Theriogenology B

Benha University
Faculty of Veterinary Medicine

Course Specification

Program on which the course is given: Bachelor of Veterinary Medical Sciences
Department offering the course: Theriogenology
Academic year/level: Fifth (Second term)

Date of specification approval: Ministerial decree No. 921 on 15/9/ 1987 (approved in this template by the Department Council on 13/2/2009)

A- Basic Information

Title: Artificial Insemination and Embryo transfer
Code: Vet00653b
Lecture: 2 h/wk  Practical: 3 h/wk  Total: 5 h/wk

B- Professional Information

1- Overall aims of course:
   1.1. To study artificial insemination, economics, management and technique.
   1.2. To study techniques of the in-vitro- fertilization and embryo transfer
   1.3. To study the most recent techniques of cloning and sexing.

2 Intended learning outcomes of course (ILOS):
   a- Knowledge and understanding (After successful completion of the courts the students should be able to)
      a.1. know the techniques of semen collection, evaluation, processing and handling.
      a.2. Learn the technique of insemination and evaluation of the breeding policy
      a.3. Recognize the techniques of IVE, ET, cloning and sexing
   b- Intellectual skills (After successful completion of the courts the students should be able to)
      b.1. Know good utilization of reproductive biotechnologies
      b.2. Know good handling with a problem
      b.3. Learn good breeding policy.
   c- Professional and practical skills (After successful completion of the courts the students should be able to)
      c.1. Know how to handle improve fertility and fertilizing capacity
      c.2. Know how to control and infertility problem
      c.3. Know how to maximize a herd reproductive potential
**d- General and transferable skills:**
After successful completion of the courts the students should be able to:

d.1. Learn how to do a review article on a subject
d.2. Learn how to read text and reference books related
d.3. Learn how to transfer skills via the network connection

**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>Semen collection</td>
<td>10</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Semen evaluation</td>
<td>10</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Semen dilution &amp; storage</td>
<td>10</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Deep frozen semen</td>
<td>10</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Insemination technique</td>
<td>10</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Management of artificial insemination</td>
<td>11</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>IVF &amp; Embryo transfer</td>
<td>14</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>75</strong></td>
<td><strong>30</strong></td>
<td><strong>45</strong></td>
</tr>
</tbody>
</table>

**4- Teaching and learning methods:**

4.1. Data show
4.2. Over- head projector
4.3. Slide projector
4.4. Video tapes
4.5. Lab equipment

**5- Student assessment methods:**

5.1. Team work (quiz, homework, case report)
5.2. Mid-term exam to assess knowledge and understanding
5.3. Practical exam for practical skills
5.5. Oral exam to assess professional and practical skill
5.6. Final exam to assess level of understanding the course.
Assessment schedule:

Assessment 1: Mid-term exam  Week 7
Assessment 2 Final-term exam  Week 15
Assessment 3: Oral exam  Week 12
Assessment 4: Practical exam  Week 11
Assessment 5: Term work (quiz and case report)  Weeks 5-10

Weighting of assessments:

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Weighting</th>
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</thead>
<tbody>
<tr>
<td>Final-term examination</td>
<td>50 %</td>
</tr>
<tr>
<td>Oral examination</td>
<td>15 %</td>
</tr>
<tr>
<td>Practical examination</td>
<td>15 %</td>
</tr>
<tr>
<td>Term work (quiz and case report)</td>
<td>10 %</td>
</tr>
<tr>
<td>Mid-term Examination</td>
<td>10 %</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100 %</strong></td>
</tr>
</tbody>
</table>

6- List of references:

6.1. Course notes:
- Artificial insemination & Embryo transfer edited by the staff members

6.2. Essential books (text books)
- Applied animal reproduction, H.J. Bearden
- Fertility and infertility in domestic animals, J.A. Laing.
- Anatomy and physiology of farm animals, R.D. Frandson

6.3. Recommended books
- Physiology of reproduction & artificial insemination in cattle, G.W. Salisbury, et al.
- Current therapy in theriogenology, D.A. Morrow.
- Current therapy in large animal theriogenology, R.S. Youngquist

6.4. Periodicals, Web sites,..... etc
- J. Animal reproduction & Fertility
- J. fertility & Sterility
- Theriogenology
- Google. Com.
- Arabvet. Com
7- Facilities required for teaching and learning

- Aids for reproductive biotechnology
- Farm for clinical application (pregnancy diagnosis and treatment of infertility problems).
- Network connection for technology transfer

Course coordinators

Prof. Dr. A. I. EL- Azab

Head of Department

Prof. Dr. Alla El-Sayed Abdel-Ghaffar

Date of issue: