



# **BUNDELKHAND UNIVERSITY, JHANSI**

SYLLABUS FOR POSTGRADUATE COURSES (Minor -1)

(Course for Students other than Science Discipline)

## **POLLUTION: CAUSES AND MITIGATION**

**Total Credits: 4**

### **Unit I: Environmental Pollution**

Definition and major categories of environmental pollution, biodegradable or decomposable waste non – biodegradable waste, nature, fate and impact of pollutants, pollution in developed and developing nations.

### **Unit II: Air Pollution**

Sources of air pollution, chemical nature and transport of air pollutants, effects of air pollution on plants, animals and human health, air pollution status in major Indian cities, air pollution monitoring, smog, control of air pollution, case study: Bhopal gas tragedy

### **Unit III: Water Pollution**

Sources of water pollution, chemical nature and transport of water pollutants, effects of water pollutants on plants, animals and human health, water quality monitoring, Eutrophication, Minamata tragedy, GAP, YAP. Waste water treatment.

### **Unit IV: Noise Pollution and Radioactive Pollution**

Sources of noise, distinction between sound and noise, Impact of noise on health, noise monitoring. Radioactive Pollutants: sources and effects.

### **Unit V: Soil Pollution**

Sources of soil pollution, soil pollution by industrial units, soil pollution due to urban waste, soil pollution due to agricultural activities, soil pollution by radioactive materials, effects of soil pollution, control of soil pollution.

### **Suggested readings:**

1. **A Text Book of Environmental Chemistry & Pollution Control** by S. S. Dara and Mishra, S Chand & Company; 7th edition 2004.
2. **Environment: Problems And Solutions** by D. K. Asthana and Meera Asthana, S Chand & Company; Reprint Edn. 2006 edition
3. **Environmental Pollution: Causes, Effects & Controls** by K.C. Agrawal, Nidhi Publications, 2001.