

# Scheme for B.Tech. in Civil Engineering

(Applicable to 2025 Batch onwards UG Students as per NEP 2020)

Semester	Course 1	Course 2	Course 3	Course 4	Course 5	Course 6	Course 7	Course 8	Course 9	Course 10	Course 11	Course 12	Course 13	Course 14	Course 15	Semester Credits	Cumulative Credits
I & II	22CEP113	22CET112	22HSP107	22HST101	22HST106	22MEP102	22MET101	22PHP103	22PHT101	22MAT101	22CET103	22CEP104	22BMT922 *			25	54
	Engineering Drawing and Sketching Lab	Engineering Drawing and Sketching	Communication Skills lab	Basic Economics	English Communication Skills	Product Realization through Manufacturing	Introduction to Mechanical Systems	Classical Physics Lab	Classical Physics	Mathematics I	Surveying	Surveying Lab	Management Principles for Engineers				
	1 (0 0 2 0)	1 (1 0 0 0)	1 (0 0 2 0)	2 (2 0 0 0)	2 (2 0 0 0)	1 (0 0 2 0)	2 (2 0 0 0)	1 (0 0 2 0)	3 (2 1 0 0)	4 (3 1 0 0)	3 (3 0 0 0)	1 (0 0 2 0)	3 (3 0 0 0)				
	22CET102	22CSP102	22CST101	22CYP102	22CYT101	22ECP101	22EEP102	22EET107	22ECT108	22MAT151	22CET152	22CET151	22CEP153	ICP101	ICP102	29	
	Environmental Science	Programming with Python Lab	Programming with Python	Engineering Chemistry Lab	Engineering Chemistry	Electronics Engineering Lab	Electrical Engineering Lab	Basic Electrical Engineering	Basics of Electronics Engineering	Mathematics II	Mechanics of Solids	Engineering Geology	Geology Lab	Creative Arts / Sports / NSS (GNI)	Discipline (GNI)		
	2 (2 0 0 0)	1 (0 0 2 0)	2 (2 0 0 0)	1 (0 0 2 0)	3 (2 1 0 0)	1 (0 0 2 0)	1 (0 0 2 0)	2 (2 0 0 0)	2 (2 0 0 0)	4 (3 1 0 0)	4 (3 1 0 0)	3 (3 0 0 0)	1 (0 0 2 0)	1	1		
III	22CET201	22CET202	22CET203	22CET204	22CET205	22CET206	22CEP207	22CEP208	22CEP209	22CEP210	22CEP211	22MAT243				25	79
	Advanced Surveying	Building Technology	Construction Materials	Fluid Mechanics	Introduction to Satellite Based Positioning	Structural Analysis	Advanced Surveying and GNSS Lab	Building Drawing - I	Construction Materials Lab	Fluid Mechanics Lab	Structural Analysis Lab	Numerical Methods & Optimization					
	2 (2 0 0 0)	2 (2 0 0 0)	3 (3 0 0 0)	4 (3 1 0 0)	2 (2 0 0 0)	4 (3 1 0 0)	1 (0 0 2 0)	1 (0 0 2 0)	1 (0 0 2 0)	1 (0 0 2 0)	1 (0 0 2 0)	3 (3 0 0 0)					
IV	22CET251	22CET252	22CET253	22CET254	22CET255	22CEP256	22CEP257	22CEP258	22CEP259	22CEP260	22ART291	22ARP292		ICP201	ICP202	27	106
	Design of RCC Structures	Environmental Engineering - I	Geotechnical Engineering - I	Hydraulic Engineering	Transportation Engineering - I	Highway Materials Lab	Hydraulics Lab	Public Health & Engineering Lab	RCC Design, Drawing, & Detailing	Soil Mechanics Lab	Building Planning & Services	Building Drawing - II		Creative Arts / Sports / NSS (GNI)	Discipline (GNI)		
	3 (3 0 0 0)	3 (3 0 0 0)	4 (3 1 0 0)	4 (3 1 0 0)	3 (3 0 0 0)	1 (0 0 2 0)	1 (0 0 2 0)	1 (0 0 2 0)	1 (0 0 2 0)	1 (0 0 2 0)	2 (2 0 0 0)	1 (0 0 2 0)		1	1		
V	22CET301	22CET302	22CET303	22CET304	22CET305	22CEP306	22CEP307	22CEP308								22	128
	Design of RCC Systems	Design of Steel Structures	Environmental Engineering - II	Geotechnical Engineering - II	Hydrology	Environmental Engineering Lab	Geotechnical Engineering Lab	Structural Design & Drawing									
	4 (3 1 0 0)	4 (3 1 0 0)	3 (3 0 0 0)	4 (3 1 0 0)	4 (3 1 0 0)	1 (0 0 2 0)	1 (0 0 2 0)	1 (0 0 2 0)									
VI	22CET351	22CET352	22CET353	22CET354	22CEP355	22CEP356	22CEP357	22CEP358	22HST391	22HSP392				ICP301	ICP302	22	150
	Construction Project Management	Estimation and Costing	Transportation Engineering - II	Water Resources Engineering	Civil Engineering Practical Applications	Construction Management Lab	Environmental System Design	Water Resources Engineering Lab	Soft Skills and Personality Development	Soft Skills Lab				Creative Arts / Sports / NSS (GNI)	Discipline (GNI)		
	3 (3 0 0 0)	4 (3 1 0 0)	3 (2 1 0 0)	3 (3 0 0 0)	1 (0 0 2 0)	1 (0 0 2 0)	1 (0 2 0 0)	1 (0 0 2 0)	2 (2 0 0 0)	1 (0 0 2 0)				1	1		
VII	22CEO401	22CEW401	22CEPE01	22CEPE02	22CEPE03											17	167
	Training Seminar	Minor Project	Program Elective - I	Program Elective - II	Program Elective - III	Open Elective - I											
	2 (0 0 4 0)	3 (0 0 6 0)	3 (3 0 0 0)	3 (3 0 0 0)	3 (3 0 0 0)	3 (3 0 0 0)											
VIII	22CEW451		22CEPE04	22CEPE05											ICP402	19	186
	Major Project Or Any 03 electives of 03 credits each		Program Elective - IV	Program Elective - V	Open Elective - II										Discipline (GNI)		
	9 (0 0 18 0)		3 (3 0 0 0)	3 (3 0 0 0)	3 (3 0 0 0)										1		

Note: As per approval given by the Senate in its 56th meeting under agenda item no. 56-3.2 the course 22BMT921 has been replaced by 22BMT922 in I semester B.Tech. scheme of Dept. of Civil Engineering

Note: GNI (Grade not included in CGPA/ SGPA calculations)

DUGC Convener, Department of Civil Engineering

Head, Department of Civil Engineering

## Scheme for B.Tech. Civil Engineering

(Applicable to 2025 Batch onwards UG Students as per NEP 2020)

### Overall minimum credit requirement

Institute Core (IC) of Basic Sciences (BS)	16
Institute Core (IC) of Fundamental Engineering (EAS)	16
Institute Core (IC) of Humanities and Social Sciences (HSS)	5
Programme Core (PC)	95
Management	3
Programme Linked (EAS/BS)	6
Humanities	3
Training Seminar	2
Project	12
Programme Elective (PE)	15
Open Elective(OE)	6
CAS	3
Discipline	4
<b>Total Credits</b>	<b>186</b>

### Institute Core (IC)

Course Code	Course Name	Credits	L	T	P	S
22CEP113	Engineering Drawing and Sketching Lab	1	0	0	2	0
22CET112	Engineering Drawing and Sketching	1	1	0	0	0
22CET102	Environmental Science	2	2	0	0	0
22CSP102	Programming with Python Lab	1	0	0	2	0
22CST101	Programming with Python	2	2	0	0	0
22CVP102	Engineering Chemistry Lab	1	0	0	2	0
22CVT101	Engineering Chemistry	3	2	1	0	0
22HSP107	Communication Skills lab	1	0	0	2	0
22HST101	Basic Economics	2	2	0	0	0
22HST106	English Communication Skills	2	2	0	0	0
22MEP102	Product Realization through Manufacturing	1	0	0	2	0
22MET101	Introduction to Mechanical Systems	2	2	0	0	0
22PHP103	Classical Physics Lab	1	0	0	2	0
22PHT101	Classical Physics	3	2	1	0	0
22MAT101	Mathematics I	4	3	1	0	0
22ECP101	Electronics Engineering Lab	1	0	0	2	0
22EEP102	Electrical Engineering Lab	1	0	0	2	0
22EET107	Basic Electrical Engg.	2	2	0	0	0
22ECT108	Basics of Electronics Engg.	2	2	0	0	0
22MAT151	Mathematics II	4	3	1	0	0
		<b>37</b>				

### Programme Core (PC)

Course Code	Course Name	Credits	L	T	P	S
22CET103	Surveying	3	3	0	0	0
22CEP104	Surveying Lab	1	0	0	2	0
22CET152	Mechanics of Solids	4	3	1	0	0
22CET151	Engineering Geology	3	3	0	0	0
22CEP153	Geology Lab	1	0	0	2	0
22CET201	Advanced Surveying	2	2	0	0	0
22CET202	Building Technology	2	2	0	0	0
22CET203	Construction Materials	3	3	0	0	0
22CET204	Fluid Mechanics	4	3	1	0	0

Course Code	Course Name	Credits	L	T	P	S
22CET205	Introduction to Satellite Based Positioning	2	2	0	0	0
22CET206	Structural Analysis	4	3	1	0	0
22CEP207	Advanced Surveying and GNSS Lab	1	0	0	2	0
22CEP208	Building Drawing - I	1	0	0	2	0
22CEP209	Construction Materials Lab	1	0	0	2	0
22CEP210	Fluid Mechanics Lab	1	0	0	2	0
22CEP211	Structural Analysis Lab	1	0	0	2	0
22CET251	Design of RCC Structures	3	3	0	0	0
22CET252	Environmental Engineering - I	3	3	0	0	0
22CET253	Geotechnical Engineering - I	4	3	1	0	0
22CET254	Hydraulic Engineering	4	3	1	0	0
22CET255	Transportation Engineering - I	3	3	0	0	0
22CEP256	Highway Materials Lab	1	0	0	2	0
22CEP257	Hydraulics Lab	1	0	0	2	0
22CEP258	Public Health & Engineering Lab	1	0	0	2	0
22CEP259	RCC Design, Drawing, & Detailing	1	0	0	2	0
22CEP260	Soil Mechanics Lab	1	0	0	2	0
22CET301	Design of RCC Systems	4	3	1	0	0
22CET302	Design of Steel Structures	4	3	1	0	0
22CET303	Environmental Engineering - II	3	3	0	0	0
22CET304	Geotechnical Engineering - II	4	3	1	0	0
22CET305	Hydrology	4	3	1	0	0
22CEP306	Environmental Engineering Lab	1	0	0	2	0
22CEP307	Geotechnical Engineering Lab	1	0	0	2	0
22CEP308	Structural Design & Drawing	1	0	0	2	0
22CET351	Construction Project Management	3	3	0	0	0
22CET352	Estimation and Costing	4	3	1	0	0
22CET353	Transportation Engineering - II	3	2	1	0	0
22CET354	Water Resources Engineering	3	3	0	0	0
22CEP355	Civil Engineering Practical Applications	1	0	0	2	0
22CEP356	Construction Management Lab	1	0	0	2	0
22CEP357	Environmental System Design	1	0	0	2	0
22CEP358	Water Resources Engineering Lab	1	0	0	2	0
		<b>95</b>				

### Management Course

Course Code	Course Name	Credits	L	T	P	S
22BMT922	Management Principles for Engineers	3	3	0	0	0
		<b>3</b>				

### Programme Linked (EAS/BS) Course

Course Code	Course Name	Credits	L	T	P	S
22MAT243	Numerical Methods & Optimization	3	3	0	0	0
22ART291	Building Planning & Services	2	2	0	0	0
22ARP292	Building Drawing - II	1	0	0	2	0
		<b>6</b>				

### Humanities (HSS) Courses

Course Code	Course Name	Credits	L	T	P	S
22HST391	Soft Skills and Personality Development	2	2	0	0	0
22HSP392	Soft Skills Lab	1	0	0	2	0
		<b>3</b>				

### Training Seminar

Course Code	Course Name	Credits	L	T	P	S
22CEO401	Training Seminar	2	0	0	4	0
		<b>2</b>				

### Project

Course Code	Course Name	Credits	L	T	P	S
22CEW401	Minor Project	3	0	0	6	0
22CEW451	Major Project	9	0	0	18	0
		<b>12</b>				

### Program Elective

Course Code	Course Name	Credits	L	T	P	S
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03 Program Elective courses in VII semester and 02 Program Elective courses in VIII semester of 03 credits each from the list of courses offered by the parent department

**15**

### Open Elective

2 Open Electives (1 in each VII & VIII semester of 03 credits each) from the list of courses offered by the other departments

**6**

### Creative Arts/ Sports/ NSS & Discipline

Course Code	Course Name	Credits	L	T	P	S
ICP101	Creative Arts/ Sports/ NSS	1	0	0	0	0
ICP102	Discipline	1	0	0	0	0
ICP201	Creative Arts/ Sports/ NSS	1	0	0	0	0
ICP202	Discipline	1	0	0	0	0
ICP301	Creative Arts/ Sports/ NSS	1	0	0	0	0
ICP302	Discipline	1	0	0	0	0
ICP402	Discipline	1	0	0	0	0
		<b>7</b>				



## Scheme for B.Tech. in Civil Engineering

(Applicable to 2022 Batch UG Students only as per NEP 2020)

(Applicable to 2022 Batch UG Students only as per NEP 2020)																
Semester	Course 1	Course 2	Course 3	Course 4	Course 5	Course 6	Course 7	Course 8	Course 9	Course 10	Course 11	Course 12	Course 13	Course 14	Semester Credits	Cumulative Credits
I & II	22CET101	22CYP102	22CYT101	22HSP104/ 22HSP105	22HST101	22HST102/ 22HST103	22MEP102	22MET101	22MAT101	22CET103	22CEP104	22CEP105			23	51
	Engineering Drawing and Sketching	Engineering Chemistry Lab	Engineering Chemistry	Communication Skills lab (Basic)/ Communication Skills lab (Advanced)	Basic Economics	English Communication Skills (Basic)/ English Communication Skills (Advanced)	Product Realization through Manufacturing	Introduction to Mechanical Systems	Mathematics I	Surveying	Surveying Lab	Introduction to Civil Engineering				
	2 (1 1 1 0)	1 (0 0 2 0)	3 (2 1 0 0)	1 (0 0 2 0)	2 (2 0 0 0)	2 (2 0 0 0)	1 (0 0 2 0)	2 (2 0 0 0)	4 (3 1 0 0)	3 (3 0 0 0)	1 (0 0 2 0)	1 (0 0 2 0)				
	22CET102	22CSP102	22CST101	22ECP101	22EEP102	22EET101	22PHP103/ 22PHP104	22PHT101/ 22PHT102	22MAT102	22CET106	22CET107	22CEP108	ICP101	ICP102	28	
	Environmental Science	Programming with Python Lab	Programming with Python	Electronics Engineering Lab	Electrical Engineering Lab	Basic Electrical and Electronics Engg.	Classical Physics Lab/ Modern Physics Lab	Classical Physics/ Modern Physics	Mathematics II	Mechanics of Solids	Engineering Geology	Engineering Geology lab	Creative Arts / Sports / NSS (GNI)	Discipline (GNI)		
2 (2 0 0 0)	1 (0 0 2 0)	2 (2 0 0 0)	1 (0 0 2 0)	1 (0 0 2 0)	3 (3 0 0 0)	1 (0 0 2 0)	3 (2 1 0 0)	4 (3 1 0 0)	4 (3 1 0 0)	3 (3 0 0 0)	1 (0 0 2 0)	1	1			
III	22CET201	22CET202	22CET203	22CET204	22CET205	22CET206	22CEP207	22CEP208	22CEP209	22CEP210	22CEP211	22MAT243			25	76
	Advanced Surveying	Building Technology	Construction Materials	Fluid Mechanics	Introduction to Satellite Based Positioning	Structural Analysis	Advanced Surveying and GNSS Lab	Building Drawing - I	Construction Materials Lab	Fluid Mechanics Lab	Structural Analysis Lab	Numerical Methods & Optimization				
	2 (2 0 0 0)	2 (2 0 0 0)	3 (3 0 0 0)	4 (3 1 0 0)	2 (2 0 0 0)	4 (3 1 0 0)	1 (0 0 2 0)	1 (0 0 2 0)	1 (0 0 2 0)	1 (0 0 2 0)	1 (0 0 2 0)	3 (3 0 0 0)	ICP201	ICP202		
IV	22CET251	22CET252	22CET253	22CET254	22CET255	22CEP256	22CEP257	22CEP258	22CEP259	22CEP260	22ART291	22ARP292	ICP201	ICP202	27	103
	Design of RCC Structures	Environmental Engineering - I	Geotechnical Engineering - I	Hydraulic Engineering	Transportation Engineering - I	Highway Materials Lab	Hydraulics Lab	Public Health & Engineering Lab	RCC Design, Drawing, & Detailing	Soil Mechanics Lab	Building Planning & Services	Building Drawing - II	Creative Arts / Sports / NSS (GNI)	Discipline (GNI)		
	3 (3 0 0 0)	3 (3 0 0 0)	4 (3 1 0 0)	4 (3 1 0 0)	3 (3 0 0 0)	1 (0 0 2 0)	1 (0 0 2 0)	1 (0 0 2 0)	1 (0 0 2 0)	1 (0 0 2 0)	2 (2 0 0 0)	1 (0 0 2 0)	1	1		
V	22CET301	22CET302	22CET303	22CET304	22CET305	22CEP306	22CEP307	22CEP308							22	125
	Design of RCC Systems	Design of Steel Structures	Environmental Engineering - II	Geotechnical Engineering - II	Hydrology	Environmental Engineering Lab	Geotechnical Engineering Lab	Structural Design & Drawing								
	4 (3 1 0 0)	4 (3 1 0 0)	3 (3 0 0 0)	4 (3 1 0 0)	4 (3 1 0 0)	1 (0 0 2 0)	1 (0 0 2 0)	1 (0 0 2 0)	22HST391	22HSP392			ICP301	ICP302		
VI	22CET351	22CET352	22CET353	22CET354	22CEP355	22CEP356	22CEP357	22CEP358	22HST391	22HSP392			ICP301	ICP302	22	147
	Construction Project Management	Estimation and Costing	Transportation Engineering - II	Water Resources Engineering	Civil Engineering Practical Applications	Construction Management Lab	Environmental System Design	Water Resources Engineering Lab	Soft Skills and Personality Development	Soft Skills Lab			Creative Arts / Sports / NSS (GNI)	Discipline (GNI)		
	3 (3 0 0 0)	4 (3 1 0 0)	3 (2 1 0 0)	3 (3 0 0 0)	1 (0 0 2 0)	1 (0 0 2 0)	1 (0 2 0 0)	1 (0 0 2 0)	2 (2 0 0 0)	1 (0 0 2 0)			1	1		
VII	22CEO401	22CEW401	22CEPE01	22CEPE02	22CEPE03										17	164
	Training Seminar	Minor Project	Program Elective - I	Program Elective - II	Program Elective - III	Open Elective - I										
	2 (0 0 4 0)	3 (0 0 6 0)	3 (3 0 0 0)	3 (3 0 0 0)	3 (3 0 0 0)	3 (3 0 0 0)								ICP402		
VIII	22CEW451		22CEPE04	22CEPE05										Discipline (GNI)	19	183
	Major Project Or Any 03 electives of 03 credits each		Program Elective - IV	Program Elective - V	Open Elective - II									1		
	9 (0 0 18 0)		3 (3 0 0 0)	3 (3 0 0 0)	3 (3 0 0 0)											

Note: GNI (Grade not included in CGPA/ SGPA calculations)

# Overall minimum credit requirement

Institute Core (IC) of Basic Sciences (BS)	16
Institute Core (IC) of Fundamental Engineering (EAS)	15
Institute Core (IC) of Humanities and Social Sciences (HSS)	5
Programme Core (PC)	96
Management	0
Programme Linked (EAS/BS)	6
Humanities	3
Training Seminar	2
Project	12
Programme Elective (PE)	15
Open Elective(OE)	6
CAS	3
Discipline	4
<b>Total Credits</b>	<b>183</b>

## Institute Core (IC)

Course Code	Course Name	Credits	L	T	P	S
22CET101	Engineering Drawing and Sketching	2	1	1	1	0
22CYP102	Engineering Chemistry Lab	1	0	0	2	0
22CYT101	Engineering Chemistry	3	2	1	0	0
22HSP104/ 22HSP105	Communication Skills lab (Basic)/ Communication Skills lab (Advanced)	1	0	0	2	0
22HST101	Basic Economics	2	2	0	0	0
22HST102/ 22HST103	English Communication Skills (Basic)/ English Communication Skills (Advanced)	2	2	0	0	0
22MEP102	Product Realization through Manufacturing	1	0	0	2	0
22MET101	Introduction to Mechanical Systems	2	2	0	0	0
22MAT101	Mathematics I	4	3	1	0	0
22CET102	Environmental Science	2	2	0	0	0
22CSP102	Programming with Python Lab	1	0	0	2	0
22CST101	Programming with Python	2	2	0	0	0
22CEP101	Electronics Engineering Lab	1	0	0	2	0
22EEP102	Electrical Engineering Lab	1	0	0	2	0
22EET101	Basic Electrical and Electronics Engg.	3	3	0	0	0
22PHP103/ 22PHP104	Classical Physics Lab/ Modern Physics Lab	1	0	0	2	0
22PHT101/ 22PHT102	Classical Physics/ Modern Physics	3	2	1	0	0
22MAT102	Mathematics II	4	3	1	0	0
		<b>36</b>				

## Programme Core (PC)

Course Code	Course Name	Credits	L	T	P	S
22CET103	Surveying	3	3	0	0	0
22CEP104	Surveying Lab	1	0	0	2	0
22CEP105	Introduction to Civil Engineering	1	0	0	2	0

# Scheme for B.Tech. Civil Engineering

(Applicable to 2022 Batch UG Students only as per NEP 2020)

Course Code	Course Name	Credits	L	T	P	S
22CET201	Advanced Surveying	2	2	0	0	0
22CET202	Building Technology	2	2	0	0	0
22CET203	Construction Materials	3	3	0	0	0
22CET204	Fluid Mechanics	4	3	1	0	0
22CET106	Mechanics of Solids	4	3	1	0	0
22CET107	Engineering Geology	3	3	0	0	0
22CEP108	Engineering Geology lab	1	0	0	2	0
22CET205	Introduction to Satellite Based Positioning	2	2	0	0	0
22CET206	Structural Analysis	4	3	1	0	0
22CEP207	Advanced Surveying and GNSS Lab	1	0	0	2	0
22CEP208	Building Drawing - I	1	0	0	2	0
22CEP209	Construction Materials Lab	1	0	0	2	0
22CEP210	Fluid Mechanics Lab	1	0	0	2	0
22CEP211	Structural Analysis Lab	1	0	0	2	0
22CET251	Design of RCC Structures	3	3	0	0	0
22CET252	Environmental Engineering - I	3	3	0	0	0
22CET253	Geotechnical Engineering - I	4	3	1	0	0
22CET254	Hydraulic Engineering	4	3	1	0	0
22CET255	Transportation Engineering - I	3	3	0	0	0
22CEP256	Highway Materials Lab	1	0	0	2	0
22CEP257	Hydraulics Lab	1	0	0	2	0
22CEP258	Public Health & Engineering Lab	1	0	0	2	0
22CEP259	RCC Design, Drawing, & Detailing	1	0	0	2	0
22CEP260	Soil Mechanics Lab	1	0	0	2	0
22CET301	Design of RCC Systems	4	3	1	0	0
22CET302	Design of Steel Structures	4	3	1	0	0
22CET303	Environmental Engineering - II	3	3	0	0	0
22CET304	Geotechnical Engineering - II	4	3	1	0	0
22CET305	Hydrology	4	3	1	0	0
22CEP306	Environmental Engineering Lab	1	0	0	2	0
22CEP307	Geotechnical Engineering Lab	1	0	0	2	0
22CEP308	Structural Design & Drawing	1	0	0	2	0
22CET351	Construction Project Management	3	3	0	0	0
22CET352	Estimation and Costing	4	3	1	0	0
22CET353	Transportation Engineering - II	3	2	1	0	0
22CET354	Water Resources Engineering	3	3	0	0	0
22CEP355	Civil Engineering Practical Applications	1	0	0	2	0
22CEP356	Construction Management Lab	1	0	0	2	0
22CEP357	Environmental System Design	1	0	0	2	0
22CEP358	Water Resources Engineering Lab	1	0	0	2	0
		<b>96</b>				

## Management Course

Course Code	Course Name	Credits	L	T	P	S
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## Programme Linked (EAS/BS) Course

Course Code	Course Name	Credits	L	T	P	S
22MAT243	Numerical Methods & Optimization	3	3	0	0	0
22ART291	Building Planning & Services	2	2	0	0	0
22ARP292	Building Drawing - II	1	0	0	2	0
		<b>6</b>				

## Humanities (HSS) Courses

Course Code	Course Name	Credits	L	T	P	S
22HST391	Soft Skills and Personality Development	2	2	0	0	0
22HSP392	Soft Skills Lab	1	0	0	2	0
		<b>3</b>				

## Training Seminar

Course Code	Course Name	Credits	L	T	P	S
22CEO401	Training Seminar	2	0	0	4	0
		<b>2</b>				

## Project

Course Code	Course Name	Credits	L	T	P	S
22CEW401	Minor Project	3	0	0	6	0
22CEW451	Major Project	9	0	0	##	0
		<b>12</b>				

## Program Elective

03 Program Elective courses in VII semester and 02 Program Elective courses in VIII semester of 03 credits each from the list of courses offered by the parent department

15

## Open Elective

2 Open Electives (1 in each VII & VIII semester of 03 credits each) from the list of courses offered by the other departments

6

## Creative Arts/ Sports/ NSS & Discipline

Course Code	Course Name	Credits	L	T	P	S
ICP101	Creative Arts/ Sports/ NSS	1	0	0	0	0
ICP102	Discipline	1	0	0	0	0
ICP201	Creative Arts/ Sports/ NSS	1	0	0	0	0
ICP202	Discipline	1	0	0	0	0
ICP301	Creative Arts/ Sports/ NSS	1	0	0	0	0
ICP302	Discipline	1	0	0	0	0
ICP402	Discipline	1	0	0	0	0
		<b>7</b>				



# Scheme for B.Tech. in Civil Engineering

(Applicable to 2023 & 2024 Batch UG Students only as per NEP 2020)

Semester	Course 1	Course 2	Course 3	Course 4	Course 5	Course 6	Course 7	Course 8	Course 9	Course 10	Course 11	Course 12	Course 13	Course 14	Course 15	Semester Credits	Cumulative Credits
I & II	22CEP113	22CET112	22HSP107	22HST101	22HST106	22MEP102	22MET101	22PHP103	22PHT101	22MAT101	22CET103	22CEP104	22BMT921			25	54
	Engineering Drawing and Sketching Lab	Engineering Drawing and Sketching	Communication Skills lab	Basic Economics	English Communication Skills	Product Realization through Manufacturing	Introduction to Mechanical Systems	Classical Physics Lab	Classical Physics	Mathematics I	Surveying	Surveying Lab	Basics of Management				
	1 (0 0 2 0)	1 (1 0 0 0)	1 (0 0 2 0)	2 (2 0 0 0)	2 (2 0 0 0)	1 (0 0 2 0)	2 (2 0 0 0)	1 (0 0 2 0)	3 (2 1 0 0)	4 (3 1 0 0)	3 (3 0 0 0)	1 (0 0 2 0)	3 (3 0 0 0)				
	22CET102	22CSP102	22CST101	22CYP102	22CYT101	22ECP101	22EEP102	22EET107	22ECT108	22MAT151	22CET152	22CET151	22CEP153	ICP101	ICP102	29	
	Environmental Science	Programming with Python Lab	Programming with Python	Engineering Chemistry Lab	Engineering Chemistry	Electronics Engineering Lab	Electrical Engineering Lab	Basic Electrical Engineering	Basics of Electronics Engineering	Mathematics II	Mechanics of Solids	Engineering Geology	Geology Lab	Creative Arts / Sports / NSS (GNI)	Discipline (GNI)		
	2 (2 0 0 0)	1 (0 0 2 0)	2 (2 0 0 0)	1 (0 0 2 0)	3 (2 1 0 0)	1 (0 0 2 0)	1 (0 0 2 0)	2 (2 0 0 0)	2 (2 0 0 0)	4 (3 1 0 0)	4 (3 1 0 0)	3 (3 0 0 0)	1 (0 0 2 0)	1	1		
III	22CET201	22CET202	22CET203	22CET204	22CET205	22CET206	22CEP207	22CEP208	22CEP209	22CEP210	22CEP211	22MAT243				25	79
	Advanced Surveying	Building Technology	Construction Materials	Fluid Mechanics	Introduction to Satellite Based Positioning	Structural Analysis	Advanced Surveying and GNSS Lab	Building Drawing - I	Construction Materials Lab	Fluid Mechanics Lab	Structural Analysis Lab	Numerical Methods & Optimization					
	2 (2 0 0 0)	2 (2 0 0 0)	3 (3 0 0 0)	4 (3 1 0 0)	2 (2 0 0 0)	4 (3 1 0 0)	1 (0 0 2 0)	1 (0 0 2 0)	1 (0 0 2 0)	1 (0 0 2 0)	1 (0 0 2 0)	3 (3 0 0 0)					
IV	22CET251	22CET252	22CET253	22CET254	22CET255	22CEP256	22CEP257	22CEP258	22CEP259	22CEP260	22ART291	22ARP292		ICP201	ICP202	27	106
	Design of RCC Structures	Environmental Engineering - I	Geotechnical Engineering - I	Hydraulic Engineering	Transportation Engineering - I	Highway Materials Lab	Hydraulics Lab	Public Health & Engineering Lab	RCC Design, Drawing, & Detailing	Soil Mechanics Lab	Building Planning & Services	Building Drawing - II		Creative Arts / Sports / NSS (GNI)	Discipline (GNI)		
	3 (3 0 0 0)	3 (3 0 0 0)	4 (3 1 0 0)	4 (3 1 0 0)	3 (3 0 0 0)	1 (0 0 2 0)	1 (0 0 2 0)	1 (0 0 2 0)	1 (0 0 2 0)	1 (0 0 2 0)	2 (2 0 0 0)	1 (0 0 2 0)		1	1		
V	22CET301	22CET302	22CET303	22CET304	22CET305	22CEP306	22CEP307	22CEP308								22	128
	Design of RCC Systems	Design of Steel Structures	Environmental Engineering - II	Geotechnical Engineering - II	Hydrology	Environmental Engineering Lab	Geotechnical Engineering Lab	Structural Design & Drawing									
	4 (3 1 0 0)	4 (3 1 0 0)	3 (3 0 0 0)	4 (3 1 0 0)	4 (3 1 0 0)	1 (0 0 2 0)	1 (0 0 2 0)	1 (0 0 2 0)									
VI	22CET351	22CET352	22CET353	22CET354	22CEP355	22CEP356	22CEP357	22CEP358	22HST391	22HSP392				ICP301	ICP302	22	150
	Construction Project Management	Estimation and Costing	Transportation Engineering - II	Water Resources Engineering	Civil Engineering Practical Applications	Construction Management Lab	Environmental System Design	Water Resources Engineering Lab	Soft Skills and Personality Development	Soft Skills Lab				Creative Arts / Sports / NSS (GNI)	Discipline (GNI)		
	3 (3 0 0 0)	4 (3 1 0 0)	3 (2 1 0 0)	3 (3 0 0 0)	1 (0 0 2 0)	1 (0 0 2 0)	1 (0 2 0 0)	1 (0 0 2 0)	2 (2 0 0 0)	1 (0 0 2 0)				1	1		
VII	22CEW401	22CEW401	22CEPE01	22CEPE02	22CEPE03	Open Elective - I										17	167
	Training Seminar	Minor Project	Program Elective - I	Program Elective - II	Program Elective - III												
	2 (0 0 4 0)	3 (0 0 6 0)	3 (3 0 0 0)	3 (3 0 0 0)	3 (3 0 0 0)	3 (3 0 0 0)											
VIII	22CEW451		22CEPE04	22CEPE05											ICP402	19	186
	Major Project Or Any 03 electives of 03 credits each		Program Elective - IV	Program Elective - V	Open Elective - II									Discipline (GNI)			
	9 (0 0 18 0)		3 (3 0 0 0)	3 (3 0 0 0)	3 (3 0 0 0)									1			

Note: GNI (Grade not included in CGPA/ SGPA calculations)

DUGC Convener, Department of Civil Engineering

Head, Department of Civil Engineering

## Scheme for B.Tech. Civil Engineering

(Applicable to 2023 & 2024 Batch UG Students only as per NEP 2020)

### Overall minimum credit requirement

Institute Core (IC) of Basic Sciences (BS)	16
Institute Core (IC) of Fundamental Engineering (EAS)	16
Institute Core (IC) of Humanities and Social Sciences (HSS)	5
Programme Core (PC)	95
Management	3
Programme Linked (EAS/BS)	6
Humanities	3
Training Seminar	2
Project	12
Programme Elective (PE)	15
Open Elective(OE)	6
CAS	3
Discipline	4
<b>Total Credits</b>	<b>186</b>

### Institute Core (IC)

Course Code	Course Name	Credits	L	T	P	S
22CEP113	Engineering Drawing and Sketching Lab	1	0	0	2	0
22CET112	Engineering Drawing and Sketching	1	1	0	0	0
22CET102	Environmental Science	2	2	0	0	0
22CSP102	Programming with Python Lab	1	0	0	2	0
22CST101	Programming with Python	2	2	0	0	0
22CYP102	Engineering Chemistry Lab	1	0	0	2	0
22CYT101	Engineering Chemistry	3	2	1	0	0
22HSP107	Communication Skills lab	1	0	0	2	0
22HST101	Basic Economics	2	2	0	0	0
22HST106	English Communication Skills	2	2	0	0	0
22MEP102	Product Realization through Manufacturing	1	0	0	2	0
22MET101	Introduction to Mechanical Systems	2	2	0	0	0
22PHP103	Classical Physics Lab	1	0	0	2	0
22PHT101	Classical Physics	3	2	1	0	0
22MAT101	Mathematics I	4	3	1	0	0
22CEP101	Electronics Engineering Lab	1	0	0	2	0
22EEP102	Electrical Engineering Lab	1	0	0	2	0
22EET107	Basic Electrical Engg.	2	2	0	0	0
22ECT108	Basics of Electronics Engg.	2	2	0	0	0
22MAT151	Mathematics II	4	3	1	0	0
		<b>37</b>				

### Programme Core (PC)

Course Code	Course Name	Credits	L	T	P	S
22CET103	Surveying	3	3	0	0	0
22CEP104	Surveying Lab	1	0	0	2	0
22CET152	Mechanics of Solids	4	3	1	0	0
22CET151	Engineering Geology	3	3	0	0	0
22CEP153	Geology Lab	1	0	0	2	0
22CET201	Advanced Surveying	2	2	0	0	0
22CET202	Building Technology	2	2	0	0	0
22CET203	Construction Materials	3	3	0	0	0
22CET204	Fluid Mechanics	4	3	1	0	0

Course Code	Course Name	Credits	L	T	P	S
22CET205	Introduction to Satellite Based Positioning	2	2	0	0	0
22CET206	Structural Analysis	4	3	1	0	0
22CEP207	Advanced Surveying and GNSS Lab	1	0	0	2	0
22CEP208	Building Drawing - I	1	0	0	2	0
22CEP209	Construction Materials Lab	1	0	0	2	0
22CEP210	Fluid Mechanics Lab	1	0	0	2	0
22CEP211	Structural Analysis Lab	1	0	0	2	0
22CET251	Design of RCC Structures	3	3	0	0	0
22CET252	Environmental Engineering - I	3	3	0	0	0
22CET253	Geotechnical Engineering - I	4	3	1	0	0
22CET254	Hydraulic Engineering	4	3	1	0	0
22CET255	Transportation Engineering - I	3	3	0	0	0
22CEP256	Highway Materials Lab	1	0	0	2	0
22CEP257	Hydraulics Lab	1	0	0	2	0
22CEP258	Public Health & Engineering Lab	1	0	0	2	0
22CEP259	RCC Design, Drawing, & Detailing	1	0	0	2	0
22CEP260	Soil Mechanics Lab	1	0	0	2	0
22CET301	Design of RCC Systems	4	3	1	0	0
22CET302	Design of Steel Structures	4	3	1	0	0
22CET303	Environmental Engineering - II	3	3	0	0	0
22CET304	Geotechnical Engineering - II	4	3	1	0	0
22CET305	Hydrology	4	3	1	0	0
22CEP306	Environmental Engineering Lab	1	0	0	2	0
22CEP307	Geotechnical Engineering Lab	1	0	0	2	0
22CEP308	Structural Design & Drawing	1	0	0	2	0
22CET351	Construction Project Management	3	3	0	0	0
22CET352	Estimation and Costing	4	3	1	0	0
22CET353	Transportation Engineering - II	3	2	1	0	0
22CET354	Water Resources Engineering	3	3	0	0	0
22CEP355	Civil Engineering Practical Applications	1	0	0	2	0
22CEP356	Construction Management Lab	1	0	0	2	0
22CEP357	Environmental System Design	1	0	2	0	0
22CEP358	Water Resources Engineering Lab	1	0	0	2	0
		<b>95</b>				

### Management Course

Course Code	Course Name	Credits	L	T	P	S
22BMT921	Basics of Management	3	3	0	0	0
		<b>3</b>				

### Programme Linked (EAS/BS) Course

Course Code	Course Name	Credits	L	T	P	S
22MAT243	Numerical Methods & Optimization	3	3	0	0	0
22ART291	Building Planning & Services	2	2	0	0	0
22ARP292	Building Drawing - II	1	0	0	2	0
		<b>6</b>				

### Humanities (HSS) Courses

Course Code	Course Name	Credits	L	T	P	S
22HST391	Soft Skills and Personality Development	2	2	0	0	0
22HSP392	Soft Skills Lab	1	0	0	2	0
		<b>3</b>				

### Training Seminar

Course Code	Course Name	Credits	L	T	P	S
22CEO401	Training Seminar	2	0	0	4	0
		<b>2</b>				

### Project

Course Code	Course Name	Credits	L	T	P	S
22CEW401	Minor Project	3	0	0	6	0
22CEW451	Major Project	9	0	0	18	0
		<b>12</b>				

### Program Elective

Course Code	Course Name	Credits	L	T	P	S
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03 Program Elective courses in VII semester and 02 Program Elective courses in VIII semester of 03 credits each from the list of courses offered by the parent department

15

### Open Elective

2 Open Electives (1 in each VII & VIII semester of 03 credits each) from the list of courses offered by the other departments

6

### Creative Arts/ Sports/ NSS & Discipline

Course Code	Course Name	Credits	L	T	P	S
ICP101	Creative Arts/ Sports/ NSS	1	0	0	0	0
ICP102	Discipline	1	0	0	0	0
ICP201	Creative Arts/ Sports/ NSS	1	0	0	0	0
ICP202	Discipline	1	0	0	0	0
ICP301	Creative Arts/ Sports/ NSS	1	0	0	0	0
ICP302	Discipline	1	0	0	0	0
ICP402	Discipline	1	0	0	0	0
		<b>7</b>				