

MAULANA AZAD NATIONAL INSTITUTE OF TECHNOLOGY, BHOPAL

DEPARTMENT OF CIVIL ENGINEERING

SCHEME FOR B.TECH. (Civil Engineering)

(2024 admitted batch onwards)

First Year Credits (Cumulative) 41

THIRD SEMESTER:

Course Code	Course Name	Scheme of Studies Periods per week			Credits
		L	T	P	
MTH24231	Applied Numerical Methods	3	1	-	4
CE24231	Strength of Materials	3	-	-	3
CE24232	Engineering Surveying	3	-	-	3
CE24233	Water Supply Engineering	3	-	-	3
CE24234	Highway Engineering	3	-	-	3
CE24235	Fluid Mechanics	3	-	-	3
CE24236	Fluid Mechanics Lab	-	-	2	1
CE24237	Engineering Surveying Lab	-	-	2	1
CE24238	Highway Engineering Lab	-	-	2	1
CE24239	Civil Engineering Materials Lab	-	1	2	2
	Minor-1	3	-	-	3* (Extra)
Total Hours =28		18	2	8	24
Total Credits (Cumulative)					65
Additional Subject: - National Cadet Corps (NCC)					
NCC24251	National Cadet Corps III	1	5	1	7
Total Credits (Cumulative)					11

FOURTH SEMESTER:

Course Code	Course Name	Scheme of Studies Periods per week			Credits
		L	T	P	
CE24241	Design of RCC Structures	3	-	-	3
CE24242	Advanced Surveying	3	-	-	3
CE24243	Wastewater Engineering	3	-	-	3
CE24244	Engineering Hydrology	3	-	-	3
CE24245	Structural Analysis-I	3	-	-	3
CE24246	Soil Mechanics	3	-	-	3
CE24247	Soil Mechanics Lab	-	-	2	1
CE24248	Water and Wastewater Lab	-	-	2	1
CE24249	Planning and Design of Building Structures Lab	1	-	2	2
	Minor-2	3	-	-	3* (Extra)
Total Hours =25		19	-	6	22
Total Credits (Cumulative)					87
Additional Subject: - National Cadet Corps (NCC)					
NCC24252	National Cadet Corps IV	2	-	1	3
Total Credits (Cumulative)					14

FIFTH SEMESTER:

Course Code	Course Name	Scheme of Studies Periods per week			Credits
		L	T	P	
CE24351	Design of Steel Structures	3	1	-	4
CE24352	Structural Analysis-II	3	-	-	3
CE24353	Hydraulics and Hydraulic Machines	3	-	-	3
CE24354	Environmental Pollution & Management	3	-	-	3
CE24355	Geotechnical Engineering	3	-	-	3
	Departmental Elective-1(A)	3	-	-	3
CE24356	Software Applications in Civil Engineering Lab	-	-	2	1
CE24357	Geotechnical Engineering Lab	-	-	2	1
CE24358	Structural Analysis Lab	-	-	2	1
CE24359	Internship/ Industrial Training	-	-	2	1
	Minor-3	3	-	-	3* (Extra)
Total Hours =27		18	1	8	23
Total Credits (Cumulative)					110
Additional Subject: - National Cadet Corps (NCC)					
NCC24351	National Cadet Corps V	1	5	1	7
Total Credits (Cumulative)					21

SIXTH SEMESTER:

Course Code	Course Name	Scheme of Studies Periods per week			Credits
		L	T	P	
CS24352	Data Structures and Algorithm	3	1	-	4
CE24361	Irrigation Engineering	3	1	-	4
CE24362	Traffic Engineering & Transportation Planning	3	-	-	3
CE24363	Financing, Planning & Management of Construction Projects	3	-	-	3
	Departmental Elective-2(A)	3	-	-	3
CE24365	Remote Sensing & GIS Lab	-	-	2	1
CE24366	Concrete & Steel Testing Lab	-	-	2	1
CE24367	Traffic Engineering Lab	-	-	2	1
CE24368	Design Project			2	1
	Minor-4	3	-	-	3* (Extra)
Total Hours =25		15	2	8	21
Total Credits (Cumulative)					131
Additional Subject: - National Cadet Corps (NCC)					
NCC24352	National Cadet Corps VI	2	-	1	3
Total Credits (Cumulative)					24

SEVENTH SEMESTER:

Course Code	Course Name	Scheme of Studies Periods per week			Credits
		L	T	P	
HUM24451	Engineering Economics and IPR	3	-	-	3
CE24471	Detailed Project Report Preparation and Valuation of Infrastructure Projects	3	-	-	3
	Programme Elective-3 (A)	3	-	-	3
	Programme Elective-4 (A)	3	-	-	3
	Open Elective-1(C)	3	-	-	3
CE24472	Project based lab	-	-	2	1
CE24473	B Tech Project	-	-	4	2
CE24474	Industrial / Field Training	-	-	2	1
	Minor-5	3	-	-	3* (Extra)
Total Hours =23		15	-	8	19
Total Credits (Cumulative)					150

EIGHTH SEMESTER:

Course Code	Course Name	Scheme of Studies Periods per week			Credits
		L	T	P	
	Programme Elective-5 (A) -NPTEL	3	-	-	3
	Programme Elective-6 (A) -NPTEL	3	-	-	3
CE24481	Internship	-	-	16	8
CE24482	General Proficiency	-	-	-	1
Total Hours =22		6	-	16	15
Total Credits (Cumulative)					165

LIST OF DEPARTMENT/PROGRAMME ELECTIVES

For 3rd year

CE24301 Geotechnical Investigations for Civil Engineering Structures
CE24302 Modern Foundations
CE24303 Concrete Technology
CE24304 Pre-stressed Concrete
CE24305 Highway Geometric Design
CE24306 Road Safety Audit
CE24307 Noise Pollution & Its Control
CE24308 Hazardous Waste Management
CE24309 GPS Surveying and its Applications
CE24310 Remote Sensing and GIS
CE24311 Water Resources Systems, Planning and Management
CE24312 River Engineering
CE24313 Open Channel Hydraulics
CE24314 Hydropower Engineering
CE24315 Groundwater Engineering and Management

For 4th year

CE24401 Ground Improvement Techniques
CE24402 Geosynthetics and Reinforced Soil Structures
CE24403 Soil Dynamics & Machine Foundation
CE24404 Advanced RCC Design
CE24405 Bridge Design
CE24406 Earthquake Resistant Design of Structures
CE24407 Finite Element Method
CE24408 Advanced Technologies in Transport Infrastructure
CE24409 Road Safety Engineering
CE24410 Intelligent Transport Systems
CE24411 Analysis and Design of Pavement Structures
CE24412 Railway, Airport, and Harbour Engineering
CE24413 Environmental Impact Assessment
CE24414 Environmental Legislation
CE24415 Sustainable Development and Global Environmental Issues
CE24416 Industrial Waste Treatment
CE24417 Advanced Treatment Methods
CE24418 Air Pollution and Control
CE24419 Environmental Quality Monitoring
CE24420 Digital Processing of Remotely Sensed Data
CE24421 Digital Mapping and Cartography
CE24422 Mechanics of Sediment Transport
CE24423 Machine Learning and Data Analytics in Civil Engineering
CE24424 Fluid Measurement Systems
CE24425 Design of Hydraulic Structures
CE24426 Disaster Management and Mitigation
CE24427 Hydroclimatology
CE24428 Optimization Methods for Civil Engineers
CE24429 Design of Steel-Concrete Composite Structures
CE24430 Modern Construction Equipment and Construction Practices
CE24431 Mega Projects in Construction
CE24432 Recent Advances in Civil Engineering