Fish and Crustacean Diseases Course Specifications (2010 - 2011)

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: 4th Year 2 Semesters
Date of specification approval:

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 condition.

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:

<table>
<thead>
<tr>
<th>Topic</th>
<th>1st Semester</th>
<th>2nd Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. of hours</td>
<td>Lectures</td>
</tr>
<tr>
<td>Natural of fish diseases</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Bacterial disease of fish</td>
<td>20</td>
<td>10</td>
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<tr>
<td>Bacterial disease of crustaceans</td>
<td>20</td>
<td>10</td>
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<tr>
<td>Mycotic disease of fresh and marine fish</td>
<td>18</td>
<td>8</td>
</tr>
<tr>
<td>Parasitic disease of fresh water fish</td>
<td>20</td>
<td>10</td>
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<tr>
<td>Parasitic disease of marine fish</td>
<td>8</td>
<td>4</td>
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<tr>
<td>Parasitic disease crustaceans</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Non infectious disease</td>
<td>8</td>
<td>4</td>
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<tr>
<td>Viral diseases</td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td>Prevention and control of fish diseases</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>120</strong></td>
<td><strong>60</strong></td>
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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:

**Exam**

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

Assessment Schedule (in each semester):

<table>
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<tr>
<th>Exam</th>
<th>Week</th>
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<tbody>
<tr>
<td>Assessment 1</td>
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<tr>
<td>Assessment 2</td>
<td>16th</td>
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<tr>
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<td>15th</td>
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<tr>
<td>Assessment 4</td>
<td>16th</td>
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</table>

Weighing of assessments

<table>
<thead>
<tr>
<th>Exam</th>
<th>Per Semester (%)</th>
<th>Total (%)</th>
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</thead>
<tbody>
<tr>
<td>Assessment 1</td>
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<tr>
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</tr>
<tr>
<td>Assessment 3</td>
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<td>20</td>
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<tr>
<td>Assessment 4</td>
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<td>10</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>50</strong></td>
<td><strong>100</strong></td>
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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. Hatem Salah El-Dein Abdel-Hamid
Date: