جامعة الشرقية
A' SHARQIYAH UNIVERSITY

Course Descriptor
VTMD422 Veterinary Artificial Insemination and Embryo Transfer

Proposed Academic Year	2021 - 22	**Last Reviewed Academic Year**	
Course Code	VTMD422	**Course Title**	Veterinary Artificial Insemination and Embryo Transfer
Credit hours	2	**Level of study**	Undergraduate
College / Centre	CAHS	**Department**	VTMD
Co-requisites		**Pre-requisites**	VTMD414

1. COURSE OUTLINE

The course introduces the applications of molecular genetics in selection; marker assisted selection; cloning, quantitative trait loci; gene transfer; transgenic animals; in vitro fertilization; sex control; embryo splitting.

2. AIMS

This course aims to provide training in reproductive management techniques including Artificial Insemination (AI), Embryo Transfer (ET) and ultrasonography that is needed to improve reproductive performance in water buffalos, cattle, and other animals. Poor reproductive performance is a major factor limiting the growth and expansion of all ruminant livestock enterprises including the water buffalo and cattle industries.

3. LEARNING OUTCOMES, TEACHING, LEARNING and ASSESSMENT METHODS

Learning Outcomes ***(Definitive)*** Upon successful completion of this course, students will be able to**:**	**Teaching and Learning methods** ***(Indicative)***	**Assessment** ***(Indicative)***
1. Discuss the physiology of gametogenesis, embryogenesis, pregnancy, parturition and lactation.	Power point presentations, lab work, discussion	Work sheets and written examinations
2. Apply artificial Insemination.	Power point presentations, lab work, discussion	Work sheets and written examinations
3. Explain the strategies for the management of reproduction and fertility in animals.	Power point presentations, lab work, discussion	Work sheets and written examinations
4. Evaluate critically the advantages/disadvantages of current and developing reproductive technologies.	Power point presentations, lab work, discussion	Work sheets and written examinations

4. ASSESSMENT WEIGHTING

Assessment	Percentage of final mark (%)
Assignment	20%
Quizzes	20%
Mid-term Examination	20%
Final Examination	40%
TOTAL	**100%**

5. ACHIEVING A PASS

Students will achieve **2** credit hours for this course by passing **ALL** of the course assessments *[Quizzes, Mid-term, Final Examination*]* and achieving a **minimum overall score of 50%**

NB *Ensure that ALL learning outcomes are taken into account

6. COURSE CONTENT (Indicative)

Embryo transfer.	
In vitro embryo production.	
Controlling oestrus and ovulation.	
Control of postpartum ovarian activity.	
Control of seasonal breeding and Synchoranization	
Controlling multiple births and litter size.	
Pregnancy testing technology.	
Controlling parturition.	
Controlling onset of puberty.	
Production of clones and transgenics.	
Suppressing reproductive activity.	
TOTAL HOURS	**30**
Plus **RECOMMENDED INDEPENDENT STUDY HOURS**	**15**
TOTAL COURSE HOURS	**45**

7. RECOMMENDED REFERENCES

Core text/s:
--Timothy J. Parkinson, Gary C. W. England (Editors): Arthur's Veterinary Reproduction and Obstetrics. 9th ed. Saunders (2009).

Library + online resources:

Open Educational Resources: