## COURSE SPECIFICATIONS

### Postgraduate courses

*(PhD)*

*Prepared By*

**Anatomy & Embryology Department**

<table>
<thead>
<tr>
<th>University: Benha</th>
<th>Faculty: Veterinary Medicine</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Course Title</strong>: Comparative Urogenital System</td>
<td></td>
</tr>
<tr>
<td><strong>Code</strong>: 4 (advanced)</td>
<td></td>
</tr>
<tr>
<td><strong>Department offering the course</strong>: Anatomy and Embryology Department</td>
<td></td>
</tr>
<tr>
<td><strong>Program(s) on which the course is given</strong>: Ph. D. Degree in Veterinary science (Anatomy)</td>
<td></td>
</tr>
<tr>
<td><strong>Academic year / Level</strong>: 2011-2012</td>
<td></td>
</tr>
<tr>
<td><strong>Date of specification approval</strong>: /2012</td>
<td></td>
</tr>
</tbody>
</table>

### A- Basic Information

<table>
<thead>
<tr>
<th>Title: Comparative Urogenital System</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Credit Hours</strong>:</td>
</tr>
<tr>
<td>Lecture: 2</td>
</tr>
</tbody>
</table>

### B- Professional Information

1 - **Overall Aims of Course**: The postgraduate student gain the experience in the anatomy of the kidney, testis and ovary of horse, ox, dog and pig. At the end of the course, they are provided with the anatomy of the urogenital system and organs in different domestic animals and become able 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 urinary and genital systems on a comparative basis between the different animal species.

A2- Identify the anatomy of kidney in different species of animals and its relations to surface of the body.

A3- Recognize the anatomy of the ovary, testes and other genital tracts in both male and female in different species of animals.

A4- Recognize the normal urinary organs and tract in a series of urogram.

A5- use the several techniques like Echo. And thermography to aid him to work in team with surgeries.

B-Intellectual Skills

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

B1- Estimate the problems of the urinary and genital systems

B2- to determine the position of the kidney under the transverse processes of lumbar vertebrae for palpation, biopsy and radiology.

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

B4- Has the ability to use the several diagnostic techniques like catherarization, Radiography and Ultrasonography.

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 kidney and ovary in clearing some field problems.
C.3- Do hard and wet formalin preserved anatomical specimens for display.
C.4- know the relationship of different Compartments to the surface of different animals for easy surgical interference.
C.5- Demonstrate the position of Urinary bladder and penile urethra.

**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, power point program and other 3D programs).
D.3 Constructing a poster and its presentation.
D.4 Time management.
D.5 Has self confidence and be creative that will help him to create another ways for diagnosis and assist him to help if asked.

**E- Attitude**

E1- Scientific integrity
E2- know the rules and ethics of scientific research

**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>Urinary system</td>
<td>25</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>Anatomy of Male genital system</td>
<td>25</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>Anatomy of Female genital system</td>
<td>25</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>Comparative urogenital organs</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>
<td></td>
</tr>
</tbody>
</table>
### 4. Program - Course ILO Matrix:

<table>
<thead>
<tr>
<th></th>
<th>A (K&amp;U)</th>
<th>B (I.S)</th>
<th>C (P&amp;P.S)</th>
<th>D (G&amp;T.S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

- **Urinary system**
- **Anatomy of Male genital system**
- **Anatomy of Female genital system**
- **Comparative urogenital organs**

### 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

6.2 oral examination

6.3 practical exam

6.4 final exam

- **Assessment Schedule**
  - Assessment 1: 7th week
  - Assessment 2: Week 14th
  - Assessment 3: Week 21st
  - Assessment 4: Week 28th

### Weighting of Assessments

- Mid-Term Examination: 10%
- Final-term Examination: 50%
- Oral Examination: 10%
- Practical Examination: 20%
- seminar & researches: 10%
- Other types of assessment: 10%
7- List of References

7.1- Books


7.2- Periodicals, web sites, … etc.

**Periodicals**
- Anatomia Histologia Embryologia (Journal of the World Association of Veterinary Anatomists)
- Anatomical Record
- Veterinary Radiology

**Websites**
- WAVA
- Veterinary Anatomy Course.
- CONVINCE
- Comparative Mammalian Brain Collection.
- Veterinary Courseware at Massey University , New Zealand

8- Facilities required for teaching and Learning

**A) Available**
- Formalin preserved specimens.
- X-ray images.
- Comparative urogenital specimens.
- Over Head Projector.
- Posters and colored sheets and transparencies.

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

**Course Coordinator:** Prof. Dr. Hatem Bahgat

**Head of Department:** Prof. Dr. Hatem Bahgat

**Date:** 17/1/2012