

**VIJAYANAGARA SRI KRISHNADEVARAYA UNIVERSITY, BALLARI**



**ENVIRONMENTAL STUDIES SYLLABUS**

**FOR THE UNDER GRADUATE COURSE  
B.A/B.Sc/B.Com/B.C.A/B.B.A/B.S.W COMMONPAPER (COMPULSORY)  
(CBCS)**

**With effect from Academic year 2022-23**

**VIJAYANAGARA SRI KRISHNADEVARAYA UNIVERSITY**  
Jnanasagara campus, Vinayakanagara, Cantonment, Ballari.-583105  
**Ability Enhancement Compulsory Course**

**SYLLABUS of ENVIRONMENTAL STUDIES (CBCS) for**  
**B.A/B.Sc/B.Com/B.C.A/B.B.A/B.S.W/BHM**  
**COMMON PAPER (COMPULSORY) EFFECTIVE FROM 2022-23**

**ENVIRONMENTAL STUDIES (CBCS) (AECC)**

**COURSE CODE: 21AECCE1**

**Semester: I/II**

Number of Theory/Credits: 3	Number of lecture hours: 42
<b>Internal Assessment: 40</b>	<b>End semester Examination: 60</b>

**Course Content of AECC – ENVIRONMENTAL STUDIES**

	<b>Environmental Studies</b>	<b>42 hours</b>
<b>Unit 1</b>	<p><b>Introduction to Environmental Studies:</b> Multidisciplinary nature of environmental studies. Scope and importance; Concept of sustainability and sustainable development. <b>Ecosystems:</b> What is an ecosystem? Structure and function of ecosystem; Energy flow in an ecosystem: food chains, food webs and ecological succession. Case studies of the following ecosystems: a) Forest ecosystem b) Grassland ecosystem c) Desert ecosystem Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries)</p>	<b>8hrs</b>
<b>Unit 2</b>	<p><b>Natural Resources: Renewable and Non-Renewable Resources:</b> Land resources and land-use change; Land degradation, soil erosion and desertification. Deforestation: Causes and impacts due to mining, dam building on environment, forests, biodiversity and tribal populations. Water: Use and over-exploitation of surface and ground water, floods, droughts, conflicts over water (International &amp; Inter-state). Energy resources: Renewable and non-renewable energy sources, use of alternate energy sources, growing energy needs, case studies.</p>	<b>8 hrs</b>
<b>Unit 3</b>	<p><b>Biodiversity and Conservation:</b> Levels of biological diversity: Genetic, species and ecosystem diversity; Biogeographic zones of India; Biodiversity patterns and global biodiversity hotspots. India as a mega-biodiversity nation; Endangered and endemic species of India. Threats to biodiversity: Habitat loss, poaching of wildlife, man-wildlife conflicts, biological invasions; Conservation of biodiversity: In-situ and Ex-situ conservation of biodiversity. Ecosystem and biodiversity services: Ecological, economic, social, ethical, aesthetic and Informational value.</p>	<b>9 hrs</b>
<b>Unit 4</b>	<p><b>Environmental Pollution:</b> Types, causes, effects and controls; Air, water, soil and noise pollution. Nuclear hazards and human health risks. Solid waste management, Control measures of urban and industrial waste. Pollution case studies. <b>Environmental Policies and Practices:</b> Climate change, global warming, ozone layer depletion, acid rain and impacts on human communities and agriculture. Environment Laws: Environment Protection Act; Air (Prevention &amp; Control of Pollution) Act; Water (Prevention and Control of Pollution) Act; Wildlife (Protection) Act; Forest Conservation Act. International agreements: Montreal and Kyoto protocols and Convention on Biological Diversity (CBD). Nature reserves, tribal populations and rights, and human wildlife conflicts in Indian context.</p>	<b>8hrs</b>

<b>Unit 5</b>	<b>Human Communities and the Environment</b> Human population growth: Impacts on environment, human health and welfare. Resettlement and rehabilitation of project affected persons; case studies. Disaster management: Floods, Earthquake, Cyclones and Landslides. Environmental movements: Chipko, Silent valley, Bishnois of Rajasthan. Environmentalethics:RoleofIndianandotherreligionsand cultures in environmental conservation. Environmental communication and public awareness, case studies (e.g., CNG vehicles in Delhi). Field work (2 hours) <ul style="list-style-type: none"> <li>• Visit to an area to document environmental assets: river/forest/flora/fauna</li> <li>• Visit to a local polluted site: urban/rural/Industrial/Agricultural</li> <li>• Study of common plants, insects, birds and basic principles of identification</li> <li>• Study of simple ecosystems-pond, river, delhi ridge, etc</li> </ul>	<b>9 hrs</b>
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**Reference:**

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2. Carson, R. (2002). *Silent Spring*. Houghton Mifflin Harcourt.
3. Climate Change: Science and Politics. (2021). *Centre Science and Environment*, New Delhi.
4. Gadgil, M., & Guha, R. (1993). *This Fissured Land: An Ecological History of India*. Univ. of California Press.
5. Gleeson, B. and Low, N. (eds.) (1999). *Global Ethics and Environment*, London, Routledge.
6. Groom, Martha J., Gary K. Meffe, and Carl Ronald Carroll. (2006). *Principles of Conservation Biology*. Sunderland: Sinauer Associates.
7. McCully, P. (1996). *Rivers no more: the environmental effects of dams* (pp. 29-64).
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9. Nandini, N., Sunitha N., & Sucharita Tandon. (2019). *A text book on Environmental Studies (AECC)*. Sapna Book House, Bengaluru.
10. Odum, E.P., Odum, H.T. & Andrews, J. (1971). *Fundamentals of Ecology*. Philadelphia: Saunders.
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13. Raven, P.H., Hassenzahl, D.M. & Berg, L.R. (2012). *Environment*. 8<sup>th</sup> Edition. John Wiley & Sons.
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16. Singh, J.S., Singh, S.P. and Gupta, S.R. (2014). *Ecology, Environmental Science and Conservation*. S. Chand Publishing, New Delhi.
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18. Wilson, E. O. (2006). *The Creation: An appeal to save life on Earth*. New York: Norton.
19. World Commission on Environment and Development. (1987). *Our Common Future*. Oxford University Press.