

Department of Geography
(Prof. Rajendra Singh (Rajju Bhaiya) University, Prayagraj)

(2024-2025 onwards)

COURSE STRUCTURE WITH CREDITS DISTRIBUTION

VAC Course: ENVIRONMENTAL STUDIES

Programme: Undergraduate		Year: 1	Semester: IST
Offered by : Department of Geography			
Course Code: S020102T		Course: ENVIRONMENTAL STUDIES	
Credit: 2		Value Added Course (Elective Course)	
Unit	Course Contents		
1	Multidisciplinary nature of environmental studies: Definition, scope and importance, Need for public awareness		
2	<p>Natural Resources : Renewable and non-renewable resources : Natural resources and associated problems.</p> <p>a) Forest resources : Use and over-exploitation, deforestation, case studies. Timber extraction, mining, dams and their effects on forest and tribal people.</p> <p>b) Water resources : Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems.</p> <p>c) Mineral resources : Use and exploitation, environmental effects of extracting and using mineral resources, case studies.</p> <p>d) Food resources : World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies.</p> <p>e) Energy resources : Growing energy needs, renewable and non renewable energy sources, use of alternate energy sources. Case studies.</p> <p>f) Land resources : Land as a resource, land degradation, man induced landslides, soil erosion and desertification.</p>		
3	<p>Ecosystems:</p> <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 :- Forest ecosystem, Grassland ecosystem, Desert ecosystem, Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries) 		
4	<p>Biodiversity and its conservation</p> <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 ● Hot spots of biodiversity. ● Threats to biodiversity : habitat loss, poaching of wildlife, man-wildlife conflicts. ● Endangered and endemic species of India ● Conservation of biodiversity : In-situ and Ex-situ conservation of biodiversity. 		
5	<p>Environmental Pollution: Definition</p> <ul style="list-style-type: none"> ● Cause, effects and control measures of :- Air pollution, Water pollution, Soil pollution, Marine pollution, Noise pollution, Thermal pollution Nuclear hazards ● Solid waste Management : Causes, effects and control measures of urban and industrial wastes. 		

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	<ul style="list-style-type: none"> ● Role of an individual in prevention of pollution. ● Pollution case studies. ● Disaster management : floods, earthquake, cyclone and landslides.
6	<p>Social Issues and the Environment</p> <ul style="list-style-type: none"> ● From Unsustainable to Sustainable development ● Urban problems related to energy ● Water conservation, rain water harvesting, watershed management ● Resettlement and rehabilitation of people; its problems and concerns. Case Studies ● Environmental ethics : Issues and possible solutions. ● Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust. Case Studies. ● Wasteland reclamation. ● Consumerism and waste products. ● Environment Protection Act. ● Air (Prevention and Control of Pollution) Act. ● Water (Prevention and control of Pollution) Act ● Wildlife Protection Act ● Forest Conservation Act
7	<p>Human Population and the Environment</p> <ul style="list-style-type: none"> ● Population growth, variation among nations. ● Population explosion – Family Welfare Program. ● Environment and human health. ● Human Rights. ● Value Education. ● HIV/AIDS. ● Women and Child Welfare.
8	<ul style="list-style-type: none"> ● Role of an individual in conservation of natural resources. ● Equitable use of resources for sustainable lifestyles. ● Role of Information Technology in Environment and human health.
<p>Suggested Readings:</p> <ol style="list-style-type: none"> 1 “Text book for Environmental Studies for Undergraduate Course” by Erach Bharucha, UGC New Delhi, 2004 2 Download link for Environmental Studies for Undergraduate Course https://www.ugc.gov.in/facultycorner/Model_Curriculum 	