

MAULANA AZAD NATIONAL INSTITUTE OF TECHNOLOGY, BHOPAL

CE/178
28/5/26

B.Tech. Scheme of Study (Branch: Civil Engineering)

Session 2025-26 Onwards

B.Tech. III Semester

Course Code	Course Name	Scheme of Studies Periods per week			Credits
		L	T	P	
MCMT2001	Applied Numerical Methods	3	1	-	4
HS2001	Fundamentals of Entrepreneurship	3	-	-	3
CE2101	Strength of Materials	3	-	-	3
CE2102	Engineering Surveying	3	-	-	3
CE2103	Fluid Mechanics	3	-	-	3
CE2104	Building Construction	3	-	-	3
CE2105	Engineering Materials and Building Construction Lab	-	-	2	1
CE2106	Fluid Mechanics Lab	-	-	2	1
CE2107	Engineering Surveying Lab	-	-	2	1
CE2108	Professional Practice (AutoCAD)	-	2	-	2
Total Hours = 27		18	3	6	24
Total Credits (Cumulative)					65
Additional Subject: National Cadet Corps (NCC)					
NC2151	National Cadet Corps III	1	5	1	7
Total Credits (Cumulative)					11
	Minor-1*	3	-	-	3

B.Tech. IV Semester

Course Code	Course Name	Scheme of Studies Periods per week			Credits
		L	T	P	
CS2001	Data Structures and Algorithm	2	1	-	3
CE2201	Structural Analysis-I	3	1	-	4
CE2202	Advanced Surveying	3	-	-	3
CE2203	Hydraulics and Hydraulic Machines	3	-	-	3
CE2204	Geotechnical Engineering I	3	-	-	3
CE2205	Water Supply Engineering	3	-	-	3
CE2206	Geotechnical Engineering I Lab	-	-	2	1
CE2207	Building Planning and Drawing Lab	-	-	2	1
CE2208	Project Based Lab1 # (Learn any software from Civil Engineering)	-	-	2	1
Total Hours = 25		17	2	6	22
Total Credits (Cumulative)					87
Additional Subject: National Cadet Corps (NCC)					
NC2251	National Cadet Corps IV	2	-	1	3
Total Credits (Cumulative)					14
	Minor-2*	3	-	-	3

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B.Tech. V Semester

Course Code	Course Name	Scheme of Studies			Credits
		Periods per week			
		L	T	P	
CE3101	Structural Analysis-II	3	1	-	4
CE3102	Wastewater Engineering	3	-	-	3
CE3103	Geotechnical Engineering II	3	-	-	3
CE3104	Engineering Hydrology	3	-	-	3
CE3105	Highway Engineering	3	-	-	3
CE3151-3159	Departmental Elective-1(A)	3	-	-	3
CE3106	Water and Wastewater Lab	-	-	2	1
CE3107	Geotechnical Engineering II Lab	-	-	2	1
CE3108	Structural Analysis Lab	-	-	2	1
CE3109	Internship/ Industrial Training	-	-	2	1
Total Hours = 27		18	1	8	23
Total Credits (Cumulative)					110
Additional Subject: National Cadet Corps (NCC)					
NC3151	National Cadet Corps V	1	5	1	7
Total Credits (Cumulative)					21
*Optional	NPTEL/SWAYAM Courses Only	3	-	-	3
	Minor-3*	3	-	-	3

B.Tech. VI Semester

Course Code	Course Name	Scheme of Studies			Credits
		Periods per week			
		L	T	P	
CE3201	Design of RCC Structures	3	1	-	4
CE3202	Project Management	3	1	-	4
CE3203	Transportation Engineering	3	-	-	3
CE3204	Irrigation Engineering	3	-	-	3
CE3251-3259	Departmental Elective-2(A)	3	-	-	3
CE3205	Highway Engineering Lab	-	-	2	1
CE3206	Estimation and Costing Lab	-	-	2	1
CE3207	Remote Sensing & GIS Lab	-	-	2	1
CE3208	Project Based Lab2 # (Application of the software in Civil Engineering problems)			2	1
Total Hours = 27		15	2	8	21
Total Credits (Cumulative)					131
Additional Subject: National Cadet Corps (NCC)					
NC3251	National Cadet Corps IV	2	-	1	3
Total Credits (Cumulative)					24
	Minor-4*	3	-	-	3

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B.Tech. VII Semester

Course Code	Course Name	Scheme of Studies			Credits
		Periods per week			
		L	T	P	
HS4101	Engineering Economics and IPR	3	-	-	3
CE4101	Design of Steel Structures	3	-	-	3
CE4151-4159	Departmental Elective-3(A)	3	-	-	3
CE4161-4169	Departmental Elective-4(A)	3	-	-	3
4181-4199	Open Elective-1(C)	3	-	-	3
CE4102	Concrete & Steel Testing Lab	-	-	2	1
CE4103	Project-I#	-	-	4	2
CE4104	Internship/ Field Training	-	-	2	1
Total Hours = 23		15	-	8	19
Total Credits (Cumulative)					150
	Minor-5*	3	-	-	3

B.Tech. VIII Semester

Course Code	Course Name	Scheme of Studies			Credits
		Periods per week			
		L	T	P	
CE4251-4259	Departmental Elective-5 (A) NPTEL/SWAYAM Courses Only	3	-	-	3
CE4261-4269	Departmental Elective-6 (A) NPTEL/SWAYAM Courses Only	3	-	-	3
CE4201	Project-2/ Internship#	-	-	16	8
CE4202	General Proficiency	-	-	-	1
Total Hours =22		6	-	16	15
Cumulative Credits					165

It may be earned by startup activity

CE3151-3159	Departmental Elective-1(A)
CE3151	Geotechnical Investigations for Civil Engineering Structures
CE3152	Concrete Technology
CE3153	Highway Geometric Design
CE3154	GPS Surveying and its Applications
CE3155	Environmental Pollution & Management
CE3156	Financing, Planning & Management of Construction Projects
CE3157	Open Channel Hydraulics
CE3158	Groundwater Engineering and Management

CE3251-3259	Departmental Elective-2(A)
CE3251	Modern Foundations
CE3252	Pre-stressed Concrete
CE3253	Traffic Engineering & Transportation Planning
CE3254	Remote Sensing and GIS
CE3255	Geosynthetics and Reinforced Soil Structures
CE3256	Hydropower Engineering

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CE3257	Hazardous Waste Management
CE3258	River Engineering

CE4151-4159	Departmental Elective-3(A)
CE4151	Ground Improvement Techniques
CE4152	Advanced RCC Design
CE4153	Road Safety Audit
CE4154	Digital Processing of Remotely Sensed Data
CE4155	Noise Pollution & Its Control
CE4156	Water Resources Systems, Planning and Management
CE4157	Advanced Technologies in Transport Infrastructure
CE4158	Railway, Airport, and Harbour Engineering

CE4161-4169	Departmental Elective-4(A)
CE4161	Finite Element Method
CE4162	Intelligent Transport Systems
CE4163	Digital Mapping and Cartography
CE4164	Environmental Impact Assessment
CE4165	Fluid Measurement Systems
CE4166	Environmental Legislation
CE4167	Optimization Methods for Civil Engineers
CE4168	Detailed Project Report Preparation and Valuation of Infrastructure Projects
CE4169	Advanced Treatment Methods

CE4251-4259	Departmental Elective-5(A) NPTEL/SWAYAM Courses Only
CE4251	Bridge Design
CE4252	Environmental Quality Monitoring
CE4253	Analysis and Design of Pavement Structures
CE4254	Road Safety Engineering
CE4255	Mechanics of Sediment Transport
CE4256	Machine Learning and Data Analytics in Civil Engineering
CE4257	Industrial Waste Treatment
CE4258	Design of Hydraulic Structures
CE4259	Air Pollution and Control

CE4261-4269	Departmental Elective-6(A) NPTEL/SWAYAM Courses Only
CE4261	Disaster Management and Mitigation
CE4262	Hydroclimatology
CE4263	Sustainable Development and Global Environmental Issues
CE4264	Design of Steel-Concrete Composite Structures
CE4265	Modern Construction Equipment and Construction Practices
CE4266	Mega Projects in Construction
CE4267	Recent Advances in Civil Engineering
CE4268	Earthquake Resistant Design of Structures

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