Sreyas Institute of Engineering and Technology

An Autonomous Institution

Approved by AICTE, Affiliated to JNTUH

Accredited by NAAC-A Grade, NBA (CSE & ECE) & ISO 9001:2015 Certified

Department of Humanities and Sciences (Environmental Science)

Board of Studies – First meeting on 14-08-2025 at 12:30 pm

AGENDA

Item-1: Welcoming the distinguished Members of the Board of Studies for the BOS meeting by the Head of the Department.

Item-2: Review /Approval of the academic regulation for the B. Tech Program.

Item-3: Review /Approval of the course structure of B. Tech Program.

Item-4: Review/Approval of the detailed syllabus of Environmental Science.

Item-5: Any other suggestions to the department.

Item-6: Vote of Thanks.

Md. Naseeruddin

Chairman of BoS and HoD of H&S Dept.

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BoS - Members

S.No	Name of the member	Designation & Address	BOS Position	Signature
1	Mr.Md.Naseeruddin	Asso.Prof , HoD (H&S), SIET	Chairman	
2	**Dr.Vurimindi Hima Bindu**	**Prof. of Env.Sci. JNTUH, UCESTH**	**Member JNTUH Nominee**	
3	**Prof.Shashidhar**	**Prof. of Civil Engineering IITH**	**Member Subject Expert**	
4	Mrs.G.Sujatha	Asst.Prof, SIET	Member Internal Faculty	
5	Dr.A.Hymavathi	Assoc.Prof, SIET	Member Internal Faculty	
6	Dr.Y.Swetha	Asst.Prof, SIET	Member Internal Faculty	
7	Ms.G.Aswini Devi	Asst.Prof, SIET	Member Internal Faculty	
8	Mr.B.Rahul Omprakash	Assoc.Prof, SIET	Member Internal Faculty	
9	Mr.M.Srikanth	Asst.Prof, SIET	Member Internal Faculty	

The minutes of the meeting are as follows:

- The meeting commenced by the welcome note by the Domain Lead.
- Faculty members reviewed the syllabus in detail, and found it comprehensive and relevant to current academic year.
- It was decided that the syllabus aligns well with the specified POs and COs, ensuring intended learning objectives are met.
- The subject expert thoroughly reviewed the Environmental science syllabus and suggested certain changes to improve the content, including " Global Environmental Issues and Global effects to the first unit," "Solid pollution, plastic pollution, e -waste pollution, Hazardous pollution and their management under a separate sub-unit in unit-4 " and "explanation of only the definition, scope and applications of EIA in unit-5.
- The University Nominee reviewed the suggested changes and accepted them. Additionally, the nominee offered value suggestions for strengthening the course such as" Integration of sustainable development goals (SDGs), greater emphasis on climatic change issues etc.
- Discussions included the potential for introducing new teaching methodologies such as blended learning, project-based activities, and interactive classroom practices.
- After thorough discussion, all members unanimously agreed to incorporate the proposed modifications and additional suggestions into the syllabus.
- The Domain Lead concluded the meeting by thanking all the members of their active participation and constructive inputs.

Indian Institute of Technology Hyderabad
Department of Civil Engineering
Dr. SHASHIDHAR
Professor

Closing Remarks

The Domain lead concluded the meeting by thanking all the members for their active participation and constructive inputs, and adjourned the meeting.

List of enclosures:

1) R25 Regulations
2) Course Structure
3) Syllabus

Common Syllabus for R25 B.Tech ECE/CSE/CSE(AIML)					SIET Hyderabad			
	VA300ES: ENVIRONMENTAL SCIENCE							
II B.Tech – I Sem					**L**	**T**	**P**	**C**
					1	**0**	**0**	**1**
Pre-requisite: Pre-university knowledge								

Course Objectives: To learn

1. Understand the components, structure, and functions of ecosystems and their relevance to human society.
2. Comprehend classification, sustainable management, and challenges of natural resources including water, minerals, land, forests, and energy
3. Grasp the significance, value, and conservation approaches for biodiversity, including threats and legislative frameworks.
4. Analyze types, sources, and impacts of environmental pollution, and learn technological and policy measures for pollution prevention and control
5. Develop awareness about global environmental challenges, international agreements, and the role of policy, law in sustainable development and EIA.

Course Outcomes: After completion of the course, the student must be able to

1. Understand the structure, function, and significance of ecosystems, including energy flow, biogeochemical cycles, and biodiversity conservation through field experiences.
2. Analyze the classification, utilization, and sustainable management of natural resources, along with alternative energy options
3. Evaluate biodiversity at genetic, species, and ecosystem levels, its values, threats, and conservation methods under national and international frameworks.
4. Identify types, sources, and impacts of environmental pollution, and apply suitable control technologies while assessing global environmental challenges, protocols and EIA.

UNIT – I Ecosystems:

Definition, Scope, and Importance of ecosystem. Classification, structure, and function of an ecosystem, Food chains, food webs, and ecological pyramids. Flow of energy, Biogeochemical cycle (nitrogen cycle).

UNIT – II: Natural Resources: Classification of Resources:

Dr. SHASHIDHAR
Professor

and exploitation, environmental effects of extracting and using mineral resources, **Energy resources:** growing energy needs, renewable and non-renewable energy sources, use of alternate energy source, case studies.
UNIT – III: Biodiversity and Biotic Resources:
Introduction, Definition, genetic, species and ecosystem diversity. India as a mega diversity nation, Hot spots of biodiversity. Forest Act, Wild life Act, Threats to biodiversity: habitat loss, poaching of wildlife, man-wildlife conflicts. National Biodiversity act.
UNIT – IV: Environmental Pollution and Control Technologies:
Environmental Pollution: Classification of pollution, **Air Pollution:** Primary and secondary pollutants, Automobile and Industrial pollution, Ambient air quality standards. **Solid waste:** composition and characteristics of e-Waste, plastic waste, Hazardous waste and their management. **Global Environmental Issues and Global Efforts: C**limate change and impacts on human environment. Ozone depletion and Ozone depleting substances (ODS). Deforestation and desertification. International conventions / Protocols: Earth summit, Kyoto protocol, and Montréal Protocol.
UNIT – V: Environmental Policy and Legislation
Environmental Protection act, Legal aspects Air Act- 1981, Water Act, Municipal solid waste management and handling rules, biomedical waste management and handling rules. EIA –definition, scope and applications. Environmental Management Plan (EMP). Sustainable development goals (SDGs); Global environmental challenges.
TEXT BOOKS:
1. Introduction to Environmental Science by Y. Anjaneyulu, BS. Publications.
2. Textbook of Environmental Studies for Undergraduate Courses by Erach Bharucha for University Grants Commission.
3. Environmental Studies by R. Rajagopalan, Oxford University Press.
REFERENCE BOOKS:
1. Environmental Science: towards a sustainable future by Richard T. Wright. 2008 PHL Learning Private Ltd. New Delhi
2. Environmental Engineering and science by Gilbert M. Masters and Wendell P. Ela. 2008 PHI Learning Pvt. Ltd.
3. Environmental Science by Daniel B. Botkin & Edward A. Keller, Wiley INDIA edition.
4. Environmental Studies by Anubha Kaushik, 4th Edition, New age international publishers.
5. Text book of Environmental Science and Technology – Dr. M. Anji Reddy 2007, BS Publications.

Dr. SHASHIDHAR
Professor