

**B.Sc. Biotechnology: Semester-II**  
**BST 204 Ecology & Environment Biotechnology**

<b>Teaching Scheme</b> Lectures: 3 hrs/Week Tutorials: 1 hr/Week  Credits: 4	<b>Examination Scheme</b> Class Test -12Marks Teachers Assessment - 6Marks Attendance – 12 Marks End Semester Exam – 70 marks
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**Prerequisite:** - General knowledge of Ecology and Environment Biotechnology

**Course Objectives:**

1. To give an overview of Environment and factors associated with it.
2. To give basic knowledge of Effects of human activities on environment-Agriculture, Housing, Industry, Mining and Transportation activities
3. To have an overview of Natural Resources- Water Resources- Availability and Quality aspects.
- 4 To explain about the Environmental Pollution, their types and their effects.
5. To explain the Current Environmental Issues of Importance
6. To explain the Human Health & Hygiene: Population and birth control, sexually transmitted diseases.

**Course Outcomes:**

After completing the course, students will be able to:

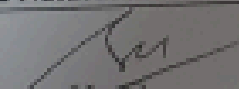
- CO1: Identify the factors governing the environment and their impact.
- CO2: Current Environmental Issues and solution to curb it.
- CO3: Initiatives taken by Government and Non-governmental Organizations (NGO)
- CO4: Judicious use of Conventional and Non-Conventional sources
- CO5: Legal aspects pertaining to protection of environment.


**Detailed Syllabus:**


**UNIT-1 Environment :Scope & Definition**

Definition, Scope & Importance, Need For Public Awareness- Environment definition, Eco system Balanced ecosystem, Human activities – Food, Shelter, Economic and social Security. Effects of human activities on environment-Agriculture, Housing, Industry, Mining and Transportation activities, Basics of Environmental Impact Assessment.

**UNIT-2 Natural Resources**

  
**Head**  
 Department of Biotechnology  
 Invertis University Bareilly (U.P.)

  
**Dean**  
 Faculty of Science  
 Invertis University Bareilly (U.P.)

  
**Registrar**  
 Invertis University,  
 Bareilly

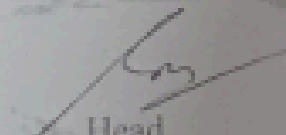
**Natural Resources- Water Resources-** Availability and Quality aspects, Water borne diseases, Water induced diseases, Fluoride problem in drinking water, Mineral Resources, Forest Wealth, Material cycles- Carbon, Nitrogen and Sulphur Cycles. **Energy** – Different types of energy, Electro-magnetic radiation, Conventional and Non-Conventional sources – Hydro Electric, Fossil Fuel, Nuclear, Solar, Biomass and Bio-


**UNIT-3 Environmental Pollution**


Environmental Pollution and their effects, Water pollution, Land pollution, Noise pollution, Public Health aspects, Air Pollution, Solid waste management, Current Environmental Issues of Importance: Population Growth, Climate Change and Global warming- Effects, Urbanization, Automobile pollution, Acid Rain, Ozone Layer depletion, Animal Husbandry, Environmental Protection- Role of Government, Legal aspects, Initiatives by Non-governmental Organizations (NGO), Environmental Education, Women Education

**Text and Reference Books**

1. Benny Joseph – "Environmental Studies" –Tata McGrawHill-2005
2. Dr. D.L. Manjunath, "Environmental Studies" –Pearson Education-2006.
3. R. Rajagopalan – "Environmental studies" –Oxford Publication – 2005.
4. M. Anji Reddy – "Text book of Environmental Science & Technology" –BS Publication.
5. P. Venugoplan Rao, "Principles of Environmental Science and Engineering" – Prentice Hall of India.

  
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