

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

**M Tech in Environmental Engineering**

**SCHEME OF STUDY (January 2021)**

**First Semester:**

Course No.	Subject	Scheme of studies periods per week			Total Credits
		L	T	P	
MTH 101 EN	Advanced Mathematics	3	-	-	3
EN 102	Physico-Chemical Treatment Processes	3	-	-	3
EN 103	Air and Noise Pollution	3	-	-	3
EN 104	Biological Treatment Processes	3	-	-	3
	Elective-I (A)	3	-	-	3
	Elective-II (B)	3	-	-	3
EN 105	Lab-1	-	-	2	1
EN 106	Seminar-1	-	-	2	1
EN 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	
EN 201	Sustainable Development, Ethics and Global Environmental Issues	3	-	-	3
EN 202	Solid Waste Management	3	-	-	3
EN 203	Environmental Impact Assessment & Legislation	3	-	-	3
	Elective-3 (A)	3	-	-	3
	Elective-4 (A)	3	-	-	3
	Elective-5 (C)	3	-	-	3
EN 204	Lab-2	-	-	2	1
EN 205	Research Methodology, Technical Report and Paper Writing	-	2	-	2
EN 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	
EN 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	
EN 401	Dissertation Phase-2	-	-	40	20
Total Hours: 40 Total Credits: 80		Total Semester Credits			20

List of Electives A		List of Electives B	
EN501	Environmental Chemistry	GI103	Basics of Remote Sensing Technology
EN502	Environmental Quality Monitoring	GI507	Remote sensing and GIS applications in Environmental Engineering
EN503	Noise Pollution & Its Control	WR101	Computational Techniques in Water Resources Engineering
EN504	Environmental Legislation	WR509	Rainwater Harvesting, Recycling and Reuse
EN505	Principles of Ecology	WR508	Finite Element Method
EN506	Environmental Auditing & Management System	HY505	Instrumentation & Measurements
EN507	Advanced Treatment Methods	GE502	Environmental Geotechniques
EN508	Industrial Waste Treatment and Disposal	<b>List of Electives C</b>	
EN509	Hazardous Waste Management & Risk Analysis	ID203	Advanced Product Design
EN510	Global Warming and Climate Change	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}**