SCMS SCHOOL OF ENGINEERING AND TECHNOLOGY (AUTONOMOUS)

VIDYA NAGAR, PALISSERY, KARUKUTTY - 683576

DEPARTMENT OF CIVIL ENGINEERING

Curriculum for B. Tech. in Civil Engineering

Branch Code - CE

(Group C)

2026 Scheme • Semesters S1 – S8

Vision

To emerge as a premier department, empowering Civil Engineering professionals and research-oriented innovators for sustainable development.

Mission

- Impart industry-relevant Civil Engineering education that promotes ethical conduct and lifelong learning.
- Develop innovative problem-solving skills to address societal needs and environmental challenges in infrastructure development.
- Enhance service learning and research through collaboration with government departments and local bodies.

Program Outcomes (POs)

- PO1: Engineering Knowledge: Apply math, science, computing, and engineering fundamentals to complex problems.
- PO2: Problem Analysis: Formulate and analyse complex engineering research and literature.
- PO3: Design/Development of Solutions: Design solutions considering public safety, cost, and net-zero carbon goals.
- PO4: Conduct Investigations: Use research methods, experiment design, and data analysis for valid conclusions.
- PO5: Engineering Tool Usage: Select and apply modern engineering and IT tools with an understanding of limits.
- PO6: The Engineer and the World: Evaluate societal, health, legal, and environmental sustainability impacts.
- PO7: Ethics: Apply professional ethics, human values, inclusivity, and legal compliance.
- PO8: Individual and Collaborative Teamwork: Function effectively as an individual or team leader.
- PO9: Communication: Communicate and write effectively across diverse cultural and technical communities.
- PO10: Project Management and Finance: Apply management and economic principles in multidisciplinary settings.
- PO11: Life-Long Learning: Adapt to emerging technologies and engage in independent critical thinking.

Program Specific Outcomes (PSOs)

- PSO1: Apply community-engaged learning to identify and solve societal and infrastructure challenges.
- PSO2: Enhance professional competence through research and certifications.
- PSO3: Demonstrate competence in applying modern AI-enabled tools to optimally solve Civil Engineering problems.

Program Educational Objectives (PEOs)

- PEO1: Graduates will establish successful professional careers with a commitment to lifelong learning.
- PEO2:Graduates will solve complex civil engineering problems through innovative and sustainable solutions.
- PEO3: Graduates will pursue professional practice, research, or higher studies, demonstrating collaborative and managerial competence.

ABBREVIATIONS & COURSE CATEGORIES

L – Lecture (hours)	T – Tutorial (hours)	P – Practical (hours)
SL – Self-Learning (hours)	MC – MOOC Course	Cr. - Credits
IAT1 / IAT-2 – Internal Assessment Test1 / 2	CIA – Continuous Internal Assessment	SEE – Semester End Examination
BSC – Basic Science Course	ESC – Engineering Science Course	PC / PCL – Programme Core / Programme Core Lab
PC-PBL – Programme Core – Project Based Learning	PE – Programme Elective	OE / ILE – Open Elective / Industry Linked Elective
HMC – Humanities Management Course	SEC – Skill Enhancement Course	HWP – Health & Wellness Programme
PWS – Project Work / Seminar	GC / UC / UE – Group Course / Universal Course/ Universal Elective	MOOC – Massive Open Online Course

SEMESTER 1 (S1)

Sl. No	Slot	Course Code	Type	Cat.	Course Title	Cr.	Hour Structure				Total Hrs.	Internal Test		CIA	SEE	Overall Marks
							L	T	P	SL		IA-1	IA-2			
1	A	26GYMAT101	BSC	GC	Matrices, Ordinary Differential Equations and Transforms	3	45	0	0	45	90	40	40	40	60	100
2	B	26GCPHT121 / 26GCCYT122	BSC	GC	Physics for Physical Science / Chemistry for Physical Science	4	45	0	30	45	120	40	40	40	60	100
3	C	26GCEST103	ESC	GC	Engineering Mechanics	3	45	0	0	45	90	40	40	40	60	100
4	D	26GCEST104	ESC	GC	Introduction to Mechanical and Civil Engineering	4	60	0	0	60	120	40	40	40	60	100
5	E	26UCEST105	ESC	UC	Programming in C	4	45	0	30	45	120	40	40	40	60	100
6	F	26GCESL106	ESC	GC	Basic Engineering workshop	1	0	0	30	0	30			100	-	100
7	G	26UCHWT127	HWP	CC	Health and Wellness	1	0	0	30	0	30	-	-	50	-	50
		26UCHUT128	HMC		Life Skills and Professional Communication									100	-	100
8		26UCSEM129	SEC	MC	MOOC Course/Communicative English (8 WEEKS)	0	0	0	0	0	0	-	-	-	-	-
TOTAL						20	240	0	120	240	600					
Bridge Course: Total 15 Hours																

SEMESTER 2 (S2)

Sl. No	Slot	Course Code	Type	Cat.	Course Title	Cr.	Hour Structure				Total Hrs.	Internal Test		CIA	SEE	Overall Marks
							L	T	P	SL		IA-1	IA-2			
1	A	26GYMAT201	BSC	GC	Partial Differential Equations and Vector Calculus	3	45	0	0	45	90	40	40	40	60	100
2	B	26GCPHT121 / 26GCCYT122	BSC	GC	Physics for Physical Science/ Chemistry for Physical Science	4	45	0	30	45	120	40	40	40	60	100
3	C	26GCEST203	ESC	CC	Engineering Graphics	3	30	0	30	30	90	60	60	40	60	100
4	D	26PCCET204	PC	PC	Mechanics of Solids	4	45	15	0	60	120	40	40	40	60	100
5	E	26UCEST205	ESC	GC	Engineering Entrepreneurship & IPR	3	45	0	0	45	90	40	40	60	40	100
6	F	26GCESL206	ESC	GC	Strength of Materials Workshop	1	0	0	30	0	30	-	-	100	-	100
7	G	26UCHWT127	HWP	CC	Health and Wellness	1	0	0	30	0	30	-	-	50	-	50
		26UCHUT128	HMC		Life Skills and Professional Communication							-	-	100	-	100
8		26UCSEM129	SEC	MC	MOOC Course/Communicative English (8 WEEKS)	1	0	0	0	30	30	-	-	-	-	-
TOTAL						20	210	15	120	255	600					

SEMESTER 3 (S3)

Sl. No	Slot	Course Code	Type	Cat.	Course Title	Cr.	Hour Structure				Total Hrs.	Internal Test		CIA	SEE	Overall Marks
							L	T	P	SL		IA-1	IA-2			
1	A	26GYMAT301	BSC	GC	Complex Analysis and Integral Transforms	3	45	0	0	45	90	40	40	40	60	100
2	B	26PCCET302	PC	PC	Fluid Mechanics	3	45	0	0	45	90	40	40	40	60	100
3	C	26PCCET303	PC	PC	Structural Analysis-I	4	45	15	0	60	120	40	40	40	60	100
4	D	26PBCET304	PC-PBL	PB	Surveying & Geomatics	4	60	0	0	60	120	40	40	60	40	100
5	E	26GCEST305	ESC	GC	Introduction to Electrical, Electronics and AI	3	45	0	0	45	90	40	40	40	60	100
6	F	26UCHUT346	HMC	UC	Economics for Engineers	2	30	0	0	30	60	40	40	50	50	100
		26UCHUT347			Engineering Ethics and Sustainable Development							-	-	50	50	100
7	G	26PCCEL307	PCL	PC	Survey Lab	2	0	0	45	15	60	-	-	50	50	100
8	H	26PCCEL308	PCL	PC	Fluid Mechanics Lab	2	0	0	45	15	60	-	-	50	50	100
9			SEC	MC	MOOC Course (8 WEEKS)	0	0	0	0	0	0	-	-	-	-	-
TOTAL						23	270	15	90	315	690					
Bridge Course for Lateral Entry Students: Total 15 Hrs.																

SEMESTER 4 (S4)

Sl. No	Slot	Course Code	Type	Cat.	Course Title	Cr.	Hour Structure				Total Hrs.	Internal Test		CIA	SEE	Overall Marks
							L	T	P	SL		IA-1	IA-2			
1	A	26GCMAT401	BSC	GC	Probability Distributions and Numerical Methods	3	45	0	0	45	90	40	40	40	60	100
2	B	26PCCET402	PC	PC	Transportation Engineering	3	45	0	0	45	90	40	40	40	60	100
3	C	26PCCET403	PC	PC	Geotechnical Engineering	4	45	15	0	60	120	40	40	40	60	100
4	D	26PBCET404	PC-PBL	PB	Structural Analysis-II	4	60	0	0	60	120	40	40	60	40	100
5	E	26PECET41N	PE	PE	Program Elective-1	3/5	45	0	0	45/105	90/150	40	40	40	60	100
6	F	26UCHUT346	HMC	UC	Economics for Engineers	2	30	0	0	30	60	40	40	50	50	100
		26UCHUT347			Engineering Ethics and Sustainable Development							-	-	50	50	100
7	G	26PCCEL407	PCL	PC	Civil Engineering Drafting Lab	2	0	0	45	15	60			50	50	100
8	H	26PCCEL408	PCL	PC	Geotechnical Engineering Lab	2	0	0	45	15	60			50	50	100
9			SEC	MC	MOOC Course (8 WEEKS)	1	0	0	0	30	30					
TOTAL						24/26	270	15	90	345/405	720/780					

SEMESTER 5 (S5)

Sl. No	Slot	Course Code	Type	Cat.	Course Title	Cr.	Hour Structure				Total Hrs.	Internal Test		CIA	SEE	Overall Marks
							L	T	P	SL		IA-1	IA-2			
1	A	26PCCET501	PC	PC	Hydrology & Water Resources Engineering	3	45	0	0	45	90	40	40	40	60	100
2	B	26PCCET502	PC	PC	Environmental Engineering	3	45	0	0	45	90	40	40	40	60	100
3	C	26PCCET503	PC	PC	Design of Concrete Structures	4	45	15	0	60	120	40	40	40	60	100
4	D	26PBCET504	PC-PBL	PB	Applied Geotechnical Engineering	4	60	0	0	60	120	40	40	60	40	100
5	E	26PECET52N	PE	PE	Program Elective-2	3/5	45	0	0	45/105	90/150	40	40	40	60	100
6	F	26GCEST566	ESC	GC	Design Thinking and Product Development (Group specific)	2	30	0	0	30	60	40	40	40	60	100
		26UCHUT567	HMC	UC	Constitution of India											
7	G	26PCCEL507	PCL	PC	Concrete Lab	2	0	0	45	15	60			50	50	100
8	H	26PCCEL508	PCL	PC	Transportation Engineering Lab	2	0	0	45	15	60			50	50	100
9			SEC	MC	MOOC (8 weeks)	0	0	0	0	0	0					
TOTAL						23/25	270	15	90	315/375	690/750					
Industrial Visit: Maximum 12 days are permitted in S5/S6, not exceeding more than 6 working days. Industrial Training: Students who are not participating in the industrial visit must attend industrial training during that period.																

SEMESTER 6 (S6)

Sl. No	Slot	Course Code	Type	Cat.	Course Title	Cr.	Hour Structure				Total Hrs.	Internal Test		CIA	SEE	Overall Marks
							L	T	P	SL		IA-1	IA-2			
1	A	26PCCET601	PC	PC	Quantity Surveying & Valuation	3	45	0	0	45	90	40	40	40	60	100
2	B	26PCCET602	PC	PC	Design of Steel Structures	4	45	15	0	60	120	40	40	40	60	100
3	C	26PBCET603	PC-PBL	PB	Construction Project Management	4	60	0	0	60	120	40	40	60	40	100
4	D	26PECET63N	PE	PE	Program Elective-3	3/5	45	0	0	45/105	90/150	40	40	40	60	100
5	E	26OECET61N/26IECET61N	OE/ILE	OE/IE	Open Elective/Industry Linked Elective-1	3	45	0	0	45	90	40	40	40	60	100
6	F	26GCEST566	ESC	GC	Design Thinking and Product Development (Group specific)	2	30	0	0	30	60	40	40	40	60	100
		26UCHUT567	HMC	UC	Constitution of India											
7	G	26PCCEL607	PCL	PC	Civil Engineering Modelling Lab	2	0	0	45	15	60	-	-	50	50	100
8	H	26PCCEL609	PCL	PC	Environmental Engineering Lab	2	0	0	45	15	60	-	-	50	50	100
9			SEC	MC	MOOC (8 weeks)	1	0	0	0	30	30	-	-	-	-	-
TOTAL						24/26	270	15	90	345/405	720/780					
Industrial Visit: Maximum 12 days are permitted in S5/S6, not exceeding more than 6 working days. Industrial Training: Students who are not participating in the industrial visit must attend industrial training during that period.																

Note: *Open Electives are such courses which will be offered by other departments.*

SEMESTER 7 (S7)

Sl. No	Slot	Course Code	Type	Cat.	Course Title	Cr.	Hour Structure				Total Hrs.	Internal Test		CIA	SEE	Overall Marks
							L	T	P	SL		IA-1	IA-2			
1	A	26PECET74N/ 26PECEM74N	PE	PE	Program Elective-4 (Self Study/ MOOC/ONLINE)	3/5	45	0	0	45/ 105	90/150	40	40	40	60	100
2	B	26PECET75N/ 26PECEM75N	PE	PE	Program Elective-5 (Self Study/ MOOC/ONLINE)	3/5	45	0	0	45/ 105	90/150	40	40	40	60	100
3	C	26UEHUT71N/ 26UEHUM71N	HMC	UE	HMC Elective (Self Study/ MOOC/ONLINE)	2	30	0	0	30	60	40	40	50	50	100
4	D	26OECET72N/ 26OECEM72N/ 26IECET72N	OE/ ILE	OE/ IE	Open Elective-2 (Self Study/ MOOC/ONLINE) Industry Linked Elective-2	3	45	0	0	45	90	40	40	40	60	100
5	E	26PCCES705	PWS	PC	Seminar	2	0	0	45	15	60	-	-	50	0	50
6	F	26PCCEP706/ 26PCCEI706	PWS	PC	Option 1: Major Project Option 2: Internship (4-6 Months)	5	0	0	150	0	150	-	-	100	-	100
TOTAL						18/ 20/ 22	165	0	195	180/ 240/ 300	540/ 600/ 660					

SEMESTER 8 (S8)

Sl. No	Slot	Course Code	Type	Cat.	Course Title	Cr.	Hour Structure				Total Hrs.	Internal Test		CIA	SEE	Overall Marks
							L	T	P	SL		IA-1	IA-2			
1	A	26PECET86N/ 26PECEM86N	PE	PE	Program Elective-6 (Self Study) MOOC/ONLINE)	3/5	45	0	0	45/ 105	90/150	40	40	40	60	100
2	B	26UCHUT802/ 26UCHUM802	HMC	UC	Organizational Behavior and Business Communication (Self Study) MOOC/ONLINE)	2	30	0	0	30	60	40	40	50	50	100
3	C	26OECET83N/ 26OECEM83N	OE/ ILE	OE/ IE	Open Elective-3 (Self Study) MOOC/ONLINE)	3	45	0	0	45	90	40	40	40	60	100
4	D	26PCCEP806/ 26PCCEI806/ 26PCCEJ806	PWS	PC	Option 1: Major Project Option 2: Internship (4-6 Months) Option 3: Major Project - Phase II	5	0	0	150	0	120	-	-	100	0	100
TOTAL						13/15	120	0	150	120/ 180	390/ 450					

TOTAL PROGRAMME CREDITS (S1 – S8):
165 + Additional Credits from level 5 courses (if awarded) + 3 Credits from Activity Points

PROGRAMME ELECTIVES, OPEN ELECTIVES & HMC ELECTIVES

Note: *Level 5 courses in the B. Tech. curriculum carry a total of 5 credits, consisting of 3 credits for the Programme Elective and 2 additional credits. The additional 2 credits shall be awarded only if the student meets the eligibility conditions specified in the B. Tech. - 2026 regulations. If those conditions are not fulfilled, the student will receive only 3 credits for the course.*

PROGRAM ELECTIVE-1

Sl. No	Course Code	Type	Cat.	Course Title	Cr.	Hour Structure				Total Hrs.	Internal Test		CIA	SEE	Overall Marks
						L	T	P	SL		IA-1	IA-2			
1	26PECET411	PE	PE	Advanced Solid Mechanics	3	45	0	0	45	90	40	40	40	60	100
2	26PECET412	PE	PE	Concrete Technology	3	45	0	0	45	90	40	40	40	60	100
3	26PECET413	PE	PE	Mechanics of Fluid Flow	3	45	0	0	45	90	40	40	40	60	100
4	26PECET414	PE	PE	Cartography and GIS	3	45	0	0	45	90	40	40	40	60	100
5	26PECET415	PE	PE	Engineering Geology	3	45	0	0	45	90	40	40	40	60	100
6	26PECET416	PE	PE	Numerical Methods for Engineers	3	45	0	0	45	90	40	40	40	60	100
7	26PECET417	PE	PE	Environmental Law and Policy	3	45	0	0	45	90	40	40	40	60	100
8	**26PECET418**	**PE**	**PE**	**Architectural Engineering**	**5/3**	**45**	**0**	**0**	**45**	**90**	**40**	**40**	**40**	**60**	**100**

PROGRAM ELECTIVE-2

Sl. No	Course Code	Type	Cat.	Course Title	Cr.	Hour Structure				Total Hrs.	Internal Test		CIA	SEE	Overall Marks
						L	T	P	SL		IA-1	IA-2			
1	26PECET521	PE	PE	Advanced Structural Analysis	3	45	0	0	45	90	40	40	40	60	100
2	26PECET522	PE	PE	Modern Construction Technology	3	45	0	0	45	90	40	40	40	60	100
3	26PECET523	PE	PE	Open Channel Hydraulics	3	45	0	0	45	90	40	40	40	60	100
4	26PECET524	PE	PE	Disaster Management	3	45	0	0	45	90	40	40	40	60	100
5	26PECET525	PE	PE	Applied Hydrology and Climatology	3	45	0	0	45	90	40	40	40	60	100
6	26PECET526	PE	PE	Town Planning	3	45	0	0	45	90	40	40	40	60	100
7	26PECET527	PE	PE	Optimization Techniques and Operations Research for Civil Engineers	3	45	0	0	45	90	40	40	40	60	100
8	**26PECET528**	**PE**	**PE**	**Design of Prestressed Concrete**	**5/3**	**45**	**0**	**0**	**45**	**90**	**40**	**40**	**40**	**60**	**100**

PROGRAM ELECTIVE-3

Sl. No	Course Code	Type	Cat.	Course Title	Cr.	Hour Structure				Total Hrs.	Internal Test		CIA	SEE	Overall Marks
						L	T	P	SL		IA-1	IA-2			
1	26PECET631	PE	PE	Irrigation and Drainage Engineering	3	45	0	0	45	90	40	40	40	60	100
2	26PECET632	PE	PE	Ground Improvement Techniques	3	45	0	0	45	90	40	40	40	60	100
3	26PECET633	PE	PE	Repair and Rehabilitation of Structures	3	45	0	0	45	90	40	40	40	60	100
4	26PECET634	PE	PE	Solid and Hazardous Waste Management	3	45	0	0	45	90	40	40	40	60	100
5	26PECET635	PE	PE	Traffic Engineering and Management	3	45	0	0	45	90	40	40	40	60	100
6	26PECET636	PE	PE	Advanced Foundation Engineering	3	45	0	0	45	90	40	40	40	60	100
7	**26PECET637**	**PE**	**PE**	**Advanced Design of Concrete Structures**	**5/3**	**45**	**0**	**0**	**45**	**90**	**40**	**40**	**40**	**60**	**100**

PROGRAM ELECTIVE-4

Sl. No	Course Code	Type	Cat.	Course Title	Cr.	Hour Structure				Total Hrs.	Internal Test		CIA	SEE	Overall Marks
						L	T	P	SL		IA-1	IA-2			
1	26PECET741	PE	PE	Structural Dynamics	3	45	0	0	45	90	40	40	40	60	100
2	26PECET742	PE	PE	Formwork Engineering	3	45	0	0	45	90	40	40	40	60	100
3	26PECET743	PE	PE	Environmental Geotechnology	3	45	0	0	45	90	40	40	40	60	100
4	26PECET744	PE	PE	Airport Planning and Design	3	45	0	0	45	90	40	40	40	60	100
5	26PECET745	PE	PE	Highway Material & Design	3	45	0	0	45	90	40	40	40	60	100
6	26PECET746	PE	PE	River Engineering	3	45	0	0	45	90	40	40	40	60	100
7	**26PECET747**	**PE**	**PE**	**Pavement Design and Construction**	**5/3**	**45**	**0**	**0**	**105**	**150**	**40**	**40**	**40**	**60**	**100**

PROGRAM ELECTIVE-5

Sl. No	Course Code	Type	Cat.	Course Title	Cr.	Hour Structure				Total Hrs.	Internal Test		CIA	SEE	Overall Marks
						L	T	P	SL		IA-1	IA-2			
1	26PECET751	PE	PE	Groundwater Engineering	3	45	0	0	45	90	40	40	40	60	100
2	26PECET752	PE	PE	Sustainable Construction Practices	3	45	0	0	45	90	40	40	40	60	100
3	26PECET753	PE	PE	Advanced Geotechnical Investigation	3	45	0	0	45	90	40	40	40	60	100
4	26PECET754	PE	PE	Railway, Port and Harbor Engineering	3	45	0	0	45	90	40	40	40	60	100
5	26PECET755	PE	PE	Air and Noise Pollution Control Engineering	3	45	0	0	45	90	40	40	40	60	100
6	26PECET756	PE	PE	Finite Element Method	3	45	0	0	45	90	40	40	40	60	100
7	**26PECET757**	**PE**	**PE**	**Design of Hydraulic Structures**	**5/3**	**45**	**0**	**0**	**105**	**150**	**40**	**40**	**40**	**60**	**100**

PROGRAM ELECTIVE-6

Sl. No	Course Code	Type	Cat.	Course Title	Cr.	Hour Structure				Total Hrs.	Internal Test		CIA	SEE	Overall Marks
						L	T	P	SL		IA-1	IA-2			
1	26PECET861	PE	PE	Water and Air Quality Management	3	45	0	0	45	90	40	40	40	60	100
2	26PECET862	PE	PE	Valuation of Real Properties	3	45	0	0	45	90	40	40	40	60	100
3	26PECET863	PE	PE	Contracts Management	3	45	0	0	45	90	40	40	40	60	100
4	26PECET864	PE	PE	Advanced Design of Steel Structures	3	45	0	0	45	90	40	40	40	60	100
5	26PECET865	PE	PE	Urban Transportation Planning	3	45	0	0	45	90	40	40	40	60	100
6	26PECET866	PE	PE	Building Services	3	45	0	0	45	90	40	40	40	60	100
7	**26PECET867**	**PE**	**PE**	**Design of Earthquake Resistant Structures**	**5/3**	**45**	**0**	**0**	**105**	**150**	**40**	**40**	**40**	**60**	**100**

OPEN ELECTIVE-1

Sl. No	Course Code	Type	Cat.	Course Title	Cr.	Hour Structure				Total Hrs.	Internal Test		CIA	SEE	Overall Marks
						L	T	P	SL		IA-1	IA-2			
1	26OECET611	OE	OE	Introduction to Construction Engineering	3	45	0	0	45	90	40	40	40	60	100
2	26OECET612	OE	OE	Environmental Laws and Policy	3	45	0	0	45	90	40	40	40	60	100
3	26OECET613	OE	OE	Disaster Management	3	45	0	0	45	90	40	40	40	60	100
4	26OECET614	OE	OE	Environmental Impact Assessment	3	45	0	0	45	90	40	40	40	60	100
5	26OECET615	OE	OE	Structural Geology	3	45	0	0	45	90	40	40	40	60	100
6	26OECET616	OE	OE	Environment Health and Safety	3	45	0	0	45	90	40	40	40	60	100

OPEN ELECTIVE-2

Sl. No	Course Code	Type	Cat.	Course Title	Cr.	Hour Structure				Total Hrs.	Internal Test		CIA	SEE	Overall Marks
						L	T	P	SL		IA-1	IA-2			
1	26OECET721	OE	OE	Intelligent Transportation Systems	3	45	0	0	45	90	40	40	40	60	100
2	26OECET722	OE	OE	Watershed Conservation and Management	3	45	0	0	45	90	40	40	40	60	100
3	26OECET723	OE	OE	Forensic Engineering	3	45	0	0	45	90	40	40	40	60	100
4	26OECET724	OE	OE	Finance for Engineers	3	45	0	0	45	90	40	40	40	60	100
5	26OECET725	OE	OE	Applied Earth Systems	3	45	0	0	45	90	40	40	40	60	100

OPEN ELECTIVE-3

Sl. No.	Course Code	Type	Cat.	Course Title	Cr.	Hour Structure				Total Hrs.	Internal Test		CIA	SEE	Overall Marks
						L	T	P	SL		IA-1	IA-2			
1	26OECET831	OE	OE	Waste Management	3	45	0	0	45	90	40	40	40	60	100
2	26OECET832	OE	OE	Rainwater Harvesting	3	45	0	0	45	90	40	40	40	60	100
3	26OECET833	OE	OE	Public Transportation Systems	3	45	0	0	45	90	40	40	40	60	100
4	26OECET834	OE	OE	Fundamentals of Building Planning	3	45	0	0	45	90	40	40	40	60	100
5	26OECET835	OE	OE	Hydrogeology	3	45	0	0	45	90	40	40	40	60	100

HMC ELECTIVE

Sl. No	Course Code	Type	Cat.	Course Title	Cr.	Hour Structure				Total Hrs.	Internal Test		CIA	SEE	Overall Marks
						L	T	P	SL		IA-1	IA-2			
1	26UEHUT711	HMC	UE	Project Management: Planning, Execution, Evaluation and Control	2	30	0	0	30	60	40	40	50	50	100
2	26UEHUM712	HMC	UE	Proficiency course in Foreign language (MOOC Only)	2	0	0	0	60	60	-	-	-	-	-
2	26UEHUM713	HMC	UE	Financial Management	2	30	0	0	30	60	40	40	50	50	100

MINOR PROGRAMME

Note: Students should select any one stream/basket in S3 and register for courses within that stream/basket in the subsequent semesters.

Minor Program – Sustainable Construction and Infrastructure Management															
Sem.	Course Code	Type	Cat.	Course Title	Cr.	Hour Structure				Total Hrs.	Internal Test		CIA	SEE	Overall Marks
						L	T	P	SL		IA-1	IA-2			
S3	26MNCET319	MN	MN	Building Materials	4	45	15	0	60	120	40	40	40	60	100
S4	26MNCET419	MN	MN	Advanced Construction Technologies	4	45	15	0	60	120	40	40	40	60	100
S5	26MNCET519	MN	MN	Functional Design Of Buildings	4	45	15	0	60	120	40	40	40	60	100
S6	26MNCET619	MN	MN	Sustainable Construction Practices	3	45	0	0	45	90	40	40	40	60	100
				TOTAL	**15**										

Minor Program - Climate Resilience and Sustainable Environmental Management															
Sem.	Course Code	Type	Cat.	Course Title	Cr.	Hour Structure				Total Hrs.	**Internal Test**		**CIA**	**SEE**	**Overall Marks**
						L	T	P	SL		**IA-1**	**IA-2**			
S3	26MNCET329	MN	MN	Climate Change And Sustainable Development	4	45	15	0	60	120	40	40	40	60	100
S4	26MNCET429	MN	MN	Environment and pollution abatement	4	45	15	0	60	120	40	40	40	60	100
S5	26MNCET529	MN	MN	Industrial health and safety	4	45	15	0	60	120	40	40	40	60	100
S6	26MNCET629	MN	MN	Environmental planning and Management	3	45	0	0	45	90	40	40	40	60	100
				TOTAL	**15**										

Minor Program – Transportation Infrastructure and Foundation Engineering															
Sem.	Course Code	Type	Cat.	Course Title	Cr.	Hour Structure				Total Hrs.	**Internal Test**		**CIA**	**SEE**	**Overall Marks**
						L	T	P	SL		**IA-1**	**IA-2**			
S3	26MNCET339	MN	MN	Fundamentals of Transportation Engineering	4	45	15	0	60	120	40	40	40	60	100
S4	26MNCET439	MN	MN	Introduction to Geotechnical Engineering	4	45	15	0	60	120	40	40	40	60	100
S5	26MNCET539	MN	MN	Advanced Transportation Studies	4	45	15	0	60	120	40	40	40	60	100
S6	26MNCET639	MN	MN	Foundation Engineering	3	45	0	0	45	90	40	40	40	60	100
				TOTAL	**15**										

Slot M is assigned to Minor Examinations in the respective semesters.

HONOURS PROGRAMME

Honours Program															
Sem.	Course Code	Type	Cat.	Course Title	Cr.	Hour Structure				Total Hrs.	**Internal Test**		**CIA**	**SEE**	**Overall Marks**
						L	T	P	SL		**IA-1**	**IA-2**			
S4	26HNCET409	HN	HN	Modern construction materials	4	45	15	0	60	120	40	40	40	60	100
S5	26HNCET509	HN	HN	Computational Elasticity	4	45	15	0	60	120	40	40	40	60	100
S6	26HNCET609	HN	HN	Probability Methods in Civil Engineering	4	45	15	0	60	120	40	40	40	60	100
S7	26HNCET709	HN	HN	Infrastructure Health Monitoring and Assessment	3	45	0	0	45	90	40	40	40	60	100
				TOTAL	**15**										

Slot N is assigned to Honours Examinations in the respective semesters.

COURSES UNDER VARIOUS COURSE CLASSIFICATION

Engineering Science Courses (ESC)				
Sl. No:	**Semester**	**Course Category**	**Course Name**	**Credits**
1	S1	GC	Engineering Mechanics	**3**
2		GC	Introduction to Civil and Mechanical Engineering	**4**
3		UC	Programming in C	**4**
4		GC	Basic Engineering workshop	**1**
5	S2	GC	Engineering Graphics	**3**
6		UC	Engineering Entrepreneurship & IPR	**3**
7		GC	Strength of Materials Workshop	**1**
8	S3	GC	Introduction to Electrical, Electronics and AI	**3**
9	S5/S6	GC	Design Thinking and Product Development (Group specific)	**2**
			TOTAL	**24**

Basic Science Course (BSC)				
Sl. No:	**Semester**	**Course Category**	**Course Name**	**Credits**
1	S1	GC	Matrices, Ordinary Differential Equations and Transforms	**3**
2	S1/S2	GC	Physics for Physical Science	**4**
3			Chemistry for Physical Science	**4**
4	S2	GC	Partial Differential Equations and Vector Calculus	**3**
5	S3	GC	Complex Analysis and Integral Transforms	**3**
6	S4	GC	Probability Distributions and Numerical Methods	**3**
			TOTAL	**20**

Humanities Based Courses (HMC)/Health and Wellness (HWP)				
Sl. No:	**Semester**	**Course Category**	**Courses**	**Credits**
1	S1/S2	UC	Health and Wellness	1
2	S1/S2	UC	Life Skills and Professional Communication	1
3	S3/S4	UC	Economics for Engineers	2
4	S3/S4	UC	Engineering Ethics and Sustainable Development	2
5	S5/S6	UC	Constitution of India	2
6	S7	UE	HMC Elective-1 (Self Study/MOOC/ONLINE)	2
7	S8	UC	Organizational Behavior and Business Communication (Self Study/MOOC/ONLINE)	2
			TOTAL	**12**

Program Core (PC) Courses				
Sl. No:	**Semester**	**Course Category**	**Courses**	**Credits**
1	S2	PC	Mechanics of Solids	4
2	S3	PC	Fluid Mechanics	3
3	S3	PC	Structural Analysis-I	4
4	S4	PC	Transportation Engineering	3
5	S4	PC	Geotechnical Engineering	4
6	S5	PC	Hydrology & Water Resources Engineering	3
7	S5	PC	Environmental Engineering	3
8	S5	PC	Design of Concrete Structures	4
9	S6	PC	Quantity Surveying & Valuation	3
10	S6	PC	Design of Steel Structures	4
			TOTAL	**35**
Project Based Program Core (PC-PBL) Course				
1	S3	PB	Surveying & Geomatics	4
2	S4	PB	Structural Analysis-II	4
3	S5	PB	Applied Geotechnical Engineering	4
4	S6	PB	Construction Project Management	4
			TOTAL	**16**
Program Core Laboratory (PCL) Course				
1	S3	PC	Survey Lab	2
2	S3	PC	Fluid Mechanics Lab	2
3	S4	PC	Civil Engineering Drafting Lab	2
4	S4	PC	Geotechnical Engineering Lab	2
5	S5	PC	Concrete Lab	2
6	S5	PC	Transportation Engineering Lab	2
7	S6	PC	Civil Engineering Modelling Lab	2
8	S6	PC	Environmental Engineering Lab	2
			TOTAL	**16**
			GRAND TOTAL for Program Core	**67**

Program Elective (PE) Courses				
Sl. No:	**Semester**	**Course Category**	**Courses**	**Credits**
1	S4	PE	Program Elective-1	3
2	S5	PE	Program Elective-2	3
3	S6	PE	Program Elective-3	3
4	S7	PE	Program Elective-4 (Self Study/ MOOC/ ONLINE)	3
5	S7	PE	Program Elective-5 (Self Study/ MOOC/ ONLINE)	3
6	S8	PE	Program Elective-6 (Self Study/ MOOC/ ONLINE)	3
			TOTAL	**18**

Project/Internship & Seminar (PWS)				
Sl. No:	**Semester**	**Course Category**	**Course Name**	**Credits**
1	S7	PC	Seminar	2
2		PC	Option 1: Major Project Option 2: Internship (4-6 Months)	5
3	S8	PC	Option 1: Major Project Option 2: Internship (4-6 Months) Option 3: Major Project Phase-2 (For the students who have not opted for internship in either S7 or S8)	5
			TOTAL	**12**

Open Elective (OE) Courses				
Sl. No:	**Semester**	**Course Category**	**Courses**	**Credits**
1	S6	OE	Open Elective-1	3
2	S7	OE	Open Elective-2 (Self Study/ MOOC/ ONLINE)	3
3	S8	OE	Open Elective-3 (Self Study/ MOOC/ ONLINE)	3
			TOTAL	**9**

Skill Enhancement (SEC) Courses				
Sl. No:	**Semester**	**Course Category**	**Courses**	**Credits**
1	S1/S2	UC	MOOC (8 Weeks)	1
1	S3/S4	MC	MOOC (8 Weeks)	1
1	S5/S6	MC	MOOC (8 Weeks)	1
			TOTAL	**3**

Activity Points					
Sl. No.	**Group**	**Activities**	**Point**	**Credit**	**Minimum Credit Requirements**
Participation					**3 Credits (One credit from each Group)**
1	I	Short Term Internship (Minimum 2 weeks offline)	10 points	1 Credit for 40 Points	
2		Industrial Training (Minimum 2 weeks)	10 points		
3		Attending Conference (Within Institute or outside)	5 points		
4		Attended Conference with Paper Presentation (Within Institute or outside)	10 points		
5		Attended Workshops/STTP (Totaling 5 days of all programs per semester)	5 points per semester		
6		Professional Body member	5 points		
7		Participation in Club activity within institutions	2 points		
8		Participation in Inter/Intra college Hackathons/project competitions/ Technical festivals/Technical Events	5 points per event		
9		Participation in Industrial Visit organized as per S5/S6 curriculum	10 points		
10		Participation in GATE/National Exams (On Submission of Score card/result)	10 points		
11		Participation in IEDC Activities (minimum 2 activities per year)	10 points per year		
12		MOOC certification on Indian knowledge systems (IKS)	10 points		
Technical/ Academic/Cocurricular ACHIEVEMENTS					
1	II	Journal/Conference Publication	40 points per publication	1 Credit for 40 Points	
2		Patent Publishing	40 points per publication		
3		Department/College owned Magazine/newsletter publication	5 points per year		
4		Winners in Inter/Intra college Hackathons/ project competitions/ Technical festivals/Technical Events	20 points per win		
5		Winners of Club Activities (college level)	10 points per win		
6		Academic achievement (Above 9 SGPA in any semester)	20 points		
7		Silver or above certification in any NPTEL/SWAYAM MOOCs	20 points for each MOOC		
8		Aptitude Proficiency Certification (GRE, CAT, GMAT etc.)/ Valid Gate Score.	40 points for every single score		
9		Funded Projects	40 points per funded project		
10		Individual Start-up/Entrepreneurship activity validated by the department	20 points (per year)		
11		Elected Student Representatives of Club/University/National/International Technical Bodies	20 points		
12		Foreign Language Skill (TOEFL/IELTS/BEC exams)	20 points per score		
13		International Internship	40 points		
14		Coordinators of Editorial board/Club/University/National Technical events	10 points per year		

Extracurricular					
1	III	NSS, NCC, NSO (National Sports Organization) (minimum 2 years of activity done as member)	40 points	1 Credit for 40 Points	
2		Arts/Sports/Games: (Multiply by 2 for University level, Multiply by 3 for state level, Multiply by 4 for national level)	5 points for Participation per year		
			10 points for winning in any event per year		
			10 points for coordinating any event per year		
3		Union Activities	5 points for Participation in Election as a voter per year		
			10 points for Standing in Election as a candidate per year (must have come in top 5 in election result within the category)		
			15 points for Elected members		
4		Participation Social outreach program (initiated or approved by Department/College/NSS/Government bodies/professional bodies)	5 points per certificate		

Course classifications of the B. Tech Program and Overall Credit Structure			
S.No.	**Code Type**	**Category**	**Credits**
1	ESC	Engineering Science Courses	24
2	BSC	Basic Science Course	20
3	HMC/ HWP	Humanities Based Courses /Health and Wellness	12
4	PC	Program Core Courses	35
5	PC-PBL	Project Based Program Core Course	16
6	PCL	Program Core Laboratory Course	16
7	PE	Program Elective Courses	18
8	PWS	Project/Internship & Seminar	12
9	OE	Open Elective Courses	9
10	SEC	Skill Enhancement Courses	3
11	MSA	Mandatory Student Activities	3
		TOTAL CREDITS	**165**