

Name of the Program: M.Sc. Marine Microbiology

Course Code: MMI-526

Title of the Course: Fishery Microbiology - Practical

Number of Credits: 01

Effective from AY : 2022 - 23

Prerequisites for the course:	Knowledge of fishes, and microbial diversity.	
Objective:	Provides hands-on experience in the fish anatomy and its associated microbial flora, including human pathogens.	
Content:	<ol style="list-style-type: none">1. Sampling techniques for microbiological investigation of moribund fish. (10 hrs, refs. 1 -3)2. Methods for examination and analyzing fish for health certification/diagnosis of disease condition, techniques for sample collection and processing for bacteriological agents. (10 hrs, refs. 1 -3)3. Isolation and identification of various human bacterial pathogens from fish samples (<i>Enterobacteriaceae</i> and <i>Vibrio</i>). (10 hrs, refs. 1 -3)	30 hrs
Pedagogy:	Experiments in the laboratory.	
References/ Readings:	<ol style="list-style-type: none">1. Woo P. & Bruno D. (2011). Fish Diseases and Disorders, Vol 3: Viral, Bacterial and Fungal Infections (2nd edn) CABI Publishers. United Kingdom.2. Noga E. C. (2010). Fish Disease: Diagnosis and Treatment (2nd edn). Wiley-Blackwell Publishers. New Jersey.3. Leatherland J. F. & Wook P. K. T. (2006) Fish Diseases and Disorders (2nd edn) CABI Publishers. United Kingdom	
Course Outcomes:	<ol style="list-style-type: none">1. Apply the tools and techniques of microbiology for isolation of fish microbiota.2. Assess the microbiological quality of fishes in terms of associated disease or as carrier for human pathogens.3. Analyze the symptoms and colony characteristics of isolates for the prediction of disease type.4. Hypothesize the disease occurrence in local fish catch.	