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

M Tech in Transportation 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
TR 511	Analysis and Design of Pavement Structures	3	-	-	3
TR 512	Traffic Engineering and Management	3	-	-	3
TR 513	Transport Planning	3	-	-	3
HUM 511	Communication Skills	2	-	-	2
	Elective-1 (A)	3	-	-	3
	Elective-2 (B)	3	-	-	3
TR 514	Lab Practice-1	-	-	2	1
TR 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	
TR 521	Highway Construction and Maintenance	3	-	-	3
TR 522	Public Transport system	3	-	-	3
TR 523	Highway Geometric Design	3	-	-	3
	Elective-3 (A)	3	-	-	3
	Elective-4 (A)	3	-	-	3
	Elective-5 (C)	3	-	-	3
MTH 524	Research Methodology	1	1	-	2
TR 525	Lab Practice-2	-	-	2	1
TR 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	
TR 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	
TR 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	
TR551	Analysis and Design of Highway Intersections	ARP - 581	Introduction to Urban Planning
TR552	Transport System Analysis	BSE – 581	Bioprocess Engineering
TR553	Pavement Evaluation Techniques	BSE – 582	Biophysics Tools and Techniques
TR554	Highway Maintenance Management System	CHE – 581	Analytical Techniques
TR555	Planning and Design of Airports	CHE – 582	Green Technology & Processes
TR556	Intelligent Transportation Systems	CSE – 581	Machine Learning
TR557	Road Safety Audit	CSE – 582	Advanced Data Structures and Algorithms
TR558	Traffic Flow Theory	PHY – 581	Nanotechnology and Nanoscience
TR559	Transport Economics and Finance	EE – 581	Electric Machines & Applications
TR560	Traffic Simulation Modeling	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
GE 511	Advanced Geotechnical Engineering	HUM – 582	Applied Psychology: Human Centered Design and Engineering
GE 512	Advanced Foundation Engg.	MTH – 581	Advanced Operations Research
GE 553	Geotechnical Investigation & Field Testing of Soil	MTH – 582	Computing Technologies
ST 511	Finite Element Method	ME – 581	Value Engineering
ST 559	Soft Computing	ME – 582	Design Thinking
EN 560	Global Warming and Climate Change	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