

Department of Civil Engineering

NEP courses for the batch admitted from AY 2024-25

Details of Departmental Compulsary (DC) Courses

Departmental Compulsary (DC) Courses					
S. No.	Course Code	Course Name	L-T-P	Credit	Course Type
1	NCEC501	Mechanics of Deformable Solids	3-1-0	4	Theory
2	NCEC502	Mechanics of Geomaterials	3-1-0	4	Theory
3	NCEC503	Numerical Methods in Civil Engg	3-1-0	4	Theory
4	NCEC504	Computational Laboratory-I	0-0-3	1.5	Practical
5	NCEC505	Civil Engineering Model Development Laboratory	0-0-3	1.5	Practical
6	NCEC507	Transportation System, Design, and Management	3-1-0	4	Theory
7	NCEC508	Engineering Hydrology and Hydraulics	3-1-0	4	Theory
8	NCEC509	Finite Element Method	3-1-0	4	Theory
9	NCEC510	Advanced Testing Laboratory	0-0-3	1.5	Practical
10	NCEC512	Computational Laboratory-II	0-0-3	1.5	Practical
11	NCEC513	Theory of Elasticity and Plasticity	3-1-0	4	Theory
12	NCEC514	Structural Dynamics	3-1-0	4	Theory
13	NCEC515	Structural Engineering Laboratory	0-0-3	1.5	Practical
14	NCEC516	Transportation Statistics and Microsimulation	3-1-0	4	Theory
15	NCEC517	Traffic Engineering and Design	3-1-0	4	Theory
16	NCEC518	Advanced Pavement Material Laboratory	0-0-3	1.5	Practical
17	NCEC519	Transportation Planning Laboratory	0-0-3	1.5	Practical
18	NCEC520	River Engineering	3-1-0	4	Theory
19	NCEC521	Water Resource Engineering Laboratory-I	0-0-3	1.5	Practical
20	NCEC522	Theory of Elastic Stability	3-1-0	4	Theory
21	NCEC523	Hydrogeology and Well Hydraulics	3-1-0	4	Theory
22	NCEC524	Experimental Geotechnics I: Laboratory Testing	0-0-3	1.5	Practical
23	NCEC525	Hydroclimatology for Water Resources Management	3-1-0	4	Theory
24	NCEC526	Finite Element Method in Structural Analysis	3-1-0	4	Theory
25	NCEC527	Earthquake Resistant Design of Structures	3-1-0	4	Theory
26	NCEC528	Advanced Structural Engineering Laboratory	0-0-3	1.5	Practical
27	NCEC529	Travel Behaviour Modelling	3-1-0	4	Theory
28	NCEC530	Road Safety and Risk Analysis	3-1-0	4	Theory
29	NCEC531	Advanced Highway Design and Analysis	3-1-0	4	Theory
30	NCEC532	Pavement Design Laboratory	0-0-3	1.5	Practical
31	NCEC533	Traffic Engineering Laboratory	0-0-3	1.5	Practical
32	NCEC534	Geoinformatics in Civil Engineering	3-1-0	4	Theory
33	NCEC535	Water Resource Engineering Laboratory-II	0-0-3	1.5	Practical
34	NCEC536	Ground Improvement and Geosynthetics	3-1-0	4	Theory
35	NCEC537	Geoenvironmental Engineering	3-1-0	4	Theory
36	NCEC538	Advanced Foundation Engineering	3-1-0	4	Theory
37	NCEC539	Experimental Geotechnics-II: In-situ Testing & Physical Modelling	0-0-3	1.5	Practical
38	NCEC540	Computational Geomechanics	3-1-0	4	Theory
39	NCEC541	Numerical Geotechnics-I	0-0-3	1.5	Practical
40	NCEC542	Numerical Geotechnics-II	0-0-3	1.5	Practical

41	NCEC543	Computational Laboratory in Structural Engineering - I	0-0-3	1.5	Practical
42	NCEC544	Computational Laboratory in Structural Engineering - II	0-0-3	1.5	Practical
43	NCEC545	Computational Laboratory In Hydraulics	0-0-3	1.5	Practical
44	NCEC546	Computational Laboratory In Hydrology	0-0-3	1.5	Practical
45	NCEC547	Term Project-I	0-0-3	1.5	Practical
46	NCEC548	Term Project-II	0-0-3	1.5	Practical
47	NCEC595	Research Methodology	3-0-0	3	Theory
48	NCEC596	Research Methodology	3-0-0	3	Audit
49	NCEC597	Thesis	0-0-0	20	Non-contact
50	NCEC598	Thesis	0-0-0	20	Non-contact
51	NCEC599	Thesis	0-0-0	20	Audit

Details of Departmental Elective (DE) Courses

Departmental Elective Courses					
S. No.	Course Code	Course Name	L-T-P	Credit	Course Type
1	NCED502	Theory of Plates and Shells	3-0-0	3	Theory
2	NCED504	Computational Fluid Dynamics in Civil Engineering	3-0-0	3	Theory
3	NCED505	Soil Dynamics	3-0-0	3	Theory
4	NCED506	Slope and Retaining Structures	3-0-0	3	Theory
5	NCED507	Structural Dynamics	3-0-0	3	Theory
6	NCED508	Sustainable Engineering	3-0-0	3	Theory
7	NCED509	Blast Protection of Structures	3-0-0	3	Theory
8	NCED510	Railway Geotechnics	3-0-0	3	Theory
9	NCED511	Hydroclimatology	3-0-0	3	Theory
10	NCED512	Earthquake Engineering	3-0-0	3	Theory
11	NCED513	Heritage Structures: Preservation, Restoration and Rehabilitation	3-0-0	3	Theory
12	NCED514	Design of Tall Buildings	3-0-0	3	Theory
13	NCED515	Hydrological Measurements and Stochastic Analysis	3-0-0	3	Theory
14	NCED516	Advanced Fluid Mechanics	3-0-0	3	Theory
15	NCED517	Optimization Methods	3-0-0	3	Theory
16	NCED518	Pavement Design and Analysis	3-0-0	3	Theory
17	NCED519	Urban Transportation Planning and Policy	3-0-0	3	Theory
18	NCED520	Water Resources System Planning and Management	3-0-0	3	Theory
19	NCED521	Unsaturated Soil Mechanics	3-0-0	3	Theory
20	NCED522	Pavement Geotechnics	3-0-0	3	Theory
21	NCED523	Prestressed Concrete Structures	3-0-0	3	Theory
22	NCED524	Mechanics of Composite Materials	3-0-0	3	Theory
23	NCED525	Soil-Structure Interaction	3-0-0	3	Theory