COURSE SPECIFICATIONS for phd

University: Benha  Faculty: Veterinary Medicine

Course Title: Physiology of digestive system, metabolism and energy.

Code: 18(advanced)

Department offering the course: department of : Physiology.

Program (s) on which the course is given: - ph Degree of Veterinary Medical Sciences (Animal physiology).

Academic year / Level : 2011-2012

Date of specification approval: /2012

A- Basic Information

Lecture: 2  Tutorial:  Practical: 2  Total: 4/w

B- Professional Information

1 - Overall Aims of Course: a-To ensure that students reserve a comprehensive theoretical base in veterinary physiology.
   b-To provide students with knowledge, skills and confidence to enable them to pursue a career in the field of nutrition of farm animals

2 - Intended Learning Outcomes of Course (ILOs)

A-Knowledge and Understanding:

 a1-To understand the process of digestion and absorption of food stuffs.
 a2-To identify the movements of different parts of GIT.
 a3-To discuss neural and hormonal control of digestion and absorption.
 a4-To identify the different types of energy and metabolic balance.
 a5-To discuss the basal metabolic rate and methods of its measurement.
 a6-To discuss the factors affecting basal metabolic rate.

B-Intellectual Skills

 b1-To compare between digestion in simple and compound stomach animals.
 b2-To compare between absorption in herbivorous and carnivorous animals.
 b3-To compare between direct and indirect calorimetry in measuring BMR.

C-Professional and Practical Skills:

 c1-To collect and examine samples of digestive juices.
 c2-To be able to use the Spirometer in measuring BMR.
 c3-To make use of statistical techniques.

D-General and Transferable Skills
dl-To summarize research findings in oral form in seminars and workshops.
d2-To communicate effectively with supervisors.
d3-To demonstrate information retrieval and library skills.

**E- Attitude**
e1 -To be kind with animals during experimentation.
e2-To encourage students for cooperation with colleagues.

### 3. Contents

<table>
<thead>
<tr>
<th>Topic</th>
<th>No. of hours</th>
<th>Lecture</th>
<th>Tutorial/Practical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regulation of GIT function</td>
<td>20</td>
<td>20</td>
<td>-</td>
</tr>
<tr>
<td>Salivary secretion</td>
<td>35</td>
<td>12</td>
<td>23</td>
</tr>
</tbody>
</table>

**Swallowing**
- Ruminant stomach
- The pancreas

**Bile secretion**
- The small intestine

**The large intestine**
- Energy balance

**Animal calourimetry**
- Direct calourimetry
- Indirect
<table>
<thead>
<tr>
<th></th>
<th>Basal metabolic rate</th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>calourimetry Metabolic rate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The stomach</td>
<td>45</td>
<td>20</td>
<td>25</td>
</tr>
<tr>
<td>The simple stomach</td>
<td>11</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>Vomition</td>
<td>20</td>
<td>15</td>
<td>5</td>
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</tbody>
</table>

The total hours are distributed over 44 weeks with 4 hours per week that gives a total of 176 hours

### 4- Teaching and Learning Methods:

4.1-lectures
4.2-Practical
4.3-reports
4.5- Review article
4.6- seminars

### 5- Student Assessment Methods:

5.1 practical exam to assess practical skills
5.2 oral examination to assess ability to demonstrate his knowledge
5.3 final exam to assess different skills

#### Assessment Schedule

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessment 1</td>
<td>42th</td>
</tr>
<tr>
<td>Assessment 2</td>
<td>44th</td>
</tr>
<tr>
<td>Assessment 3</td>
<td>44th</td>
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</tbody>
</table>

#### Weighting of Assessments

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Final-term Examination</td>
<td>50%</td>
</tr>
<tr>
<td>Oral Examination</td>
<td>25%</td>
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<tr>
<td>Practical Examination</td>
<td>25%</td>
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</tbody>
</table>

Other types of assessment

Total 100%

### 6- List of References
7.1- Course Notes
   Veterinary Physiology.
7.2- Essential Books (Text Books)
7.3- Recommended Books

6.4- Periodicals, Web Sites, … etc
   Veterinary Journal
   Journal of Veterinary Internal Medicine.
   Veterinary Record.

8- Facilities Required for Teaching and Learning

| Data show, TV |
| Laboratory |
| Library |

Course Coordinator: Prof. Dr/ Mohamed ElSayed Azab
Head of Department: Prof. Dr/ Mohamed ElSayed Azab
Date: /2012