

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

M Tech in Geotechnical Engineering

SCHEME OF STUDY (wef July 2021)

First Semester:

Course No.	Subject	Scheme of studies periods per week			Total Credits
		L	T	P	
MTH 514	Advanced Mathematics	3	-	-	3
GE 511	Advanced Geotechnical Engineering	3	-	-	3
GE 512	Advanced Foundation Engineering	3	-	-	3
GE 513	Soil Dynamics	3	-	-	3
HUM 511	Communication Skills	2	-	-	2
	Elective-1 (A)	3	-	-	3
	Elective-2 (B)	3	-	-	3
GE 514	Lab-1	-	-	2	1
GE 515	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	
GE 521	Design and Construction of Machine Foundation	3	-	-	3
GE 522	Ground Improvement Techniques	3	-	-	3
GE 523	Reinforced Soil Structures	3	-	-	3
	Elective-3 (A)	3	-	-	3
	Elective-4 (A)	3	-	-	3
	Elective-5 (C)	3	-	-	3
MTH 524	Research Methodology	1	1	-	2
GE 525	Lab-2	-	-	2	1
GE 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	
GE 611	Dissertation Phase - I	-	-	32	16
Total Hours: 32 Total Credits: 16		Total Semester Credits			60

Fourth Semester:

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

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List of Program Electives A		List of Open Electives C	
GE551	Forensic Geotechnical Engineering	ARP - 581	Introduction to Urban Planning
GE552	Environmental Geo techniques	BSE – 581	Bioprocess Engineering
GE553	Geotechnical Investigations and Field Testing of Soils	BSE – 582	Biophysics Tools and Techniques
GE554	Critical State Soil Mechanics	CHE – 581	Analytical Techniques
GE555	Rock mechanics and Engineering Geology	CHE – 582	Green Technology & Processes
GE556	Expansive and Shrinkable Soils	CSE – 581	Machine Learning
GE557	Strength and Deformation Behavior of Soils	CSE – 582	Advanced Data Structures and Algorithms
GE558	Earthquake Engineering	PHY – 581	Nanotechnology and Nanoscience
GE559	Constitutive Soil Mechanics	EE – 581	Electric Machines & Applications
GE560	Software Application in Geotechnical Engineering	EE – 582	Control and Instrumentation
		ECE – 581	Introduction to Fuzzy Logic
		ECE – 582	Neural Networks and its Applications
	List of Departmental Electives B	EC - 581	Energy Resource Technologies
GI 512	Basics of Remote Sensing Technology	HUM – 581	Intellectual Property Rights for Engineers
ST 511	Finite Element Method	HUM – 582	Applied Psychology: Human Centered Design and Engineering
ST 551	Soil Structure Interaction	MTH – 581	Advanced Operations Research
ST 557	Design of Foundation Systems	MTH – 582	Computing Technologies
TR 511	Analysis and Design of Pavement Structures	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