

NATIONAL INSTITUTE OF TECHNOLOGY, Bhopal-462003
DEPARTMENT OF MATHEMATICS, BIOINFORMATICS & COMPUTER APPLICATIONS
M. Tech. in Agile Software Engineering
SCHEME OF STUDY



SCHEME M. Tech. (Agile Software Engineering)

First Semester:

Course No.	Subject	Schemes of studies periods per week			Total Credits
		L	T	P	
MTH 511	Linear Algebra	3	-	-	3
SE 512	Software Architecture and Design	3	-	-	3
SE 513	DevOps Tool and Chains	3	-	-	3
	Department Elective - 1	3	-	-	3
	Department Elective - 2	3	-	-	3
SE 514	DevOps Tool and Chains Lab	-	-	2	1
SE 515	Lab	-	-	2	1
SE 516	Seminar-I	-	-	2	1
SE 517	Minor Project-1 (Self Learning)				2
HUM 511	Communication Skill (Audit Course)	2	-	-	2*
Total Hours:23		Total Semester Credits			20
Total Credits: 20					

*Communication Skill will be Audit Course of 2 credits which will not be counted in SGPA/CGPA calculation

Second Semester:

Course No.	Subject	Schemes of studies Periods per week			Total Credits
		L	T	P	
SE 521	Design Patterns	3	-	-	3
SE 522	Software Testing – Techniques and Tools	3	-	-	3
	Department Elective - 3	3	-	-	3
	Department Elective - 4	3	-	-	3
	Open Elective	3	-	-	3
SE 523	Software Testing Lab	-	-	2	1
SE 524	Agile Testing Lab	-	-	2	1
SE 525	Seminar-II	-	-	2	1
SE 526	Minor Project-2 (Self Learning)				2
Total Hours: 23		Total Semester Credits			20
Total Credits: 40					

Third Semester:

Course No.	Subject	Schemes of studies Periods per week			Total Credits
		L	T	P	
SE 611	Dissertation Phase-I	-	-	40	20
Total Hours: 40 Total Credits: 60				Total Semester Credits	20

Fourth Semester:

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

List of Courses (Elective-Departmental / Open)

List of Departmental Elective		List of Open Electives	
SE 551	Neural Network	ARP 581	Introduction to Urban Planning
SE 552	Machine Learning	BSE 581	Bioprocess Engineering
SE 553	Deep learning	BSE 582	Biophysics Tools and Techniques
SE 554	Agile Software Development	CHE 581	Analytical Techniques
SE 555	Data Warehousing and Data Mining	CHE 582	Green Technology & Processes
SE 556	Cloud Computing and Virtualization	CE 581	Solid Waste Management
SE 557	Web Search and Information Retrieval	CE 582	Basic Concept of GIS
SE 558	Edge Computing	CE 583	Road Safety
SE 559	Data Security & Data Privacy	CSE 581	Machine Learning
SE 560	Internet of Things	CSE 582	Advanced Data Structures and Algorithms
SE 561	Data Science & Analytics	PHY 581	Nanotechnology and Nano science
SE 562	Mobile Computing and Application Development	EE 581	Electric Machines & Applications
SE 563	Software Quality Engineering	EE 582	Control and Instrumentation
SE 564	Service Oriented Architecture	ECE 581	Introduction to Fuzzy Logic
SE 565	Requirement Engineering	ECE 582	Neural Networks and its Applications
SE 566	Software Agents	EC 581	Energy Resource Technologies
SE 567	Cyber Security	HUM 581	Intellectual Property Rights for Engineers
MTH 524	Research Methodology	HUM 582	Applied Psychology: Human Centered Design and Engineering
		ME 581	Value Engineering
		ME 582	Design Thinking
		ME 583	Mechatronics and NDT in Engineering
		MME 581	Advanced Instrumentation Methods for Material Analysis
		MME 582	Smart Materials and their Application
		MBA 581	Engineering startup Management