



**ST.PHILOMENA'S COLLEGE (AUTONOMOUS), MYSURU**

*(AFFILIATED TO UNIVERSITY OF MYSORE)*

*REACCREDITED BY NAAC WITH A GRADE*

**FOUNDATION COURSE**

**DEPARTMENT OF ENVIRONMENTAL STUDIES**

**CBCS SYLLABUS**

**Academic year 2018-19 onwards**

**St. Philomena's College (Autonomous), Mysore 570015**  
**Environmental Studies**  
**Syllabus for B.A/B.Sc/B.Com/ BBM/BSW/BCA/B.Voc /BBA - THM Courses**  
**Title - Environmental Studies**  
**Marks Theory – 70 + Internal Assessment -30 = 100**  
**16 weeks-3 Hrs/week = 48 Hrs.**

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**Note: Environmental Studies paper shall be taught during the first two years in any one of the semesters.**

**Subject Description:** This subject provides basic knowledge and understanding of how our world works from an environmental perspective. The study revolves around basic principles of ecosystem function; biodiversity and its conservation; human population growth; water resources and management; water, air and soil pollution; climate change; energy resources, and sustainability.

**Objectives:**

- Creating awareness about environmental problems among students.
- Imparting basic knowledge about the environment and its allied problems.
- Developing an attitude of concern for the environment.
- Striving to attain harmony with Nature.
- To use natural resources more efficiently.
- To know the behaviour of organism under natural conditions.
- To know the interrelationship between organisms in populations and communities.
- To make aware and educate people regarding environmental issues and problems at local, national and international levels.

**Learning Outcome:** The students studying the foundational course Environmental Studies will be able to recognize the physical, chemical, and biological components of the earth's systems and how they function. They will be able to critically examine all sides of environmental issues and apply understanding from science, law, history, and policy to create informed opinions about how to interact with the environment both personally and societally. They will also have a better understanding of probabilistic aspects of human interactions with the environment.

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<b>Unit 1- Introduction</b>	<b>3 Hrs</b>
1.1 Definition, scope and importance. Need for Public awareness.	
1.2 The multidisciplinary nature of environmental studies	
<b>Unit 2 -Biodiversity and its Conservation:</b>	<b>10 Hrs</b>
2.1 Introduction - Definition, genetic, species, ecosystem diversity.	
2.2 Biogeographical classification of India.	
2.3 Significance and Values of biodiversity: consumptive use, productive use, social, ethical, aesthetic and option value.	
2.4 India as a Mega - Biodiversity nation	

- 2.5 Hot - spots of Biodiversity.
- 2.6 Threats to biodiversity: habitat loss, poaching of wildlife, man wildlife conflicts.
- 2.7 Endangered and endemic species of India.
- 2.8 Conservation of biodiversity- In - situ and Ex - situ conservation

**Unit -3- Ecosystem**

**6 Hrs**

- 3.1 Concept of an ecosystem.
- 3.2 Structure and functions of an ecosystem.
- 3.3 Producers , consumers and decomposers.
- 3.4 Energy flow in an ecosystem.
- 3.5 Food chains, food web and ecological pyramids and their types.
- 3.6 Introduction , types , characteristic features, structure and functions of the following ecosystem
  - 3.6.1 Forest ecosystem
  - 3.6.2 Grassland ecosystem
  - 3.6.3 Desert ecosystem
  - 3.6.4 Aquatic ecosystem ( Ponds)

**Unit-4 - Natural Resources**

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- 4.1 Renewable and non renewable natural resources. Natural resources and associated problems
- 4.2 Forest Resources : use and over- exploitation , deforestation. Timber extraction ,mining, resort construction ,ecotourism , dams and their effects on forest and tribal people.
- 4.3 Water Resources: use and over- exploitation of surface and ground water, dams - benefits and problems.
- 4.4 Mineral Resources: use and exploitation, environmental effects of extracting and using mineral.
- 4.5 Food Resources: World food problems, changes caused by agricultural and overgrazing. Effects of modern agriculture, chemical fertilizer - pesticide problems, water logging, salinity, genetically modified plants and their impact.
- 4.6 Energy Resources: Renewable and non renewable energy resources, use of alternate energy sources,
- 4.7 Land Resources: Land as a resource, land degradation, (man induced landslides), soil erosion and desertification.
- 4.8 Impact of destroying and depleting natural resources.
- 4.9 Role of an individual in conservation of natural resources.

**Unit – 5- Environmental Pollution**

**11Hrs**

- 5.1 Definition, Pollutants and its types. Causes, effects and control measures of the following pollution: Air Pollution.- (Case study – Bhopal gas tragedy)
- 5.2 Soil Pollution
- 5.3 Water Pollution – ( Case study Ganga river ,Bellendur lake )
- 5.4 Marine Pollution - ( Coral reefs over exploitation )
- 5.5 Noise Pollution
- 5.6 Thermal Pollution
- 5.7 Nuclear hazards
- 5.8 Impact of disposable goods and modern lifestyle on environment.

- 5.9 Solid Waste management : (Urban and Industrial wastes )  
Role of an individual in prevention of pollution( 4 R's)

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

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- 6.1 Sustainable development
- 6.2 Sustainable lifestyle - Water conservation( Case study – Cauvery river), rain water harvesting, watershed management.
- 6.3 Impact of pollution on tribals and rural populations.
- 6.4 Resettlement and rehabilitation of people - its problems and concerns.
- 6.5 Climate changes :green house effect, ozone layer depletion, global warming. acid rain.
- 6.6 Wasteland reclamation.
- 6.7 Consumerism
- 6.8 Water ( Prevention and Control of Pollution ) Act, Wildlife Protection Act , Forest conservation Act.
- 6.9 Issues involved in enforcement of environmental legislation. Public awareness

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

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- 7.1 Population explosion – causes and effects
- 7.2 Environment and human health
- 7.3 HIV/AIDS , Vector borne diseases.
- 7.4 Family welfare Programme .and Women and child welfare.
- 7.5 Role of information technology in environmental awareness.

**Unit 8 : Field work/ Visits**

- 8.1 Field work - Visit to a local area to document environmental assets- river/forest/grassland/hill/mountain
- 8.2 Visit to a local polluted site-Urban/Rural/Industrial/Agricultural
- 8.3 Study of common plants, insects, birds.

**References**

- 1 Agarwal K.C.(2000) Biodiversity, Agrobios, Jadhpur
- 2. Agarwal K.C.(2001) Environmental Biology, Nidi Publications, Bikaner.
- 3. Biodiversity Hot spots for conservation priorities Nature 403:853, fifth report, New Delhi; centre for science and environment.
- 4. E.P.Odum (1971) Fundamental of Ecology, W.B.Saunders Co.USA.
- 5. S.Sinha, M Shukla and R.Shukla (2005) Text Book of Environmental Studies by AITBS, New Delhi.
- 6. Hand Book on Environmental laws by R.K.Trivedy.
- 7. Environmental Studies by Dr.Syed Fasihuddin Vidyanidhi Prakashana Gadag.
- 8. Ecology and Environment 10th revised edition by P.D.Sharma, Rastogi publications.
- 9. Text Book of Environmental Studies – student edition (2009), Saraswati purohit for Student Edition India.
- 10 Text Book of Environmental Studies by Dr.Rajendra.
- 11 FSI (1999) FRA 2000 input tables of India. Dehradun; India. Forest Survey of India, Ministry of Environment and forest.

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