Module (Course Syllabus) Catalogue

2023-2024

College/ Institute	Shaqlawa Technical College	
Department	Veterinary	
Module Name	Reproductive Physiology & Artificial Insemination	
Module Code	RAI403	
Semester	4th Semester	
Credits	6	
Module type	Prerequisite ☐ Core √ Assist. ☐	
Weekly hours	4 hr	
Weekly hours (Theory)	(2)hr Class	(75)hr Workload
Weekly hours (Practical)	(2)hr Class	(75)hr Workload
Lecturer (Theory)	Dr. Abdulhadi Omar Qoja	
E-Mail& Mobile NO.	abdulhadiomar@epu.edu.iq	
Lecturer (Practical)	Dr. Abdulhadi Omar Qoja	
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Course Book

Course Description	Study of the functions of reproductive organs of farm animals, endocrine glands and hormonal regulation of reproduction, synchronization of estrous and improving reproductive performance of farm animals, collection, testing, refrigeration and freezing of semen, methods and techniques of artificial insemination in farm animals.
Course objectives	In general, this class is designed to teach the student reproductive management of the female. In addition, and endocrinology is covered in this class. This class will take advantage of all previous courses that covered related materials to animal reproduction. This includes animal physiology, cattle production and sheep and goat production. The practical part of this class is designed to teach the student how to perform detailed reproductive examination of the female and male domestic animals.
Student's obligation	1-The student attention in all theoretical and practical lectures in academic year. 2-Completion of all tests. 3-Attendance in exams. 4-Write or prepare reports.
Required Learning Materials	lecture halls with data show equipment for lecture presentations, white board, overhead projector, posters
Assessment scheme	16% Mid Term (Theory and practical) 4% Quiz 40% Assignment (report, paper, homework, seminar..) 25% final practical 15% final theory
Specific learning outcome:	At the end of this course students should be able to; 1) Describe the reproductive anatomy and reproductive function in domestic animals. 2) To familiarize students with physiological and endocrinological events which constitute the

	reproductive cycle. 3) Understand reproductive management of the female and male animals 4) Discuss factors affecting efficiency of reproduction in animals. 5) Describe and discuss estrous synchronization and embryo transfer programs 6) Demonstrate proper artificial insemination techniques in cattle. 7) Demonstrate proper semen handling and pregnancy diagnostic techniques. 8) Evaluate the collected semen by the macroscopic and microscopic semen examinations. 9) Inseminating cows and Applying hormones and sponges for estrous synchronization
Course References:	1) Reproduction in Farm Animals .7th (ed) (2000) 2) Applied Animal Reproduction. 6t (ed) (2003) 3) Compendium of Animal Reproduction.9th (ed)(2006) 4) PowerPoint lectures.

Course topics (Theory)	**Week**	**Learning Outcome**
- Female Reproductive System(Description & Functions)	1	1&2
- Male Reproductive System(Description & Functions)	2	1&2
- Endocrine Glands and Sexual Hormones	3	2,4 &9
- Sexual Puberty & Maturation	4	3&4
- Factors Affecting on Reproductive	5	3&4
- Spermatogenesis	6	1,4&8
- Estrous Cycle	7	4&5
- Synchronization of Estrous	8	4,4&9
- Physiology of Fertilization	9	1,2&3
- Gestation	10	1,2&3

- Parturition and care of Parturient animals	11	1,2&3
- Embryo Transfer in Farm Animals	12	1,2&3
Practical Topics	**Week**	**Learning Outcome**
- Dissection Female Genital Organs	1	1&2
- Dissection Male Genital Organs	2	1&2
- Clinical Examination of the Female & Male Genital Tract	3	1&2
- Introduction and Description of Artificial Insemination	4	6,7&8
- Structure of sperm and Chemical characteristic of seminal plasma	5	6,7&8
- Methods of Semen Collection	6	6,7&8
- Macroscopic Evaluation of Semen	7	6,7&8
- Sperm Cell Morphology & Differential Staining of Live and Dead Sperm	8	6,7&8
- Semen Collection by Artificial Vagina from bull and ram	9	6,7&8
- Semen Processing, Storage, Thawing, and Handling, Buffer Solutions Used in Semen Diluters	10	6,7&8
- Insemination Techniques & Cow insemination Training	11	6,7&9
- Pregnancy diagnosis by rectal palpation and ultrasonography	12	6,7&9

Questions Example Design:

- **Complete the following sentences.**
- **Define the following terms.**
- **Fill in the blanks with correct choice.**
- **Choose a phrase from list (A) then another from list (B) that completes its meaning.**
- **Enumerate the following.**
- **Describe the functions/purpose.**
- **Select True or False.**

Extra notes:

- **During semester time, the details are applied in assessment scheme.**

External Evaluator:

- **The topics are broad and are aimed to equip students with required knowledge to enable them to understand the reproduction physiology and artificial insemination equipment in farm animals.**