COURSE SPECIFICATIONS

Postgraduate courses
(Master)

Prepared By
Anatomy & Embryology Department

<table>
<thead>
<tr>
<th>University: Benha</th>
<th>Faculty: Veterinary Medicine</th>
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<tbody>
<tr>
<td>Course Title : Osteology and Arthrology</td>
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<tr>
<td>Code: 2</td>
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<tr>
<td>Department offering the course: Anatomy and Embryology Department</td>
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<tr>
<td>Program (s) on which the course is given: Master Degree in Veterinary science (Anatomy)</td>
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<tr>
<td>Academic year / Level : 2011-2012</td>
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<td>Date of specification approval: /2011</td>
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A- Basic Information

Title: Osteology and Arthrology

Credit Hours:

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

B- Professional Information

1 - Overall Aims of Course: The postgraduate student gain the experience in the anatomy of the skeleton and joints of ruminants, camel, horse, dog and pig. At the end of the course, the student will be able to identify the comparative features of bones and types & structures of joints of different animal species and become able also to use the anatomical knowledge in other veterinary fields such as medicine, surgery, ..................etc.

2 - Intended Learning Outcomes of Course (ILOs)

A-Knowledge and Understanding:

After successful completion of this course the student should be able to:
A1- Understand the anatomy of the skeleton and bones on a comparative basis between different animal species.

A2- Understand the anatomy of the joints of the body in different animal species.

A3- Identify the bones and joints of the fore and hind limbs in equine and ruminants.

A4 - Identify the most important points of joint illness and mechanism of occurrence.

**B-Intellectual Skills**

After successful completion of this course the student should be able to:

B1- Estimate the problems of lameness and fractures of bones.

B2- determine the sites of joint injection.

B3- Assess inquiries from the animal owners and the official authorities reports (e.g. Forensic Medicine) and how to answer it.

**C-Professional and Practical Skills**

After successful completion of this course the student should be able to:

C1- Implement surface anatomy knowledge on the living animals and in approaching some field cases.

C2- Use the radiographic anatomy of the bones and joints in clearing some field problems.

C.3- Do hard and wet formalin preserved anatomical specimens for display.

**D-General and Transferable Skills**

After successful completion of this course the student should be able to:

D.1 Prepare a scientific papers and essays.

D.2 Acquires the skill of oral Presentation (Using the Over Head Projector,
D.3 Constructing a poster and its presentation.
D.4 Time management.

**E- Attitude**

El-Scientific Integrity.
E2-Knowledge of the rules of the scientific researches.
E3-Respect his profession and encourage 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>General Osteology and Arthrology</td>
<td>25</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>Bones and joints of the thoracic limb</td>
<td>25</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>Bones and joints of the pelvic limb</td>
<td>25</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>Bones and joints of the skull, vertebral column and ribs</td>
<td>25</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>Review article</td>
<td>10</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>seminar</td>
<td>10</td>
<td>10</td>
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### 4. Program - Course ILO Matrix:

<table>
<thead>
<tr>
<th>Content title</th>
<th>A (K&amp;U)</th>
<th>B (LS)</th>
<th>C (P&amp;P.S)</th>
<th>D (G&amp;T.S)</th>
<th>E (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Osteology and Arthrology</td>
<td>A1 A2 A3 A4</td>
<td>B1 B2 B3</td>
<td>C1 C2 C3</td>
<td>D1 D2 D3 D4</td>
<td>E1 E2 E3</td>
</tr>
<tr>
<td>Bones and joints of the thoracic limb</td>
<td>A1 A3 A4</td>
<td>B1 B2 B3</td>
<td>C1 C2 C3</td>
<td>D1 D2 D3 D4</td>
<td>E1 E2 E3</td>
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<td>A1 A3 A4</td>
<td>B1 B2 B3</td>
<td>C1 C2 C3</td>
<td>D1 D2 D3 D4</td>
<td>E1 E2 E3</td>
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<td>C1 C2 C3</td>
<td>D1 D2 D3 D4</td>
<td>E1 E2 E3</td>
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</table>
5- Teaching and Learning Methods

5.1 lectures

5.2 Practical

5.3 practical training on living animals

5.4 reports

6- Student Assessment Methods

6.1 seminar & researches to assess student ability discussion his attendants

6.2 oral examination to assess ability to demonstrate his knowledge

6.3 practical exam to assess practical skills

6.4 final exam to assess different skills

Assessment Schedule

<table>
<thead>
<tr>
<th>Assessment 1</th>
<th>7rd week</th>
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<tbody>
<tr>
<td>Assessment 2</td>
<td>14th Week</td>
</tr>
<tr>
<td>Assessment 3</td>
<td>21th Week</td>
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<tr>
<td>Assessment 4</td>
<td>28th Week</td>
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Weighting of Assessments

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Weight</th>
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<tbody>
<tr>
<td>Mid-Term Examination</td>
<td>10%</td>
</tr>
<tr>
<td>Final-term Examination</td>
<td>50%</td>
</tr>
<tr>
<td>Oral Examination</td>
<td>10%</td>
</tr>
<tr>
<td>Practical Examination</td>
<td>20%</td>
</tr>
<tr>
<td>seminar &amp; researches</td>
<td>10%</td>
</tr>
</tbody>
</table>

Other types of assessment

| Total                           | 100%   |

7- List of References

7.1 Books


7.2- Periodicals, web sites, … etc.
Periodicals
  o Anatomia Histologia Embryologia (Journal of the World Association of Veterinary Anatomists )
  o Anatomical Record
  o Veterinary Radiology
Websites
  o WAVA
  o Veterinary Anatomy Course.
  o CONVINCE
  o Comparative Mammalian Brain Collection.
  o Veterinary Courseware at Massey University , New Zealand

8- Facilities required for teaching and Learning
A) Available
• Formalin preserved specimens.
• X-ray images.
• Comparative bone specimens.
• Over Head Projector.
• Posters and colored sheets and transparencies.

B) Required
• Models of skeletons of different animal species.
• Stereo-Microscope.
• Tools and electric appliances for organs, skeletons and bone preparation.
• Mobile ultrasonic apparatus.
• Data Show.
• CDs. (anatomy, applied anatomy, radiographic anatomy ..etc.)
• Television circuit for the dissection room.

Course Coordinator: Prof. Dr. Hatem Bahgaat.

Head of Department: Prof. Dr. Hatem Bahgaat.

Date: 17/1/2012