



University of Sadat City
Faculty of Veterinary Medicine
Dept. of Aquatic Animal Medicine and Hygiene
(2014-2015)



Aquatic Animal Microbial Diseases (811M)

MVSc COURSE SPECIFICATION

A. BASIC INFORMATION

University:	Sadat City
Faculty:	Veterinary Medicine
Program on which the course is given:	Master in Veterinary Medical Sciences (Aquatic Animal Medicine and Hygiene)
Department offering the Course:	Aquatic Animal Medicine and Hygiene
Course code:	811M
Course title:	Aquatic Animal Microbial Diseases
Lecture (hr/week):	3
Practical (hr/week):	3
Course coordinator:	Dr. Mouhammed Khallaf

B. PROFESSIONAL INFORMATION

1) Overall aims of course

Upon successful completion of the course, the student will be able to:

-)] Diagnose INFECTIOUS diseases of fish and other aquatic animals.
-)] Treat and control aquatic microbial diseases.

2) Intended learning outcomes of course (ILOs)

a) KNOWLEDGE AND UNDERSTANDING

By the end of this course, the graduate should be able to:

- a.1. Describe the basic terminology in microbial aquatic diseases.
- a.2. Define the basics of etiology and pathogenesis of aquatic microbial diseases.
- a.3. Differentiate the basic methods of diagnosis and treatment of aquatic microbial diseases
- a.4. Discuss the prevention and control measures of infectious diseases of fish and other aquatic animals.

b) INTELLECTUAL SKILLS

By the end of this course, the student should be able to:

- b.1. Correlate the results of laboratory tests with clinical signs and PM lesions to reach correct diagnosis.
- b.2. Differentiate aquatic microbial diseases from non-infectious diseases.
- b.3. Investigate the suitable measures to control and prevent aquatic microbial diseases.
- b.4. Detect the quality of fish intended for human consumption.

c) PROFESSIONAL AND PRACTICAL SKILLS

By the end of this course, the student should be able to:

- c.1. Determine case history and information about the morbidity and mortality in aquatic animals.
- c.2. Prepare, blood and tissue sampling, labeling and preservation of samples.
- c.3. Investigate post mortem examination of dead and diseased fish.
- c.4. Process the necessary laboratory bacteriological, viral and mycotic investigations to aid diagnosis of the microbial diseases.
- c.5. Calculate drug doses accurately on a pond basis according to fish size, intensity and severity of disease.

d) GENERAL AND TRANSFERABLE SKILL

By the end of this course, the student should be able to:

- d.1. Plan effectively as part of a team.
- d.2. Create different resources for self-learning such as libraries, scientific periodicals, internet and various scientific associations.
- d.3. Join effectively.
- d.4. Manage time perfectly.

3) Topics and contents

Topic	No. of hours		
	Lectures	Practical	Total
Introduction and basic terminology	6	0	6
Viral diseases of fish	12	9	21
Bacterial diseases of fish	12	12	24
Mycotic diseases of fish	12	12	24

Diagnosis of microbial diseases of fish	9	12	21
Clinical treatment of microbial diseases of fish	12	9	21
Vaccination and clinical immunology of fish	6	9	15
Microbial diseases of edible crustacea	6	9	15
Microbial diseases of edible mollusca	6	9	15
Microbial diseases of echinodermata	6	6	12
Microbial diseases of amphibia	6	6	12
Microbial diseases of aquatic reptiles	9	6	15
Microbial diseases of aquatic mammals	9	6	15
Diagnosis of microbial infections in aquatic animals	12	9	21
Treatment and control of microbial infections in aquatic animals	9	18	27
Total	132	132	264

4) Teaching and learning methods

- 4.1. Lectures.
- 4.2. Practical.
- 4.3. Self-learning activities.

5) Student assessment

a. METHODS:

1- Written examination	For assessment of knowledge, back calling and Intellectual skills
2- Practical examination	For assessment of practical and professional skill.
3- Oral examination	For assessment of knowledge and Intellectual skills
4- Student activities	For assessment of knowledge and general and transferable skills

b. MATRIX ALIGNMENT OF THE MEASURED ILOS/ ASSESSMENTS METHODS:

	K.U (a)	I.S (b)	P.P.S (c)	G.S (d)
Written exam	1,2,3,4	1,2,3		
Practical exam		2	1,2,3,4,5	
Oral exam	2,4	4		
Student activities				1-4

c. WEIGHT OF ASSESSMENTS:

Assessment	Allocated Mark	Evidence
Final written exam	50%	Marked and signed written paper
Practical exam	20%	Marked and signed practical exam paper
Oral exam	20%	Signed list of oral exam marks
Student assignments	10%	Representative samples of presented materials

6) List of references

6.1. Essential books

-] **Fish Diseases and Disorders, Volume 3: Viral, Bacterial and Fungal Infections.** Patrick T. K. Woo, David W. Bruno., CABI; 2nd edition (2010).
-] **Fish Disease: Diagnosis and Treatment.** Noga, E.J. (2010): Wiley-Blackwell; 2 edition, USA.
-] **Fish Bacteriology.** Witman, R.N. (1982):. 7th Ed., Upper Saddle River, New Jersey, USA.
-] **Fish disease diagnosis.** Anderson, M.D. (2002). An International Thomson. Publishing Company, London.
-] **Bacterial disease diagnosis.** Amlacher, S.R. (1993): 3rd Ed., Lea and Febiger, Philadelphia PA.
-] **Crustacean diseases and management.** Michael, M.T. (1975): Iowa State University Press/ Ames, Iowa.
-] **Fish Health and Diseases.** Tood, J.R. (1977): CAB International Wallingford, Oxon Ox10 8De, UK.
-] **Freshwater fish disease Introduction to Quantitative Genetics.** Jodi, R.Y. (1991): 4th Edition. Longman.
-] **Aquatic Ecosystem and related problems.** Tabered, A.D. (2008). 3rd Ed. FAO international publication.

6.3. Periodicals

-] Index of fish Health and Production
-] Journal of fish disease
-] Indian journal of fish disease
-] Journal of fish bacteriology
-] Journal of virology

6.4. Web sites

-] animal-world.com/encyclo/fresh/.../Diseases.htm
-] www.fishyfarmacy.com
-] www.fishyfarmacy.com/symptoms.html
-] www.aquaticcommunity.com/disease
-] www.alnwadr.com/animals103
-] www.fishlore.com/Disease.htm

7) Facilities required for teaching and learning

- 7.1 Data-show.
- 7.2 Network for technology transfer.
- 7.3 Computer.

	Course coordinators	Head of department
Name	Mouhammed Khallaf	Prof. Dr. Shaaban Gad Allah
Signature		

Matrix alignment of course topics and ILOs

Topic	No. of hours /week		Total hours	Hours for Lect.	Hours for Pract.	ILOs			
	Lect.	Pract.				K.U (a)	LS (b)	P.P.S (c)	G.T.S (d)
Introduction and basic terminology	3	3	6	6	0	1			
Viral diseases of fish	3	3	21	12	9	1,2,3,4	1,2	1,2,3,4,5	1,2,3,4
Bacterial diseases of fish	3	3	24	12	12	1,2,3,4	1,2	1,2,3,4,5	1,2,3,4
Mycotic diseases of fish	3	3	24	12	12	1,2,3,4	1,2	1,2,3,4,5	1,2,3,4
Diagnosis of microbial diseases of fish	3	3	21	9	12	2,3	1	1,2,3,4	1,2,3,4
Clinical treatment of microbial diseases of fish	3	3	21	12	9	4	4	5	1,2,3,4
Vaccination and clinical immunology of fish	3	3	15	6	9	4	4	5	1,2,3,4
Parasitic diseases of fish and aquatic animals	3	3	15	6	9	1,2,3,4	1,2	1,2,3,4,5	1,2,3,4
Developmental diseases of fish and aquatic animals	3	3	15	6	9	1,2,3,4	1,2	1,2,3,4,5	1,2,3,4
Aquaculture	3	3	12	6	6				1,2,3,4
Microbial and parasitic diseases of edible crustacea	3	3	12	6	6	1,2,3,4	1,2	1,2,3,4,5	1,2,3,4
Microbial and non- infectious diseases of edible mollusca	3	3	15	9	6	1,2,3,4	1,2	1,2,3,4,5	1,2,3,4
Microbial and parasitic diseases of echinodermata	3	3	15	9	6	1,2,3,4	1,2	1,2,3,4,5	1,2,3,4
Microbial and parasitic diseases of amphibia	3	3	21	12	9	1,2,3,4	1,2	1,2,3,4,5	1,2,3,4
Microbial and parasitic diseases of aquatic reptiles	3	3	27	9	18	1,2,3,4	1,2	1,2,3,4,5	1,2,3,4
Microbial and parasitic diseases of aquatic mammals	3	3	6	6	0	1,2,3,4	1,2	1,2,3,4,5	1,2,3,4
Diagnosis of microbial and parasitic infections in aquatic animals	3	3	21	12	9	2,3	1	1,2,3,4	1,2,3,4
Treatment and control of microbial and parasitic diseases in aquatic animals	3	3	24	12	12	4	3,4	5	1,2,3,4
Total			264	132	132				