



# UNIVERSITY OF CALCUTTA

## NotificationNo.CSR/17/2023

It is notified for information of all concerned that in terms of the provisions of Section 54 of the Calcutta University Act, 1979, (as amended), and, in exercise of his powers under 9(6) of the said Act, the Vice-Chancellor has, by an order dated 17.07.2023 approved the Syllabi of the under mentioned COMPULSORY CVAC Courses, to be studied in semester 1& 2 for semester wise Four-year (Honours & Honours with Research) /Three-year (Multidisciplinary) programme of U.G. courses of studies, as applicable under CCF,2022 . under this University, as laid down in the accompanying pamphlet.

SL.NO.	NAME OF SUBJECTS	TYPE OF COURSES
1.	Environmental Studies	Compulsory CVAC Course, to be taught in the 1 <sup>st</sup> and 2 <sup>nd</sup> semesters
2.	Constitutional Values	Compulsory CVAC Course, to be taught in the 1 <sup>st</sup> semester.

The above shall be effective from the academic session 2023-2024.

SENATE HOUSE

KOLKATA-700 073

The 20<sup>th</sup> July, 2023

Prof.(Dr.) Debasis Das

Registrar

**University of Calcutta**  
**Common Value Added Courses on Environmental Studies**  
**ENVS01: Fundamentals of Environment**  
**Semester -I**

**Total Marks 50 (Credit -2)**

[Marks obtained in this course will be taken to calculate SGPA & CGPA]

**Theory**

<b>Unit 1</b>	<b>Introduction to environmental studies</b>	<b>3 lectures</b>
	<ul style="list-style-type: none"> <li>• Multidisciplinary nature of environmental studies</li> <li>• Scope and importance</li> <li>• Concept of sustainability, sustainable development, and sustainability goals</li> <li>• Low carbon lifestyle: Mission LIFE</li> </ul>	
<b>Unit 2</b>	<b>Ecology and Ecosystems</b>	<b>7 lectures</b>
	<ul style="list-style-type: none"> <li>• Concept of ecology, ecosystem, and ecosystem services</li> <li>• Structure and function of ecosystem</li> <li>• Energy flow in an ecosystem</li> <li>• Ecological pyramid</li> <li>• Food chain and food web (Terrestrial and aquatic ecosystems)</li> <li>• Basic concept of population and community ecology</li> <li>• Ecological succession</li> </ul>	
<b>Unit 3</b>	<b>Natural Resources</b>	<b>6 lectures</b>
	<ul style="list-style-type: none"> <li>• Concept of renewable and non-renewable resources</li> <li>• Land resources and land use change: land degradation, soil erosion and desertification.</li> <li>• Forest resources: importance, Deforestation- causes, consequences, and remedial measures</li> <li>• Water: use and over-exploitation of surface and ground water, floods, droughts, conflicts over water (international &amp; inter-state).</li> <li>• Energy resources: Environmental impacts of energy generation, use of alternative and nonconventional energy sources, green energy.</li> <li>• Natural resource accounting</li> </ul>	
<b>Unit 4</b>	<b>Biodiversity and Conservation</b>	<b>7 lectures</b>
	<ul style="list-style-type: none"> <li>• Levels of biological diversity: genetic, species and ecosystem diversity</li> <li>• Biogeographic zones of India, Biodiversity hot spots, Endemism, India as a mega-diversity nation</li> <li>• Threats to biodiversity, IUCN threat categories</li> <li>• In-situ and Ex-situ conservation of biodiversity, Protected area network</li> <li>• Role of indigenous communities in biodiversity conservation, Peoples Biodiversity Register, Bioprospecting and Biopiracy</li> </ul>	
<b>Unit 5</b>	<b>Environmental Pollution</b>	<b>7 lectures</b>
	<ul style="list-style-type: none"> <li>• Environmental pollution: concepts and types,</li> <li>• Air, water, soil, noise and marine pollution- causes, effects and controls</li> <li>• Concept of hazardous waste and human health risks</li> <li>• Solid waste management: Control measures of municipal, biomedical and e-waste.</li> <li>• Climate change, global warming, ozone layer depletion, acid rain and their impacts on human communities and agriculture</li> </ul>	
<b>Total</b>		<b>30 lectures</b>

# University of Calcutta

## Common Value Added Courses on Environmental Studies

### ENVS 02: Environmental Education

#### Semester -II

Total Marks-50(Credit -2)

[Marks obtained in this course will be taken to calculate SGPA & CGPA]

<b>Unit 1</b>	<b>Environmental Education</b>	4 lectures .
	<ul style="list-style-type: none"><li>• Concept, definition, and significance of environmental education</li><li>• Genesis of environmental education, Tbilisi Declaration 1977</li><li>• Philosophy of environmental education</li><li>• Environmental awareness vis a vis environmental education</li></ul>	
<b>Unit 2</b>	<b>Rules and regulations of environment</b>	6 lectures
	<ul style="list-style-type: none"><li>• Necessity of rules and regulations, different types of rules and regulations, mistakes in implementing of environmental rules, problems in implementing environmental rules.</li></ul> <p>Environment Laws in India: Wildlife (Protection) Act; Forest (Conservation) Act; Water (Prevention and control of Pollution) Act; Air (Prevention &amp; Control of Pollution) Act; Environment Protection Act; Biodiversity Act.</p> <ul style="list-style-type: none"><li>• International agreements: Montreal Protocol, Kyoto protocol and climate negotiations; Convention on Biological Diversity (CBD).</li></ul>	
<b>Unit 3</b>	<b>Human Communities and the Environment</b>	6 lectures
	<ul style="list-style-type: none"><li>• Human population growth: Impacts on environment, human health, and welfare.</li><li>• Concept of Resettlement and rehabilitation.</li><li>• Environmental movements: Bishnois, Chipko, Silent valley, Big dam movements.</li><li>• Environmental ethics: Types, ecofeminism, role of cultures in environmental conservation.</li></ul>	
<b>Unit 4</b>	<b>Disaster Awareness</b>	8 lectures
	<ul style="list-style-type: none"><li>• Fundamentals of hazard, disaster, risk and vulnerability</li><li>• Disaster classification, Natural Disasters-floods, earthquake, cyclones, tsunami and landslides; Manmade Disaster.</li><li>• Case Studies: Minamata disaster, Bhopal gas disaster, Fukushima nuclear disaster, Kedarnathflood, Cyclone <i>Aila</i>, COVID-19</li><li>• Disaster management, Disaster warning systems</li></ul>	
<b>Unit 5</b>	<b>Role of environmental education in protecting environment</b>	6 lectures
	<ul style="list-style-type: none"><li>• Lifelong learning procedure, Pedagogy in environmental education, Formal and informal environmental education (Exhibition, role playing ability, quiz, debate, field trip, demonstration, project, poster presentation, seminar, eco-club)</li><li>• Role of NGOs and government institutions</li><li>• Role of information technology and mass media: Print, Electronic, and Social media</li></ul>	
Total		<b>30 lectures</b>

#### Suggested Reading:

Reference: Das, S., (2023) Environmental Education, Sanjib Prakasan, Kolkata

## **CVAC: Constitutional Values and Fundamental Duties**

### **Course Objectives:**

- To enrich students with knowledge and relevance of the Indian Constitution.
- To develop awareness about values of basic tenets and Duties.
- To inculcate a sense of Constitutionalism.

### **Learning Outcomes:**

- To understand the Constitution and its relevance.
- To appreciate the values and goals embedded in the Constitution.
- To recognise the importance of Fundamental Duties enshrined in the Constitution.

### **Module I**

1. The Constitution of India and Constitutionalism. Constitutional Values--- Justice, Liberty, Equality, Fraternity
2. Fundamental Rights; Rule of Law; Separation of Powers
3. Sovereignty, Socialism, Secularism, Democracy, Republic

### **Module II**

4. Fundamental Duties: emergence; value and significance.
5. Article 51A: enumerated Duties.
6. Legal status of Fundamental Duties. Limitations.

### **Select Readings:**

- D. D. Basu, et al., Introduction to the Constitution of India (latest edition)  
G. C. Hiregowder et al.: The Indian Constitution--- An Introduction.  
S.K. Chaube: The Making and Working of the Indian Constitution  
M. P. Singh, V.N. Shukla: Constitution of India.  
SudhirKrishnaswamy: Democracy and Constitutionalism in India
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