

Artificial Insemination and Embryo transfer

Benha University

Faculty of Veterinary Medicine

Programme on which the course is given: **Bachelor of Veterinary Medical Sciences**

Department offering the course : Theriogenology

Academic year/level : Fifth (First 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. Identify the techniques of semen collection, evaluation, processing and handling.
- a.2. Locate 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 Analyze the utilization of reproductive biotechnologies
- b.2. Practice the handling with a problem of A.I
- b.3..Formulate and Learn good breeding policy.

c- Professional and practical skills:

After successful completion of the courts the students should be able to:

- c.1. Measure how to handle improve fertility and fertilizing capacity
- c.2 Evaluate an infertility problem
- c.3. Choose different tools 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 :

Topic	No. of hours	Lecture	Tutorial/ practical
Semen collection	10	4	6
Semen evaluation	10	4	6
Semen dilution & storage	10	4	6
Deep frozen semen	10	4	6
Insemination technique	10	4	6
Management of artificial insemination	11	5	6
IVF & Embryo transfer	14	5	9
Total	75	30	45

4- content-ILOs matrix

Content	ILOs			
	Knowledge and understanding	Intellectual	Professional and practical	General and transferable
Semen collection	a1, a2	b1, b2,b3	c1c3	d2

Semen evaluation	a1, a3	b1, b2,b3	c1, c2 , c3	d1, d2,
Semen dilution & storage	a1, a3	b1, ,b3,	c1, c2 , c3	d1
Deep frozen semen	a1, a2, a3	b1, b3	c1, c2 , c3	
Insemination technique	a1, a3	b1, b2	c1,c3	
Management of artificial insemination	a1, a2	b1,b3	c1	d1, d2
IVF & Embryo transfer	a1, a2	b1,b3	c1, c2 , c3	d1, d2

5- Assessment-ILOS matrix

Assessment	ILOs			
	Knowledge and understanding	Intellectual	Professional and practical	General and transferable
Mid - Term	a1, a2	b1, b2	c2 , c3	
Practical	a3	b1, b2,b3	c1, c2 , c3	

Oral	a1, a3	b1, b2,b3	c1, c3	
Final written exam	a2, a3	b1, b2,b3	c1, c2 , c3	
Assignments (Part of mid term grads)				d1, d2, d3

6- Teaching and learning methods :

- . Data show
- .Over- head projector
- . Slide projector
- . Video tapes
- . Lab equipments

7- Student assessment methods :

- Team work (quiz, homework, case report)
- . Mid-term exam to assess knowledge and understanding
- Practical exam for practical skills
- Oral exam to assess professional and practical skill
- . 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 :

Mid term Examination	10 %
Final- term examination	50 %
Oral examination	15 %
Practical examination	15 %
Term work (quiz and case report)	10 %
Total	100 %

8- List of references :

8.1. Course notes:

- Artificial insemination & Embryo transfer edited by the staff members

8.2. 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

8.3. 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

8.4. Periodicals, Web sites,..... etc

- J. Animal reproduction & Fertility
- J. fertility & Sterility
- J. Theriogenology
- Google. Com.
- Arabvet. Com
- Esarf. Tripod. Com/index. Htm.

9- 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 coordinator:



Prof. Dr. A.I El Azab

Head of Department:

Prof. Dr. Mahmoud Abed Abouy EL- Roos

Date: 13/ 2/2009