

M Tech in Transportation Engineering

SCHEME OF STUDY (January 2021)

First Semester:

Course No.	Subject	Scheme of studies periods per week			Total Credits
		L	T	P	
MTH 101 TR	Advanced Mathematics	3	-	-	3
TR 102	Analysis and Design of Pavement Structures	3	-	-	3
TR 103	Traffic Engineering and Management	3	-	-	3
TR 104	Transport Planning	3	-	-	3
	Elective-1 (A)	3	-	-	3
	Elective-2 (B)	3	-	-	3
TR 105	Lab Practice-1	-	-	2	1
TR 106	Seminar-1	-	-	2	1
TR 107	Computational skills NPTL/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	
TR 201	Highway Construction and Maintenance	3	-	-	3
TR 202	Public Transport system	3	-	-	3
TR 203	Highway Geometric Design	3	-	-	3
	Elective-3 (A)	3	-	-	3
	Elective-4 (A)	3	-	-	3
	Elective-5 (C)	3	-	-	3
TR 204	Lab Practice-2	-	-	2	1
TR 205	Seminar-2	-	-	2	1
TR 206	Research Methodology, Technical Report and Paper Writing	-	2	-	2
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	
TR 301	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 401	Dissertation Phase-2	-	-	40	20
Total Hours: 40 Total Credits: 80		Total Semester Credits			20

List of Electives A		List of Electives B	
TR501	Analysis and Design of Highway Intersections	GI103	Basics of Remote Sensing Technology
TR502	Transport System Analysis	ST509	Soft Computing
TR503	Pavement Evaluation Techniques	GE102	Advanced Geotechnical Engineering
TR504	Highway Maintenance Management System	GE103	Advanced Foundation Engg.
TR505	Planning and Design of Airports	ST101	Finite Element Method
TR506	Intelligent Transportation Systems	EN510	Global Warming and Climate Change
TR507	Road Safety Audit	GE503	Geotechnical Investigation & Field Testing of Soil
TR508	Traffic Flow Theory	List of Electives C	
TR509	Transport Economics and Finance	ID203	Advanced Product Design
TR510	Traffic Simulation Modeling	IT202	Failure Analysis & Prevention
		AM202	Advanced Composite Materials
		SV203	Theory of Vibration II
		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}