



**Course Title: Environmental Studies - I**

**Course Code: EVS103**

**Credit Units: 02**

L	T	P/S	SW/F W	TOTAL CREDIT UNITS
2	-	-	-	2

**Course Objectives:**

The goal of this course is to provide students with the scientific background needed to understand how the Earth works and how we, as human beings, fit into that. At the end of the course, it is expected that students will be able to identify and analyze environmental problems as well as the risks associated with these problems and understand what it is to be a steward in the environment, studying how to live their lives in a more sustainable manner.

**Pre-requisites:** Basic concepts of environmental study is essential. This course approaches each concept in a variety of methods including lecture, written assignments, class-wide debates and discussions, lab activities, and outdoor fieldwork. Students are exposed to each concept in a variety of different ways, allowing them to work a concept from a variety of angles.

**Student Learning Outcomes:**

**Apply** : Apply an awareness, knowledge, and appreciation of the intrinsic values of environmental study and its conservation. and demonstrate an integrative approach to environmental issues with a focus on sustainability.

**Develop** : Develop an ability to integrate the many disciplines and fields that intersect with environmental concerns.

**Implement** the various theoretical concepts learnt.

**Build** the critical thinking skills in relation to environmental conservation.

**Course Contents/Syllabus:**

	Weightage (%)
<b>Module I</b> : Multidisciplinary nature of environmental studies	<b>15</b>

<p><b>Descriptors/Topics</b></p> <p>Introduction, definition and importance of environmental studies, need for public awareness, sensitisation and participation</p> <p>.</p>	
<p><b>Module II : Natural Resources</b></p>	
<p><b>Descriptors/Topics</b></p> <ol style="list-style-type: none"> <li>1. Types of natural resources, natural resource conservation, Role of an individual in conservation of natural resources, Equitable use of resources for sustainable lifestyles.</li> <li>2. Land resources: Land as a resource, land degradation, man induced landslides, Land resources: soil erosion and desertification.</li> <li>3. Natural Resources: Forest resources: Use and over-exploitation, deforestation, case studies. Timber extraction, mining, dams and their effects on forests and tribal people.</li> <li>4. Natural Resources: Water resources: Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems.</li> <li>5. Natural Resources: Mineral resources: Use and exploitation, environmental effects of extracting and using mineral resources, case studies.</li> <li>6. Natural Resources: Food resources: World food problems, changes caused by agriculture and overgrazing, Food resources effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies.</li> <li>7. Natural Resources :Energy resources: Growing energy needs, Energy resources renewable and non-renewable energy sources, Energy resources use of alternate energy sources, case studies.</li> <li>8. Role of individual in conservation of natural resources</li> <li>9. Equitable use of resources for sustainable lifestyles.</li> </ol>	<p><b>35</b></p>
<p><b>Module III : Ecosystems</b></p>	
<p><b>Descriptors/Topics</b></p> <ol style="list-style-type: none"> <li>1. Concept of an ecosystem,</li> <li>2. Types of ecosystem,</li> </ol>	<p><b>25</b></p>

<p>3. Structure and function of an ecosystem, Producers, consumers and decomposers.</p> <p>4. Energy flow in the ecosystem, Food chains, food webs and ecological pyramids.</p> <p>5. Ecological succession.</p> <p>6. Introduction, types, characteristic features, structure and function of Forest ecosystem, Grassland ecosystem and Desert ecosystem, Aquatic ecosystems (ponds, streams, lakes, rivers, ocean estuaries)</p>	
<p><b>Module IV : Biodiversity</b></p>	
<p><b>Descriptors/Topics</b></p> <ol style="list-style-type: none"> <li>1. Introduction - Definition: genetic, species and ecosystem diversity</li> <li>2. Biogeographical classification of India</li> <li>3. Value of biodiversity: consumptive use, productive use, social, ethical aesthetic and option values</li> <li>4. Biodiversity at global, national and local levels, India as a mega-diversity nation</li> <li>5. Hot-spots of biodiversity,</li> <li>6. Threats to biodiversity: habitat loss, poaching of wildlife, man wildlife conflicts</li> <li>7. Endangered and endemic species of India</li> <li>8. Conservation of biodiversity: In-situ and Ex-situ conservation of biodiversity</li> <li>9. Biological Diversity Act, 2002</li> </ol>	<p><b>25</b></p>

**Pedagogy for Course Delivery:**

1. Subject will be taught on the basis of class room teaching in form of lectures, question – answer sessions and group discussions and role play covering different modules of the course.
2. The students were required to bring the text with them to every lecture class, among other reasons so that when working through problems in class they would get practice in finding the information (physical properties, conversion factors, graphical correlations, etc.) they would need to look up on the open-book tests to come.

**Assessment/ Examination Scheme:**

<b>Theory L/T (%)</b>	<b>Lab/Practical/Studio (%)</b>	<b>Total (%)</b>
<b>100</b>	<b>NIL</b>	<b>100</b>

**Theory Assessment (L&T):**

<b>Continuous Assessment/Internal Assessment</b>					<b>EE</b>
<b>Components</b>	<b>Mid Term (CT)</b>	<b>Att.</b>	<b>Assignment(HA)</b>	<b>Project</b>	
<b>Weightage (%)</b>	10	5	5	10	70

**Text & References:**

1. Khaushik & Khaushik, “Fundamentals of Environmental Studies”
2. Somvanshi & Dhupper “Fundamentals of Environmental Studies”
3. Gauba& Bisht “ Environmental Studies, Challenges & Solutions A quick Compendium
4. Asthana & Asthana “ A textbook of Environmental Studies”