



MAULANA AZAD
NATIONAL INSTITUTE OF TECHNOLOGY BHOPAL-462003

**M.Tech in Transportation
Engineering**

First Semester:

Course No.	Subject	Schemes of studies period per week			Total Credits
		L	T	P	
CE TR 1101	Transportation Planning	3	-	-	3
CE TR 1102	Highway Materials and Characterization	3	-	-	3
CE TR 1103	Traffic Engineering and Management	3	-	-	3
	Department Elective -1	3	-	-	3
	Department Elective -2	3	-	-	3
CE TR 1104	Highway Materials Testing Lab	-	-	2	1
CE TR 1105	Traffic Engineering and Management Lab	-	-	2	1
CE TR 1106	Seminar-I	-	-	2	1
CE TR 1107	Minor Project-1(Self- Learning)	-	-	-	2
HS PG	Communication Skills	-	-	-	0
Total Hours: 21 Total Credits: 20		Total Semester Credits			20

SecondSemester:

CourseNo.	Subject	Schemesofstudiesperiodspe rweek			Total Credits
		L	T	P	
CE TR 1201	Pavement Design and Evaluation	3	-	-	3
CE TR 1202	Public Transport system	3	-	-	3
	DepartmentElective -3	3	-	-	3
	DepartmentElective -4	3	-	-	3
	OpenElective	3	-	-	3
CE TR 1203	Pavement Evaluation Lab	-	-	2	1
CE TR 1204	Traffic Safety and Operations Lab	-	-	2	1
CE TR 1205	Seminar-II	-	-	2	1
CE TR 1206	MinorProject-2(SelfLearning)				2
TotalHours: 21 TotalCredits:40		TotalSemesterCredits			20

ThirdSemester:

CourseNo.	Subject	Schemesofstudiesperiodspe rweek			Total Credits
		L	T	P	
CE TR 2101	DissertationPhase-I	-	-	40	20
TotalHours: 40 TotalCredits:60		TotalSemesterCredits			20

FourthSemester:

Course No.	Subject	Schemes of studies periods per week			Total Credits
		L	T	P	
CE TR 2201	Dissertation Phase-II	-	-	40	20
Total Hours: 40 TotalCredits:80		Total Semester Credits			20

Codes of Open Elective will be provided by respective department

List of Program Electives A		List of Open Electives	
CE TR 1151/ CE TR 1251	Analysis and Design of Highway Intersections		Introduction to Urban Planning
CE TR 1152/ CE TR 1252	Transport System Analysis		Bioprocess Engineering
CE TR 1153 / CE TR 1253	Pavement Evaluation Techniques		Biophysics Tools and Techniques
CE TR 1154 / CE TR 1254	Highway Maintenance Management System		Analytical Techniques
CE TR 1155 / CE TR 1255	Railway and Airport Engineering		Green Technology & Processes
CE TR 1156 / CE TR 1256	Intelligent Transportation Systems		Machine Learning
CE TR 1157 / CE TR 1257	Road Safety Engineering		Advanced Data Structures and Algorithms
CE TR 1158 / CE TR 1258	Traffic Flow Theory		Nanotechnology and Nanoscience
CE TR 1159 / CE TR 1259	Transport Economics and Finance		Electric Machines & Applications
CE TR 1160 / CE TR 1260	Traffic Simulation Modeling		Control and Instrumentation
CE TR 1161 / CE TR 1261	Highway Construction and Maintenance		Introduction to Fuzzy Logic
CE TR 1162 / CE TR 1262	Highway Geometric Design		Neural Networks and its Applications
CE TR 1174 / CE TR 1274	Computational Methods in Civil Engineering		Energy Resource Technologies
CE TR 1175 / CE TR 1275	Research Methodology		Intellectual Property Rights for Engineers
			Applied Psychology: Human Centered Design and Engineering
			Advanced Operations Research
			Computing Technologies
			Value Engineering
			Design Thinking
			Mechatronics and NDT in Engineering
			Advanced Instrumentation Methods for Material Analysis
			Smart Materials and their Application
			Engineering Startup Management