SCMS SCHOOL OF ENGINEERING AND TECHNOLOGY (AUTONOMOUS)

VIDYA NAGAR, PALISSERY, KARUKUTTY - 683576

DEPARTMENT OF CIVIL ENGINEERING

Curriculum for M.Tech in Environmental Engineering

Branch Code - CEEE

2026 Scheme • Semesters S1 – S4

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: Technical Skills: Post-Graduates will develop confidence and technical skills for taking up research, consultancy and teaching as a profession.
- PO2: Problem analysis / Development of solutions: Post-Graduates will attain an ability to identify, formulate and design system components or processes that meet the specified needs to solve complex environmental engineering problems.
- PO3: Conduct investigations of complex problems: Post-Graduates will be able to conduct investigations of complex environmental problems using research based knowledge and tests / experiments.
- PO4: The engineer and society: Post-Graduates will understand the impact of engineering solutions on the environment and the society.
- PO5: Ethics: Post –Graduates will have a strong Professional and Ethical responsibility.
- PO6: Communication: Post-Graduates will be able to communicate effectively in both verbal and written forms to the technical community as well as society.
- PO7: Face Challenges: Post-Graduates will develop confidence to face newer challenges in Industry / society.
- PO8: Life-long learning: Post-Graduates will develop confidence for self-education and ability for life-long learning.
- PO9: Adopt new technology: Post-Graduate will learn to adopt new technology by properly understanding the pros and cons to implement the same successfully.

ABBREVIATIONS & COURSE CATEGORIES

L : Lecture (hours)	T : Tutorial (hours)	P : Practical (hours)
SL : Self-Learning (hours)	CIA : Continuous Internal Assessment	SEE : Semester End Examination
PC : Programme Core course	PCL : Programme Core Laboratory course	PE : Programme Elective course
CC : Common Courses	CC-PC : Common Course- Program Core Courses	CC-AC : Common Course-Audit Course
CC-SEC : Common Course-Skill Enhancement Course	PWI : Project Work / Internship	MC : Massive Open Online Course (MOOC)
IE/ID : Industry Elective / Interdisciplinary Elective		

SEMESTER 1 (S1)

Sl.	Slot	Course Code	Type	Cat.	Course Title	Cr.	Hour Structure				Total Hrs.	Marks Distribution		Total Marks
							L	T	P	SL		CIA	SEE	
1	A	261TCECC01	CC	PC	Probability and Statistics	3	45	0	0	45	90	40	60	100
2	B	261TCEEE02	PC	PC	Environmental Chemistry and Microbiology	4	45	15	0	60	120	40	60	100
3	C	261TCEEE03	PC	PC	Physicochemical Wastewater Treatment	4	45	15	0	60	120	40	60	100
4	D	261ECEEE1X	PE	PE	Program Elective 1	3	45	0	0	45	90	40	60	100
5	E	261ECEEE2X	PE	PE	Program Elective 2	3	45	0	0	45	90	40	60	100
6	F	261TCECC06	CC	SEC	Research Methodology and IPR	2	30	0	0	30	60	40	60	100
7	G	261LCEEE07	PCL	PCL	Environmental Monitoring Lab 1	2	0	0	45	15	60	100	..	100
TOTAL						21	255	30	45	300	630			

SEMESTER 2 (S2)

Sl.	Slot	Course Code	Type	Cat.	Course Title	Cr.	Hour Structure				Total Hrs.	Marks Distribution		Total Marks
							L	T	P	SL		CIA	SEE	
1	A	262TCEEE01	PC	PC	Solid and Hazardous Waste Management	4	45	15	0	60	120	40	60	100
2	B	262TCEEE02	PC	PC	Biological Wastewater Treatment	4	45	15	0	60	120	40	60	100
3	C	262ECEEE3X	PE	PE	Program Elective 3	3	45	0	0	45	90	40	60	100
4	D	262ECEEE4X	PE	PE	Program Elective 4	3	45	0	0	45	90	40	60	100
5	E	262ECEIE05 / 262ECEID1X	IE/ID	IE/ID	Industry / Interdisciplinary Elective	3	45	0	0	45	90	40	60	100
6	F	262PCEEE06	PWI	PWI	Mini Project	2	0	0	45	15	60	100	..	100
7	G	262LCEEE07	PCL	PCL	Environmental Monitoring Lab II	2	0	0	45	15	60	100	..	100
TOTAL						21	225	30	90	285	630			

SEMESTER 3 (S3)

Sl.	Slot	Course Code	Type	Cat.	Course Title	Cr.	Hour Structure				Total Hrs.	Marks Distribution		Total Marks
							L	T	P	SL		CIA	SEE	
1	A	263MCEEE01	MC	MC	MOOC	2	0	0	0	60	60	To be completed successfully		100
2	B	263SCECC02	CC	SEC	Academic Writing	1	15	0	0	15	30	100	0	100
3	C	263ICEEE03	PWI	PWI	Internship	3	0	0	0	90	90	50	50	100
4	D	263PCEEED1	PWI	PWI	Dissertation Phase I	11	0	0	165	165	330	100	0	100
TOTAL						17	15	0	165	330	510			

SEMESTER 4 (S4)

Sl.	Slot	Course Code	Type	Cat.	Course Title	Cr.	Hour Structure				Total Hrs.	Marks Distribution		Total Marks
							L	T	P	SL		CIA	SEE	
1	A	264PCEEED2	PWI	PWI	Dissertation Phase II	16	0	0	240	240	480	100	100	200
TOTAL						16	0	0	240	240	480			

TOTAL PROGRAMME CREDITS (S1 – S4): 75

PROGRAMME ELECTIVESE

PROGRAM ELECTIVE-1

Sl.	Course Code	Type	Cat.	Course Title	Cr.	Hour Structure				Total Hrs.	Marks Distribution		Total Marks
						L	T	P	SL		CIA	SEE	
1	261ECEEE11	PE	PE	Environmental Impact Assessment and Management	3	45	0	0	45	90	40	60	100
2	261ECEEE12	PE	PE	Sustainable Technologies and Cleaner Production	3	45	0	0	45	90	40	60	100
3	261ECEEE13	PE	PE	GIS and Remote Sensing for Environmental Applications	3	45	0	0	45	90	40	60	100
4	261ECEEE14	PE	PE	Mitigation and Adaptation Strategies in Climate Change	3	45	0	0	45	90	40	60	100

PROGRAM ELECTIVE-2

Sl.	Course Code	Type	Cat.	Course Title	Cr.	Hour Structure				Total Hrs.	Marks Distribution		Total Marks
						L	T	P	SL		CIA	SEE	
1	261ECEEE21	PE	PE	Environmental Health and Safety	3	45	0	0	45	90	40	60	100
2	261ECEEE22	PE	PE	Instrumental and Analytical Techniques in Environmental Engineering	3	45	0	0	45	90	40	60	100
3	261ECEEE23	PE	PE	Environmental System Modeling	3	45	0	0	45	90	40	60	100
4	261ECEEE24	PE	PE	Ecological Engineering	3	45	0	0	45	90	40	60	100

PROGRAM ELECTIVE-3

Sl.	Course Code	Type	Cat.	Course Title	Cr.	Hour Structure				Total Hrs.	Marks Distribution		Total Marks
						L	T	P	SL		CIA	SEE	
1	262ECEEE31	PE	PE	Air Quality Management	3	45	0	0	45	90	40	60	100
2	262ECEEE32	PE	PE	Advanced Wastewater Treatment Technologies	3	45	0	0	45	90	40	60	100
3	262ECEEE33	PE	PE	Industrial Effluent Management	3	45	0	0	45	90	40	60	100
4	262ECEEE34	PE	PE	Geo Environmental Engineering	3	45	0	0	45	90	40	60	100

PROGRAM ELECTIVE-4

Sl.	Course Code	Type	Cat.	Course Title	Cr.	Hour Structure				Total Hrs.	Marks Distribution		Total Marks
						L	T	P	SL		CIA	SEE	
1	262ECEEE41	PE	PE	Environmental Biotechnology and Bioremediation	3	45	0	0	45	90	40	60	100
2	262ECEEE42	PE	PE	Environmental Toxicology	3	45	0	0	45	90	40	60	100
3	262ECEEE43	PE	PE	Contaminant Transport and Remediation	3	45	0	0	45	90	40	60	100
4	262ECEEE44	PE	PE	Advanced Hydrology	3	45	0	0	45	90	40	60	100

INTERDISCIPLINARY ELECTIVE

Sl.	Course Code	Type	Cat.	Course Title	Cr.	Hour Structure				Total Hrs.	Marks Distribution		Total Marks
						L	T	P	SL		CIA	SEE	
1	262ECEID11	IE/ID	ID	Climate Change and Sustainable Development	3	45	0	0	45	90	40	60	100
2	262ECEID12	IE/ID	ID	Waste Management	3	45	0	0	45	90	40	60	100
3	262ECEID13	IE/ID	ID	Environmental Health and Safety	3	45	0	0	45	90	40	60	100