

**SREE SANKARACHARYA UNIVERSITY OF SANSKRIT**  
**SCHEME AND SYLLABI FOR UNDER GRADUATE PROGRAMME**  
 (Outcome Based Teaching, Learning and Evaluation)  
**2020 JUNE ADMISSION ONWARDS**

**Ability Enhancement Courses/ Audit Courses**

<b>Sem</b>	<b>Course Code</b>	<b>Title of the Courses</b>	<b>Credits</b>	<b>Hour / Week</b>
1	IEUM 101	Environment Studies	4	0
2	II E U S 102	Disaster Management	4	0
		Anti Narcotic / Drug Awareness		
3	III E U M 103	Human Rights	4	0
		Gender Studies		
		Ethics		
4	IV E U S 104	Social Media and Cyber Ethics	4	0
		Intellectual Property Rights		
Total			16	0

**SEMESTER – I**

**Ability Enhancement Course/ Audit Course No. 1**

<b>Course Code</b>	:	IEUM 101
<b>Title</b>	:	Environment Studies
<b>Number of Credits</b>	:	4
<b>Medium of Examination</b>	:	English/Sanskrit/Malayalam

**Course Outcomes :** After the successful completion of the course the student should be able to:

1. Understand the basic notion of sustainable development and the significance of Environmental studies in the present scenario.
2. Understand the environmental issues that hinder the sustainable development.
3. Recognize the need for public awareness on environmental issues.
4. Recognize the role of an individual in conservation of natural resources.
5. Analyze the local environmental issues.
6. Apply the environmental awareness in individual and social life citations.
7. Create action plans for public awareness programmes.
8. Recognize the equitable use of resources for sustainable lifestyles

9. Create action plans for waste Management programmes in the campus and living premises.

### **Course Outline**

Module 1 : Multidisciplinary nature of environmental studies - Definition, scope and importance - Need for public awareness.

Module 2: Natural Resources : Renewable and non-renewable resources : Natural resources and associated problems. a) Forest resources : Use and over-exploitation, deforestation. Timber extraction, mining, dams and their effects on forest and tribal people. b) Water resources : Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems. c) Mineral resources: Use and exploitation, environmental effects of extracting and using mineral resources. d) Food resources: World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity. e) Energy resources: Growing energy needs, renewable and non renewable energy sources, use of alternate energy sources. f) Land resources : Land as a resource, land degradation, man induced landslides, soil erosion and desertification. Role of an individual in conservation of natural resources. Equitable use of resources for sustainable lifestyles.

Module 3: Ecosystems - Concept of an ecosystem. Structure and function of an ecosystem - Producers, consumers and decomposers - Energy flow in the ecosystem - Ecological succession - Food chains, food webs and ecological pyramids - Introduction, types, characteristic features, structure and function of the following ecosystem :- a) Forest ecosystem, b) Grassland ecosystem, c) Desert ecosystem, d) Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries).

Module 4: Biodiversity and its conservation - Introduction – Definition : genetic, species and ecosystem diversity. Biogeographical classification of India - Value of biodiversity : consumptive use, productive use, social, ethical, aesthetic and option values - Biodiversity at global, National and local levels India as a mega-diversity nation - Hot-spots of biodiversity - Threats to biodiversity : habitat loss, poaching of wildlife, man-wildlife conflicts. Endangered and endemic species of India. Conservation of biodiversity.

- Module 5: Environmental Pollution - Definition - Cause, effects and control measures of :- a. Air pollution, b. Water pollution, c. Soil pollution, d. Marine pollution, e. Noise pollution, f. Thermal pollution, g. Nuclear hazards. Solid waste Management: Causes, effects and control measures of urban and industrial wastes. Role of an individual in prevention of pollution.
- Module 6: Social Issues and the Environment. From Unsustainable to Sustainable development - Urban problems related to energy - Water conservation, rain water harvesting, watershed management - Resettlement and rehabilitation of people; its problems and concerns. Environmental ethics : Issues and possible solutions. Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust. Wasteland reclamation. Consumerism and waste products. Environment Protection Act. Air (Prevention and Control of Pollution) Act. Water (Prevention and control of Pollution) Act. Wildlife Protection Act. Forest Conservation Act. Issues involved in enforcement of environmental legislation. Public awareness.

**Field work/Assignments :** Each student should do minimum one assignment and one field work and submit the report. Some examples of Field work/Assignments to be given is given below:

- Visit to a local area to document environmental assets - river/forest/grassland/hill/mountain and prepare a report.
- Visit to a local polluted site - Urban/Rural/Industrial/Agricultural and prepare a report.
- Conduct a study of common plants, insects, birds.
- Conduct a study of simple ecosystems - pond, river, hill slopes, etc.
- Conduct a study to know the bio-diversity of your campus.
- Prepare an action plan for developing and preserving the bio-diversity of your campus.
- Prepare an action Plan for waste management in your Campus.
- Prepare an action Plan for a public awareness programme on environmental issues.
- Prepare an action Plan for an awareness programme to be conducted in your Campus on environmental issues.
- Prepare an action Plan for an awareness programme to be conducted in your Campus on environmental issues.

**Reference:**

- അച്യുതൻ, എ., പരിസ്ഥിതിപഠനത്തിന് ഒരാമുഖം, കേരളശാസ്ത്രസാഹിത്യപരിഷത്ത്, തൃശ്ശൂർ, 2013.
- അരവിന്ദാക്ഷൻ, വി. (എഡി.), പരിസ്ഥിതിവിജ്ഞാനകോശം, കേരളസംസ്ഥാനസർവ്വ വിജ്ഞാനകോശം ഇൻസ്റ്റിറ്റ്യൂട്ട്, തിരുവനന്തപുരം, 2000.
- രഘുനന്ദൻ, വി.ആർ., (എഡി.), ഭൂമി പൊതുസ്വത്ത്, കേരളശാസ്ത്രസാഹിത്യപരിഷത്ത്, തൃശ്ശൂർ, 2020.
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- സിറിൽ, ഡി വി, ആഗോളതാപനവും കാലാവസ്ഥ വ്യതിയാനവും, ഡിസി ബുക്സ്, കോട്ടയം, 2013.
- സി രാജഗോപാലൻ, ഇടവഴിപ്പച്ചകൾ, ഗ്രീൻ ബുക്സ്, ISBN : 9788184233995.
- നാരായണൻ, കെ ആർ, കടൽ വിസ്മയങ്ങൾ, ഡിസി ബുക്സ്, കോട്ടയം, 2013.
- കെ രാമചന്ദ്രൻ കെ സഹദേവൻ, മാലിന്യസംസ്കരണം -  
ഖരമാലിന്യങ്ങൾ:പ്രശ്നങ്ങളും പരിഹാരങ്ങളും, കറന്റ് ബുക്സ്, തൃശ്ശൂർ
- Erach Bharucha, *Textbook of Environmental Studies for Undergraduate Courses*, Orient BlackSwan; Second edition, 2013.
- B. S. Chauhan, *Environmental Studies*,
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- Asthana, D.K. and Meera Asthana, *Environment Problems and Solutions*, 2007.
- Dury, G.H., *The Face of the Earth*, London: Allen & Unwin, 1986,
- <https://www.ugc.ac.in/oldpdf/modelcurriculum/env.pdf>
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**Course Procedure:** The course may be offered and managed on online platforms fully or partially. It may be managed centrally or regionally. The university portal [www.lms.ssus.ac.in](http://www.lms.ssus.ac.in) may be used for this. Simple reading materials, case study reports and action plans are to be collected and shared to the students. A question bank is to be prepared for the Examination.

**Assessment**

Internal assessment	50 Marks
End semester assessment	50 Marks

**Internal assessment**

Internal tests(minimum one)	10
Assignments (minimum one)	10
Field work (minimum one)	10
Field work Report (minimum one)	10
Presentation and participation in seminars/workshops	10

(A minimum participation and/or presentation of paper in one national seminar or in two regional seminars is necessary for obtaining this mark. Separate seminar may be organised for the participation/presentation of the students)

**End semester assessment**

Question pattern	Marks	No. of Questions	Total Marks
Objective type questions	1	50	50

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