

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

M Tech in Structural Engineering

SCHEME OF STUDY (January 2021)

First Semester:

Course No.	Subject	Scheme of studies periods per week			Total Credits
		L	T	P	
ST 101	Finite Element Method	3	-	-	3
ST 102	Theory of Elasticity	3	-	-	3
ST 103	Advanced Structural Analysis	3	-	-	3
ST 104	Advanced Design of Structures	3	-	-	3
	Elective-1 (A)	3	-	-	3
	Elective-2 (B)	3	-	-	3
ST 105	Lab-1	-	-	2	1
ST 106	Seminar-1	-	-	2	1
ST 107	Communication Skills NPTEL/ MOOC/ Humanities Deptt.	2	-	-	2
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 201	Pre Stressed Concrete	3	-	-	3
ST 202	Structural Dynamics	3	-	-	3
ST 203	Theory of Plates and shells	3	-	-	3
	Elective-3 (A)	3	-	-	3
	Elective-4 (A)	3	-	-	3
	Elective-5 (C)	3	-	-	3
ST 204	Lab-2	-	-	2	1
ST 205	Research Methodology, Technical Report and Paper Writing	-	2	-	2
ST 206	Seminar-2	-	-	2	1
Total hours: 24 Total Credits: 44		Total Semester Credits			22

Third Semester:

Course No.	Subject	Scheme of studies periods per week			Total Credits
		L	T	P	
ST 301	Dissertation Phase-1	-	-	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 401	Dissertation Phase-2	-	-	40	20
Total hours: 40 Total Credits: 80		Total Semester Credits			20

List of Electives A		List of Electives B	
ST501	Soil Structure Interaction	TR102	Analysis and Design of Pavement Structures
ST502	Design of Steel Concrete Composite Structures	GE102	Advanced Geotechnical Engineering
ST503	Experimental Stress Analysis	WR104	Advanced Hydraulics
ST504	Bridge Design	List of Electives C	
ST505	Structural Health Monitoring	ID203	Advanced Product Design
ST506	Earthquake Analysis and Design of Structures	IT202	Failure Analysis & Prevention
ST507	Design of Foundation Systems	AM202	Advanced Composite Materials
ST508	Mechanics of Composite Materials	SV203	Theory of Vibration II
ST509	Soft Computing	TH202	Thermal Environmental Engineering
		PS201	Modern Control Systems
		ED202	Advanced Control Systems
		VE202	VLSI Technology
		DC203	Digital Image Processing
		AC203	Optimization Techniques
		AI202	Deep Learning
		CN203	Graph Theory & Network Algorithm
		IS201	Applied Cryptography
		MS202	Deformation Behavior of Materials
		CH203	Industrial Safety & Hazard Management
		HS1204	Housing Finance
		UP1203	Infrastructure Planning
		NT201	Nano Structures Characterization Techniques
		BI203	Optimization Techniques & Graph
		CSB201	Mathematical Modeling & Simulation of Biological Systems
		RE202	Solar Energy Systems
		ES202	Energy Management in Buildings
		BIO201	Cheminformatics & Drug Designing

Group A: Program Electives.

Group B: Departmental Electives.

Group C: Open Electives.

{It may also be opted as NPTEL Course after approval from Chairman Senate}