MANGALORE UNIVERSITY

Department of Biosciences
MSc Environmental Science

ESS553 ENVIRONMENTAL POLLUTION AND MANAGEMENT 39hrs.

Course Outcomes:

CO1 demonstrate various types of pollution and their impact on different environmental components.
CO2 demonstrate various pollution mitigation measures.
CO3 demonstrate the various forms of pollution and its impact on different components of environment.
CO4 Understand know about biopollution.

UNIT I (13 Hours)

Water and Thermal pollution: Introduction, types, sources and effects of water pollution, Primary, Secondary, Tertiary and Advanced treatments for control of water pollution, Thermal pollution- sources, harmful effects, prevention and control.

UNIT II (13 Hours)

Air pollution: Sources, classification, properties of air pollutants, effects of air pollution on plants and human beings, Control methods for industrial air pollution-fugitive emission and source emission. Automobile pollution and mitigation measures. Soil pollution: Sources, effects and control measures. Noise pollution: Sources, effects and control methods. Measurement of noise pollution.

UNIT III (13 Hours)

Radiation pollution: Types of radiation - non ionizing and ionizing, alpha, beta and gamma radiations, cosmic rays and X-rays, sources of radioactive pollution, impact of radiation pollution on human health, preventive measures. Biopollution: Aeroallergens, pollen grains, fungi, biopollutants as biological components.

References:

1. Aswathanarayana, U. Soil Resources & the Environment, Oxford & IBH publishing, New Delhi.
2. Dubey, R.C. and MaheshwariW.K., Text book of Microbiology, S.Chand and Co., New Delhi.
3. Meera Asthana and Astana D.K. Environmental pollution and Toxicology, Alka Printers (1990)
4. Santra, S.C. Environmental Science, New Central Book Agency (Pvt.) Ltd., Kolkata.
5. Sharma, B.K. and Kaur, Environmental Chemistry, Goel Publishing House, Meerut (1995)
6. Sharma, P.D. Environmental Biology and Toxicology, Rastogi Publ. (1994)
7. Sharma, P.D. Ecology and Environment, Rostogi Publications, Meerut.