

**CORE COURSE VIII**  
**MICROBIAL INFECTION, DISEASE DIAGNOSIS AND CONTROL MEASURES**

**Unit 1:**

General introduction to marine microbiology and pathology - their importance in aquaculture.

**Unit 2:**

Study of marine microorganism: methods of collection of water, sediment and fish samples, isolation and culture of bacteria.

**Unit 3:**

Disease development: Abiotic and biotic factors important: Diseases of finfish vira, bacterial, fungal, parasitic (protozoan & metazoan) environmental and nutritional diseases.

**Unit 4:**

Larval health monitoring with special reference to shrimps. Modern techniques employed in disease diagnosis of cultivable organisms, with reference to microbiology, immunology and PCR).

**Unit 5:**

Control of diseases, environmental, physical, chemical and biological methods. Sanitary practices and prophylactic measures – disinfection procedures, water quality standards disease, common chemicals and antibiotics in use, immunization of cultivable organisms.

**References:**

1. Ferguson wood, E.J.,1967. Microbiology of Oceans and Estuaries. Elsevier publishing Co., Amsterdam.
2. Hawker, L.E. and A.h.Linton, 1971. Microorganisms; Function, form and Environment Edward Arnold ltd., London.
3. Sinderman, C.J.and C.V.Lightner, 1988. Disease Diagnosis and control in North American Marine Aquaculture. Elsevier, Amsterdam.
4. Rheinheimer, G., 1980. Aquatic Microbiology John Wiley & Sons.
5. Atlas, R.M.and Bartha, 1997. Microbial Ecology – Fundamentals and applications, Benjamin, Cummings science Publishers.
6. Prescott, L.M.Harley, J.P.and D.A.Klein, 1999. Microbiology, Mc Graw Hill Inc., pp 1962.