



ANNA UNIVERSITY

CHENNAI 600025

COURSES RELATED TO CLIMATE SCIENCE AND SUSTAINABILITY

LIST OF COURSES OFFERED UNDER R 2019 DEALING WHICH TACKLE ISSUES RELATED TO CLIMATE SCIENCE AND SUSTAINABILITY

FACULTY OF CIVIL ENGINEERING

UG PROGRAMME

Sl. No.	Name of the Programme	Course Code	Name of the Course	Offering Semester	URL
1	B E Civil Engineering	GE5251	Environmental Sciences	2	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Civil/B.E.Civil.pdf#page=38
2		CE5012	Transport and Environment	6	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Civil/B.E.Civil.pdf#page=123
3		CE5004	Air Pollution and Control Engineering	PEC- VI Semester	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Civil/B.E.Civil.pdf#page=103
4		CE5005	Environmental and Social Impact Assessment	PEC- VI Semester	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Civil/B.E.Civil.pdf#page=105
5		CE5006	Industrial Wastewater Treatment	PEC- VI Semester	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Civil/B.E.Civil.pdf#page=107
6		CE5007	Municipal Solid Waste Management	PEC- VI Semester	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Civil/B.E.Civil.pdf#page=108
7		CE5029	Global Climate Change	PEC- VII Semester	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Civil/B.E.Civil.pdf#page=151
8		CE5030	Climate Change and Vulnerability Assessment	PEC- VII Semester	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Civil/B.E.Civil.pdf#page=152

9		CE5503	Waste Water Engineering	PCC - V Semester	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Civil/B.E.Civil.pdf#page=74
10		CE5511	Water and Waste Water Analysis Laboratory	PCC - V Semester	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Civil/B.E.Civil.pdf#page=78
11		CE5712	Irrigation and Environmental Engineering Drawing	PCC – VII Semester	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Civil/B.E.Civil.pdf#page=93
12		CE5023	Geo-Environmental Engineering	PEC- VII Semester	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Civil/B.E.Civil.pdf#page=140
13		CE5071	Hydrology and Water Resources Engineering	PEC- VI Semester	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Civil/B.E.Civil.pdf#page=110
14		CE5073	Participatory Water Resources Management	PEC- VI Semester	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Civil/B.E.Civil.pdf#page=113
15		CE5008	Groundwater Engineering	PEC- VI Semester	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Civil/B.E.Civil.pdf#page=115
16		CE5009	Water Resources Systems Engineering	PEC- VI Semester	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Civil/B.E.Civil.pdf#page=117
17		CE5013	Transportation Planning and Systems	PEC- VI Semester	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Civil/B.E.Civil.pdf#page=124
18		CE5014	Urban Planning and Development	PEC- VI Semester	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Civil/B.E.Civil.pdf#page=126
19		CE5024	Ground Improvement Techniques	PEC- VII Semester	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Civil/B.E.Civil.pdf#page=142
20		CE5025	Soil Dynamics and Machine Foundations	PEC- VII Semester	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Civil/B.E.Civil.pdf#page=144
21		CE5027	Coastal Engineering	PEC- VII Semester	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Civil/B.E.Civil.pdf#page=147
22		CE5028	Coastal Zone Management	PEC- VII Semester	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Civil/B.E.Civil.pdf#page=149
1	B E GEOINFORMATICS	GE5251	Environmental Sciences	6	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Civil/B.E.%20Ge.pdf#page=83
2		GI5006	Environmental Geoinformatics	PEC	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Civil/B.E.%20Ge.pdf#page=105
3		GI5001	Climate Change Studies	PEC	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Civil/B.E.%20Ge.pdf#page=96
4		GI5003	Urban Geoinformatics	PEC	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Civil/B.E.%20Ge.pdf#page=100

5		GI5004	Hydrology and Water Resources Engineering for Geoinformatics	PEC	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Civil/B.E.%20Ge.pdf#page=102
6		GI5005	Transportation Geoinformatics	PEC	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Civil/B.E.%20Ge.pdf#page=104
7		GI5007	Airborne and Terrestrial Laser Mapping.	PEC	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Civil/B.E.%20Ge.pdf#page=107
8		GI5009	Oceanography and Coastal Processes	PEC	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Civil/B.E.%20Ge.pdf#page=110
9		GI5011	GIS based Disaster Preparedness and Mitigation	PEC	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Civil/B.E.%20Ge.pdf#page=114
10		GI5012	Planetary Remote Sensing	PEC	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Civil/B.E.%20Ge.pdf#page=115
11		GI5013	Satellite Meteorology	PEC	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Civil/B.E.%20Ge.pdf#page=117
12		GI5071	Geoinformatics for Agriculture and Forestry	PEC	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Civil/B.E.%20Ge.pdf#page=121

PG PROGRAMME

All the ten PG Programmes offer (i) E5092 - Industrial Safety and (ii) OE5096 - Waste to Energy as Open Elective Courses.

Sl. No.	Name of the Programme	Course Code	Name of the Course	Offering Semester	URL
1	M E Irrigation Water Management	IW5102	Integrated Water Resources Management	1	https://cac.annauniv.edu/uddetails/udpg_2019/civil/3.%20M.E.%20IWM.pdf#page=13
2		IW5302	Water Quality	3	https://cac.annauniv.edu/uddetails/udpg_2019/civil/3.%20M.E.%20IWM.pdf#page=29
3		IW5002	Climate Change and Water Resources	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/civil/3.%20M.E.%20IWM.pdf#page=33

4		IW5006	Drought Risk Assessment and Management	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/civil/3.%20M.E.%20IWM.pdf#page=40
5		IW5008	Water and Environment	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/civil/3.%20M.E.%20IWM.pdf#page=43
6		IW5012	Environmental Impact Assessment for Water Resources	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/civil/3.%20M.E.%20IWM.pdf#page=50
7		IW5013	Water, Sanitation and Health	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/civil/3.%20M.E.%20IWM.pdf#page=51
8	M E Hydrology and Water resources Engineering	HW5003	River Engineering	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/civil/4.%20M.E.%20HWRE.pdf#page=33
9		HW5004	Environmental Hydraulics	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/civil/4.%20M.E.%20HWRE.pdf#page=35
10		HW5005	Sediment Transportation	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/civil/4.%20M.E.%20HWRE.pdf#page=36
11		HW5006	Flood Modelling and Drought Management	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/civil/4.%20M.E.%20HWRE.pdf#page=38
12		HW5011	Water and Ecosystems	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/civil/4.%20M.E.%20HWRE.pdf#page=29
13	M E Environmental Engineering	EN5101	Environmental Chemistry	1	https://cac.annauniv.edu/uddetails/udpg_2019/civil/5.%20M.E.%20Env%20Eng.pdf#page=11
14		EN5102	Environmental Microbiology	1	https://cac.annauniv.edu/uddetails/udpg_2019/civil/5.%20M.E.%20Env%20Eng.pdf#page=12
15		EN5104	Transport of water and wastewater	1	https://cac.annauniv.edu/uddetails/udpg_2019/civil/5.%20M.E.%20Env%20Eng.pdf#page=16
16		EN5111	Environmental Chemistry Laboratory	1	https://cac.annauniv.edu/uddetails/udpg_2019/civil/5.%20M.E.%20Env%20Eng.pdf#page=19
17		EN5112	Environmental Microbiology Laboratory	1	https://cac.annauniv.edu/uddetails/udpg_2019/civil/5.%20M.E.%20Env%20Eng.pdf#page=20
18		EN5251	Air Pollution Control	2	https://cac.annauniv.edu/uddetails/udpg_2019/civil/5.%20M.E.%20Env%20Eng.pdf#page=23

19		EN5252	Industrial Wastewater Pollution-Prevention and Control	2	https://cac.annauniv.edu/uddetails/udpg_2019/civil/5.%20M.E.%20Env%20Eng.pdf#page=24
20		EN5211	Environmental and Processes Monitoring Laboratory	2	https://cac.annauniv.edu/uddetails/udpg_2019/civil/5.%20M.E.%20Env%20Eng.pdf#page=26
21		EN5001	Design of Environmental Engineering Structures	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/civil/5.%20M.E.%20Env%20Eng.pdf#page=27
22		EN5002	Natural Systems for Wastewater Treatment	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/civil/5.%20M.E.%20Env%20Eng.pdf#page=29
23		EN5003	Environmental Monitoring Instruments	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/civil/5.%20M.E.%20Env%20Eng.pdf#page=30
24		EN5004	Fate and remediation of Emerging Contaminants	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/civil/5.%20M.E.%20Env%20Eng.pdf#page=32
25		EN5005	Computing Techniques in Environmental Engineering	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/civil/5.%20M.E.%20Env%20Eng.pdf#page=33
26		EN5006	Air Quality Modeling	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/civil/5.%20M.E.%20Env%20Eng.pdf#page=35
27		EN5007	Water Quality Modeling	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/civil/5.%20M.E.%20Env%20Eng.pdf#page=36
28		EN5008	Environmental System Analysis	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/civil/5.%20M.E.%20Env%20Eng.pdf#page=38
29		EN5010	Environmental Reaction Engineering	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/civil/5.%20M.E.%20Env%20Eng.pdf#page=41

33		EM5252	Solid and hazardous waste management	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/civil/5.%20M.E.%20Env%20Eng.pdf#page=52
		EN5071	MARINE POLLUTION AND CONTROL	PEC	http://cac.annauniv.edu/uddetails/udpg_2019/civil/5.%20M.E.%20Env%20Eng.pdf#page=42
		EN5072	MEMBRANE SEPARATION FOR WATER AND WASTEWATER TREATMENT	PEC	http://cac.annauniv.edu/uddetails/udpg_2019/civil/5.%20M.E.%20Env%20Eng.pdf#page=44
		EM5071	CLIMATE CHANGE AND MODELLING	PEC	http://cac.annauniv.edu/uddetails/udpg_2019/civil/5.%20M.E.%20Env%20Eng.pdf#page=45
34	M E Transportation Engineering	TE5006	Dynamic Simulation Modelling for Sustainable Transportation and Management	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/civil/6.%20M.E.%20Trans.pdf#page=38
35		TE5008	Sustainable Urban and Transport Planning	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/civil/6.%20M.E.%20Trans.pdf#page=41
36		TE5015	Environmental Impact Assessment of Transportation Projects	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/civil/6.%20M.E.%20Trans.pdf#page=52
37	M E Soil Mechanics and Foundation Engineering	SF5103	Subsurface Investigation and Instrumentation	1	https://cac.annauniv.edu/uddetails/udpg_2019/civil/7.%20M.E.%20Soil.pdf#page=10
38		SF5001	Environmental Geotechnology	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/civil/7.%20M.E.%20Soil.pdf#page=34
39	M E Environmental Management	EM5102	Environmental Chemistry and Microbiology	1	https://cac.annauniv.edu/uddetails/udpg_2019/civil/8.%20M.E.%20Env.%20Mgmt.pdf#page=12

34		EM5103	Principles of Sustainable Development	1	https://cac.annauniv.edu/uddetails/udpg_2019/civil/8.%20M.E.%20Env.%20Mgmt.pdf#page=14
35		EM5104	Environmental Policies and Legislations	1	https://cac.annauniv.edu/uddetails/udpg_2019/civil/8.%20M.E.%20Env.%20Mgmt.pdf#page=16
36		EM5111	Environmental Chemistry and Microbiology laboratory	1	https://cac.annauniv.edu/uddetails/udpg_2019/civil/8.%20M.E.%20Env.%20Mgmt.pdf#page=19
37		EM5201	Environmental Economics	2	https://cac.annauniv.edu/uddetails/udpg_2019/civil/8.%20M.E.%20Env.%20Mgmt.pdf#page=20
40		EM5301	Environmental Management Systems and Auditing	3	https://cac.annauniv.edu/uddetails/udpg_2019/civil/8.%20M.E.%20Env.%20Mgmt.pdf#page=26
41		EM5001	Environmental Risk Assessment	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/civil/8.%20M.E.%20Env.%20Mgmt.pdf#page=28
42		EM5003	Environmental Quality Monitoring	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/civil/8.%20M.E.%20Env.%20Mgmt.pdf#page=31
43		EM5004	Sludge and Septage Management	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/civil/8.%20M.E.%20Env.%20Mgmt.pdf#page=33
44		EM5005	Remote Sensing and GIS Applications in Environmental Management	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/civil/8.%20M.E.%20Env.%20Mgmt.pdf#page=34
45		EM5006	Sustainable Agriculture and Environmental Management	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/civil/8.%20M.E.%20Env.%20Mgmt.pdf#page=36
46		EM5007	Life Cycle Analysis and Design for the Environment	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/civil/8.%20M.E.%20Env.%20Mgmt.pdf#page=37
47		EM5009	Environment, Health and Safety in Industries	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/civil/8.%20M.E.%20Env.%20Mgmt.pdf#page=39

48		EM5011	Environmental Toxicology and Monitoring	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/civil/8.%20M.E.%20Env.%20Mgmt.pdf#page=44
52	M E Remote Sensing and Geomatics	RG5013	Geomatics for Environmental Monitoring and Modelling	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/civil/9.M.E.%20Remote.pdf#page=54
53		RG5014	Geomatics for Agriculture and Forestry	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/civil/9.M.E.%20Remote.pdf#page=56
54		RG5016	Geomatics for Ocean and Coastal Zone Management	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/civil/9.M.E.%20Remote.pdf#page=59
55		RG5017	Disaster Management and Geomatics Applications	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/civil/9.M.E.%20Remote.pdf#page=61
56		M Tech Ocean Technology	OT5103	Marine and Coastal Resources Management	1
57	OT5111		Marine Water Quality and Sediment Laboratory	1	https://cac.annauniv.edu/uddetails/udpg_2019/civil/M.%20Tech.Ocean%20Technology.pdf#page=16
58	OT5001		Marine Pollution Monitoring and Management	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/civil/M.%20Tech.Ocean%20Technology.pdf#page=30
59	OT5002		Fisheries and Aquaculture Technology	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/civil/M.%20Tech.Ocean%20Technology.pdf#page=32
60	OT5004		EIA and Ocean Governance	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/civil/M.%20Tech.Ocean%20Technology.pdf#page=35
61	OT5005		Ocean Renewable Energy	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/civil/M.%20Tech.Ocean%20Technology.pdf#page=37
62	OT5006		Coastal Hazards and Management	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/civil/M.%20Tech.Ocean%20Technology.pdf#page=38

63		OT5007	Integrated Coastal Zone Management	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/civil/M.%20Tech.Ocean%20Technology.pdf#page=40
64		OT5008	Coastal Ecosystem and Biodiversity	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/civil/M.%20Tech.Ocean%20Technology.pdf#page=41
65		OT5009	Global Climate Change and Oceans	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/civil/M.%20Tech.Ocean%20Technology.pdf#page=43
66	M.E. CONSTRUCTION ENGINEERING AND MANAGEMENT	CN5014	ENVIRONMENTAL IMPACT ASSESSMENT FOR CONSTRUCTION ENGINEERS	PEC – III Semester	http://cac.annauniv.edu/uddetails/udpg_2019/civil/2.M.E.%20Construction.pdf#page=53
67	M.E. REMOTE SENSING AND GEOMATICS	RG5013	GEOMATICS FOR ENVIRONMENTAL MONITORING AND MODELING	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/civil/9.M.E.%20Remote.pdf#page=54
68	M.E. ENVIRONMENTAL MANAGEMENT	EN5252	INDUSTRIAL WASTEWATER POLLUTION - PREVENTION AND CONTROL	PEC	http://cac.annauniv.edu/uddetails/udpg_2019/civil/8.%20M.E.%20Env.%20Mgmt.pdf#page=56
		EM5101	Design of Water and Wastewater Treatment Systems	PCC – I Semester	https://cac.annauniv.edu/uddetails/udpg_2019/civil/8.%20M.E.%20Env.%20Mgmt.pdf#page=11
		EN5103	Design of Physico-Chemical Treatment systems for water and wastewater	PCC – I Semester	https://cac.annauniv.edu/uddetails/udpg_2019/civil/5.%20M.E.%20Env%20Eng.pdf#page=14

LIST OF COURSES OFFERED UNDER R 2019 DEALING WHICH TACKLE ISSUES RELATED TO CLIMATE SCIENCE AND SUSTAINABILITY
FACULTY OF TECHNOLOGY

U.G.PROGRAMME

Sl. No.	Name of the Programme	Course Code	Name of the Course	Offering Semester	URL
1.	B.Tech. Industrial Bio-Technology	IB5304	Material and Energy Balance	ESC – III Semester	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Tech/B.Tech%20Ind%20Biotechnology.pdf#page=61
2.		IB5008	Industrial Biosafety and Hazard Management	PEC	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Tech/B.Tech%20Ind%20Biotechnology.pdf#page=134
3.	B.Tech. Petroleum Engineering and Technology	CH5071	Energy Technology	PEC	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Tech/B.Tech.%20Petroleum%20Engineering%20and%20Technology.pdf#page=137
4.		AS5029	Safety and Environment Health	PEC	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Tech/B.Tech.%20Petroleum%20Engineering%20and%20Technology.pdf#page=134
5.		AS5024	Unconventional Hydrocarbon Sources	PEC	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Tech/B.Tech.%20Petroleum%20Engineering%20and%20Technology.pdf#page=123

PG PROGRAMME

Sl. No.	Name of the Programme	Course Code	Name of the Course	Offering Semester	URL
6.	M. TECH. ENVIRONMENTAL SCIENCE AND TECHNOLOGY	EV5203	Environmental Impact Assessment	II SEM	https://cac.annauniv.edu/uddetails/udpg_2019/tech/06.Est.pdf#page=30
7.		EV5002	Environmental Sustainability	Elective	https://cac.annauniv.edu/uddetails/udpg_2019/tech/06.Est.pdf#page=60
8.		EV5005	Environmental Management	Elective	https://cac.annauniv.edu/uddetails/udpg_2019/tech/06.Est.pdf#page=78
9.		EV5003	Environmental Risk Assessment	Elective	https://cac.annauniv.edu/uddetails/udpg_2019/tech/06.Est.pdf#page=62
10.	M. TECH. CHEMICAL ENGINEERING	CL5007	CHEMICAL PROCESSES AND POLLUTION CONTROL	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/tech/01.Chemical.pdf#page=68
11.		CL5016	SAFETY AND ENVIRONMENT IN CHEMICAL INDUSTRIES	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/tech/01.Chemical.pdf#page=95
12.		CL5017	MEMBRANE TECHNOLOGY FOR WATER AND WASTE WATER TREATMENT	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/tech/01.Chemical.pdf#page=97

13.	M.TECH. POLYMER SCIENCE AND ENGINEERING	PL5010	PLASTICS WASTE MANAGEMENT	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/tech/05.Poly.pdf#page=63
14.	M. TECH. ENVIRONMENTAL SCIENCE AND TECHNOLOGY	EV5101	Unit Operations and Unit Processes in Environmental Technology	PCC-I Semester	https://cac.annauniv.edu/uddetails/udpg_2019/tech/06.Est.pdf#page=11
15.		EV5102	Biological Wastewater Treatment	PCC-I Semester	https://cac.annauniv.edu/uddetails/udpg_2019/tech/06.Est.pdf#page=13
16.		EV5103	Air Pollution Control Engineering	PCC-I Semester	https://cac.annauniv.edu/uddetails/udpg_2019/tech/06.Est.pdf#page=15
17.		EV5111	Environmental Engineering Laboratory-I	PCC-I Semester	https://cac.annauniv.edu/uddetails/udpg_2019/tech/06.Est.pdf#page=22
18.		EV5112	Separation Processes In Environmental Applications Laboratory	PCC-I Semester	https://cac.annauniv.edu/uddetails/udpg_2019/tech/06.Est.pdf#page=24
19.		EV5201	Separation Processes in Environmental Applications	PCC-II Semester	https://cac.annauniv.edu/uddetails/udpg_2019/tech/06.Est.pdf#page=26
20.		EV5202	Modeling of Environmental Systems	PCC-II Semester	https://cac.annauniv.edu/uddetails/udpg_2019/tech/06.Est.pdf#page=28
21.		EV5211	Environmental Engineering Laboratory-II	PCC-II Semester	https://cac.annauniv.edu/uddetails/udpg_2019/tech/06.Est.pdf#page=32
22.		CL5020	ENVIRONMENTAL POLICIES AND LEGISLATION	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/tech/06.Est.pdf#page=47
23.		CL5024	ENVIRONMENTAL NANOTECHNOLOGY	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/tech/06.Est.pdf#page=57
24.		CL5025	ENVIRONMENTAL HEALTH AND SAFETY IN INDUSTRIES	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/tech/06.Est.pdf#page=67
25.		EV5007	WASTE MANAGEMENT AND ENERGY RECOVERY	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/tech/06.Est.pdf#page=87
26.		CL5030	ELECTROCHEMICAL ENVIRONMENTAL TECHNOLOGY	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/tech/06.Est.pdf#page=92
27.	M.TECH. RUBBER TECHNOLOGY	RT5009	POLYMER WASTE MANAGEMENT	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/tech/09.Rub.pdf#page=40
28.	M.TECH. LEATHER TECHNOLOGY	LE5006	GREEN CHEMISTRY APPROACHES AND PRINCIPLES	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/tech/10.Leach.pdf#page=69

29.		LE5011	TANNERY WASTE MANAGEMENT AND ENGINEERING	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/tech/10.L Leather.pdf#page=86
30.	M. TECH. NANO SCIENCE AND TECHNOLOGY	NT5002	NANOMATERIALS FOR ENERGY AND ENVIRONMENT	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/tech/12.Nano.pdf#page=32
31.	M.TECH. INDUSTRIAL SAFETY AND HAZARDS MANAGEMENT	IH5025	HAZARDOUS WASTE MANAGEMENT		https://cac.annauniv.edu/uddetails/udpg_2019/tech/14.ISHM.pdf#page=105
32.		IH5103	Standards and Regulation for Health, Safety and Environment	PCC-I Semester	https://cac.annauniv.edu/uddetails/udpg_2019/tech/14.ISHM.pdf#page=19
33.		IH5212	Environmental Analysis Laboratory	PCC-II Semester	https://cac.annauniv.edu/uddetails/udpg_2019/tech/14.ISHM.pdf#page=38

LIST OF COURSES OFFERED UNDER R 2019 DEALING WHICH TACKLE ISSUES RELATED TO CLIMATE SCIENCE AND SUSTAINABILITY
FACULTY OF MECHANICAL ENGINEERING
UG PROGRAMME

Sl. No.	Name of the Programme	Course Code	Name of the Course	Offering Sem	URL
1.	B.E. Manufacturing Engineering	MF5072	Sustainable Manufacturing	PEC	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Mech/B.E.%20Manf..pdf#page=102
2.	B.E. Mechanical Engineering	ME5695	Sustainable Energy Technologies and Assessment	OEC	https://cac.annauniv.edu/uddetails/udug_2019/Ammend/OE2019/OE_CEG%20&%20ACT%20-%20VI%20Sem.pdf#page=68
3.		ME5651	Heat and Mass transfer	PCC	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Mech/B.E.%20Mechanical%20.pdf#page=73
4.		ME5611	Heat Transfer and Refrigeration and Air-conditioning Laboratory	PCC	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Mech/B.E.%20Mechanical%20.pdf#page=74
5.		ME5701	Energy Conversion Techniques	PCC – VII Semester	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Mech/B.E.%20Mechanical%20.pdf#page=77
6.		ME5010	Energy Conservation in Industries	PEC – VII Semester	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Mech/B.E.%20Mechanical%20.pdf#page=124
7.		ME5011	Energy Efficient Buildings Design	PEC – VII Semester	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Mech/B.E.%20Mechanical%20.pdf#page=125

8.		ME5016	Solar Energy Technology	PEC – VII Semester	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Mech/B.E.%20Mechanical%20.pdf#page=134
9.		GE7071	Disaster Management	PEC – VI Semester	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Mech/B.E.%20Mechanical%20.pdf#page=121
10.	B.E. Manufacturing Engineering	MF5692	Sustainable Development and Manufacturing	OEC	https://cac.annauniv.edu/uddetails/udug_2019/Ammend/OE2019/OE_CEG%20&%20ACT%20-%20VI%20Sem.pdf#page=74
11.		ME5083	Product Life Cycle Management	PEC – VI Semester	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Mech/B.E.%20Manf..pdf#page=100
12.		MF5072	Sustainable Manufacturing	PEC – VII Semester	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Mech/B.E.%20Manf..pdf#page=102
13.		ME5079	New and Renewable Sources of Energy	PEC – VII Semester	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Mech/B.E.%20Manf..pdf#page=106
14.		PR5074	Materials Procurement Management	PEC – VIII Semester	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Mech/B.E.%20Manf..pdf#page=110
15.	B.E. Aeronautical Engineering	AE5004	Wind Engineering	PEC – V Semester	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Mech/B.E.%20Aero.pdf#page=91
16.		AE5029	Non-conventional Energy Resources	PEC – VIII Semester	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Mech/B.E.%20Aero.pdf#page=134
17.	B.E. Automobile Engineering	AU5601	Automotive Pollution and Control	PC – VI Semester	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Mech/B.E.%20Auto.pdf#page=68
18.		AU5611	Engine Testing and Emission Measurement Laboratory	PC – VI Semester	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Mech/B.E.%20Auto.pdf#page=74
19.		AU5015	Alternative and Advanced Fuels for IC engines	PEC – VII Semester	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Mech/B.E.%20Auto.pdf#page=89
20.		AU5022	Renewable Sources of Energy	PEC – VI Semester	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Mech/B.E.%20Auto.pdf#page=101
21.	B.E. Industrial Engineering	PH5251	Materials Science	BSC – II Semester	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Mech/B.E.%20Industrial..pdf#page=37
22.		IE5751	Supply Chain Management	PCC – VII Semester	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Mech/B.E.%20Industrial..pdf#page=77
23.		HU5271	Gender Culture and Development	HSMC – Even Semesters	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Mech/B.E.%20Industrial..pdf#page=125

24.	B.E. Mining Engineering	MI5402	Mine Environment and Ventilation	PCC – IV Semester	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Mech/B.E.%20Mining.pdf#page=59
25.		MI5009	Energy Conservation and Management	PEC – VII Semester	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Mech/B.E.%20Mining.pdf#page=99
26.		MI5013	Environmental Management for Sustainable Mining	PEC – VIII Semester	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Mech/B.E.%20Mining.pdf#page=104
27.	B.E. Production Engineering	PR5017	Smart Materials for Manufacturing	PEC – VII Semester	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Mech/B.E.%20Production.pdf#page=113
28.	B.E. Materials Science and Engineering	ML5001	Bio and Smart Materials	PEC – V Semester	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Mech/B.E.%20Materials%20science.pdf#page=86
29.		ML5019	Materials Science and Engineering of Green Energy	PEC – VII Semester	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Mech/B.E.%20Materials%20science.pdf#page=122
30.	B.E. Robotics and Automation	RO5008	Smart mobility and Intelligent Vehicles	PEC - II	https://cac.annauniv.edu/uddetails/udug_2019/AmmendII/Mech/B.E.%20Robo%20&%20Auto.pdf#page=95

LIST OF COURSES OFFERED UNDER R 2019 DEALING WHICH TACKLE ISSUES RELATED TO CLIMATE SCIENCE AND SUSTAINABILITY
FACULTY OF MECHANICAL ENGINEERING

PG PROGRAMME

Sl. No	Name of the Programme	Course Code	Name of the Course	Offering Semester	URL
1.	M.E. Internal Combustion Engineering	EY5076	Environmental Engineering and Pollution Control	OEC	https://cac.annauniv.edu/uddetails/udpg_2019/mech/1.%20M.E.ICE%20(FT).pdf#page=49
2.		IC5007	ENGINE POLLUTION AND CONTROL	PEC-II Semester	http://cac.annauniv.edu/uddetails/udpg_2019/mech/1.%20M.E.ICE%20(FT).pdf#page=39
3.	M.E. Energy Engineering	EY5151	Energy Management and Environmental Benefits	PCC	https://cac.annauniv.edu/uddetails/udpg_2019/mech/2.%20M.E.%20Energy.(FT%20&%20PT).pdf#page=14

4.		EY5153	Instrumentation for Energy Systems	PCC	https://cac.annauniv.edu/uddetails/udpg_2019/mech/2.%20M.%20E.%20Energy.(FT%20&%20PT).pdf#page=16
5.		EY5154	Renewable Energy Systems	PCC	https://cac.annauniv.edu/uddetails/udpg_2019/mech/2.%20M.%20E.%20Energy.(FT%20&%20PT).pdf#page=18
6.		EY5155	Thermodynamic Analysis of Energy Systems	PCC	https://cac.annauniv.edu/uddetails/udpg_2019/mech/2.%20M.%20E.%20Energy.(FT%20&%20PT).pdf#page=19
7.		EY5201	Energy Conservation in Industrial Utilities	PCC	https://cac.annauniv.edu/uddetails/udpg_2019/mech/2.%20M.%20E.%20Energy.(FT%20&%20PT).pdf#page=23
8.		EY5251	Computational Fluid Dynamics for Energy Systems	PCC	https://cac.annauniv.edu/uddetails/udpg_2019/mech/2.%20M.%20E.%20Energy.(FT%20&%20PT).pdf#page=24
9.		EY5211	Energy Conservation Laboratory	PCC	https://cac.annauniv.edu/uddetails/udpg_2019/mech/2.%20M.%20E.%20Energy.(FT%20&%20PT).pdf#page=25
10.		EY5212	Analysis and Simulation Laboratory for Energy Engineering	PCC	https://cac.annauniv.edu/uddetails/udpg_2019/mech/2.%20M.%20E.%20Energy.(FT%20&%20PT).pdf#page=26
11.	M.E. Computer Integrated Manufacturing	CI5072	Sustainable Manufacturing	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/mech/3.%20M.E.%20CIM%20(FT).pdf#page=53
12.	M.E. Manufacturing Engineering (with Specialization In Green Manufacturing Engineering) (Part Time)	GR5201	Environment Sustainability and Impact Assessment	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/mech/18.%20M.E%20Green%20(PT).pdf#page=12
13.	M.E. (SOLAR ENERGY)	SY5007	SOLAR ENERGY FOR INDUSTRIAL PROCESS HEATING	PEC – III Semester	https://cac.annauniv.edu/uddetails/udpg_2019/mech/17.%20M.E%20Solar%20(FT).pdf#page=43
14.		EY5071	ADVANCED ENERGY STORAGE TECHNOLOGIES	PEC – II Semester	https://cac.annauniv.edu/uddetails/udpg_2019/mech/17.%20M.E%20Solar%20(FT).pdf#page=32

15.		EY5075	ENERGY FORECASTING, MODELING AND PROJECT MANAGEMENT	PEC – II Semester	https://cac.annauniv.edu/uddetails/udpg_2019/mech/17.%20M.E.%20Solar%20(FT).pdf#page=29
16.		SY5112	Analysis and Simulation Laboratory for Solar Energy	PCC – I Semester	https://cac.annauniv.edu/uddetails/udpg_2019/mech/17.%20M.E.%20Solar%20(FT).pdf#page=17
17.	M.E. PRINTING AND PACKAGING TECHNOLOGY	PG5018	SUSTAINABLE PACKAGING	PEC-III Semester	https://cac.annauniv.edu/uddetails/udpg_2019/mech/15.%20M.E.%20Printing%20(FT).pdf#page=49
18.	M.E. ENGINEERING DESIGN	ED5075	DESIGN FOR SUSTAINABILITY	PEC-I Semester	http://cac.annauniv.edu/uddetails/udpg_2019/mech/5.%20M.E.%20ED%20(FT).pdf#page=25
19.		EY5072	BIO ENERGY TECHNOLOGIES	PEC-II Semester	http://cac.annauniv.edu/uddetails/udpg_2019/mech/2.%20M.%20E.%20Energy.(FT%20&%20PT).pdf#page=29
20.	M.E. MANUFACTURING SYSTEMS AND MANAGEMENT	MS5010	SUSTAINABLE AND GREEN MANUFACTURING	PEC-III Semester	http://cac.annauniv.edu/uddetails/udpg_2019/mech/11.%20M.E.%20MSM%20(FT).pdf#page=42
21.		MS5004	COMPETITIVE AND SUSTAINABLE MANUFACTURING SYSTEMS	PEC-II Semester	http://cac.annauniv.edu/uddetails/udpg_2019/mech/11.%20M.E.%20MSM%20(FT).pdf#page=33
22.	M.E THERMAL ENGINEERING	EY5081	SOLAR ENERGY TECHNOLOGIES	PEC-II Semester	https://cac.annauniv.edu/uddetails/udpg_2019/mech/4.%20M.E.%20Thermal(R&AC)%20(FT).pdf#page=29
23.	M.E. AUTOMOBILE ENGINEERING	AM5202	Automotive Engine Pollution and its Control	PEC-II Semester	https://cac.annauniv.edu/uddetails/udpg_2019/mech/7.M.E.%20%20AUTO%20(FT%20&PT).pdf#page=24

LIST OF COURSES OFFERED UNDER R 2019 DEALING WHICH TACKLE ISSUES RELATED TO CLIMATE SCIENCE AND SUSTAINABILITY

FACULTY OF ELECTRICAL ENGINEERING

U.G.PROGRAMME

Sl. No.	Name of the Programme	Course Code	Name of the Course	Offering Semester	URL
24.	B.E. Electrical and Electronics Engineering	HM5403	Work Ethics, Corporate Social Responsibility and Governance	HSMC – V Semester	https://cac.annauniv.edu/uddetails/udug_2019/AmmendIII/EEE/B.E.%20EEE.pdf#page=74
25.		EE5006	Energy Management and Auditing	PEC	https://cac.annauniv.edu/uddetails/udug_2019/AmmendIII/EEE/B.E.%20EEE.pdf#page=102
26.		EE5009	Power Electronics for Renewable Energy Systems	PEC	https://cac.annauniv.edu/uddetails/udug_2019/AmmendIII/EEE/B.E.%20EEE.pdf#page=106
27.		EE5030	Utilization and Conservation of Electrical Energy	PEC	https://cac.annauniv.edu/uddetails/udug_2019/AmmendIII/EEE/B.E.%20EEE.pdf#page=137
28.		EE5032	Energy Auditing	PEC	https://cac.annauniv.edu/uddetails/udug_2019/AmmendIII/EEE/B.E.%20EEE.pdf#page=139

LIST OF COURSES OFFERED UNDER R 2019 DEALING WHICH TACKLE ISSUES RELATED TO CLIMATE SCIENCE AND SUSTAINABILITY

FACULTY OF ARCHITECTURE

UG PROGRAMME

Sl.No	Name of the Programme	Course Code	Name of the Course	Offering Semester	URL
1.	B.Arch	AR5302	Environment and Architecture	PCC – III Semester	https://cac.annauniv.edu/uddetails/udug_2019/Ammend/B.Arch.pdf#page=30
2.		AR5303	Water Supply and Sanitation in Buildings	ESC – III Semester	https://cac.annauniv.edu/uddetails/udug_2019/Ammend/B.Arch.pdf#page=31

3.		AR5401	Regional and Vernacular Built Environments in India	HSMC – IV Semester	https://cac.annauniv.edu/uddetails/udug_2019/Ammend/B.Arch.pdf#page=36
4.		AR5621	Environmental Design Studio	PCC – VI Semester	https://cac.annauniv.edu/uddetails/udug_2019/Ammend/B.Arch.pdf#page=54
5.		AR5006	Sustainable Design	PEC – II Semester	https://cac.annauniv.edu/uddetails/udug_2019/Ammend/B.Arch.pdf#page=72
6.		AR5007	Disaster Management	PEC – II Semester	https://cac.annauniv.edu/uddetails/udug_2019/Ammend/B.Arch.pdf#page=74
7.		AR5008	Earthquake Resistant Architecture	PEC – II Semester	https://cac.annauniv.edu/uddetails/udug_2019/Ammend/B.Arch.pdf#page=75
8.		AR5012	Human Behaviour and Built Environment	PEC – III Semester	https://cac.annauniv.edu/uddetails/udug_2019/Ammend/B.Arch.pdf#page=79
9.		AR5016	Human Settlements Planning	PEC – IV Semester	https://cac.annauniv.edu/uddetails/udug_2019/Ammend/B.Arch.pdf#page=83
10.		AD5097	Essence of Indian Knowledge Tradition	AC	https://cac.annauniv.edu/uddetails/udug_2019/Ammend/B.Arch.pdf#page=90
11.		AR7701	Professional Practice and Ethics	PC – VI Semester	https://cac.annauniv.edu/uddetails/udug_2015/29.B.Arch.pdf#page=47
12.		AR7902	Landscape Design	PC – IX Semester	https://cac.annauniv.edu/uddetails/udug_2015/29.B.Arch.pdf#page=54

P.G.PROGRAMME

Sl.No	Name of the Programme	Course Code	Name of the Course	Offering Semester	URL
1.	M. Arch (General)	AA5102	Climate Change Adaptation and Resilience in Architecture	PCC	https://cac.annauniv.edu/uddetails/udug_2019/Ammend/B.Arch.pdf#page=30
2.		AA5111	Sustainable Design Studio	PCC – I Semester	https://cac.annauniv.edu/uddetails/udpg_2019/arch/01.M.Arch.(General).pdf#page=11
3.		AA5211	Urban Environment Design Studio	PCC – II Semester	https://cac.annauniv.edu/uddetails/udpg_2019/arch/01.M.Arch.(General).pdf#page=14
4.		AA5351	Research Methodologies for Human Environment	RMC – III Semester	https://cac.annauniv.edu/uddetails/udpg_2019/arch/01.M.Arch.(General).pdf#page=15
5.		AA5101	Sustainable Architecture - Historic and Community Perspective	PCC – I Semester	https://cac.annauniv.edu/uddetails/udpg_2019/arch/01.M.Arch.(General).pdf#page=9
6.	M.Arch (Landscape Architecture)	LN5001	SUSTAINABILITY AND ENERGY CONSERVATION IN LANDSCAPE ARCHITECTURE	PEC	http://cac.annauniv.edu/uddetails/udpg_2019/arch/02.M.Arch.(LA).pdf#page=21
7.	M.Plan	TP5009	URBAN SUSTAINABILITY	PEC	https://cac.annauniv.edu/uddetails/udpg_2019/arch/03.M.Plan.pdf#page=32