THE GANDHIGRAM RURAL INSTITUTE- DEEMED TO BE UNIVERSITY

GANDHIGRAM-624 302

TEMPLATE FOR OBE ELEMENTS

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Designation & Department/Centre : Co-Ordinator, Centre for Futures Studies

Academic Programme offered (Foundation Course): **Environmental Studies**

OBE Elements for **Environmental Studies**

Programme Educational Objectives (PEO)

PEO 1: To impart the basic knowledge about the environment and its associated problems among students.

PEO 2: To develop an attitude of concern for environment and create harmony with nature among students.

PEO 3: To motivate students to acquire a set of values for conservation and improvement of our Environment.

PEO 4: To create awareness & importance of sustainable development without degrading the environmental resources

PROGRAMME OUTCOME (PO)

PO 1: Become knowledge in the subject of Environmental Studies and apply the principles of the same to the needs of the Employer/Institution/ Enterprise/Society.

PO 2: Gain Analytical skills in the field/area of Pollution and its control

PO 3: Understand and appreciate professional ethics, community living and National Building initiatives

PO 4: Gain a rigorous foundation in various scientific disciplines as they apply to environmental studies, such as evolutionary biology, hydrology, and human behavior.

PO 5: Appreciate the concepts and methods from ecological, biological and physical sciences and their application in solving environmental problem and Reflect critically about their roles and identities as a consumers and environmental actors in an interconnected world.

PROGRAMME SPECIFIC OUTCOME (PSO)

PSO 1: Apply the knowledge of Environmental Studies in the domain of Physical, Chemical, Biological and Social Sciences.

PSO 2: Solve the complex problems in the field of Wild life & Pollution with an understanding of the societal, legal and cultural impacts of the solution.

PSO 3: Demonstrate an ability to integrate with many disciplines and fields that intersect with environmental concerns.

PSO 4: Demonstrate an awareness, knowledge, and appreciation of the intrinsic values of ecological processes and communities.

PSO 5: Establish an integrative approach to environmental issues with a focus on sustainability.

Template for Course Syllabus

Course Code & Title	**18EVSU0002, ENVIRONMENTAL STUDIES**		
Class	**Under Graduate level**	**Semester**	**One**
Course Objectives	**The Course Aims** • To impart the basic knowledge about the environment and its associated problems among students. • To develop an attitude of concern for environment and create harmony with nature among students. • To motivate students to acquire a set of values for environmental conservation and for improvement. • To create awareness & importance of sustainable development without degrading the environmental resources.		

SYLLABUS

Unit	Content	No. of Hours
I	• Introduction to environment and natural resources (Definition, Scope and Importance). • Forest resources: Use and over- exploitation of forest resources and its impact on forest and tribal people. • Water resources: Use and over- exploitation of water and impact. • Land resources: land degradation and soil- erosion, desertification. • Food resources: Effect of modern agriculture, fertilizer- pesticide problems. • Energy resources: Growing energy needs renewable and non renewable energy resources –use of alternative energy sources.	5
II	**Ecosystem and biodiversity** • Concept of an ecosystem • Structure and function of an ecosystem • Energy flow in the ecosystem • Food chains, food webs and ecological pyramids • Types of ecosystem	

	• Biodiversity: Genetic, species and ecosystem diversity, India as a mega –diversity nation. • Threats to biodiversity: habitat loss, poaching of wild life, man – wildlife conflicts: • Endangered and endemic species of India. • Conservation of Biodiversity: *In-situ* and *Ex-situ* conservation of Biodiversity.	10
III	**Environmental pollution** Causes, effects and control measures of : • Air pollution • Water pollution • Soil pollution • Noise pollution and • Nuclear hazards • Solid waste management • Global environmental problems	8
IV	**Social issues and the environment** • Sustainable development • Rural urban problems related to environment • Water management and rain water harvesting • Environmental ethics: Issues and possible solutions • Environmental protection policy, Act and Legislation • Population and the environment • Environment and human health • Environment education at various levels • HIV/AIDS • Women and child welfare, gender issues, gender equity, institutions for gender studies and research.	15
V	**Disaster Management** • Disaster: Meaning and concepts, types, causes and management. • Effects of disaster on community, economy, environment • Disaster management cycle: early response, rehabilitation, reconstruction and preparedness • Vulnerability analysis and role of community in disaster mitigation • The disaster management Act, 2005-Disaster management authority: National state and district level. • Ill effects of fireworks	7

References	**Referrence Books:** 1. Asthana. D.K., Meera Asthana, 2006, A text book of Environmental Studies, S.Chand & Company Ltd., New Delhi. 2. Benny Joseph, 2005, Environmental Studies, Tata Mcgraw –Hill publishing company, New Delhi. 3. Erach Bharucha, 2005, A text book of Environmental Studies, UGC, University Press, New Delhi. 4. Palanithurai, G., 2009, Panchayats in Disaster: preparedness and Management, Concepts publishing company. 5. Thangamani and Shyamala, 2003, A text book of Environmental Studies, Pranav Syndicate, Publishing Division, Sivakasi. **WEBSITES:** 1.http://wwf.panda.org/knowledge_hub/teacher_resources/webfieldtrips/natural_resources/ 2. https://www.conserve-energy-future.com/what-is-biodiversity.php 3. http://pdf.wri.org/environmentalpollution_bw.pdf 4. https://ndma.gov.in/en/	
Course outcomes	On completion of the course , students should be able to do **CO 1:** Acquire knowledge about the natural environment as a system and understand how human enterprise affects that system **CO 2:**.Understand primary environmental problems and the science behind those problems and potential solutions. **CO 3:** Analyze environmental issues and learn how to use the skills in applied situations **CO 4:**. Be able to deal in complex wholes- to view the self and social situation in their full ecological, cultural and social context **CO 5:** Perceive the future of the society and environment as a range of alternate possibilities which will be determined by the policies and decisions of the present and understand the processes through which these policies and decisions are made	

Environmental Studies

CO/PO		PO					PSO				
		1	2	3	4	5	1	2	3	4	5
		Become knowledge in the subject of Environmental Studies and apply the principles of the same to the needs of the Employer/Institution/ Enterprise/Society.	Gain Analytical skills in the field/area of Pollution and its control	Understand and appreciate professional ethics, community living and National Building initiatives	Gain a rigorous foundation in various scientific disciplines as they apply to environmental studies, such as evolutionary biology, hydrology, and human behavior.	Appreciate the concepts and methods from ecological, biological and physical sciences and their application in solving environmental problem and Reflect critically about their roles and identities as a consumers and environmental actors in an interconnected world.	Apply the knowledge of environmental Studies in the domain of Physical, Chemical, Biological and Social Sciences	Solve the complex problems in the field of Wild life & Pollution with an Understanding of the societal, legal and cultural impacts of the solution.	Demonstrate an ability to integrate with many disciplines and fields that intersect with environmental concerns.	Demonstrate an awareness, knowledge, and appreciation of the intrinsic values of ecological processes and communities.	Establish an integrative approach to environmental issues with a focus on sustainability.
CO1	Acquire knowledge about the natural environment as a system and understand how human enterprise affects that system	3	1	2	1	3	2	3	1	1	3
CO2	Understand primary environmental problems and the science behind those problems and potential solutions.	1	3	1	1	3	2	2	1	1	3
CO3	Analyze environmental issues and learn how to use the skills in applied situations.	1	3	1	1	2	3	3	2	1	3
CO4	Be able to deal in complex wholes- to view the self and social situation in their full ecological, cultural and social context.	1	1	1	1	3	3	1	1	1	1
CO5	Perceive the future of the society and environment as a range of alternate possibilities which will be determined by the policies and decisions of the present and understand the processes through which these policies and decisions are made	1	1	3	1	1	1	1	1	1	1

Strongly Correlating(S) - 3 marks	**Moderately Correlating (M)- 2 marks**
Weakly Correlating (W) - 1 marks	**No Correlation(N) - 0 marks**