

COLLEGE OF FISHERIES, KISHANGANJ
BIHAR ANIMAL SCIENCES UNIVERSITY, PATNA

Lecture Plan

Course code: AAH- 502

Course Title: Bacterial and Fungal Diseases of Finfish and Shellfish

Credit hrs: 3 (2+1)

Batch: M.F.Sc. 1st Yr 1st Sem

Assigned Teachers: Dr Sudeshna Sarker

Theory	No. of classes
1. Introduction to microbial infection	1
2. Pathogenesis, Virulence Mechanisms, Epidemiology, Prophylaxis, Therapeutic measures.	1
3. Bacterial diseases of finfish: Aetiology, Epidemiology, Pathogenicity, Virulence, Prophylaxis, Treatment and control measures of bacterial diseases of finfish with emphasis on: furunculosis, aeromoniasis, columnaris disease.	3
4. Bacterial kidney disease	1
5. Bacterial gill disease	1
6. Vibriosis	1
7. Mycobacteriosis	1
8. Edwardsiellosis	1
9. Flavobacteriosis, Francisellosis,	1
10. Enteric red mouth disease, Pasteurellosis	1
11. Piscirickettsiosis, Streptococcosis, Lactococcosis	1
12. <i>Pseudomonas septicaemia</i> , <i>Chryseobacteriosis</i>	2
13. Clostridial disease, <i>Aerococcus viridans</i> infection.	1
14. Bacterial diseases of shellfish: Aetiology, Epidemiology, Pathogenicity, Virulence, Prophylaxis, Treatment and control measures of bacterial diseases of shellfish with emphasis on: Vibriosis, Acute Hepatopancreatic Necrosis Disease (AHPND)	3
15. Hepatobacter penaei infection or Necrotizing Hepatopancreatitis (NHP)	1
16. Rickettsial diseases, Mycobacteriosis	2
17. Fungal diseases of finfish: Aphanomycosis, Epizootic Ulcerative Syndrome (EUS) in fish- Aetiology, Epidemiology, Pathogenesis diagnosis and management	2
18. Cotton wool disease, Branchiomycosis, Aspergillosis	2
19. Fungal diseases of shellfish: <i>Lagenidium spp.</i> , <i>Sirolopidium spp.</i> , <i>Haliphthoros spp.</i> , <i>Fusarium spp.</i> , <i>Aphanomyces astaci</i> infection.	3
20. Use and abuse of antibiotics in aquaculture	1
21. Antibiotic resistance	1
22. Multidrug resistance	1
23. Antimicrobial resistance: Molecular mechanisms	1
Total No. of Classes	33

Practical	No. of classes
1) Sampling techniques	1
2) Culture techniques	1
3) Case study I	1
4) Case study II	1
5) Case study III	2
6) Case study IV	1
7) Examination of moribund fish for bacterial diseases	1
8) Isolation and identification of bacterial pathogens	2
9) Serological diagnostic techniques	1
10) Molecular diagnostic techniques	1
11) Antibiotic sensitivity assay	1
12) Identification of virulence factors	1
13) Isolation, culture and identification of fungal pathogens	1
14) Maintenance of microbial cultures	1
15) Preservation of microbial cultures	1
Total No. of Classes	17

Course Instructor