

UNIVERSITY OF MUMBAI  
No.UG/215 of 2010

**CIRCULAR :-**

A reference is invited to the Ordinances, Regulations, and syllabi relating to the B.Sc. degree course vide this office Circular No.UG/184 of 2008, dated 12<sup>th</sup> May, 2008 and the Principals of the affiliated Colleges in Science are hereby informed that the recommendation made by the Faculty of Science at its meeting held on 12<sup>th</sup> May, 2010 has been accepted by the Academic Council at its meeting held on 10<sup>th</sup> June, 2010 vide item No. 4.65 and that, in accordance therewith, the subject of foundation course II at S.Y.B.Sc. is revised as per Appendix and that the same has been brought into force with effect from the academic year 2010-2011.

MUMBAI-400 032  
27<sup>th</sup> July, 2010

L. R. MANE  
Offg. REGISTRAR

To,

The Principals of the affiliated Colleges in Science .

A.C./4.65/10/06/2010

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No. UG/215-A of 2010,

MUMBAI-400 032

27<sup>th</sup> July, 2010

Copy forwarded with compliments for information to:-

- 1) The Dean, Faculty of Science,
- 2) The Controller of Examinations,
- 3) The Co-Ordinator, University Computerization Centre,

  
(D. N. Jadhav)  
Ag. Deputy Registrar  
(UG/PG Section)

Copy to :-

The Director, Board of College and University Development, the Deputy Registrar (Eligibility and Migration Section), the Director of Students Welfare, the Executive Secretary to the to the Vice-Chancellor, the Pro-Vice-Chancellor, the Registrar and the Assistant Registrar, Administrative sub-center, Ratnagiri for information.

The Controller of Examinations (10 copies), the Finance and Accounts Officer (2 copies), Record Section (5 copies), Publications Section (5 copies), the Deputy Registrar, Enrolment, Eligibility and Migration Section (3 copies), the Deputy Registrar, Statistical Unit (2 copies), the Deputy Registrar (Accounts Section), Vidyanagari (2 copies), the Deputy Registrar, Affiliation Section (2 copies), the Professor-in-charge, Institute of Distance and Open Learning (IDOL), (10 copies) the Director, University Computer Center (IDE Building), Vidyanagari, (2 copies) the Deputy Registrar (Special Cell), the Deputy Registrar, (PRO) the Assistant Registrar, Academic Authorities Unit (2 copies) and the Assistant Registrar, (PRO) the Assistant Registrar, Academic Authorities Unit (2 copies). They are requested to treat this as action taken report.

10/06/2010

# UNIVERSITY OF MUMBAI



Revised Syllabus  
of  
S.Y.B.Sc.  
in the subject  
of  
Foundation Course - II

(With effect from the academic year 2010-2011)

## S.Y.B.Sc. Foundation Course – II

### Syllabus :

#### Section I

#### ■ Module I : Human Rights (15)

Human Rights Constituents: With special reference to the Fundamental Rights in India.

Mechanisms to protect and promote human rights in India : The NHRC State Human Rights Commission, National Commission for S.C.'s National Commission for S.T.'s, National Commission for Women.

The Role of Non-Governmental Organization( Such as Peoples' Union for Civil Liberties) and Movements (Such as Chipko', Namada Bachav Andolan) in protecting human rights.

#### ■ Module II : Effective Communication In Business (15)

1) Importance and benefits of effective communication – components of communication – the concept and problems of communication – Non Verbal Communication.

2) Seven C's of Effective Communication - The process of preparing Effective Business Messages – Effective Communication Skills – Negotiation Skills

#### ■ Module III : Professional Skills Development : (20)

1) Reading efficient processing of written discourse – Adjusting speed to the Purpose of Reading.

##### 2) Writing :

- a) Letter writing (Formal and Informal)
- b) Summary Writing.
- c) Report Writing.
- d) Essay Writing.
- e) Comprehension.

##### 3) Speaking and Listening :

- a) Participation in discussion, debates, seminars and interviews with ease and fluency.
- b) Observation of appropriate conventions of speech in social situation e.g. in greeting and in showing courtesy and politeness in conversation.
- c) Strategies for successful speaking and successful listening, for successful informative and persuasive speaking, for successful interpersonal communication, for successful business and group meetings.

## Section II

**Unit 1. : The Multidisciplinary nature of Environmental Studies** (2 lectures)

Definition scope and importance  
Need for public awareness.

**Unit 2. : Natural Resources:** (8 lectures)

**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.

**Unit 3: Ecosystems**

(6 Lectures)

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.

**Unit 4: Biodiversity and its conservation**

(8 Lectures)

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.

### **Unit 5: Environmental Pollution**

**(8 lectures)**

Definition, Causes 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, landslides.

### **Unit 6 :- Social issues and the Environment.**

**(7 lectures)**

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 solution, 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 legislation , Public awareness.

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

**(6 lectures)**

Pollution growth , various 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.

### **Unit 8 : Field Work**

**(5 lectures)**

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 lectures hours)

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

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

**Credit System:-** The core 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 patter	-	25 marks
Part – B,	Essay type with inbuilt choice	-	50 marks
Part – C,	Field Work	-	25 marks

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

#### **Teaching Methodologies**

The Core Module Syllabus for Environmental 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 students first hand knowledge on various local environmental aspects. Field experience is one of the most effective learning tools for environment 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 resource persons for teaching purposes.

Environmental Core Modules shall be integrated into the teaching programmes of all undergraduate course.

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## REFERENCES

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(M) Magazine

( R )Reference

(TB) Textbook