AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Reproductive Biotechnology and Applications								
Course Code	VST542		Couse Level	Second Cycle (Master's Degree)					
ECTS Credit	2	Workload	50 *(Hours)*	Theory	1	Practice	0	Laboratory	0
Objectives of the Course	To give information about reproductive biotechnology and its applications in domestic animals								
Course Content	Reproductive biotechnologies, producing in vitro embryo, preservations of oocyte and embryos, determination of sex in embryos								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Discussion								
Name of Lecturer(s)									

Assessment Methods and Criteria		
Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	60

Recommended or Required Reading	
1	Ball P.J.H., Peters A.R. (2004) Reproduction in Cattle. Blackwell Publishing, Oxford
2	Bearden H.J., Fuquay J.W., Willard S.T. (2004) Applied Animal Reproduction. Pearson Prentice Hall, New Jersey
3	Feldman E. C., Nelson R. W. (2004) Canine and Feline Endocrinology and Reproduction. Saunders, St. Louis
4	Hafez E.S E., Hafez B. (2000) Reproduction in Farm Animals. Lippincott Williams & Wilkins, Philadelphia
5	Pineda M. H., Dooley M. P. (2003) McDonald’s Veterinary Endocrinology and Reproduction, Iowa State Press, New York
6	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
7	Evans G., Maxwell WMC. (1987) Salamon’s Artificial Insemination of Sheep and Goats. Butterworths, Sydney

Week	Weekly Detailed Course Contents	
1	Theoretical	Progress of reproductive biotechnologies in the world
2	Theoretical	Oestrus synchronisation
3	Theoretical	Synchronisation of ovulation
4	Theoretical	Multiple ovulation and embryo transfer (MOET) method
5	Theoretical	Laparoscopic owum pick up (LOPU) technique
6	Theoretical	Producing in vitro embryos
7	Theoretical	Producing transgenic animal and cloning
8	Intermediate Exam	Midterm exam
9	Theoretical	Determination of embryo quality
10	Theoretical	Freezing of embryos and preservation
11	Theoretical	Determination of embryo sex
12	Theoretical	Identical twins obtained from embryos
13	Theoretical	Laparoscopic inseminations
14	Theoretical	Intra cytoplasmic sperm injection (ICSI)
15	Theoretical	In-vitro fertilization
16	Final Exam	Final term exam

Workload Calculation				
Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	0	1	14
Reading	14	0	1	14
Midterm Examination	1	7	1	8

Final Examination	1	12	2	14
			Total Workload (Hours)	50
			[Total Workload (Hours) / 25*] = **ECTS**	2
**25 hour workload is accepted as 1 ECTS*				

Learning Outcomes	
1	to be able to define reproductive biotechnologies
2	to be able to comprehend current common reproductive biotechnologies
3	to be able to apprehend the benefits of reproductive biotechnology
4	to be able to apply the use of reproduction biotechnology in animal
5	Application and advantages of reproductive biotechnology in livestock

Programme Outcomes *(Reproduction and Artificial Insemination (Veterinary Medicine) Master)*	
1	To get knowledge about Reproduction and Artificial Insemination with theoretical lessons and practise
2	To get knowledge about reproductive systems of animals, reproductive organs and functions of these organs
3	To get knowledge about reproductive physiology of male and female animals, reproductive endocrinology, synchronisations and reproductive health
4	To get experience about diagnosis of oestrus, proper insemination time and method
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	To get experience about cryopreservation and short term storage of sperm, examination of sperm
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

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

	L1	L2	L3	L4
P1	5	5	4	4
P2	5	4		
P3		4	4	4
P4	4		3	
P6			5	4
P8	5	5	5	5