

MTech(CSE)

Proposed Curriculum

| Semester I (18 Credits) | | |
|----------------------------------|---|-----------------|
| 1. | Professional and Communication Skills | 1-0-2-2 |
| 2. | Mathematics for Computer Science (Compulsory) | 3-0-0-4 |
| 3. | Advanced Algorithms (Compulsory) | 3-0-0-4 |
| 4. | Elective I | 3-0-0-4 |
| 5. | Elective II | 3-0-0-4 |
| Semester II (16 Credits) | | |
| 1. | Elective III | 3-0-0-4 |
| 2. | Elective IV | 3-0-0-4 |
| 3. | Elective V | 3-0-0-4 |
| 4. | Elective or Thesis | 3-0-0-4/0-0-0-4 |
| Semester III (18 Credits) | | |
| 1. | Thesis | 0-0-0-16 |
| 2. | Graduate Seminar I | 0-0-0-2 |
| Semester IV (18 Credits) | | |
| 1. | Thesis | 0-0-0-16 |
| 2. | Graduate Seminar II | 0-0-0-2 |

Note:

1. Elective courses will be floated as per the decision of the discipline.
2. An elective can be substituted by EMFs equivalent in credit.

Some Electives offered earlier – 4 credit courses

| Course Number | Course Name |
|---------------|---|
| CS415 | Machine Learning |
| CS608 | Mobile and Wireless Network |
| CS416 | Advanced Computer Architecture |
| CS631 | Parallel Algorithms |
| CS509 | Software Modeling: Techniques and Tools |
| CS510 | Advance Cryptography and Network Security |
| EC611 | Image Processing |
| CS501 | Biometrics |
| CS506 | Image Retrieval |
| CS504 | Object-Oriented Software Engineering |

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|--------|---|
| CS607 | Cryptography and Network Security |
| EC612 | Pattern Recognition |
| CS 505 | Advanced Topics in Software Engineering |
| CS 508 | Software Testing |

Some EMFs (Electives in Modular Form) offered earlier – 1 or 2 credit courses

| Course Number | Course Name |
|---------------|---|
| EM601d | Parallel Processing” |
| EM604b | Dependable Computing |
| EM675d | Multimedia Information Processing |
| EM601g | Data Engineering |
| EM674a | Visual Cryptography |
| EM668d | Empirical Software Engineering |
| EM605f | Coding Theory |
| EM606b | Introduction to Data Mining and Big Data Analysis |
| EM669b | Pattern Recognition |
| EM675a | Geometric Transforms and Motion Analysis |
| EM675b | Document Image Processing and Compression |
| EM608a | Modeling and Simulation |
| EM675c | Fundamentals of Image Reconstruction |
| EM601f | Data Mining |
| EM606b | Introduction to Data Mining and Big Data Analysis |
| EM664h | Network Computing |
| EM605a | Network Flows and Matching |
| EM605b | NP Completeness and Approximation Algorithms |
| EM605e | Graph Algorithms |
| EM667a | Neural Networks |
| EM604c | Distributed Computing using Hadoop |
| EM607a | Design of Extensible Applications in Java |
| EM604a | Introduction to Cloud Computing |
| EM 605d | Path Planning Algorithms |
| EM603b | Compiler Optimizations |
| EM663b | Introduction to Functional Programming |
| EM669b | Computer Vision |
| EM673a | Biometrics |