

## Curriculum Format

Programme Name:

M. Tech. Computer Science and Engineering

Curriculum applicable to (for admitted year

AY 2025-26

Curriculum Version:

1.0

Approved by & Date

1st Academic Council

## School Core Min. Credit Requirements ----->

36

| Course Code | Category                   | Course Title   | L | T | P  | C  | Pre/Co-Requisite | Anti-requisite | Course Discipline |
|-------------|----------------------------|--|---|---|----|----|------------------|----------------|-------------------|
|             | Projects and Internships   | 28-40 Credits (Based on the Choice of students)      |   |   |    |    |                  |                |                   |
| MTPJ649     |                            | Project  | 0 | 0 | 16 | 8  | None             | None           | Engineering       |
| RES703      |                            | Final Dissertation                                   | 0 | 0 | 40 | 20 | None             | None           | Engineering       |
|             | Skill Enhancement Courses  | All are Compulsory                                   |   |   |    | 6  |                  |                |                   |
| MTSE501     |                            | Technical Communication and Professional Development | 3 | 0 | 0  | 3  | None             | None           | Science           |
| MTSE502     |                            | Quantitative Aptitude and Problem-Solving Strategies | 3 | 0 | 0  | 3  | MTSE501          | None           | Science           |
| RES701      | Compulsory Research Course | Research Methodology                                 | 2 | 0 | 0  | 2  |                  |                | Research          |

## Programme Core Min. Credit Requirements ----->

22

| Course Code | Category     | Course Title                        | L | T | P | C | Pre/Co-Requisite | Anti-requisite | Course Discipline |
|-------------|--------------|-------------------------------------|---|---|---|---|------------------|----------------|-------------------|
| MTCSE501    | Program Core | Agile Software Development          | 3 | 0 | 0 | 3 | None             |                | Engineering       |
| MTCSE502    | Program Core | Java for Enterprise Applications    | 3 | 0 | 2 | 4 | None             |                | Engineering       |
| MTCSE503    | Program Core | Computer Networking and security    | 3 | 0 | 0 | 3 | None             |                | Engineering       |
| MTCSE601    | Program Core | Advanced Data Structures            | 3 | 0 | 2 | 4 | None             |                | Engineering       |
| MTCSE504    | Program Core | Machien Learning for AI             | 3 | 0 | 2 | 4 | None             |                | Engineering       |
| MTCSE602    | Program Core | Advanced DataBase Management System | 4 | 0 | 0 | 4 | None             |                | Engineering       |

## Specialization Electives Min. Credit Requirements ----->

18

| Course Code | Category         | Course Title                                  | L | T | P | C | Pre/Co-Requisite | Anti-requisite | Course Discipline |
|-------------|------------------|---|---|---|---|---|------------------|----------------|-------------------|
| MTCC505     | Program Elective | Cloud Computing & Virtualization              | 3 | 0 | 2 | 4 | None             |                | Engineering       |
| MTCC506     | Program Elective | Parallel and Distributed Programming          | 3 | 0 | 0 | 3 | None             |                | Engineering       |
| MTCC503     | Program Elective | Advanced Algorithms                           | 3 | 0 | 2 | 4 | None             |                | Engineering       |
| MTCC507     | Program Elective | Essentials of Data Science on Cloud Computing | 3 | 0 | 0 | 3 | None             |                | Engineering       |
| MTCC508     | Program Elective | IoT Integration with Cloud Systems            | 3 | 0 | 2 | 4 | None             |                | Engineering       |
| MTCC509     | Program Elective | Cloud DevOps and Automation                   | 3 | 0 | 2 | 4 | None             |                | Engineering       |
| MTCSE604    | Program Elective | Advanced AI with Generative Models            | 3 | 0 | 0 | 3 | None             |                | Engineering       |
| MTCSE514    | Program Elective | Deep Learning                                 | 3 | 0 | 2 | 4 | None             |                | Engineering       |
| MTCSE515    | Program Elective | Text and Speech Analytics                     | 3 | 0 | 0 | 3 | None             |                | Engineering       |
| MTCSE516    | Program Elective | Natural Language Processing                   | 3 | 0 | 2 | 4 | None             |                | Engineering       |
| MTCSE517    | Program Elective | Computer Vision                               | 3 | 0 | 2 | 4 | None             |                | Engineering       |
| MTCSE518    | Program Elective | Applied Cryptography                          | 3 | 0 | 0 | 3 | None             |                | Engineering       |
| MTCSE519    | Program Elective | Steganography and Digital Watermarking        | 3 | 0 | 2 | 4 | None             |                | Engineering       |
| MTCSE520    | Program Elective | Blockchain Technologies                       | 3 | 0 | 0 | 3 | None             |                | Engineering       |
| MTCSE521    | Program Elective | Cyber Security and Privacy                    | 3 | 0 | 2 | 4 | None             |                | Engineering       |
| MTCSE522    | Program Elective | Intrusion Detection Systems and Firewall      | 3 | 0 | 2 | 4 | None             |                | Engineering       |

## Open Electives Min. Credit Requirements ----->

4

| Course Code  | Category | Course Title | L | T | P | C | Pre/Co-Requisite | Anti-requisite | Course Discipline |
|--|----------|--------------|---|---|---|---|------------------|----------------|-------------------|
| Any Course after fulfilling Programme Core & Unified Core requirements without duplicity can be taken as Open Elective |          |              |   |   |   |   |                  |                |                   |

## Credit Distribution -1

| CSE                                      | Credits |
|--|---------|
| School Core Courses                      | 36      |
| Skill Enhancement Courses                | 6       |
| Research Methodology                     | 2       |
| Projects and Dissertations               | 28      |
| Program Core Courses                     | 22      |
| Program/ Specialization Elective Courses | 18      |
| Open Elective Courses                    | 4       |
| Total Credits                            | 80      |