Obstetrics, Artificial Insemination and Embryo Transfer
Course Specifications (٢٠١٢ - ٢٠١٣)

A. BASIC INFORMATION

Title: Obstetrics, Artificial Insemination and Embryo Transfer
Code: ٥AOBS, ٥BOBS

Hours:
Lectures ٧ hrs/week  Practical ٧ hrs/week  Total ٧٥١ hrs

B. PROFESSIONAL INFORMATION

١. Overall aims of the course: By the end of this course, students should
   • Acquire the basic knowledge and practices related to physiology and pathology of
     gestation, parturition and puerperium in farm and pet animals.
   • Gain the skills of diagnosing and treating cases of infertility and dystocia in cattle,
     buffalo, sheep, goat, equine and pet animals, as well as practicing a reproductive herd
     health program in dairy farms.

٢. Intended Learning Outcomes (ILOs) of the Course:

a. Knowledge and Understanding: On successful completion of this course, the
   student should be able to:

   a١ Define the basic terms in the fields of infertility in farm and pet animals.
   a٢ Classify causes of dystocia in farm and pet animals,
   a٣ Recognize the diagnosis and treatment of different diseases of pregnant
      animals,
   a٤ Recall the herd health program of dairy farm,
   a٥ Discuss physiology and pathology of gestation, parturition, puerperium in
      farm animals.
List the causes of infertility in farm animals,

Explain the faulty alignment of the fetus causing dystocia,

Describe the methods for intervention with dystocia in animals

b. Intellectual Skills: By the end of this course, the student should be able to:

- Summarize the physiology of gestation, parturition and puerperium in farm animals,
- Discriminate causes and forms of infertility in farm animals,
- Interpret faulty alignment as a cause of dystocia in farm and pet animals,
- Select the methods of pregnancy diagnosis in farm and pet animals,
- Relate between managemental and nutritional deficiencies and infertility,
- Differentiate between different forms of animal infertility,
- Choose appropriate treatment for dystocia and infertility according the case and costs,
- Integrate recent programs in controlling genital diseases and enhance fertility in farm and pet animals.

c. Professional and Practical Skills: By the end of this course, the student should be able to:

- Treat cases of dystocia in different animals,
- Apply different methods dealing with dystocia in cows,
- Examine the pregnancy in farm and pet animals,
- Diagnose the diseases of pregnancy and post-partum in farm and pet animals,
- Treat a case of infertility in farm and pet animals,
- Apply heat detection aids in a dairy farm,
- Assess for fetal alignment at parturition in large and small animals.

d. General and Transferable Skills: By the end of this course, the student should be able to

- Deal ethically with faculty staff, colleagues and stakeholders.
- Work under adverse field environment without interruption.
- Utilize the web options for a given course topic to build up a review.
- Demonstrate the skills of communication and team-working

Contents:

<table>
<thead>
<tr>
<th>Topic</th>
<th>Total (hr)</th>
<th>Lectures (hr)</th>
<th>Practical (hr)</th>
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<tbody>
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First semester
## Course specification

<table>
<thead>
<tr>
<th>Topic</th>
<th>Lectures (hr)</th>
<th>Practical (hr)</th>
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<tbody>
<tr>
<td>Environmental causes of infertility</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Hormonal causes of infertility</td>
<td>8</td>
<td>8</td>
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<tr>
<td>Congenital causes of infertility</td>
<td>4</td>
<td>4</td>
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<tr>
<td>Pathological causes of infertility</td>
<td>4</td>
<td>4</td>
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<tr>
<td>Infectious causes of infertility</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Infertility in mare and bitch</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Heat detection</td>
<td>2</td>
<td>2</td>
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<tr>
<td>Clinical examination of the female</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Herd health programs</td>
<td>6</td>
<td>6</td>
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<tr>
<td>Therapeutic uses of PGFtα and GnRH</td>
<td>3</td>
<td>3</td>
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<tr>
<td>Pregnancy diagnosis in domestic animals</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Rectal examination of the cow and mare</td>
<td>18</td>
<td>18</td>
</tr>
<tr>
<td>Students activities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Posters illustrating some cases of normal and abnormal pregnancy and parturition.</td>
<td></td>
<td></td>
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<tr>
<td>- Short assays.</td>
<td></td>
<td></td>
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<tr>
<td>- Seminars &amp; faculty campaigns</td>
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<tr>
<td><strong>Total</strong></td>
<td>75</td>
<td>30</td>
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### Second semester

<table>
<thead>
<tr>
<th>Topic</th>
<th>Total (hr)</th>
<th>Lectures (hr)</th>
<th>Practical (hr)</th>
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</thead>
<tbody>
<tr>
<td><strong>Physiology of gestation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Changes in genital organs during gestation</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>- Placentaion and development of conceptus</td>
<td></td>
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<tr>
<td><strong>Diseases of pregnancy</strong></td>
<td>14</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>- Prolapse of vagina and uterine torsion</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Affection of fetal membranes (hydropsy and moles) and abortion</td>
<td>14</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>- Fetal anomalies</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>- Intra uterine fetal death</td>
<td></td>
<td></td>
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<tr>
<td><strong>Normal parturition</strong></td>
<td>10</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Normal parturition</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Normal fetal presentation, position and posture</td>
<td>10</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td><strong>Abnormal parturition</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dystocia</td>
<td>12</td>
<td>6</td>
<td>6</td>
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<tr>
<td>Faulty fetal alignment and its correction and birth help.</td>
<td>6</td>
<td>2</td>
<td>4</td>
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<tr>
<td>Instruments</td>
<td>3</td>
<td>3</td>
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<tr>
<td>Cesarean section</td>
<td>6</td>
<td>2</td>
<td>4</td>
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<tr>
<td>Fetotomy</td>
<td>6</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td><strong>Puerperium and postpartum affections</strong></td>
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<tr>
<td>Physiology of puerperium</td>
<td>2</td>
<td>2</td>
<td></td>
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<tr>
<td>Postpartum affections</td>
<td></td>
<td></td>
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<tr>
<td>- Retention of placenta</td>
<td>12</td>
<td>4</td>
<td>8</td>
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<tr>
<td>- Prolapse of uterus</td>
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<tr>
<td>- Septic metritis</td>
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<td></td>
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<tr>
<td>Students activities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Posters illustrating some cases of normal and abnormal pregnancy and parturition.</td>
<td>12</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>- Short assays.</td>
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<tr>
<td>- Seminars &amp; faculty campaigns</td>
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</tr>
<tr>
<td><strong>Total</strong></td>
<td>75</td>
<td>30</td>
<td>45</td>
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<tr>
<td><strong>Total of two semesters</strong></td>
<td>150</td>
<td>60</td>
<td>90</td>
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٤. Teaching and Learning Methods:

<table>
<thead>
<tr>
<th>Lectures:</th>
<th>Interactive lectures through:</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>• Student participation in the discussions</td>
</tr>
<tr>
<td></td>
<td>• Using electronic shows (PowerPoint slides and videos).</td>
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</tbody>
</table>

| Practical sessions: | Practical lessons on faculty farm animals and faculty hospitals. |
|                    | • Training during veterinary campaigns and summer training. |
|                    | • Field visits to commercial and governmental animal production farms. |

| Self-Learning activities: | Posters and video collections illustrating some cases of normal and abnormal pregnancy and parturition. |
|                          | • Short reviews from the internet and the internet. |
|                          | • Seminars and presentations. |

٥. Student Assessment Methods:

<table>
<thead>
<tr>
<th>Exam</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>5.1 Written Mid-term</td>
<td>To assess the ability to understand and remember knowledge, and intellectual skills</td>
</tr>
<tr>
<td>5.2 Student activities</td>
<td>To assess the Self-Learning ability of the student</td>
</tr>
<tr>
<td>5.3 Written Final-term</td>
<td>To assess the ability to understand and remember knowledge, and intellectual skills</td>
</tr>
<tr>
<td>5.4 Practical Final-term</td>
<td>To assess professional and practical skills</td>
</tr>
<tr>
<td>5.5 Oral Final-term</td>
<td>To assess skills of analysis and discussion</td>
</tr>
</tbody>
</table>

**Assessment Schedule** (in each semester):

<table>
<thead>
<tr>
<th>Exam</th>
<th>Week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Written Mid-term</td>
<td>8th week</td>
</tr>
<tr>
<td>Student activities</td>
<td>Throughout the semester</td>
</tr>
<tr>
<td>Written Final-term</td>
<td>16th week</td>
</tr>
<tr>
<td>Practical Final-term</td>
<td>16th week</td>
</tr>
<tr>
<td>Oral Final-term</td>
<td>16th week</td>
</tr>
</tbody>
</table>

**Weighing of assessments**

<table>
<thead>
<tr>
<th>Exam</th>
<th>Per Semester (%)</th>
<th>Total (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Written Mid-term</td>
<td>8</td>
<td>16</td>
</tr>
<tr>
<td>Student activities</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Written Final-term</td>
<td>25</td>
<td>50</td>
</tr>
<tr>
<td>Practical Final-term</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>Oral Final-term</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>50</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

٦. List of References:

٦١ Course Notes:

• Not printed

٦٥ Essential Book
• Hafez, E.S.E., ٨٠٨٠٩٩. Reproduction in farm animals ٩١٠٨ Philadelphia, USA.
• Noakes, D.E., ٨٠٨٠٩٩. Veterinary reproduction and obstetrics ٩١٠٠ Elsevier Publ., Philadelphia, USA.
• Robert (Veterinary Obstetrics and Genital Diseases)
• Arthur (Veterinary Reproduction and Obstetrics)
• Morrow (Current Therapy in Theriogenology)

Recommended Books:
• Threfall, R, ٨٠٨٠٩٩. Current Therapy in Large Animals Theriogenology. ٩٠٨٠٩٩ Elsevier Inc, USA.
• Schatten, H and Cheorghe, N ٨٠٨٠٩٩. Comparative Reproductive Biology Blackwell Publishing Professional, USA.

Periodicals, websites, ….. etc
Scientific Journals
• Journal of Dairy Science
• Journal of Theriogenology

Scientific websites
• www.sciencedirect.com
• www.pubmed.com
• www.altavista.com
• WWW.IVIS.ORG

V. Facilities Required for Teaching and Learning
• Ultrasonography
• Audio-visual aids
• Learning multimedia
• Closed TV circuit
• Microscope with monitor
• Computers
• Cinema (٨٠٨٠٩٩ mm.)

Course Coordinator: Prof Dr. Fekry Mohamed Hussein

Head of Department: Prof. Dr. Usama Mahros

Date: