



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



# Aquatic Animal Non-infectious Diseases (813M)

## **MVSc COURSE SPECIFICATION**

### **A. BASIC INFORMATION**

<b>University:</b>	<b>University of Sadat City</b>
<b>Faculty:</b>	<b>Veterinary Medicine</b>
<b>Program on which the course is given:</b>	<b>Master in Veterinary Medical Sciences (Aquatic Animal Medicine and Hygiene)</b>
<b>Department offering the Course:</b>	<b>Aquatic Animal Medicine and Hygiene</b>
<b>Course code:</b>	<b>813M</b>
<b>Course title:</b>	<b>Aquatic Animal Non-infectious Diseases</b>
<b>Lecture (hr/week):</b>	<b>3</b>
<b>Practical (hr/week):</b>	<b>3</b>
<b>Course coordinator:</b>	<b>Dr. Mouhammed Khallaf</b>

## B. PROFESSIONAL INFORMATION

### 1) Overall aims of course

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

- ) Diagnose and control different noninfectious diseases of fish and other aquatic animals.

### 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. Define the basic terminology in noninfectious aquatic diseases.
- a.2. Recognize the etiology and pathogenesis of aquatic noninfectious diseases.
- a.3. Describe the major clinical signs of aquatic noninfectious diseases.
- a.4. Outline the methods of diagnosis, treatment and control of aquatic noninfectious diseases.

#### 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 non-infectious diseases from microbial diseases.
- b.3. Select the most suitable and economic way of treatment and prevention of disease conditions in fish.
- 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. Assign the necessary laboratory investigations to aid diagnosis of the non-infectious diseases.
- c.5. Determine 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. Organize time perfectly.

### 3) Topics and contents

Topic	No. of hours		
	Lectures	Practical	Total
Clinical pathobiology	6	3	9
Aquatic animal dermatology	6	9	15
Respiratory diseases of fish	6	6	12
Hematopoietic diseases of fish	6	12	18

Musculoskeletal diseases of fish	6	6	12
Reproductive diseases of fish	6	6	12
Metabolic and nutritional diseases of fish	6	6	12
Toxicological diseases of fish	9	6	15
Enteric diseases of fish	6	6	12
Urinary diseases of fish	6	6	12
Nervous diseases of fish	6	6	12
Managemental diseases of fish	6	6	12
Traumatic diseases in fish	6	6	12
Noninfectious diseases of edible crustacea	6	6	12
Noninfectious diseases of edible mollusca	6	3	9
Noninfectious diseases of echinodermata	6	3	9
Noninfectious diseases of amphibia	6	6	12
Noninfectious diseases of aquatic reptiles	6	6	12
Noninfectious diseases of aquatic mammals	9	9	18
Clinical laboratory diagnosis of noninfectious diseases	12	15	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	2,3	3,4		
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

- ) Noga, E.J. (2010): Fish Disease: Diagnosis and Treatment. Wiley-Blackwell; 2 edition, USA.
- ) Fundamentals of Ornamental Fish Health.
- ) Tood, J.R. (1977): Fish Health and Diseases . CAB International Wallingford, Oxon Ox10 8De, UK.
- ) Michael, M.T. (1975): Crustacean diseases and management Iowa State University Press/ Ames, Iowa.
- ) Jodi, R.Y. (1991): Freshwater fish disease Introduction to Quantitative Genetics. 4th Edition. Longman.
- ) Tabered, A.D. (2008) Aquatic Ecosystem and related problems. 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](http://animal-world.com/encyclo/fresh/.../Diseases.htm)
- ) [www.fishyfarmacy.com](http://www.fishyfarmacy.com)
- ) [www.fishyfarmacy.com/symptoms.html](http://www.fishyfarmacy.com/symptoms.html)
- ) [www.aquaticcommunity.com/disease](http://www.aquaticcommunity.com/disease)
- ) [www.alnwadr.com/animals103](http://www.alnwadr.com/animals103)
- ) [www.fishlore.com/Disease.htm](http://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.

	<b>Course coordinators</b>	<b>Head of department</b>
<b>Name</b>	Mouhammed Khallaf	Prof. Dr. Shaaban Gad Allah
<b>Signature</b>		

### 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)	I.S (b)	P.P.S (c)	G.T.S (d)
Clinical pathobiology	3	3	9	6	3	2,3	1	2,3,5	1-4
Aquatic animal dermatology	3	3	15	6	9	1-4	1-4	1-5	1-4
Respiratory diseases of fish	3	3	12	6	6	1-4	1-4	1-5	1-4
Hematopoietic diseases of fish	3	3	18	6	12	1-4	1-4	1-5	1-4
Musculoskeletal diseases of fish	3	3	12	6	6	1-4	1-4	1-5	1-4
Reproductive diseases of fish	3	3	12	6	6	1-4	1-4	1-5	1-4
Metabolic and nutritional diseases of fish	3	3	12	6	6	1-4	1-4	1-5	1-4
Toxicological diseases of fish	3	3	15	9	6	1-4	1-4	1-5	1-4
Enteric diseases of fish	3	3	12	6	6	1-4	1-4	1-5	1-4
Urinary diseases of fish	3	3	12	6	6	1-4	1-4	1-5	1-4
Nervous diseases of fish	3	3	12	6	6	1-4	1-4	1-5	1-4
Managerial diseases of fish	3	3	12	6	6	1-4	1-4	1-5	1-4
Traumatic diseases in fish	3	3	12	6	6	1-4	1-4	1-5	1-4
Noninfectious diseases of edible crustacea	3	3	12	6	6	1-4	1-4	1-5	1-4
Noninfectious diseases of edible mollusca	3	3	9	6	3	1-4	1-4	1-5	1-4
Noninfectious diseases of echinodermata	3	3	9	6	3	1-4	1-4	1-5	1-4
Noninfectious diseases of amphibia	3	3	12	6	6	1-4	1-4	1-5	1-4
Noninfectious diseases of aquatic reptiles	3	3	12	6	6	1-4	1-4	1-5	1-4
Noninfectious diseases of aquatic mammals	3	3	18	9	9	1-4	1-4	1-5	1-4
Clinical laboratory diagnosis of non infectious diseases	3	3	27	12	15	3,4	1,2	1-5	1-4
<b>Total</b>			<b>264</b>	<b>132</b>	<b>132</b>				