code | Course Title | L | T | P | C |
|---|---|---|---|---|---|
| 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

# SRM INSTITUTE OF SCIENCE AND TECHNOLOGY

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

Kattankulathur, Chengalpattu District 603203, Tamil Nadu, India