

University: Damanhour  
Department: Theriogenology



Faculty: Veterinary Medicine

## Gynaecology and Andrology Course Specifications (2012 – 2013)

Program(s) on which the course is given: BVSc  
Department offering the program: ---  
Department offering the course: Theriogenology  
Major or Minor element of programs: Major  
Academic year /Level: 4<sup>th</sup> Year 2 semesters  
Date of specification approval:

### A. BASIC INFORMATION

Title: Gynecology and Andrology Code: ΣAGYN, ΣBGYN  
Hours:  
Lectures 2 hrs/week Practical 2 hrs/week Total 4 hrs

### B. PROFESSIONAL INFORMATION

1. Overall aims of the course:

- Knowledge: normal patterns and diseases of reproduction in male and female pet and farm animals, and the practical skills for diagnosis and treatment of diseases of reproduction in these animals.
- Skills: Diagnosis and treatment of Female and Male genital diseases, Practice artificial insemination and assisted reproduction in farm animals.

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

- a. Knowledge and Understanding: On successful completion of this course, the student should be able to:
- a) Define the basic terms in the fields of normal patterns and diseases of reproduction in male and female animals.
  - aγ Classify types of impotentia in male animals,
  - aΥ Draw the male and female reproductive organs,
  - aΣ Summarize the scheme of semen evaluation in bull
  - aO Recall different assisted reproduction techniques (control of estrus, AI, ET, IVC, IVF and cryopreservation) in animals,
  - aΓ Discuss physiology of estrus cycle in different animals,
  - aV List the different methods of semen collection in farm animals,
  - aΛ Explain sexual behaviours in domestic animals,
  - aϑ Describe semen processing in animals,
  - a)• Give examples for methods of estrous synchronization in animals,

a) Generalize the importance and uses of embryo transfer in animals.

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

- b) Summarize the physiology of reproductive cycle in male and female,
- bΥ Discriminate causes and forms of impotentia in male animal,
- bΥ Interpret sexual behaviours in male of different animals,
- b4 Select the appropriate methods controlling estrous cycle in pet animals,
- b5 Relate between diseases of reproduction and different forms of impotentia in male of different animals,
- b6 Differentiate between different forms of impotentia in male animals,
- bV Compare between different methods of semen collection in different animals,
- b8 Design programs for estrus synchronization and artificial insemination for dairy farms,
- b9 Infer advantages and disadvantages of artificial insemination in farm animal production,
- b10 Distinguish between patterns of reproduction in different animals,
- b11 Summarize pattern of reproduction in farm animals,
- b12 Correlate gamete passage and fertilization with infertility in farm animals.

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

- c) Use the artificial vagina for collection of semen in different animals,
- cΥ Perform semen processing and preservation in dairy farms,
- cΥ Produce a processed semen in AI centers,
- c4 Apply different methods of estrous synchronization in animals,
- c5 Examine bulls in artificial insemination centers,
- c6 Select sires for a dairy farm,
- c7 Judge libido of bulls in a dairy farm,
- c8 Diagnose different forms of infertility in male animals,
- c9 Increase the level of libido in a bull,
- c10 Assess the quality of fresh and frozen semen of bull,
- c11 Examine the male and female genital system.

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

- d) Deal ethically with faculty staff, colleagues and stakeholders,
- dΥ Utilize computer and internet skills,
- dΥ Work efficiently in a team and under the stressful field conditions,
- dΣ Communicate with professional and discussion groups and colleagues.

Υ. Contents:

First semester			
Topic	Total (hr)	Lectures (hr)	Practical (hr)
Reproductive hormones and estrus cycle	2	2	
Reproductive patterns in farm and pet animals			
• Reproductive patterns in equines	2	2	
• Reproductive patterns in cow and buffalo	4	4	
• Reproductive patterns in camel and small ruminants	2	2	
• Reproductive pattern in pet animals	2	2	
Sexual behavior	4	2	
Libido and impotentia			

• Lack of libido and impotentia coeundi	4	4	2
• Impotentia generandi	6	6	
Development of reproductive organs	4	4	
Gamete passages and fertilization	2	2	
Functional anatomy of female genital system	8		8
Functional anatomy of male genital system	8		8
Examination of bull and sire selection	6		6
Slaughterhouse material examination	6		6
Students activities			
- Posters and videos illustrating some cases of infertility.			
- Short assays.			
- Seminars & veterinary campaigns			
<b>Total</b>	<b>60</b>	<b>30</b>	<b>30</b>

### Second semester

Topic	Total (hr)	Lectures (hr)	Practical (hr)
History, advantages and disadvantages of AI	2	2	-
Biochemistry and metabolism of semen	4	4	-
Semen collection	6	4	2
Semen evaluation	12	4	8
Semen processing	10	4	6
Artificial insemination techniques	6	-	6
Assisted reproduction techniques			
- Control and synchronization of estrous	4	4	-
- Embryo transfer	8	4	4
- IVC, Cryopreservation and Ova manipulation	8	4	4
Students activities			
- Posters and videos illustrating some cases of infertility.			
- Short assays.			
- Seminars & veterinary campaigns			
<b>Total</b>	<b>60</b>	<b>30</b>	<b>30</b>
<b>Total of two semesters</b>	<b>120</b>	<b>60</b>	<b>60</b>

### Σ. Teaching and Learning Methods:

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<b>Lectures:</b>	<b>Interactive lectures through:</b> <ul style="list-style-type: none"> <li>• Student involvement in the discussions</li> <li>• The use of datashow for demonstration of electronic slides and scientific videos.</li> </ul>
<b>Practical sessions:</b>	<ul style="list-style-type: none"> <li>• Training on faculty farm animals.</li> <li>• Field trips to animal production farms.</li> <li>• Veterinary campaigns of the faculty.</li> </ul>
<b>Self-Learning</b>	<ul style="list-style-type: none"> <li>• Posters and videos illustrating some cases of infertility.</li> </ul>

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- activities:
- Short essays.
  - Seminars and presentations.
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**O. Student Assessment Methods:**

Exam		
5.1	Written Mid-term	To assess the ability to understand and remember knowledge, and intellectual skills
5.2	Student activities	To assess the Self-Learning ability of the student
5.3	Written Final-term	To assess the ability to understand and remember knowledge, and intellectual skills
5.4	Practical Final-term	To assess professional and practical skills
5.5	Oral Final-term	To assess skills of analysis and discussion

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

	Exam	Week
Assessment 1	Written Mid-term	8 <sup>th</sup>
Assessment 2	Student activities	Throughout the semester
Assessment 3	Written Final-term	16 <sup>th</sup>
Assessment 4	Practical Final-term	16 <sup>th</sup>
Assessment 5	Oral Final-term	16 <sup>th</sup>

**Weighing of assessments**

	Exam	Per Semester (%)	Total (%)
Assessment 1	Written Mid-term	8	16
Assessment 2	Student activities	2	4
Assessment 3	Written Final-term	25	50
Assessment 4	Practical Final-term	10	20
Assessment 5	Oral Final-term	5	10
	<b>Total</b>	<b>50</b>	<b>100</b>

**1. List of References:**

**1.1. Course Notes:**

- Not printed

**1.2. Essential Book**

- Hafez, E.S.E., 2001. **Reproduction in farm animals** 5<sup>th</sup> Ed. Philadelphia .USA
- Noakes, D.E., 2009. **Veterinary reproduction and obstetrics** 9<sup>th</sup> Ed. Elsevier Publ., Philadelphia, USA.
- Robert (Veterinary Obstetrics and Genital Diseases)
- Arthur (Veterinary Reproduction and Obstetrics)
- Morrow (Current Therapy in Theriogenology)

**1.3. Recommended Books:**

- Threfall, R, 2005. **Current Therapy in Large Animals Theriogenology**. 7<sup>nd</sup> Ed. Elsevier Inc, USA.
- Schatten, H and Cheorge, M 2005. **Comparative Reproductive Biology**. Blackw Publishing Professional, USA.

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**Scientific Journals**

- **Journal of Dairy Science**
- **Journal of Theriogenology**

**Scientific websites**

- [www.sciencedirect.com](http://www.sciencedirect.com)
- [www.pubmed.com](http://www.pubmed.com)
- [www.altavista.com](http://www.altavista.com)
- [WWW.IVIS.ORG](http://WWW.IVIS.ORG)

**V. Facilities Required for Teaching and Learning**

- **Ultrasonography**
- **Audio-visual aids**
- **Learning multimedia**
- **Closed TV circuit**
- **Microscope with monitor**
- **Computers**
- **Cinema (1V mm.)**

**Course Coordinator: Prof Dr. Fekry Mohamed Hussein**

**Head of Department: Prof. Dr. Usama Mahros**

**Date:**

