

COLLEGE OF FISHERIES, KISHANGANJ

BIHAR ANIMAL SCIENCES UNIVERSITY, PATNA

Lecture Plan

Course code: AAHM-221

Course Title: Finfish and Shellfish Diseases and Treatment

Credit hrs: 3 (2+1)

Program: B.F.Sc.

Assigned Teacher: Mr. Pankaj Kumar

Theory	
Topics	No. of Classes
1. General characteristics, life cycle, diagnosis of pathogens.	4
2. Prevention and treatment of parasitic, bacterial, fungal and viral diseases of finfish and shellfish.	2
3. OIE listed diseases.	1
4. Disease surveillance and reporting.	1
5. Quarantine and health certification in aquaculture	1
6. Health management strategies in Aquaculture: Bioremediators	1
7. Biocontrol agents, Probiotics, Immunomodulators	2
8. Concepts of vaccination. Shrimp toilet	2
9. Management measures for the host. Specific pathogen-free (SPF), Specific pathogen-resistant (SPR) and Specific pathogen-tolerant (SPT).	2
10. Developing management practices and biosecurity principles	1
11. Health maintenance, Better management practices (BMP), Good aquaculture practices (GAP)	2
12. Hazard analysis and Critical control point (HACCP) and Biosecurity principles in aquaculture.	2
13. Disease control through environmental management	1
14. Importance of Biofilm and Bio-floc	2
15. Periphyton in aquatic health management	1
16. Zoonotic diseases	2
17. Principles of disease diagnosis: Conventional, molecular and antibody-based diagnostic methods.	2
18. Rapid diagnostic methods	2
Total Number of classes	31
Practical	
1. General procedure for disease diagnosis	2
2. Methods of fish and shell-fish sampling for disease diagnosis.	1
3. Taxonomy, lifecycle and identification of fish and shell-fish parasites	2
4. Sampling, preparation of media and culture of pathogenic bacteria.	2
5. Techniques for bacterial classification	1

6. Techniques in disease diagnosis: Microbiological,	2
7. Haematological, histopathological, immunological, molecular techniques and biochemical tests.	3
8. Agglutination test and Challenge tests	2
9. Purification of virus	1
10. Stress-related study of fish and shell-fish	2
11. Prevention and treatment of parasitic, bacterial, fungal and viral diseases of finfish and shell-fish.	2
Total Number of classes	20



Course Instructor
Mr. Pankaj Kumar