



Graphic Era

Deemed to be University

Accredited by NAAC with Grade A

Approved by AICTE, Ministry of HRD, Govt. of India

BACHELOR OF TECHNOLOGY

CIVIL ENGINEERING

Course Components of Academic Programme

B.Tech. (Civil Engineering)

Minimum Duration	:	8 Semesters (4 Years)
Maximum Duration	:	12 Semesters (6 Year)
Total Number of Credits	:	190 Credits

<u>Course Components</u>	<u>Credits</u>
1. Compulsory Courses	
I. Foundation Course(FC)	40
II. Core Course(CC)	114
2. Elective Courses	
I. Departmental Electives (DE)	6
II. Interdepartmental Electives (IE)	3
3. Discipline-Centric Additional Courses	
I. Seminar(SM)	2
II. Project(PJ)	8
III. Career Skill(CK)	8
IV. Healthy Living (HF)	1
4. General Courses	
I. Environmental (EV)	2
II. General Proficiency(GP)	6

- A. Requirement of Awards of Degree: - Total Credits - 190; CGPA \geq 4.5 and any other condition as per regulation and ordinances.
- B. Additional Courses up to 20 credits may be done by student as extra course over & above the requirement for award of this Honor's degree.

B. Tech (Civil Engineering)
CURRICULAR STRUCTURE AND EVALUATION SCHEME

Semester	Course ID	Course Title	Course Type	Credits	Lecture Hours	Tutorials	Practical Hrs	CW Asmnt	Mid Sem Exam	End Sem Exam	Total Marks
1	THU 101	Professional Communication	FC	2	2	0	0	25	25	50	100
	TPH 101	Engineering Physics	FC	3	3	0	0	25	25	50	100
	TMA 101/102*	Engineering Mathematics- I	FC	4	3	1	0	25	25	50	100
	TEE 101	Basic Electrical Engineering	FC	3	3	0	0	25	25	50	100
	TCS 101	Fundamentals of Computer & introduction to programming	FC	3	3	0	0	25	25	50	100
	THF 101	Healthy Living and fitness	HF	1	1	0	0	0	0	25	25
	PPH 151	Physics Lab	FC	1	0	0	2	25	25	50	100
	PME 151	Workshop	CC	3	1	0	4	25	25	50	100
	PCS 151	Computer Lab-1	FC	2	0	0	4	25	25	50	100
				22	16	1	10	200	200	425	825
2	THU 201	Advanced Professional Communication	FC	2	2	0	0	25	25	50	100
	TCH 201	Engineering Chemistry	FC	3	3	0	0	25	25	50	100
	TMA 201/202*	Engineering Mathematics - II	FC	4	3	1	0	25	25	50	100
	TEV 201	Environmental Science	EV	2	2	0	0	25	25	50	100
	TEC 201	Basic Electronics Engineering	FC	3	3	0	0	25	25	50	100
	TCS 201	Programming for problem solving	FC	3	3	0	0	25	25	50	100
	TCH 251	Chemistry Lab	FC	1	0	0	2	25	25	50	100
	PEE 201	Basic Electrical and Electronics Engineering Lab	FC	1	0	0	2	25	25	50	100
	PME 253	Computer Aided Engg. Graphics Lab.	CC	3	1	0	4	25	25	50	100
	PCS 251	Computer Lab- II	FC	2	0	0	4	25	25	50	100
				24	17	1	12	250	250	500	1000

Semester	Course ID	Course Title	Course Type	Credits	Lecture Hours	Tutorials	Practical Hrs	CW Asmnt	Mid Sem Exam	End Sem Exam	Total Marks
3	TMA 302	Engineering Mathematics III	FC	3	2	1	0	25	25	50	100
	TCE 301	Mechanics of Fluids	CC	4	3	1	0	25	25	50	100
	TCE 302	Basic Surveying	CC	3	3	0	0	25	25	50	100
	TCE 303	Building Materials and Construction Technology	CC	3	3	0	0	25	25	50	100
	TCE 304	Strength of Materials	CC	3	2	1	0	25	25	50	100
	TCE 305	Engineering Mechanics	CC	3	2	1	0	25	25	50	100
	PCE 301	Fluid Mechanics Lab	CC	2	1	0	2	25	25	50	100
	PCE 302	Basic Survey Field Work	CC	2	1	0	2	25	25	50	100
	PCE 303	Material Testing Lab.	CC	2	1	0	2	25	25	50	100
	XCS 301	Career Skills	CK	2	2	0	0	25	25	50	100
	GP 301	General Proficiency	CK	1	0	0	0	0	0	0	100
				28	20	4	6	250	250	500	1100
4	TCE 401	Hydraulics and Hydraulic Machines	CC	3	2	1	0	25	25	50	100
	TCE 402	Structural Analysis- I	CC	3	2	1	0	25	25	50	100
	TCE 403	Advanced Surveying	CC	3	2	1	0	25	25	50	100
	TCE 404	Concrete Technology	CC	3	2	1	0	25	25	50	100
	TCE 405	Geotechnical Engineering-I	CC	3	2	1	0	25	25	50	100
	TCE 406	Engineering Geology	CC	3	2	1	0	25	25	50	100
	PCE 401	Hydraulics and Hydraulic Machine Lab	CC	2	1	0	2	25	25	50	100
	PCE 402	Advanced Field Survey	CC	2	1	0	2	25	25	50	100
	PCE 403	Computer Aided Civil Engineering Drawing Lab	CC	2	1	0	2	25	25	50	100
	XCS 401	Career Skills	CK	2	2	0	0	25	25	50	100
	GP 401	General Proficiency	CK	1	0	0	0	0	0	0	100
				27	17	6	6	250	250	500	1100

Semester	Course ID	Course Title	Course Type	Credits	Lecture Hours	Tutorials	Practical Hrs	CW Asmnt	Mid Sem Exam	End Sem Exam	Total Marks
5	TCE 501	Environment Engineering –I	CC	3	3	0	0	25	25	50	100
	TCE 502	Reinforced Cement Concrete - I	CC	4	3	1	0	25	25	50	100
	TCE 503	Geotechnical Engineering –II	CC	3	2	1	0	25	25	50	100
	TCE 504	Water Resources Engineering -I	CC	4	3	1	0	25	25	50	100
	TCE 505	Structural Analysis- II	CC	4	3	1	0	25	25	50	100
	PCE 501	Geotechnical Engineering lab	CC	2	1	0	2	25	25	50	100
	PCE 502	Structural Analysis lab	CC	2	1	0	2	25	25	50	100
	PCE 503	Concrete Lab.	CC	2	1	0	2	25	25	50	100
	XCS 501	Career Skills	CK	2	2	0	0	25	25	50	100
	GP 501	General Proficiency	CK	1	0	0	0	0	0	0	100
				27	19	4	6	225	225	450	1000
6	TCE 601	Environmental Engineering II	CC	3	3	0	0	25	25	50	100
	TCE 602	Reinforced cement concrete-II	CC	3	2	1	0	25	25	50	100
	TCE 603	Water Resources Engineering-II	CC	3	2	1	0	25	25	50	100
	TCE 604	Quantity Estimation and Costing	CC	3	2	1	0	25	25	50	100
	TCE 605	Transportation Engineering - I	CC	3	3	0	0	25	25	50	100
	PCE 601	Environmental Engineering Lab.	CC	2	1	0	2	25	25	50	100
	PCE 602	Highway Material Testing Lab.	CC	2	1	0	2	25	25	50	100
	PCE 603	Computer Aided Structural Design Lab	CC	2	1	0	2	25	25	50	100
	PCE 604	Survey Camp Training	CC	2	0	0	0	0	0	0	100
	XCS 601	Career Skills	CK	2	2	0	0	25	25	50	100
	GP 601	General Proficiency	CK	1	0	0	0	0	0	0	100
				26	17	3	6	225	225	450	1100

Semester	Course ID	Course Title	Course Type	Credits	Lecture Hours	Tutorials	Practical Hrs	CW Asmnt	Mid Sem Exam	End Sem Exam	Total Marks
7	TCE 701	Design of Steel Structures	CC	3	2	1	0	25	25	50	100
	TCE 702	Construction Management and Planning	CC	3	2	1	0	25	25	50	100
	TCE 703	Transportation Engineering - II	CC	3	3	0	0	25	25	50	100
	TCE 711-720	Elective I*	DE	3	3	0	0	25	25	50	100
	PCE 701	Detailing & Quantity Estimation lab	CC	2	1	0	2	25	25	50	100
	PCE 703	Seminar (Industry Based)	SM	2	2	0	0	100	0	0	100
	CEP 701	Project (Phase - I)	PJ	2	0	0	0	50	50	0	100
	GP 701	General Proficiency	CK	1	0	0	0	0	0	0	100
				19	13	2	2	275	175	250	800

8	TCE 801	Earthquake Resistant Design of Buildings	CC	4	3	1	0	25	25	50	100
	TCE 811-818	Elective II*	DE	3	3	0	0	25	25	50	100
	TCE 851-858	Elective III*	IE	3	3	0	0	25	25	50	100
	CEP 801	Project**	PJ	6	6	0	0	0	100	100	200
	GP 801	General Proficiency	CK	1	0	0	0	0	0	0	100
				17	15	1	0	75	175	250	600
Total				190	134	22	48	1750	1750	3325	7525

ELECTIVES OFFERED

7E-I	TCE 711	Design of Pre-Stressed Concrete Structures	DE
	TCE 712	Geographic Information System	DE
	TCE 713	Ground Improvement Techniques	DE
	TCE 714	Environmental Impact Assessment of Civil Engg. Projects	DE
	TCE 715	Bridge engineering	DE
	TCE 716	Advanced Highway Engineering	DE
	TCE 717	Tender procedure and contract management	DE
	TCE 718	Design of Hydraulic Structures	DE
	TCE 719	Ground Water Development and Management	DE
	TCE 720	Airfield and Harbour Engineering	DE

8E-II	TCE 811	Matrix methods of structural analysis	DE
	TCE 812	Advanced concrete technology	DE
	TCE 813	Hydro power engineering	DE
	TCE 814	Finite element technique	DE
	TCE 815	Systems approach in civil engineering	DE
	TCE 816	Engineering economics	DE
	TCE 817	Design of Tall Buildings	DE
	TCE 818	Advanced Foundation Engineering,	DE

8E-III	TCE 851	Disaster Management	IE
	TCE 852	Rock engineering	IE
	TCE 853	Air Water and noise pollution and control	IE
	TCE 854	Seismic Engineering	IE
	TCE 855	Repair & Rehabilitation of Structures	IE
	TCE 856	Construction Equipment & Automation	IE
	TCE 857	Green Building,	IE
	TCE 858	Urban Planning	IE