Benha University
Faculty of Veterinary Medicine
Department of Theriogenology

Course Specification for PhD Degree (2010- 2011)

Course Title: Female Reproduction

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Course specifications

Awarding Body:	Benha University
Teaching Body:	Faculty of Veterinary Medicine
Department responsible:	Theriogenology
Program on which the course is given:	PhD degree
Academic year / Level :	Post-graduate
Date of specification approval:	Ministerial Decree No 921, on 15/9/1987
Date of reviewing by department council:	28 /11 / 2010

A- Basic Information

Title	Female reproduction			**Code:**	PVD1
Lecture:	2 hours	**Practice:**	2 hours	**Total:**	4 hours

B- Professional information:

1- Overall aims of course:

- To prepare the Ph.D. student to be able to find out and how to solve the field problems related to lower female reproduction and infertility.
- To guide the candidate to do applicable researches to improve the female reproduction and/or compete the infertility problems.
- To provide the candidate with the more recent techniques and advanced diagnostic tools in the field of female reproduction.
- To achieve capability in laboratory and field diagnosis of the causes of low female reproductively.
- To have the ability of data statistical analysis, results interpretation and dissertation, presentation skill.

2- Intended Learning Outcomes of Course (ILOs)

a- Knowledge and understanding:

By the end of this course the graduates should be able to:

a.1. To describe the most advanced concepts about physiology of reproduction in females.

a.2. To realize the recent approach to diagnose the different types of infertility in female.

a.3. To recognize the basic and advanced theories of ovulation and fertilization.

a.4. Up to date researches about optimum method for handling infertility problems in females

a.5. To apply their knowledge and understanding of hormonal regulation of reproduction to the critical analysis and discussion of the scientific literature.

a.6. To recognize the different procedures and disciplines those improve the fertility status of the herd.

a.7. To demonstrate the quality principles and basics in female reproduction professional practice.

b- Intellectual Skills:

By the end of this course the graduates should be able to:

b.1. To identify, conceptualize and define problems related to female reproduction.

b.2. To evaluate their own research data and develop new approach to solve female reproductive problems by incorporation of various knowledge in spite of inadequacy of some resources.

b.3. Prepare and write a scientific research plan in the field of female reproduction.

b.4. To develop creative approaches for solving the technical problems or issues associated with the sustained research projects.

b.5. To identify, summarize and evaluate previous researches adopted in the field of female reproduction.

b.6. To understand areas where further researches necessary and be aware of any which would be beyond current ethical codes.

b.7. Design a plan for enhancing female reproduction or synchronization of estrus.

c- Professional and Practical Skills:

By the end of this master course the graduate should be able to:

c.1. To handle those recent techniques and tools adopted to evaluate the fertility status and diagnose causes of the reproductive failure in farm animals.

c.2. To apply the principles of good experimental design and analysis to their own research project.

c.3. To select and perform relevant programs of statistical analysis on data obtained for their own research.

c.4. To plan and execute a research project in the field of theriogenology with a consideration to the technical, ethical and safety issues and associated costs.

c.5. To achieve practical skills that underpins techniques associated with estrous detection and enhances the animal expression of signs of heat.

c.6. To perform laboratory skills related to the recent techniques used to diagnose female infertility.

d- General and Transferable Skills:

By the end of this course the graduates should be able to

d.1. To have the ability to learn independently in preparation for career of lifelong learning.

d.2. To have information retrieval and library skills.

d.3. To have interpersonal skills and team working ability by successful completion of collaborative learn assignment and the honors researches project.

d.4. To present research finding in oral and written from using arrange of appropriate soft ware(e.g., power point, word, excel and database)

3- Contents

No.	Topic	Lect./h	Pract./h	Total/h
1	Hormonal regulation of reproduction	2	2	4
2	Normal cyclicity of estrus	2	2	4
3	Theories of ovulation & fertilization	2	2	4
4	Congenital causes of infertility	2	2	4
5	Pathological causes of infertility	2	2	4
6	Environmental causes of infertility	2	2	4
7	Hormonal causes of infertility	2	2	4
8	Estrous detection & synchronization	2	2	4
	Total	16	16	32

Teaching and Learn

4- Teaching Methods

4.1. Lectures

The department council assigns one of the teaching stuff to teach a special chapter in the course syllabus. The entire student will attend one class 3h/week. The teacher will use all the available teaching tools including data show and overhead projectors. The lectures usually take the form of open discussion

4.2. Discussion sessions

The student will be responsible for making a presentation about and discuss one subject (usually related to his thesis subject) in front of all department members

4.3. Information collection

The supervisors will make assignment for their student to collect data and make a complete review about one subject (usually related to his thesis subject).

4.4. Practical training / laboratory

The students will take the practical course 4hours/week under supervision of one of the department member 2 assistants. During the lab the student will do all practical syllabus by them self.

4.5. Research assignment field

The student will be responsible for searching for the most recent research pint and designs a plan for his research work.

4.6. Visits.

The student will chair in some visits to the surrounding villages and /or farms

4.7. Case studies.

The student will chair in diagnosis and handling cases came to the faculty educational hospital.

5- Student assessment methods

- Practical exam to assess professional and practical skills.
- Oral exam to assess knowledge and information and intellectual skills.
- Written exam to assess knowledge, information and intellectual skills.
- Assignments to assess management of clinical cases.

6- Student assessment grade:

Method	Weighting		Evidence
	Mark	%	
Written Examination	50	50	Marked and signed written paper
Oral Examination	20	20	Signed list of oral exam marks
Practical Examination	20	20	Marked and signed practical exam sheet
Seminar	10	10	**??????**
Total	**100**	**100**	

7- List of references

a- Course Notes

- A concise guide of theriogenology.

b- Essential Text Books:

- Animal breeding and infertility, Michael Meredith, 1995.
- Cattle embryo transfer procedure, John Curtis, 1991.
- Clinical obstetrics and gynecology, Lind Heimer, Davidson, 1994.
- Congenital malformations in lab and farm animals, Kalman, 1989.
- Ultrasonography in obstetrics and gynecology, Peter, Callen, 3rd Ed., 1994.

c- Recommended Reference Books:

- Fertility and infertility in veterinary practices, Laing, et al., 4th Ed., 1988.
- Physiology of reproduction and A.I. in cattle, Salisbury, et al., 1985.
- Reproduction in farm animals, Hafez, 7th Ed., 2000
- Veterinary Reproduction and obstetrics, Arthur, et al., 6th Ed., 1989.
- Current therapy in theriogenology, Morrow, 1980

d- Periodicals

- J. Animal reproduction & Fertility
- J. Fertility & Sterility
- Theriogenology.
- Benha veterinary medical journal.
- Veterinary record
- Journal dairy science
- Journal animal science

e- Web sites

- google.Com
- arabvet.com
- esarf.tripod.com/index.html.

f- Facilities required for teaching and learning:

1- Video Films.
2- Data-show.
3- Farm animals for clinical application
4- Network for technology transfer.
5- Overhead projector.
6- Laboratory kits for reproductive biotechnology.
7- Computer.
8- Field visits.

Date of production and revision: 28/ 11 / 2010
Date of approval: 28/ 11 / 2010
Course Co-coordinator: **Head of Department**