



Shiv Chhatrapati Shikshan Sanstha's
Rajarshi Shahu Mahavidyalaya, Latur (Autonomous)

Class: UG-III

ENVIRONMENTAL STUDIES

Course Code: U-ENS-541

Duration: 30 Hrs

Learning Objectives:

1. To prepare students for understanding and addressing environmental issues from a problem-oriented, interdisciplinary perspective.

Course Outcomes:

At the end of the course learners will be able to:

1. Understand core concepts and methods from ecological and physical sciences and their application in environmental problem solving.
2. Explain importance of Renewable and non-renewable resources
3. Describe Structure and function of an ecosystem
4. Analyse the Biogeographical classification of India

Sr No	Contents	Hrs
1	Unit 1 : Multidisciplinary nature of environmental studies Definition, scope and importance Need for public awareness	2
2	Unit 2 : Natural Resources : Renewable and non-renewable resources: Natural resources and associated problems. a) Forest resources: Use and over-exploitation, deforestation, case studies. 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, case studies. d) Food resources: World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies. e) Energy resources: Growing energy needs, renewable and non renewable energy sources, use of alternate energy sources. Case studies.	7

	f) Land resources: Land as a resource, land degradation, man induced landslides, soil erosion and desertification.	
3	Unit 3: Ecosystems <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> a. Forest ecosystem b. Grassland ecosystem c. Desert ecosystem d. Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries) 	7
4	Unit 4: Biodiversity and its conservation <ul style="list-style-type: none"> • 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. 	9
5	Field work <ul style="list-style-type: none"> • Visit to a local area to document environmental assets river/forest/grassland/hill/mountain • Visit to a local polluted site-Urban/Rural/Industrial/Agricultural • Study of common plants, insects, birds. • Study of simple ecosystems-pond, river, hill slopes, etc. 	5

References:

- i. <https://www.ugc.gov.in/oldpdf/modelcurriculum/env.pdf>
- ii. A Text Book of Environmental Studies (As per UGC Syllabus), 2009, Dr. Pravin Meshram, Dr. Shanta Satyanarayan, Dr. Shashikant Sitre, Dr. Suresh Zade