

**School of Computer & Systems Sciences**  
**Master of Technology (Computer Science and Technology)**

**Revised Course Structure and Syllabus in Semester III and Semester IV**

A student shall have to earn a minimum of 50 credits at the end of II year in order to be eligible for the award of M.Tech. Degree in Computer Science and Technology.

**Semester I**

<b>S.No.</b>	<b>Course Name</b>	<b>Credits</b>
1.	Design and Analysis of Algorithms CS-773	3
2.	Elective I	3
3.	Elective II	3
4.	Elective III	3
5.	Elective IV	3

**Semester II**

<b>S.No.</b>	<b>Course Name</b>	<b>Credits</b>
1.	Elective V	3
2.	Elective VI	3
3.	Elective VII	3
4.	Elective VIII	3
5.	Elective IX	3

**Semester III**

<b>S.No.</b>	<b>Course Name</b>	<b>Credits</b>
1	Research Reading and Laboratory	3
2	Seminar	3

**Semester IV**

<b>S.No.</b>	<b>Course Name</b>	<b>Credits</b>
1	Dissertation	14

## List of Electives Courses for M.Tech. (Semester-I and Semester-II)

1.	Advance Scientific Computing CS-750	26.	Operating System CS-704
2.	Advanced Software Engineering CS-729	27.	Network Security CS-761
3.	Artificial Intelligence CS-708	28.	Object Oriented Programming CS-735
4.	Big Data Analytics CS-751	29.	Object Oriented Software Engineering CS-707
5.	Grid and Cloud Computing CS-771	30.	Parallel and Distributed Systems CS-762
6.	Computer Graphics CS-730	31.	Pattern Classification CS-763
7.	Computer Architecture CS-705	32.	Performance Modeling of Computer Communication Networks CS-764
8.	Computer Vision CS-752	33.	Randomized and Approximation Algorithms CS-779
9.	Data Communication and Computer Networks CS-703	34.	Swarm Intelligence CS-766
10.	Data Mining and Knowledge Discovery CS-715	35.	Services Oriented Architecture CS-738
11.	Data Structure CS-776	36.	Software Engineering CS-731
12.	Data Warehousing and Data Mining CS-753	37.	Software Quality Assurance CS-767
13.	Database Management Systems CS-706	38.	Theory of Computation CS-780
14.	Digital Image Processing CS-754	39.	Topics in Mathematical Sciences CS-736
15.	Embedded Systems CS-722	40.	Vehicular Communication Networks CS-768
16.	Geo Spatial Informatics CS-755	41.	VLSI Design and Testing CS-769
17.	Graph Theory CS-756	42.	Web Mining CS-737
18.	Large Scale Graph Algorithms and Application CS-777	43.	Wireless Communication and Mobile Computing CS-718
19.	Machine Learning CS-714	44.	Wireless Sensor Networks CS-770
20.	Maximum Entropy Modeling and Application CS-757	45.	MEMS Technology CS-781
21.	Micro Fabrication Technologies CS-758	46.	VLSI Technology CS-726
22.	Mobile Ad Hoc Networks CS-720	47.	<b>Research Methodology- CS-765</b>
23.	Modeling and Simulation CS-778	48.	<b>Academic Ethics and Technical Writing- CS-774</b>
24.	Multicast Communication CS-759		
25.	Natural Language Processing CS-760		

## **SEMESTER III**

### **All Compulsory Courses**

#### **1. Research Reading and Laboratory**

This course should be carried out under the supervisor in the area related to dissertation work, as suggested by the supervisor. The research work related to dissertation, including the laboratory work, should be presented to the concerned supervisor. The research reading and laboratory course would be evaluated by the concerned supervisor.

#### **2. Seminar**

The Seminar course would include seminars related to the dissertation work. It would be evaluated by a seminar evaluation committee comprising three faculty members. The seminar, as part of the end-semester examination, would finalize the topic of the dissertation.

## **Semester: IV**

#### **1. Dissertation**

Student will have to submit the dissertation for evaluation in the school. The dissertation of each student is to be evaluated through viva-voce/presentation in the school conducted by the committee comprising the supervisor and one external expert from outside the university in the related area, as recommended by the special committee of the School and approved by the University.