

Syllabus Environment Science

(1)

**Guidelines for Implementation :**

- I. The theory question paper would carry 75 marks - 50 for objective type questions covering various aspects of the syllabus (50 questions, each of one mark) and 25 marks for one essay type question.

At the end of the course the student would be evaluated for 100 marks with distribution as below -

Field note book	-	25
Objective Questions	-	50
Essay type question	-	25
Passing marks	-	40

The result would be declared in grades -

Grade O : above 75; A : 61-75; B : 51-60; C : 40-50

- II A fee of Rs.100/- per student be charged and its utilization is as : Rs.20/- will be sent to the university and Rs.16/- to Principal to be utilized for infrastructure and administrative expenses pertinent to the course. However the final fee structure may be decided by the appropriate authority of the University.
- III The Principal would appoint Coordinator and Assistant Coordinator as per need to coordinate the teaching of the course, appoint contributory teachers, if necessary. At the end of the course, the college would conduct the examination. It will appoint paper setters and examiners. The final grades of candidates should be informed to the university. The expenditure for all the required manpower be met from the remaining amount of fees.
- IV Qualifications of a Teacher : A teacher in any subject possessing knowledge to teach the "Course on Environmental Studies" shall be eligible.
- V The course should be taught in second year and can be cleared in third year in case the student remains absent or fails to clear the course.
- VI The candidate will have to pass in the examination of this course in order to obtain degree certificate from the University.

OR batch 20,

In view of entire course the student may be assigned a project work Encompassing Community/Biodiversity Register (CBR) of any Gram-Panchyat as per format of National Biodiversity Authority of India under the guidance of a teacher. This CBR should be evaluated for 100 marks.

Observer's list  
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ccdn  
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Test  
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Project Part  
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- Jaya Sabiwale

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Bio-diversity of  
India  
site

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CURRICULUM FOR THE COURSE ENVIRONMENTAL STUDIES in a week

(At Undergraduate level, compulsory for all faculties)  
(50 Lectures Course, spread over 6 months, at the rate of 4 lectures/week)

Unit I : Introduction (2)\*

Definition, scope and importance; Need for public awareness - institutions in environment, people in environment.

Unit II : Natural Resources (2)

Renewable and non-renewable and associated problems; Role of an individual in conservation of natural resources; Equitable use of resources for sustainable lifestyles.

Unit III : Ecosystems (8)

Concept of an ecosystem - understanding ecosystems, ecosystem degradation, resource utilization.

Structure and functions of an ecosystem - producers, consumers and decomposers.

Energy flow in the ecosystem - water, carbon, oxygen, nitrogen and energy cycles, integration of cycles in nature.

Ecological succession; Food chains, food webs and ecological pyramids; Ecosystem types - characteristic features, structure and functions of forest, grassland, desert and aquatic ecosystems.

Unit IV : Bio-diversity (10)

Introduction - biodiversity at genetic, species and ecosystem levels

Bio-geographic classification of India

Value of biodiversity - Consumptive use value, productive use value, social, ethical, moral, aesthetic and optional value of biodiversity.

India as a mega-diversity nation; hotspots of biodiversity

Threats to bio-diversity - habitat loss, poaching of wildlife, man-wild life conflicts.

Common endangered and endemic plant and animal species of India.

In situ and Ex situ conservation of biodiversity

Unit V : Pollution (6)

Definition; Causes, effects and control measures of air, water, soil, marine, noise and thermal pollutions and nuclear hazards.

Solid waste management - Causes, effects and control measures of urban and industrial waste.

Role of individual and institutions in prevention of pollution.

Disaster management - Floods, earthquake, cyclone, landslides

## Unit VI : Social Issues and the Environment (12)

Unsustainable to sustainable development; Urban problems related to energy; Water conservation, rainwater harvesting, watershed management; Problems and concerns of resettlement and rehabilitation of affected people.

Environmental ethics - issues and possible solutions - Resource consumption patterns and need for equitable utilization; Equity disparity in Western and Eastern countries; Urban and rural equity issues; need for gender equity.

Preserving resources for future generations. The rights of animals; Ethical basis of environment education and awareness; Conservation ethics and traditional value systems of India.

Climate change, global warming, acid rain, Ozone layer depletion, nuclear accidents and holoqasts.

Wasteland Reclamation; Consumerism and Waste products.

Environment legislations -The Environment (protection) Act; The water (Prevention and Control of Pollution) Act; The Wildlife Protection Act; Forest Conservation Act; Issues involved in enforcement of environmental legislations - environment impact assessment (EIA), Citizens actions and action groups.

Public awareness - Using an environmental calendar of activities, self initiation.

## Unit VII : Human Population and the Environment (10)

*P.L.D* Global population growth, variation among nations. Population explosion; Family Welfare Programmes - methods of sterilization; Urbanization.

*Madh* Environment and human health - Climate and health; infectious diseases, water-related diseases, risk due to chemicals in food, Cancer and environment.

Human rights - Equity, Nutrition and health rights, Intellectual property rights (IPRS), Community Biodiversity registers (CBRs).

Value education - environmental values, valuing nature, valuing cultures, social justice, human heritage, equitable use of resources, common property resources, ecological degradation.

*mp* HIV/AIDS; Women and Child Welfare; Information technology in environment and human health.

\*(Number of lectures suggested)

Scope and depth of each unit taught would be as per UGC Publication "a Text Book of Environmental Studies for Undergraduate Courses by Erach Bharucha", published by Universities Press (India) Pvt.Ltd., Hyderabad - 500 029..

Students be exposed to atleast 4 local field visits to record observations on the Ecosystem Structure, Common Plant and Animal Species, Pollution sites, Desertified areas etc. The field notebook maintained by the student would be evaluated for 25 marks at the end of the course period.

Annexure - A Scheme of Examination/Gradation

1. The candidate will have to pass in the examination of this course in order to obtain degree certificate from the University as per the following scheme of examinations.-
- A) The theory question paper would carry 75 marks – 50 for objective type questions covering various aspects of the syllabus (50 questions, each of one mark) and 25 marks for one essay type question.)

At the end of the course the student would be evaluated for 100 marks with distribution as below –

Field note book	-	25
Objective Questions	-	50
Essay type question	-	25
Passing marks	-	40

The result would be declared in grades –

Grade O : above 75; A: 61-75; B:51-60; C: 40-50

OR

- ✓ B) In view of the above entire course the students in terms of batches of 20 students each may be assigned a project work encompassing Community People's Bio-diversity Register (PBR) of any Gram Panchayat as per the format of Bio-diversity Authority of India under the guidance of a teacher. The PBR should be evaluated for 100 marks.

ANNEXURE - B FEE STRUCTURE

A fee of Rs. 100/- per student be charged and its utilization is as : Rs. 20/- will be sent to the university and Rs.16/- to Principal to be utilized for infrastructure and administrative expenses pertinent to the course as approved by the University vide Notification No. N/Acad/1668 dated 16<sup>th</sup> July, 2007.