

**JYOTI NIVAS COLLEGE AUTONOMOUS
SYLLABUS FOR 2018 BATCH AND THEREAFTER**

Programme: B.A. / B.Sc. / B.C.A. / B.Sc. / B.B.A. / B.Com. / B.Com. (BL) / B.Com. (TM) /

Int. B.Sc.-M.Sc./Int.B.Com.-M.Com.

Semester: I/II/III/IV

ENVIRONMENTAL SCIENCE

Course Code: 18EVS

No. of Hours: 45

COURSE OBJECTIVES

- The main aim of the course is to create an awareness among the students about the environment in which they live.
- To make the students aware of the environmental problems so that they can develop concern and help in its conservation.
- To understand and appreciate the inter-relationship existing between abiotic and biotic environment.
- To acquire knowledge of the emerging natural disasters.
- To be aware of and develop concern about the natural resources and their management.
- To understand the problems of over population and be aware of the various control measures.

UNIT I: THE MULTIDISCIPLINARY NATURE OF THE ENVIRONMENT 02 HRS

- Definition, scope and importance
- Need for public awareness

UNIT II: ECOSYSTEM 08 HRS

- CONCEPT OF ECOSYSTEM
- Structure and function of ecosystem
- Producers, consumers and decomposers
- Energy flow in an ecosystem (water, carbon and nitrogen cycles)
- Ecological succession
- Food chain and food web
- Types of ecosystems (mention only the different types)

UNIT III: BIODIVERSITY AND ITS CONSERVATION 08 HRS

- Definition, types and significance
- Biogeographical classification of India
- Hot spots of biodiversity
- Threats to biodiversity
- Endangered and endemic species of India
- Conservation of biodiversity (In-situ and Ex-situ)

UNIT IV: ENVIRONMENTAL PROBLEMS 08 HRS

- Causes, effects and control measures of – air pollution, noise pollution, thermal pollution and nuclear hazards
- Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust
- Disaster management: floods, earthquakes, cyclones, landslides, tsunami

UNIT V: SOCIAL ISSUES**06 HRS**

- Water conservation- rain water harvesting, water shed management
- Social forestry, chipiko and appiko movements, wild life management and Environment protection act

UNIT VI: NATURAL RESOURCES**03 HRS**

- Renewable and non renewable resources
- Role of an individual to conservation of natural resources
- Equitable use of resources for sustainable life styles

UNIT VII: HUMAN POPULATION AND ENVIRONMENT**05 HRS**

- Population explosion
- Family welfare programme
- HIV and AIDS
- Environment and human health
- Role of information technology in environment and human health

FIELD TRIPS**20 HRS**

1. Visit to a local are to document environmental assets-river/ forest/ grassland/ hill/ mountain
2. Visit to a local pollution site- urban/ rural/ industrial/ agricultural sites
3. Visit to sewage water treatment plant
4. Study of common plants, insects and birds
5. Study of simple ecosystems- pond, river, grassland, forest, hill slopes etc

ABSTRACT

Environmental science is a basic science, which has found its place in our day to day life. It enables us to understand the important concepts of biodiversity, its significance and conservation. It also educates people about the maintenance of environmental balance and its importance in sustaining life on this planet. It enables the students to realize the over exploitation of natural resources and its impact and also it makes them aware of the damage done to the environment and its protection.
