List of Sustainability and SDG Courses

SRM University–AP offers full degree programmes and a wide range of courses on sustainability and the Sustainable Development Goals. The key facts are:

- **Three full degrees** in the field: M.Sc. in Environmental Science, M. Tech in Environmental and Sustainable Engineering, and Ph.D. in Environmental Science and Engineering.
- **62 sustainability and environment courses** are listed in the university's SDG course mapping, in seven themes from climate and carbon to water resources.
- **15 of the 17 SDGs** are covered by these courses, with SDG 13 (Climate Action) the most common.
- **997 of the university's 1,035 unique courses (96.3 per cent)** are mapped to at least one SDG.

These courses are taught as part of the degree programmes, as electives and as value-added courses, and they are offered through engineering, science, social science and business programmes.

2. Degree Programmes

The Department of Environmental Science and Engineering, in the School of Engineering and Applied Sciences, runs two postgraduate degrees of two years each and a doctoral programme. The M.Sc. in Environmental Science trains students to address environmental and climate challenges through sustainable, multidisciplinary solutions. The M.Tech. in Environmental and Sustainable Engineering prepares students to solve complex environmental problems and promote sustainable development, covering sustainable engineering, resource management and conservation. The Ph.D. in Environmental Science and Engineering is open to M.Sc. and M.Tech. graduates.

The curriculum is research and industry oriented, with many electives and a mandatory summer internship at national or international research institutes or industries. Undergraduate students can take a value-added course in Environmental Science, as well as open electives and minors. The department supports teaching with eight laboratories, including the Net-Zero Lab, the Aquatic Biogeochemistry Lab and the Waste & Water Advanced Treatment Engineering Research Lab. Its research areas include carbon sequestration, decarbonization, circular economy, renewable energy, waste valorisation, water and wastewater treatment, and the bio-circular economy

and the Sustainable Development Goals, so that what is taught in the classroom is linked to current research.

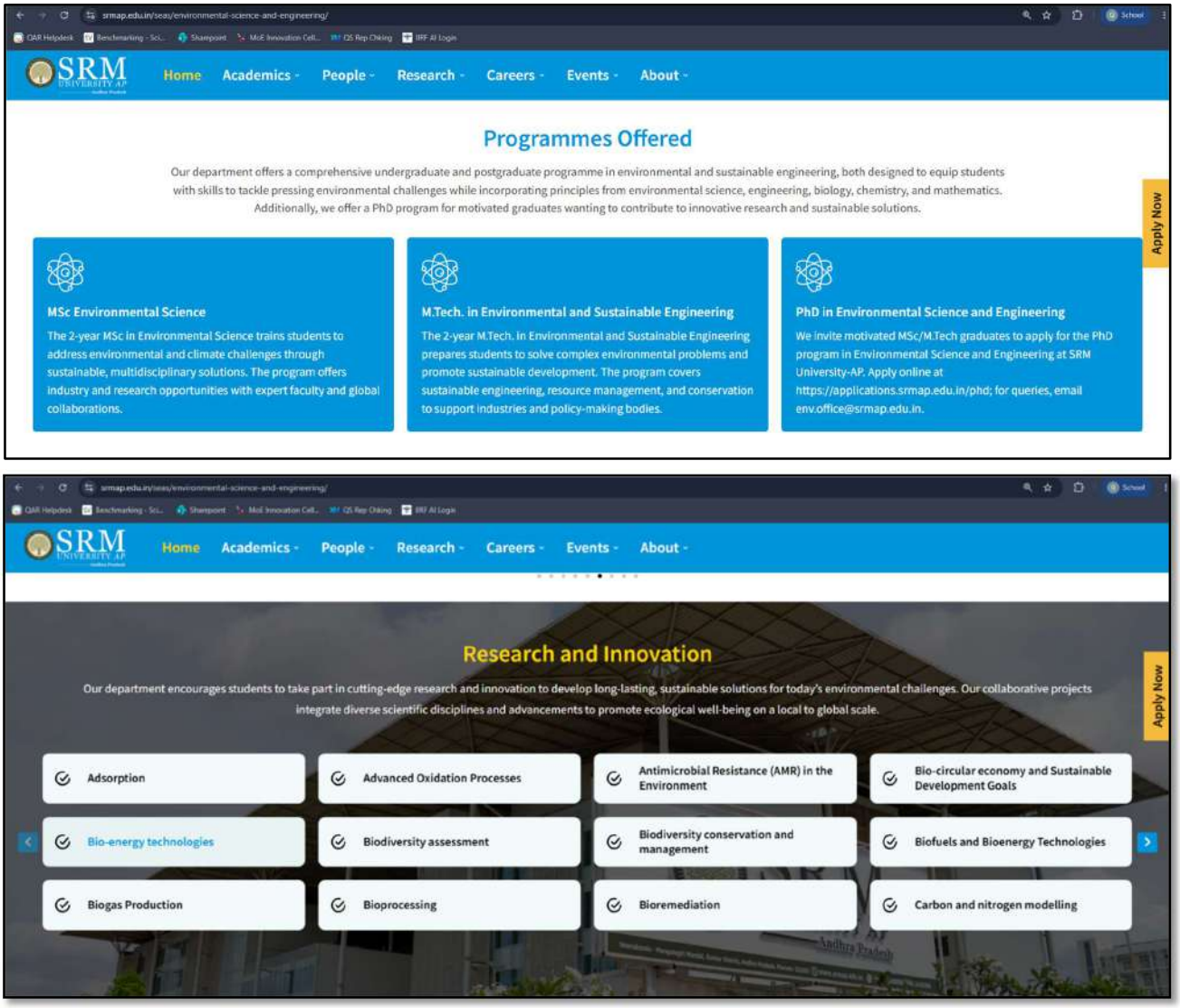


Figure 1. Programmes offered and research focus areas of the Department of Environmental Science and Engineering, SRM University-AP

3. List of Courses

The university's SDG mapping lists 62 sustainability and environment courses. Each course is shown below with its code, its theme and the SDGs it is mapped to. Four courses have no code in the mapping list and are shown with a dash.

S. No.	Course Code	Course Name	Theme	SDGs Mapped
1	EVS 563	Agriculture, Food Security and Climate Change	Climate & carbon	2, 13

S. No.	Course Code	Course Name	Theme	SDGs Mapped
2	OEC 104	Carbon Sequestration	Climate & carbon	13, 15
3	ESE 530	Climate Finance	Climate & carbon	13, 17
4	ESE 533	Net-Zero Emission and Targets	Climate & carbon	7, 13
5	ESE 502	Resource Recovery, Circular Economy and Climate Change	Climate & carbon	7, 12, 13
6	POL407	The Politics of Climate Change	Climate & carbon	1, 13, 16, 17
7	EVS 562	Biomass Energy	Energy & environment	7, 13
8	ESE 507	Food-Water-Energy Nexus	Energy & environment	2, 6, 7
9	ESE 532	Renewable Energy Sources	Energy & environment	7, 13
10	ESE 542	Analytical Methods for Environmental Monitoring	Environment	3, 6
11	EVS 555	Aquatic Microbial Ecology & Biogeochemistry	Environment	6, 14
12	EVS 502	Earth and Planetary Processes	Environment	13, 15
13	ESE 538	Ecological Modelling and Simulation	Environment	13, 14, 15
14	EVS 506	Ecology & Biodiversity	Environment	14, 15
15	–	Ecosystem Restoration	Environment	15
16	EVS 558	Energy and Environment	Environment	7, 13
17	CHE633	Environmental and Electroanalytical Techniques	Environment	7, 13
18	SOC208	Environmental Anthropology	Environment	2, 4, 6, 11, 12, 13, 15, 16
19	LBA302	Environmental Anthropology	Environment	16
20	EVS 505	Environmental Chemistry & Microbiology	Environment	3, 6, 15
21	ECO247	Environmental Economics	Environment	4, 7, 13, 16
22	ECO306	Environmental Economics and Policies	Environment	4, 7, 13, 16
23	EVS 561	Environmental Entrepreneurship and Planning	Environment	8, 9
24	EVS 508	Environmental Impact Assessment and Audits	Environment	11, 13, 15

S. No.	Course Code	Course Name	Theme	SDGs Mapped
25	ESE 503	Environmental Impact, Risk and Life Cycle Assessment	Environment	11, 13, 15
26	EVS 504	Environmental Laboratory – I	Environment	13, 15
27	EVS 507	Environmental Laboratory – II	Environment	3, 6, 14
28	EVS 503	Environmental Pollution	Environment	3, 6, 14, 15
29	VAC101	Environmental Science	Environment	2, 3, 4, 6, 7, 9, 11, 12, 13, 14, 15, 16
30	EVS 509	Geospatial Technologies for Environmental Applications	Environment	11, 13, 15
31	ESE 540	Green Chemistry	Environment	3, 12
32	ESE 508	Industrial Ecology	Environment	9, 12, 13
33	ESE 541	Nanotechnology for Environmental Engineering	Environment	6, 9
34	ESE 537	Phyto Remediation Principles and Applications in Environmental Engineering	Environment	6, 15
35	ESE 545	Aspects of Air and Noise Pollution Engineering and Management	Pollution & remediation	3, 11
36	EVS 560	Soil Pollution and Remediation Measures	Pollution & remediation	3, 15
37	ENV 120	Water Contaminants: Sources, Transport and Remediation Strategies	Pollution & remediation	3, 6
38	ESE 509	AI for Sustainable Environmental Engineering	Sustainability	9, 13
39	BBA003	Circular Supply Chains and Sustainability	Sustainability	8, 9, 12, 13
40	EVS 501	Environmental Issues, Climate Change, and Sustainable Development	Sustainability	11, 13, 15, 17
41	ESE 501	Fundamentals of Environmental Engineering and Sustainability	Sustainability	11, 13, 15
42	–	Integrated Pollution Control: Sustainable Engineering of Water and Air Systems	Sustainability	6
43	ESE 544	Microalgae for Sustainability	Sustainability	7, 13, 14

S. No.	Course Code	Course Name	Theme	SDGs Mapped
44	ESE 535	Nature-Based Solutions for Sustainable Environment	Sustainability	11, 13, 15
45	ESE 506	Policy Framework for Environmental Sustainability	Sustainability	13, 16
46	ESE 504	Sustainable Cities and Urban Planning	Sustainability	11, 13
47	LBA245	Sustainable Cities Climate Change	Sustainability	4
48	MMT502	Sustainable Manufacturing	Sustainability	4, 9, 12
49	CVE460	Sustainable Pavement Materials and Construction	Sustainability	9
50	ESE 543	Sustainable Process Design	Sustainability	9, 12, 13
51	MCE425	Sustainable product development	Sustainability	4, 7, 9, 11, 12, 13
52	ESE 534	Sustainable Remediation Strategies for Water Contaminants	Sustainability	3, 6
53	EVS 557	Urban Mining and Sustainability	Sustainability	11, 12
54	–	Industrial Effluent Treatment and Resource Recovery	Waste & circular economy	6
55	CVE 711	Industrial Waste Utilization and Management	Waste & circular economy	12
56	EVS 552	Solid Waste Management	Waste & circular economy	11, 12
57	EVS 553	Solid Waste Management (detailed)	Waste & circular economy	11, 12
58	–	Urban Waste Engineering: Solid and Liquid Waste Management	Waste & circular economy	6
59	CVE 251	Availability and Management of Groundwater Resources	Water resources	9
60	EVS 550	Freshwater Resources	Water resources	6, 14
61	EVS 551	Introduction to Limnology & Oceanography	Water resources	6, 14

S. No.	Course Code	Course Name	Theme	SDGs Mapped
62	EVS 567	Introduction to Limnology & Oceanography (detailed)	Water resources	6, 14

4. SDG Coverage

Together the 62 courses cover 15 of the 17 SDGs, and 23 of them address three or more SDGs, which shows that the courses are designed across goals and not for one goal alone. SDG 13 (Climate Action) is the most common, with 31 courses. SDG 6 (Clean Water and Sanitation) and SDG 15 (Life on Land) follow with 18 courses each, then SDG 11 (Sustainable Cities and Communities) with 14, SDG 12 (Responsible Consumption and Production) with 13, SDG 7 (Affordable and Clean Energy) with 12, and SDG 9 (Industry, Innovation and Infrastructure) with 11. SDG 3 (Good Health and Well-being) and SDG 14 (Life Below Water) have 10 courses each, SDG 4 has 7, SDG 16 has 7, SDG 2 has 4, SDG 17 has 3, SDG 8 has 2 and SDG 1 has 1.

5. SDG Mapping Across the University

Beyond these dedicated courses, the university has mapped its whole course catalogue to the SDGs. Of 1,035 unique courses, 997 (96.3 per cent) are mapped to at

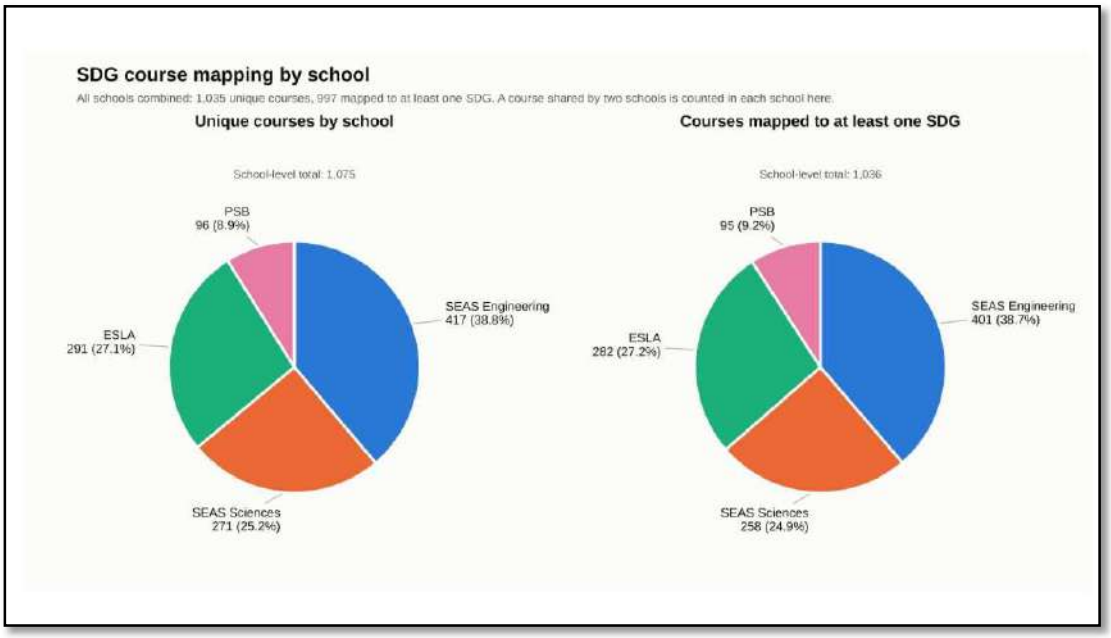


Figure 1. SDG course mapping by school: unique courses and courses mapped to at least one SDG.

least one SDG, and 38 are not yet mapped. By school, SEAS Engineering has mapped 401 of its 417 courses (96.2 per cent), SEAS Sciences 258 of 271 (95.2 per cent), ESLA 282 of 291 (96.9 per cent) and PSB 95 of 96 (99.0 per cent). A course shared by two

schools is counted once in the overall figure and in each school in the school figures. This means almost every course a student takes can be linked to at least one SDG.

School	Unique courses	Mapped to ≥1 SDG	Not mapped	% mapped
SEAS Engineering	417	401	16	96.20%
SEAS Sciences	271	258	13	95.20%
ESLA	291	282	9	96.90%
PSB	96	95	1	99.00%
All schools (unique overall)	1,035	997	38	96.30%