AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title		Reproduction and Artificial Insemination in Mares						
Course Code		VST622		Couse Level		Third Cycle (Doctorate Degree)		
ECTS Credit	6	Workload	150 *(Hours)*	Theory	2	Practice	2	Laboratory	0
Objectives of the Course		To give information about detection of oestrus and oestrus symptoms, various oestrus detection methods						
Course Content		Description of oestrus in farm animals, detection of oestrus symptoms and oestrus in farm animals						
Work Placement		N/A						
Planned Learning Activities and Teaching Methods		Explanation (Presentation), Demonstration, Individual Study						
Name of Lecturer(s)		Prof. İlker SERİN						

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	60

Recommended or Required Reading

1	Hafez E.S E., Hafez B. (2000) Reproduction in Farm Animals. Lippincott Williams & Wilkins, Philadelphia
2	Bearden H.J., Fuquay J.W., Willard S.T. (2004) Applied Animal Reproduction. Pearson Prentice Hall, New Jersey.
3	Mitchell J.R., Doak G. A. (2004) The Artificial Insemination and Embryo Transfer of Dairy and Beef Cattle (including information pertaining to goats, sheep, horses swine, and other animals). Pearson Prentice Hall, New Jersey.
4	Pineda M. H., Dooley M. P. (2003) McDonald's Veterinary Endocrinology and Reproduction, Iowa State Press, New York

Week	Weekly Detailed Course Contents	
1	Theoretical	Puberty and sexual maturity in mares
	Practice	Preparation of mares for artificial insemination
2	Theoretical	Physiology of reproduction in mares
	Practice	Keeping under control of mare
3	Theoretical	Physiology of reproduction in mares
	Practice	Palpation of cervix and uterine during rectal palpation
4	Theoretical	Sexual cycle of mare
	Practice	Palpation of cervix and uterine during rectal palpation
5	Theoretical	Hormonal mechanism of sexual cycle in mares
	Practice	Palpation of ovaries during rectal palpation
6	Theoretical	Determination of oestrus in mares
	Practice	Palpation of ovaries during rectal palpation
7	Theoretical	Determination of oestrus in mares
	Practice	Evaluation of follicle by ultrasound
8	Practice	Oestrus detection in mares which teased by stallion
	Intermediate Exam	Midterm exam
9	Theoretical	Benefits of artificial insemination in mares
	Practice	Oestrus detection in mares which teased by stallion
10	Theoretical	Determination of the most appropriate time for insemination in mares
	Practice	Examination of stallions sperm
11	Theoretical	Examination of sperm which is going to use for insemination
	Practice	Preparation of artificial insemination catheter
12	Theoretical	Pedigree in mares
	Practice	Techniques for artificial insemination
13	Theoretical	Artificial insemination of mare and artificial insemination equipments
	Practice	Techniques for artificial insemination
14	Theoretical	Artificial insemination of mare
	Practice	Practise of artificial insemination

15	Theoretical	Artificial insemination of mare
	Practice	Repetition of practise of artificial insemination
16	Final Exam	Final term exam

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	0	2	28
Lecture - Practice	14	0	2	28
Assignment	2	0	10	20
Reading	14	0	2	28
Midterm Examination	1	14	2	16
Final Examination	1	28	2	30
			Total Workload (Hours)	150
		[Total Workload (Hours) / 25*] = **ECTS**		6

*25 hour workload is accepted as 1 ECTS

Learning Outcomes

1	To get information about physiology of reproduction and reproductive hormones
2	Hormonal mechanism and sexual cycle in mares
3	Application of artificial insemination in mares
4	Artificial insemination and its importance
5	Estrus detection and time of artificial insemination

Programme Outcomes *(Reproduction and Artificial Insemination (Veterinary Medicine) Doctorate)*

1	To get knowledge about reproduction and artificial insemination with theoretical lessons and practise, also to get knowledge about reproductive systems of animals, reproductive organs and functions of these organs
2	Hormonal mechanisms of oogenesis and spermatogenesis, movements of oocyte and sperm cells in the genital tracts, factors affecting spermatogenesis and oogenesis, blood-testis barrier, functions of epidydymidis, capacitation and acrosome reaction of sperm cells, fertilization (fusion, activation, penetration)
3	To get knowledge about reproductive anatomy of male and female animals, reproductive endocrinology, , embryonic development of gonads, prenatal development, development-regression and luteolysis of corpus luteum, histological, anatomical and physiological structure of uterus, fertilization, early embryonic development, luteal mechanism, implantation, involution of uterus post partum, sperm migration in cervical mucus, oogenesis, acrosomal enzymes, fusion, activation, penetration, syngamy and polispermy and reproductive health
4	To get ample information about the structure and functions of hormones related to reproduction and diagnosis of oestrus, proper seeding time and gain experience in the selection of the technique in domestic animals
5	To get experience to join reproductive scientific research, to follow scientific advances own field. To transfer all these experiences and knowledge to students and society
6	To gain ability to reach scientific references, to plan an experiment, study this experiment, evaluation of experimental results and compare this result similar experimental result
7	Systematic of special examination, morphological and functional examination of genital organs, microbiological examination of sperm cells, ultra structure characteristics of sperm cells, factors affecting sperm quality, spermatological examination, Short term storage and cryopreservation of sperm cells, cryopreservation methods, factors affecting the success of thawing sperm cells, manipulations applied before or after thawing
8	To get knowledge about reproductive biotechnology (artificial insemination, in-vitro fertilisation, freezing of sperm and embryo, embryo transfer, laparoscopic insemination). To Contribute and advance to science
9	To get knowledge about infertility, diagnosis of infertility, treatment of infertility in domestic animals especially commercial farms
10	To make a research about reproduction and artificial insemination, this can contribute and advance to science
11	To get experience about to write a national or international article about reproduction and artificial insemination, this can contribute and advance to science

Contribution of Learning Outcomes to Programme Outcomes *1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High*

	L1	L2	L3	L4
P1	4	4	4	4
P2	4			
P3	4	4		
P4	5			
P8			3	4