



## Fish and Crustacean Diseases Course Specifications (2020– 2021 )

Program(s) on which the course is given:	BVSc
Department offering the program:	---
Department offering the course:	Poultry and Fish Diseases
Major or Minor element of programs:	Major
Academic year /Level:	4 <sup>th</sup> Year                      2 Semesters

### A. BASIC INFORMATION

Title: Fish Diseases	Code: 4AFIS, 4BFIS	
Hours:		
Lectures    2 hrs/week	Practical    2 hrs/week	Total    120 hrs

### B. PROFESSIONAL INFORMATION

#### 1. Overall aims of the course:

**Knowledge:** about normal and diseases of freshwater , marine fish and crustacean

**Skills:** assisted control programs (controlled fish cultures programs. Diagnosis and prevention of fish crustacean disease.

#### 2. Intended Learning Outcomes (ILOs) of the Course:

##### a. Knowledge and Understanding:

- a1 Normal and diseases of freshwater and marine fish as well as crustacean.
- a2 Programs for controlled fish diseases to increase production in cultured fish.
- a3 Knowledge and understanding of the normal macroscopic and microscopic structure of fish crustacean tissues and organs.
- a4 Knowledge and understanding of fish health maintenance and disease prevention
- a5 Knowledge and understanding of the scientific principles underlying laboratory diagnosis.
- a6 Knowledge and understanding epidemiology of fish and crustacean diseases.

##### b. Intellectual Skills:

- b1 Analysis of clinical signs of diseases with requested laboratory diagnosis.
- b2 Creative thinking to control disease problems in freshwater and marine fish and

crustacean.

- b3** Problem identification and solving measures for such diseases.
- b4** Apply appropriate quantitative and qualitative methodologies for prevention and control of fish and crustacean diseases.

**c. Professional and Practical Skills:** The graduate will be able to

- c1** Handle and restrain fish in a welfare manner.
- c2** Obtain an accurate and relevant history of the individual fish or fish groups and their environment.
- c3** Perform a thorough clinical examination.
- c4** Collect, preserve and transport fish samples by applying standard practical laboratory techniques; interpret laboratory results by diagnostic aids, integrate those with clinical information.
- c5** Assess the nutritional status of a fish and be able to advice on appropriate husbandry and feeding measures.
- C6** Identify etiological agents and information relevant to a clinical problem with differential diagnosis.
- C7** Demonstrate a practical ability to apply lesion knowledge of disease processes within the clinical signs, PM and environmental status.
  
- C8** Advise on fish management and understand the importance of fish health economics in the context of acceptable fish welfare.
  
- C9** Recognize treatment for diseased fish with life threatening conditions.
- C10** Obtain and record data for prepare current and/or retrospective assessment and analysis of fish health and production record.
- C11** Understand how to minimize the risks of contamination, cross infection and predisposing factors leading to fish disease in the field.
- C12** Apply imaging techniques, and advise on their safe Use Interpret the results of imaging techniques in the pursuit of a diagnosis.
- C13** Recognize the indications for treatment.
- C14** Demonstrate an understanding of veterinary public health issues and the procedures to follow with notifiable and zoonotic diseases.
- C15** Utilize appropriate safety procedures to protect clients and co-workers and self.
- C16** Have a commitment to ongoing learning and self evaluation.
- C17** the graduate recognize the most important and economic fish and crustacean diseases under Egyptian environment condiction.

**d. General and Transferable Skills:** The graduate must be able to

- d1** Conduct themselves in a professional manner with regard to the veterinarian's professional and legal responsibilities and understand and apply the ethical codes as set out in general organization of veterinary services (GOVS).
- d2** Work effectively as a member of a team in the delivery of services to community.
- d3** Communicate effectively with the public, colleagues and appropriate authorities.
- d4** Perform research on common disease problems in the surrounding domestic and wild fish in the community.
- d5** Utilize communicating skills, have access to the internet and retrieve information.
- d6** Demonstrate knowledge of the organization and management of veterinary practice; principles of certification, basic financial and accounting practices and record keeping.
- d7** Perform research and solve any emerging disease problem.

### 3. Contents:

<b>1<sup>st</sup> Semester</b>			
<b>Topic</b>	<b>No. of hours</b>	<b>Lectures</b>	<b>Practical</b>
Natural of fish diseases	2	2	--
Bacterial disease of fish	20	10	10
Bacterial disease of crustaceans	20	10	10
Mycotic disease of fresh and marine fish	18	8	10
<b>2<sup>nd</sup> Semester</b>			
Parasitic disease of fresh water fish	20	10	10
Parasitic disease of marine fish	8	4	4
Parasitic disease crustaceans	4	2	2
Non infective disease	8	4	4
Pollution	4	2	2
Viral diseases	12	6	6
Prevention and control of fish diseases	4	2	2
<b>Total</b>	<b>120</b>	<b>60</b>	<b>60</b>

### 4. Teaching and Learning Methods:

- 4.1 Lectures and practical of every topic in the course.
- 4.2 Collection of some information from text books.
- 4.3 Field visits (farms) Department laboratory.
- 4.4 Study of clinical cases in the department laboratory.

### 5. Student Assessment Methods:

<b>Exam</b>		
<b>5.1</b>	Written Mid-term	To assess the ability to understand and remember knowledge, and intellectual skills
<b>5.2</b>	Written Final-term	To assess the ability to understand and remember knowledge, and intellectual skills
<b>5.3</b>	Practical Final-term	To assess professional and practical skills
<b>5.4</b>	Oral Final-term	To assess skills of discussion

### Assessment Schedule (in each semester):

	<b>Exam</b>	<b>Week</b>
<b>Assessment 1</b>	Written Mid-term	7 <sup>th</sup>
<b>Assessment 2</b>	Written Final-term	16 <sup>th</sup>
<b>Assessment 3</b>	Practical Final-term	15 <sup>th</sup>
<b>Assessment 4</b>	Oral Final-term	16 <sup>th</sup>

### Weighing of assessments

	<b>Exam</b>	<b>Per Semester (%)</b>	<b>Total (%)</b>
<b>Assessment 1</b>	Written Mid-term	10	20
<b>Assessment 2</b>	Written Final-term	25	50
<b>Assessment 3</b>	Practical Final-term	10	20
<b>Assessment 4</b>	Oral Final-term	5	10

<b>Total</b>	50	100
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**6. List of References:**

**6.1. Course Notes:**

Departmental Notes By Prof. Dr. Magdy Khalil Soliman

**6.2. Essential Books:**

- Post (Fish Health), Bacterial fish disease
- Noga (Fish Medicine), parasitic diseases of marine fish

**6.3. Recommended Books:**

- Post book in Fish Health

**6.4. Periodicals, websites, ..... etc**

Nothing

**7. Facilities Required for Teaching and Learning**

- Microscopes, computers (Personal and Notebook).
- Datashow and video films
- Audio and video aids, mobile screens for exhibition.

**Course Coordinator:** Prof. Dr. Magdy Khalil Soliman

**Head of Department:** Prof. Dr. Nabil Bakear

**Date:**