



॥ अंतरी पेटवू ज्ञानज्योत ॥

**कवयित्री बहिणाबाई चौधरी उत्तर महाराष्ट्र विद्यापीठ, जळगाव**  
**Kavayitri Bahinabai Chaudhari North Maharashtra University, Jalgaon**

**अभ्यास मंडळ विभाग**

जा.क्र. : उमवि/२१/Environmental Studies/५२/२०१८

दिनांक:- २२/११/२०१८

प्रति,

क.व.चौ.उमविशी संलग्न सर्व महाविद्यालयांचे मा.प्राचार्य  
 व मान्यता प्राप्त परिसंस्थांचे मा. संचालक आणि  
 मा.विभाग प्रमुख विद्यापीठ शैक्षणिक प्रशाळा / विभाग यांना...

**विषय :- Environmental Studies या विषयाचे अभ्यासक्रमा संदर्भात.**

**महोदय / महोदया,**

उपरोक्त विषयांस अनुसरून आपणांस कळविण्यात येते की, मा.सर्वोच्च न्यायालयाचे निर्णयानुसार पर्यावरण संतुलन राखण्यासाठी प्रथम वर्षास प्रवेशित विद्यार्थ्यांसाठी सहा महिन्यांचा पर्यावरणशास्त्र विषयाचा अभ्यासक्रम जून, २००४ पासून सर्व विद्याशाखांमध्ये समाविष्ट करण्यात आलेला आहे.

शैक्षणिक वर्ष २०१८-१९ पासून प्रथम वर्ष कला विज्ञान व वाणिज्य वर्गांना Choice Based Credit System लागू करण्यात आलेली असल्याने Environmental Studies या विषयाचा अभ्यासक्रम Ability Enhancement Course अंतर्गत Choice Based Credit System प्रमाणे तयार करणेसाठी नियुक्त समितीच्या सभेत Environmental Studies विषयाच्या गुणांची विभागणी (Marks Pattern) देखील ६०:४० प्रमाणे करण्यात यावी, व गुणांकन (Marks Pattern) पुढील प्रमाणे करण्यात यावे, असे ठरले आहे.

लेखी परीक्षा (Theory)	६० गुण
अंतर्गत (Internal) परीक्षा फिल्ड वर्क / व्हायवा	४० गुण
एकूण	१०० गुण

अंतर्गत ४० गुणांची विभागणी पुढील प्रमाणे करण्यात यावी.

उपस्थिती (Attendance)	०५ गुण
वर्तणूक (Behaviour)	०५ गुण
व्हायवा (Viva-voce)	१० गुण
फिल्ड वर्क (Report of field Work)	२० गुण
	४० गुण

त्याअनुषंगाने Environmental Studies या विषयाचा अभ्यासक्रम विद्यापीठ अनुदान आयोगाने दिलेला असून तो जसाचे तसा लागू करण्यात आलेला असल्याने अभ्यासक्रमात बदल न करता अभ्यासक्रम तोच ठेवण्यात आला आहे. सदरचा अभ्यासक्रम उमविच्या संकेत स्थळावर अपलोड करण्यात आला आहे. तरी वरील आशय सर्व संबंधित प्राध्यापक व विद्यार्थी यांचे निदर्शनास आणून देवून पुढील योग्य ती कार्यवाही करून विद्यापीठास सहकार्य करावे, ही विनंती.

म.कळावे,

आपला विश्वासू,

  
 (ए.सी.मनोर्ष)

उपकुलसचिव

अभ्यास मंडळ विभाग



**Six Months Module Syllabus  
for  
Environmental Studies  
for  
Under Graduate Courses**



**UNIVERSITY GRANTS COMMISSION**  
BAHADURSHAH ZAFAR MARG  
NEW DELHI- 110 002

**2003**



CORE MODULE SYLLABUS FOR ENVIRONMENTAL STUDIES  
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, loss of forest, 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 Janeiro 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 environment issues. Environmental management has captured the attention of health care managers. Managing environmental hazards has become very important.

Human beings have been interested in ecology since the beginning of civilization. Even our ancient scriptures have emphasized about practices and values of environmental conservation. It is now even more critical than ever before for mankind as a whole to have a clear understanding of environmental concerns and to follow sustainable development practices.

India is rich in biodiversity which provides various resources for people. It is also basis for biotechnology.

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 near future.

In spite of the deteriorating status of the environment, study of environment have so far not received adequate attention in our academic programmes. 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 experts committee appointed by the UGC has looked into all the pertinent questions, issues and other relevant matters. This was followed by framing of the core module syllabus for environmental studies for undergraduate courses of all branches of Higher Education. We are deeply conscious that there are bound to be gaps between the ideal and real. Genuine endeavour is required to minimize the gaps by intellectual and material inputs. The success of this course will depend on the initiative and drive of the teachers and the receptive students.

## SYLLABUS

### **Unit 1 : Multidisciplinary nature of environmental studies**

Definition, scope and importance

(2 lectures)

Need for public awareness.



## 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 tribal people.
  - b) Water resources : Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems.
  - c) Mineral resources : Use and exploitation, environmental effects of extracting and using mineral resources, case studies.
  - d) Food resources : World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies.
  - e) Energy resources : Growing energy needs, renewable and non renewable energy sources, use of alternate energy sources. Case studies.
  - f) Land resources : Land as a resource, land degradation, man induced landslides, soil erosion and desertification.
- Role of an individual in conservation of natural resources.
  - Equitable use of resources for sustainable lifestyles.

(8 lectures)

## Unit 3 : Ecosystems

- 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 :-
  - a. Forest ecosystem
  - b. Grassland ecosystem
  - c. Desert ecosystem
  - d. Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries)

(6 lectures)

#### Unit 4 : Biodiversity and its conservation

- 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.

(8 lectures)

#### Unit 5 : Environmental Pollution

##### Definition

- Cause, effects and control measures of :-
  - a. Air pollution
  - b. Water pollution
  - c. Soil pollution
  - d. Marine pollution
  - e. Noise pollution
  - f. Thermal pollution
  - g. Nuclear hazards
- Solid waste Management : Causes, effects and control measures of urban and industrial wastes.
- Role of an individual in prevention of pollution.
- Pollution case studies.
- Disaster management : floods, earthquake, cyclone and landslides.

(8 lectures)

#### **Unit 6 : Social Issues and the Environment**

- 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
- Issues involved in enforcement of environmental legislation.
- Public awareness.

(7 lectures)

#### **Unit 7 : Human Population and the Environment**

- Population growth, variation among nations.
- Population explosion – Family Welfare Programme.



- Environment and human health.
- Human Rights.
- Value Education.
- HIV/AIDS.
- Women and Child Welfare.
- Role of Information Technology in Environment and human health.
- Case Studies.

(6 lectures)

#### **Unit 8 : Field work**

- Visit to a local area to document environmental assets-  
river/forest/grassland/hill/mountain
- Visit to a local polluted site-Urban/Rural/Industrial/Agricultural
- Study of common plants, insects, birds.
- Study of simple ecosystems-pond, river, hill slopes, etc. (Field work Equal to 5  
lecture hours)

**SIX MONTHS COMPULSORY CORE MODULE COURSE IN**  
**ENVIRONMENTAL STUDIES : FOR UNDERGRADUATES**

**Teaching Methodologies**

The core Module Syllabus for Environment Studies includes class room teaching and Field Work. The syllabus is divided into eight units covering 50 lectures. The first seven units will cover 45 lectures which are class room based to enhance knowledge skills and attitude to environment. Unit eight is based on field activities which will be covered in five lecture hours and would provide student first hand knowledge on various local environmental aspects. Field experience is one of the most effective learning tools for environmental concerns. This moves out of the scope of the text book mode of teaching into the realm of real learning in the field, where the teacher merely acts as a catalyst to interpret what the student observes or discovers in his/her own environment. Field studies are as essential as class work and form an irreplaceable synergistic tool in the entire learning process.

Course material provided by UGC for class room teaching and field activities be utilized.

The universities/colleges can also draw upon expertise of outside resource persons for teaching purpose.

Environmental Core Module shall be integrated into the teaching programmes of all undergraduate courses.

**Annual System :** The duration of the course will be 50 lectures. The exam will be conducted along with the Annual Examination.



**Semester System :** The Environment course of 50 lectures will be conducted in the second semester and the examination shall be conducted at the end of the second semester.

**Credit System :** The course will be awarded 4 credits.

**Exam Pattern :** In case of awarding the marks, the question paper should carry 100 marks. The structure of the question paper being :

Part-A, Short answer pattern	-	20 marks
Part-B, Essay type with inbuilt choice	-	40 marks
Part-C, Field Work	-	40 marks

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(M) Magazine

(R) Reference

(TB) Textbook

### Members of the Expert Committee on Environmental Studies

1. Prof. Erach Bharucha  
Director  
Bharati Vidyapeeth  
Institute of Environment Education &  
Research, Pune
2. Prof. C. Manoharachary  
Department of Botany  
Osmania University  
Hyderabad
3. Prof. S. Thayumanavan  
Director  
Centre for Environmental Studies  
Anna University, Chennai
4. Prof. D.C. Goswami  
Head, Deptt. Of Environment Science  
Gauhati University  
Gawahati-781 014
5. Shri R. Mehta  
Director EE Division  
Ministry of Environment & Forest  
Prayavaran Bhawan, CGO Complex  
Lodhi Road, New Delhi-110 003

### UGC OFFICIALS

6. Dr. N. K. Jain  
Joint Secretary  
UGC, New Delhi