

TY03010: VETERINARY THERIOGENOLOGY 2

1. General information

- Term: 8
- Credits: **Total credits 2 (Lecture:1.5 – Practice:0.5)**
- **Self-study: 6** credits
- Credit hours for teaching and learning activities: 30 hrs
- Self-study: 90 hrs.
- Department conducting the course:
 - Department: Animal Surgery and Theriogenology
 - Faculty: Veterinary Medicine
- Kind of the course: Specialize

Foundation ☐		Fundamental ☐		Specialized ☒	
Compulsory ☐	Elective ☐	Compulsory ☐	Elective ☐	Compulsory ☐	Elective ☒

- Prerequisite course(s):

2. Course objectives and expected learning outcomes

* *Course objectives:*

- Knowledge: Course provides students with knowledge in pregnancy, animal birth, causes, symptoms, as well as harms of major reproductive diseases to know how to diagnose, proactively prevent and treat reproductive diseases in animals.
- Skills: Course provides students with skills in Fixing livestock diseases, methods of antenatal check-up, examination of genital organs, handling of reproductive diseases, treatment of ovarian diseases in cattle.
- Attitude: Course provides students with attitude attitude of love for livestock, calm, considerate, persistent in diagnosing, treating and caring for livestock with reproductive diseases.

* *Course expected learning outcomes*

Notation	Course expected learning outcomes (CLOs) After successfully completing this course, students are able to	Program performance criteria (PPC)
Knowledge		
CLO1	Apply veterinary knowledge to the animal disease diagnosis and treatment effectively.	3.4: Apply veterinary knowledge to improve animal health
Skills		
CLO 2	Implement proficiently clinical and non-clinical skills, technical procedures in disease diagnosis and treatment for domestic animals, and animal disease prevention and control to contribute to the protection of public health	8.1: Implement proficiently clinical and non-clinical skills, and technical procedures in the disease diagnosis and treatment for animals to contribute to the protection of public health

CLO 3	Use proficiently information technology and modern equipment of the veterinary industry to serve animal disease diagnosis, treatment, prevention and management to achieve the set goals	10.2: Use modern veterinary equipment for animal disease diagnosis, treatment, prevention and management to achieve the set goals
Attitude		
CLO 4	Comply with regulations and law, maintain professional ethics	12.2: Maintain professional ethics of veterinarians
CLO 5	Demonstrate responsibility to protect the environment, improve public health and show love for animals	13.2: Show love for animals

3. Course description

Brief description of the course: This course consist of pregnancy in animals; The process of parturation; Reproductive Diseases during pregnancy; Abortion; Reproductive diseases during calving; Postpartum diseases; Diseases of the mammary glands; Reproductive failure in cattle. Teaching method: students listen to lectures and practice in class. Evaluation method: Diligence 10%; Midterm exam 30%; Final exam 60%.

4. Teaching and learning & assessment methods

CLO	CLO1	CLO2	CLO 3	CLO 4	CLO 5
Teaching and Learning					
Lecture					
Practice					
Assessment					
Rubric 1. Diligence	X			X	
Rubric 2. Practice		X	X		X
Rubric 3: Midterm exam	X			X	X
Rubric 4: Final exam	X			X	X

5. Student tasks

Attendance: All students need to attend at least 80% hours of theoretical lessons and 100% hours of practical lessons.

- Prepare for the lecture: All students need to read textbooks or references before the teacher's lecture before learning a new lesson.
- Practice: All students need to fully participate in practical lessons and participate in the implementation of practical content.

- Midterm exam: all students are required to take the midterm exam.
- Final exam: all students must take the final exam

6. Text books and references

* **Text Books/Lecture Notes:**

* **Textbooks/Lectures:**

* **Additional learning materials during the learning process**

Nguyen Van Thanh, Tran Tien Dung, Su Thanh Long, Nguyen Thi Mai Tho (2016). *Textbook of reproductive diseases in animals*. Agricultural Academy Press, 201 pages.

7. Course outline

Week	Content	CLO of the course
Week 1	Chapter 1: Pregnancy in domestic animals	
	A/Main content in class: (6,5 hours) Theoretical teaching content: 3 1.1. Concepts 1.2. Gestation 1.3. Number of fetuses 1.4. Embryo development 1.5. Fetal development through the months 1.6. Placenta system 1.7. Position, direction, and direction of the fetus in the uterus 1.8. Nurturing and managing pregnant animals 1.9. Diagnosis of pregnancy in animals Practical teaching content: (3,5 hours) 1.10. Method of examining the genital tract of female cattle 1.11. Method of antenatal care for cattle	K1, K2, K3, K4, K5
	B/ Self-study contents: (15 hours) - The development of the horse fetus - The development of the cow fetus - Pig fetus development - The mode of exploitation and use of pregnant cattle	K1, K4, K5
Week 2	Chapter 2: Parturation	
	A/ Main content in class: (4,5 hours) Theoretical content: 2 2.1. Concept 2.2. Factors that promote childbirth 2.3. Expression of the mother cattle near calving	K1, K2, K3, K4, K5

Week	Content	CLO of the course
	2.4. The process of giving birth 2.5. Midwifery method 2.6. Postpartum period Practical teaching content:(2,5 periods) The art of midwifery for cattle	
	B/ Self-study contents: (9 hours) 2.7. Caring for livestock after farrowing	K1, K4, K5
Week 3	Chapter 3: Reproductive diseases during pregnancy	
	A/ Main content in class:(4 periods) Theoretical teaching content:2 3.1. Edema during pregnancy 3.2. Uterine bleeding phenomenon 3.3. Giving birth too early 3.4. Paralysis before birth 3.5. Vagina turned out 3.6. Miscarriage phenomenon	K1, K4, K5
	B/ Self-study contents: (6 hours) 3.7. Ectopic pregnancy 3.8. Membranous edema disease 3.9. Little pregnancy fluid	K1, K4, K5
Week 4	Chapter 4: Common diseases during parturations of female animals	
	A/ Main content in class:(6 periods) Theoretical content: (3 hours)) 4.1. Straining disease is too weak 4.2. Straining to give birth is too strong 4.3. Close to each other 4.4. Uterus upside down	K1, K4, K5
	B/ Self-study contents: (9 hours) 4.5. Uterine twisting 4.6. Pelvic stenosis 4.7. Narrowing of the genital tract 4.8. Genital tract tear	K1, K4, K5
Week 5	Chapter 5: Dystocia	
	A/ Main content in class: (6 periods) Theoretical content: (3 hours) 5.1. Check livestock before intervention 5.2. Prepare before intervention for difficult labor 5.3. Some types of difficult labor and intervention methods Practical teaching content: (3 hours) Techniques to intervene when cattle have difficulty giving birth	K1, K2, K3, K4, K5

Week	Content	CLO of the course
Week 6	Chapter 6: Reproductive diseases in the postpartum period	
	A/ Main content in class: (6 periods) Content of theoretical teaching: (3 hours) 6.1. Inflammatory Bowel Disease 6.2. Paralysis after childbirth 6.3. Milk fever 6.4. Mother pig syndrome biting her baby, eating her baby	K1, K4, K5
	B/ Self-study contents: (9 periods) 6.5. Postpartum infection 6.6. Vaginitis, vestibular, vaginal	K1, K4, K5
Week 7	Chapter 7: Diseases of the mammary gland	K1, K4, K5
	A/ Main content in class: (6 periods) Content of theoretical teaching: (3 hours) 7.1. Methods of diagnosis of diseases of the breast 7.2. Classification of mastitis 7.3. Complications of mastitis 7.4. Prevention of mastitis 7.5. Some pathological processes in the mammary gland of pigs	K1, K4, K5
	B/ Self-study contents: (9 periods) 7.6. Some characteristics of the physiological structure of the mammary gland 7.7. Factors affecting mastitis in dairy cows	K1, K4, K5
Week 8	Chapter 8: Reproductive disorders in cattle	
	A/ Main content in class: (7 periods) Content of theoretical teaching: (3 periods) 8.1. Phenomenon of reproductive failure in female cattle 8.2. The phenomenon of false pregnancy	K1, K4, K5
	B/ Self-study contents: (9 periods) 8.3. Phenomenon of reproductive failure in male cattle	K1, K4, K5