Benha University
Faculty of Veterinary Medicine
Department of Theriogenology

Course Specification for Master Degree (2010- 2011)

Course Title: Artificial Insemination In Ruminants

Benha University
Faculty of Veterinary Medicine
Department of Theriogenology

Course Specification for Master Degree
(2010- 2011)

Course specifications

Awarding Body:	Benha University
Teaching Body:	Faculty of Veterinary Medicine
Department responsible:	Theriogenology
Program on which the course is given:	Master 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	A.I. in ruminants		**Code:**	MVS-SS6	
Lecture:	2 hours	**Practice:**	2 hours	**Total:**	4 hours

B- Professional information:

1- Overall aims of course:

- To provide candidates the opportunity to have deep skill and attitude in handling recent techniques and diagnostic tools.
- To achieve capability in modern laboratory technology in developing a practical research project.
- To demonstrate an awareness of the connection with the different disciplines of the world-wide research institutions by reviewing the scientific literature.
- To critically review and present their own research data for the protection and promotion of the animal health.
- To prepare and upgrade the students for registering to the PhD degrees in field of the theriogenology.

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 demonstrate concepts about AI application in the field of ruminant reproduction.
a.2. To describe the basis of semen biochemistry, metabolism and semen processing.
a.3. To know bases of the optimum method for handling, diluting and preservation cow-buffalo semen sample.
a.4. Up to date research points in the field of artificial insemination.
a.5. To apply knowledge and understanding of the artificial insemination to the critical analysis and discussion of the scientific literature.
a.6. To recognize the different procedures that improves the fertility status of the herd.

b- Intellectual Skills:

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

b.1. To detect the possible approach to spread the knowledge of AI application among practitioners and animal owners.
b.2. To select the best approach to pertain AI to control venereal infection using the available facilities and information.
b.3. To achieve maximum benefit from AI in his community.
b.4. To identify, summarize and evaluate prior researches finding in the field of artificial insemination.
b.5. Design a plan for optimum application of AI in dairy farms.

c- Professional and Practical Skills:

By the end of this diploma the graduate should be able to:

c.1. To collect, evaluate, dilute and preserve semen sample in a proper way and under high hygienic standards.
c.2. To apply the principles of good experimental design and analysis to their own research project.
c.3. To select and perform relevant statistical analysis on data obtained for their own research about semen evaluation.
c.4. To plan and execute a research project in the field of AI with a consideration to the technical, ethical and safety issues and associated costs.

c.5. To perform essential laboratory skills that underpin techniques associated with semen biology and AI.

d- General and Transferable Skills:

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

d.1. To demonstrate an ability to learn independently in preparation for career of lifelong learning.
d.2. To demonstrate information retrieval and library skills.
d.3. To demonstrate interpersonal skills and team working ability by successful completion of collaborative learn assignment and 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	Advantages & disadvantages of A.I.	2	2	4
2	Sire selection for A.I. purposes	2	2	4
3	Methods of semen collection	2	2	4
4	Techniques of semen evaluation	2	2	4
5	Semen extenders & extension	2	2	4
6	Processing of the frozen semen	2	2	4
7	Handling of the frozen semen	2	2	4
8	Records & recording systems	2	2	4
	Total	16	16	32

Teaching and Learning

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 2h/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 2hours/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 village and /or farms

4.7. Case studies.

The student will chair in diagnosis and handling case came to the faculty external clinic

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
Student activity	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- Experimental animals.
4- Teaching hospital.
5- Overhead projector.
6- Laboratories.
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**