BI5CRT23 -ENVIRONMENTAL STUDIES & HUMAN RIGHTS

CORE MODULE SYLLABUS FOR ENVIRONMENTAL STUDIES & HUMAN RIGHTS

FOR UNDER GRADUATE COURSES OF ALL BRANCHES

OF HIGHER EDUCATION

Vision

The importance of environmental science and environmental studies cannot be disputed. The need for sustainable development is a key to the future of mankind. Continuing problems of pollution, solid waste disposal, degradation of environment, issues like economic productivity and national security, Global warming, the depletion of ozone layer and loss of biodiversity have made everyone aware of environmental issues. The United Nations Conference on Environment and Development held in Rio de Janerio in 1992 and World Summit on Sustainable Development at Johannesburg in 2002 have drawn the attention of people around the globe to the deteriorating condition of our environment. It is clear that no citizen of the earth can afford to be ignorant of environmentissues..

India is rich in biodiversity which provides various resources for people. Only about 1.7 million living organisms have been described and named globally. Still many more remain to be identified and described. Attempts are made to conserve them in ex-situ and in-situ situations. Intellectual property rights (IPRs) have become important in a biodiversity-rich country like India to protect microbes, plants and animals that have useful genetic properties. Destruction of habitats, over-use of energy resource and environmental pollution have been found to be responsible for the loss of a large number of life-forms. It is feared that a large proportion of life on earth may get wiped out in the nearfuture.

In spite of the deteriorating status of the environment, study of environment have so far not received adequate attention in our academic programme. Recognizing this, the Hon'ble Supreme Court directed the UGC to introduce a basic course on environment at every level in college education. Accordingly, the matter was considered by UGC and it was decided that a six months compulsory core module course in environmental studies may be prepared and compulsorily implemented in all the University/Colleges of India.

The syllabus of environmental studies includes five modules including human rights. The first two modules are purely environmental studies according to the UGC directions. The second two modules are strictly related with the core subject and fifth module is for human rights.

Objectives

- Environmental Education encourages students to research, investigate how and why things happen, and make their own decisions about complex environmental issues by developing and enhancing critical and creative thinking skills. It helps to foster a new generation of informed consumers, workers, as well as policy or decisionmakers.
- Environmental Education helps students to understand how their decisions and actions affect the environment, builds knowledge and skills necessary to address complex environmental issues, as well as ways we can take action to keep our environment healthy and sustainable for the future. It encourages character building, and develop positive attitudes andvalues.

- To develop the sense of awareness among the students about the environment and its various problems and to help the students in realizing the inter-relationship between man and environment and helps to protect the nature and naturalresources.
- To help the students in acquiring the basic knowledge about environment and the social norms that provide unity with environmental characteristics and create positive attitude about theenvironment.

SYLLABUS

4credits **72 hours**

Module I

Unit 1 : Multidisciplinary nature of environmental studies (2 hours)

Definition, scopeandimportance

Need for publicawareness.

Unit 2 : Natural Resources :

Renewable and non-renewable resources : Natural resources and associated problems.

a) **Forest resources** : Use and over-exploitation, deforestation, case studies. Timber extraction, mining, dams and their effects on forest and tribalpeople.

b) **Water resources** : Use and over-utilization of surface and ground water,

floods, drought, conflicts over water, dams-benefits andproblems.

c) **Mineral resources** : Use and exploitation, environmental effects ofextracting

and using mineral resources, casestudies.

d) **Food resources** : World food problems, changes caused by agriculture and

overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water

logging, salinity, casestudies.

e) **Energy resources**: Growing energy needs, renewable and non renewable energysources, use of alternate energy sources, Casestudies.

f) **Land resources**: Land as a resource, land degradation, man induced landslides, soilerosion anddesertification

- Role of individual in conservation of naturalresources.
- Equitable use of resources for sustainablelifestyles. (**7 hours**)

Unit 3:Ecosystems

- Concept of anecosystem
- Structure and function of anecosystem
- Producers, consumers anddecomposers
- Energy flow in theecosystem
- Ecological succession
- Food chains, food webs and ecologicalpyramids.
- Introduction, types, characteristic features, structure and function of the given ecosystem:- Forest ecosystem (**6hours**)

Module II

Unit 1: Biodiversity and its conservation

- Introduction
- Biogeograhical classification ofIndia
- Value of biodiversity: consumptive use, productive use, social, ethical, aesthetic and option values.
- India as a mega-diversitynation
- Hot-sports ofbiodiversity
- Threats to biodiversity: habitat loss, poaching of wildlife, man-wildlifeconflicts
- Endangered and endemic speciesof India (7 **hours**)

Unit 2: Environmental Pollution

Definition

Causes, effects and control measures of: -

a. Airpollution
b. Water pollution
c. Soil pollution
d. Marinepollution
e. Noisepollution
f. Thermal pollution
g. Nuclearhazards

- Solid waste Management: Causes, effects and control measures of urban and industrial wastes.
- Role of an individual in prevention ofpollution
- Pollution casestudies
- Disaster management: floods, earthquake, cycloneandlandslides. (**8 hours**)

Unit3: Social Issues and theEnvironment

- Urban problems related toenergy
- Water conservation, rain water harvesting, watershedmanagement
- Resettlement and rehabilitation of people: its problems and concerns, Casestudies
- Environmental ethics: Issues and possiblesolutions

- Climate change, global warming, acid rain, ozone layer depletion , nuclear accidents and holocaust, Casestudies
- Consumerism and wasteproducts
- Environment Protection Act
- Air (Prevention and Control of Pollution)Act
- Water (Prevention and control of Pollution)Act
- Wildlife ProtectionAct
- Forest Conservation Act
- Issues involved in enforcement of environmentallegislation
- Publicawareness (**8 hours**)

Module – III

Bioethics

- Ethical theory and principles
- History of research ethics
- Contemporary issues in research ethics
- Balancing the benefits and harms of participation in research
- Ethical issues in study design
- Informed consent in research
- Institutional review boards
- Selection of research participants
- Ethical issues in vaccine research (**8 hours**)

Module -IV

Unit 1: Waste water management and sewage treatment.
Unit 2: Bioremediation and strategies for bioremediation.
Unit 3: Bioremediation of contaminated soils and wastelands - solid waste - sources and management (composting, vermiculture and methane production)
Unit 4: Environmental mutagenesis and toxicity testing. **(8 hours)**

Module - V

Unit 1 - Human Rights

An Introduction to Human Rights, Meaning, concept and development –History of Human Rights-Different Generations of Human Rights- Universality of Human Rights- Basic International Human Rights Documents - UDHR ,ICCPR,ICESCR.-Value dimensions of HumanRights

Unit 2 - Human Rights and United Nations

Human Rights co-ordination within UN system- Role of UN secretariat- The Economic and Social Council- The Commission Human Rights-The Security Council and Human rights- The Committee on the Elimination of Racial Discrimination- The Committee on the Elimination of Discrimination Against Women- the Committee on Economic, Social and Cultural Rights- The Human Rights Committee- Critical Appraisal of UN Human Rights Regime.

Unit 3- Human Rights National Perspective

Human Rights in Indian Constitution – Fundamental Rights- The Constitutional Context of Human Rights-directive Principles of State Policy and Human Rights- Human Rights of Women- children –minorities- Prisoners- Science Technology and Human Rights- National Human Rights Commission- State Human Rights Commission- Human Rights Awareness inEducation.

(18 Hours)

Reference

1. Basic documents in human rights-Ian Brownlie
2. Universal human rights in theory and practice –Jack Donelly
3. Future of human rights-UpendraBaxi
4. Understanding human rights an overview-O.P Dhiman
5. Reforming human rights-D.P Khanna
6. Human rights in India Social and Political Perspectives-Chiranjivi J Nirmal
7. Human rights in postcolonial India –Edited by Om Prakash Dwivedi And V.G Julie Rajan

Internal: **Fieldstudy**

- Visit to a local area to document environmental grassland/ hill/mountain
- Visit a local polluted site – Urban/Rural/Industrial/Agricultural Study of common plants, insects, birdsetc
- Study of simple ecosystem-pond, river, hill slopes,etc

(Field work Equal to 5 lecture hours)

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3. Cunningham, W.P.Cooper, T.H.Gorhani, E & Hepworth, M.T.2001 Environmental Encyclopedia, Jaico Publ. House. Mumbai. 1196p.(Ref)
4. Dc A.K.Enviornmental Chemistry, Wiley EasternLtd.(Ref)
5. Down to Earth, Centre for Science and Environment(Ref)
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10. Odum.E.P 1971. Fundamentals of Ecology. W.B. Saunders Co. USA 574p(Ref)
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14. Townsend C., Harper J, and Michael Begon, Essentials of Ecology,Blackwell Science(Ref)
15. Trivedi R.K., Handbook of Environmental Laws, Rules Guidelines, Compliances and Stadards, Vol I and II, Enviro Media(Ref)
16. Trivedi R. K. and P.K. Goel, Introduction to air pollution, Techno-Science Publication (Ref)
17. Wanger K.D., 1998 Environmental Management. W.B. Saunders Co. Philadelphia, USA 499p(Ref)
18. (M) Magazine (R) Reference (TB)Textbook

Human Rights

1. AmartyaSen, The Idea Justice, New Delhi: Penguin Books,2009.
2. Chatrath, K. J.S., (ed.), Education for Human Rights and Democracy (Shimla: Indian Institute of Advanced Studies,1998)
3. Law Relating to Human Rights, Asia LawHouse,2001.
4. Shireesh Pal Singh, Human Rights Education in 21stCentury, Discovery Publishing House Pvt.Ltd, NewDelhi,
5. S.K.Khanna, Children And The Human Rights, Common Wealth Publishers,1998.2011.

6. Sudhir Kapoor, Human Rights in 21st Century,Mangal Deep Publications, Jaipur,2001.
7. United Nations Development Programme, Human Development Report 2004: Cultural Liberty in Today's Diverse World, New Delhi: Oxford University Press, 2004.
8. P. Narayanan, Intellectual Property Laws, Eastern LawHouse.200
9. Meenu Paul, Intellectual Property Laws, Allahabad LawAgency.20
10. Intellectual Property Law containing Acts and Rules, Universal Law Publication Company.