

Maulana Azad National Institute of Technology, Bhopal – 462003
Civil Engineering Department

M Tech in Structural Engineering

SCHEME OF STUDY (wef July 2021)

First Semester:

Course No.	Subject	Scheme of studies periods per week			Total Credits
		L	T	P	
ST 511	Finite Element Method	3	-	-	3
ST 512	Theory of Elasticity	3	-	-	3
ST 513	Advanced Structural Analysis	3	-	-	3
ST 514	Advanced Design of Structures	3	-	-	3
HUM 511	Communication Skills	2	-	-	2
	Elective-1 (A)	3	-	-	3
	Elective-2 (B)	3	-	-	3
ST 515	Lab-1	-	-	2	1
ST 516	Seminar-1	-	-	2	1
Total Hours: 24 Total Credits: 22		Total Semester Credits			22

Second Semester:

Course No.	Subject	Scheme of studies periods per week			Total Credits
		L	T	P	
ST 521	Pre Stressed Concrete	3	-	-	3
ST 522	Structural Dynamics	3	-	-	3
ST 523	Theory of Plates and shells	3	-	-	3
	Elective-3 (A)	3	-	-	3
	Elective-4 (A)	3	-	-	3
	Elective-5 (C)	3	-	-	3
MTH 524	Research Methodology	1	1	-	2
ST 525	Lab-2	-	-	2	1
ST 526	Seminar-2	-	-	2	1
Total hours: 24 Total Credits: 44		Total Semester Credits			22

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Third Semester:

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

Fourth Semester:

Course No.	Subject	Scheme of studies periods per week			Total Credits
		L	T	P	
ST 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	
ST551	Soil Structure Interaction	ARP - 581	Introduction to Urban Planning
ST552	Design of Steel Concrete Composite Structures	BSE – 581	Bioprocess Engineering
ST553	Experimental Stress Analysis	BSE – 582	Biophysics Tools and Techniques
ST554	Bridge Design	CHE – 581	Analytical Techniques
ST555	Structural Health Monitoring	CHE – 582	Green Technology & Processes
ST556	Earthquake Analysis and Design of Structures	CSE – 581	Machine Learning
ST557	Design of Foundation Systems	CSE – 582	Advanced Data Structures and Algorithms
ST558	Mechanics of Composite Materials	PHY – 581	Nanotechnology and Nanoscience
ST559	Soft Computing	EE – 581	Electric Machines & Applications
		EE – 582	Control and Instrumentation
		ECE – 581	Introduction to Fuzzy Logic
List of Departmental Electives B		ECE – 582	Neural Networks and its Applications
TR 511	Analysis and Design of Pavement Structures	EC - 581	Energy Resource Technologies
GE 511	Advanced Geotechnical Engineering	HUM – 581	Intellectual Property Rights for Engineers
WR 514	Advanced Hydraulics	HUM – 582	Applied Psychology: Human Centered Design and Engineering
		MTH – 581	Advanced Operations Research
		MTH – 582	Computing Technologies
		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