

M Tech in Advanced Computing

SCHEME OF STUDY (wef July 2021)

First Semester:

Course No.	Subject	Schemes of studies periods per week			Total Credits
		L	T	P	
AC 511	Mathematical Foundations of Computer Science	3	-	-	3
AC 512	Advanced Data Structures	3	-	-	3
AC 513	Architecture of Large Systems	3	-	-	3
AC 514	Soft Computing	3	-	-	3
HUM 511	Communication Skills	2	-	-	2
	Elective-1 (A)	3	-	-	3
	Elective-2 (B)	3	-	-	3
AC 515	Lab-I (Advanced Data Structures)	-	-	2	1
AC 516	Seminar-I	-	-	2	1
Total Hours: 24 Total Credits: 22		Total Semester Credits			22

Second Semester:

Course No.	Subject	Schemes of studies periods per week			Total Credits
		L	T	P	
AC 521	High Performance Scientific Computing	3	-	-	3
AC 522	Graph Theory & Algorithms	3	-	-	3
AC 523	Optimization Techniques	3	-	-	3
	Elective-3 (A)	3	-	-	3
	Elective-4 (A)	3	-	-	3
	Elective-5 (C)	3	-	-	3
MTH 524	Research Methodology	1	1	-	2
AC 525	Laboratory-II (High Performance Scientific Computing)	-	-	2	1
AC 526	Seminar-II	-	-	2	1
Total Hours: 24 Total Credits: 44		Total Semester Credits			22

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Third Semester:

Course No.	Subject	Schemes of studies periods per week			Total Credits
		L	T	P	
AC 611	Dissertation Phase - I	-	-	32	16
Total Hours: 32 Total Credits: 60		Total Semester Credits			16

Fourth Semester:

Course No.	Subject	Schemes of studies periods per week			Total Credits
		L	T	P	
AC 621	Dissertation Phase - II	-	-	40	20
Total Hours: 40 Total Credits: 80		Total Semester Credits			20

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List of Program Electives A		List of Open Electives C	
AC 551	Data Mining	ARP - 581	Introduction to Urban Planning
AC 552	Operating System & Design	BSE – 581	Bioprocess Engineering
AC 553	Web Search & Information Retrieval	BSE – 582	Biophysics Tools and Techniques
AC 554	Digital Image Processing	CHE – 581	Analytical Techniques
AC 555	Embedded Systems	CHE – 582	Green Technology & Processes
AC 556	Distributed Computing	CE – 581	Solid Waste Management
AC 557	Cluster & Grid Computing	CE – 582	Basic Concept of GIS
AC 558	Software Engineering	CE – 583	Road Safety
AC 559	Distributed Databases	PHY – 581	Nanotechnology and Nanoscience
AC 560	Semantic Web	EE – 581	Electric Machines & Applications
AC 561	Parallel Algorithms	EE – 582	Control and Instrumentation
AC 562	Image Analysis	ECE – 581	Introduction to Fuzzy Logic
AC 563	Big Data Analytics	ECE – 582	Neural Networks and its Applications
		EC - 581	Energy Resource Technologies
		HUM – 581	Intellectual Property Rights for Engineers
List of Departmental Electives B		HUM – 582	Applied Psychology: Human Centered Design and Engineering
AI 513	Machine Learning	MTH – 581	Advanced Operations Research
AI 552	Reinforcement Learning	MTH – 582	Computing Technologies
IS 513	Cybercrime & Information Warfare	ME – 581	Value Engineering
CN 512	Computer & Network Security	ME – 582	Design Thinking
CN 514	Wireless Networking	ME - 583	Mechatronics and NDT in Engineering
CN 552	Cloud Computing	MME – 581	Advanced Instrumentation Methods for Material Analysis
CN 555	Information Theory and Coding	MME – 582	Smart Materials and their Application
		MBA-581	Engineering Startup Management