

Diseases of Aquatic Organisms

Spring Quarter 2014

5-credits

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Workspace: <https://catalysttools.washington.edu/workspace/fish404/1315/>
(UWNetID is required)

Disability

Accommodations: If you would like to request academic accommodations due to a disability, please contact Disabled Student Services, 448 Schmitz (206-543-8924 (V/TTY). If you have a letter from Disabled Student Services indicating you have a disability that requires academic accommodations, please present the letter to the instructor so that we can discuss the accommodations you might need for the class.
http://fish.washington.edu/classes/integrity_disability.html

Academic Integrity

Plagiarism, cheating, and other misconduct are serious violations of your contract as a student. We expect that you will know and follow the University's policies on cheating and plagiarism. Any suspected cases of academic misconduct will be handled according to University regulations. More information, including definitions and examples of Academic Misconduct, can be found at: <http://depts.washington.edu/grading/issue1/honesty.htm>

Office hrs: By appointment

Lecture: T/Th 9:00-10:20am in FSH Rm 107

Laboratory: Th 2:30-4:50pm in FTR Rm 113

Recommended: 10 credits of biological science

Text: Required readings are located on the course workspace.

Learning objectives:

To develop skills and acquire knowledge to be able to understand animal health, the relationship between host, pathogen and the environment, disease management and ecological impacts of disease in aquatic systems. Specifically, this course will help you to learn how to diagnose diseases of shellfish and finfish as well as introduce students to diseases of marine mammals. Students will learn both traditional and new molecular approaches to disease diagnosis; treatment and/or management options for diseases will also be explored.

Skill objectives:

- Speaking
- Writing
- Critical thinking and problem solving
- Collaborating with other students
- Gathering, reading, and reporting on current events related to aquatic animal health
- Participation in discussions
- Interaction with aquatic pathology professionals

Evaluation system:

	<u>% of course grade*</u>
CLASS PARTICIPATION	5
Exam 1	20
Exam 2	20
Lab session	30
2% participation	
3% notebook	
20% lab reports	
5% lab presentation	
Final exam	25
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TOTAL	100

*subject to change

Exams:

Approximately 80% of the material on the exams will be from information presented in lecture, and approximately 20% will be from the assigned reading. Study questions will be distributed approximately one week prior to the exams. Class time and/or a special review session will be scheduled for discussion and to answer questions.

The two exams will consist of:

- 3-4 case studies in which you will be presented with a situation or dilemma. Your charge will be to provide the best solution and to justify your answer.
- Short answer (problems, definitions, compare-and-contrast, etc.) and matching.

The final exam will consist of a detailed case study to be presented in scientific paper format or a comprehensive exam (to be determined). Tentative final exam is scheduled for Wednesday, June 11, 10:30-12:20 in FSH 107.

Lab session: Thursday 2:30-4:50 pm

Lab notebooks are required and will be periodically examined. An example lab notebook will be available during the first lab period.

Case study lab reports are required (n=2). These will entail a series of reports written as short scientific papers regarding each lab case study. All lab reports will be structured with the following: Title, Author(s), Introduction, Methods, Results, Discussion, and References. Each report requires at least four cited references from peer reviewed journal papers. Peer-reviewed journals include titles such as: Journal of Fish Diseases, Diseases of Aquatic Organisms, Aquaculture. Book chapters, web sites, technical memoranda and magazine articles (except Nature and Science) are **NOT** considered peer-reviewed articles. If you are unsure, please ask as we are happy to help.

Students must also prepare and deliver an oral presentation based on a particular disease topic. All presentations will be given during the last lab period (week 10).

Late policy: Points will be deducted from all assignments turned in late. Scores will be reduced 5% for each day late (including weekend days).

Reading assignments: All readings are posted on the class workspace. Additional readings may be added periodically to complement the lecture series.

Course Syllabus

Week/Day		Date	Lecturer	Topic	Laboratory section (Thurs)
Week 1	T (1)	Apr 1	Friedman	Course overview; Introduction: Infectious diseases	<i>Note: please refer to lab syllabus for specific laboratory information</i> Safety Intro & Histology
	Th (2)	Apr 3	Friedman	Emerging diseases and anthropogenic influences and begin diagnostic methods	
Week 2	T (3)	Apr 8	Friedman and Burge	Traditional and Molecular techniques in disease diagnosis and Sea star case study	Case study 1
	Th (4)	Apr 10	Friedman	Immunology of marine invertebrates and Genetic Basis of Disease Resistance	
Week 3	T (5)	Apr 15	Friedman	Water quality	Case study 1
	Th (6)	Apr 17	Friedman	Coral Diseases (and possibly ecology of complex life histories)	
Week 4	T (7)	Apr 22	Friedman	EXAM 1	Case study 1
	Th (8)	Apr 24	Friedman	Normal anatomy and Bacterial pathogens of molluscs	
Week 5	T (9)	Apr 29	Friedman	Viral diseases of molluscs and begin protistan diseases	Case study 1
	Th (10)	May 1	Friedman	Protistan pathogens of molluscs	

Week 6	T (11)	May 6	Friedman	Fungal and Metazoan parasites of molluscs or case study 2 terminated	Case study 2
	Th (12)	May 8	Friedman	Crustacean normal anatomy; Bacterial and begin viral	
Week 7	T (13)	May 13	Friedman	Viral diseases of crustaceans 1	Case Study 2
	Th (14)	May 15	Friedman & Crosson	Viral diseases of crustaceans 2 and protistan parasites of crustaceans	
Week 8	T (15)	May 20	Purcell	Fish and mammalian immunology and normal anatomy	EXAM 2
	Th (16)	May 22	Kurath	Viral diseases of fish	
Week 9	T (17)	May 27	Friedman	Fungal/Protistan diseases of fish	Marrowstone Island Field trip
	Th (18)	May 29	Friedman	Bacterial diseases and Use of therapeutants in aquaculture	
Week 10	T (19)	June 3	Winton	Influences of diseases on populations	Oral Presentations
	Th (20)	June 5	Friedman	Marine mammal diseases and review	