



**MANGALORE UNIVERSITY**  
**DEPARTMENT OF BIOSCIENCES**

**M.Sc. ENVIRONMENTAL SCIENCE**  
**ESS453 ENVIRONMENTAL CHEMISTRY**

**ESS455 ENVIRONMENTAL HEALTH MANAGEMENT**

**Course Outcomes:**

- CO1 Gain the knowledge of water borne diseases and prevention.
- CO2 Know the different air borne bio-allergens.
- CO3 Understand the diseases of man.
- CO4 Get the knowledge of food borne diseases.

**UNIT I (13 hours)**

Environmental health: Criteria, Chemical Safety; Effects of mercury, lead, chromium, cadmium, arsenic and nitrate on human health; Water borne diseases - Prevention and protection of community health from water borne diseases.

**UNIT II (13 hours)**

Air borne bio-allergens, seasonal changes, mode of dispersal, disease intensity and control. Effects of Physical Environment on Accidents and Crime; Diseases of Man: Effects of temperature, humidity, ionization, ultra violet radiation and acidity of air on skin, lungs, throat, nose, eye, nervous system.

**UNIT III (13 hours)**

Food borne diseases: Types, symptoms and prevention. Food safety. Environmental sanitation. Effects of weather and climate on human health, working efficiency, traffic and industrial accidents.

**References**

1. Wisner, B. and Adams, J., 2002. Environmental Health in emergencies and disasters – A Practical Guide, World Health Organization.
2. Paul R. Hunter, 1997. Waterborne disease: Epidemiology and ecology, Chichester John Wiley and Sons Ltd.
3. Eaton, A. D., Clesceri, L.S. & Greenberg, A.E. 1995. Standard Methods for the Examination of Water and Wastewater. APHA, Washington.
4. Moriarty, F., 1975. Pollutants and animals: A factual perspective. George Allan & Unwin Ltd., London.
5. Atlas, RM and Bartha R. Microbial Ecology. Benjamin-Cummings Sci. Press, USA.
6. Beven, K., 2002. Rainfall-Runoff Modeling: The Primer.
7. Beaglehole, R., Bonita, R. and Kjellstrom, T. 2006. Basic epidemiology
8. Environmental Health - Emergency Response Guide, A supplement to local emergency preparedness and response plans, Advanced Practice Centres.

