



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Introduction to Animal Biotechnology							
Course Code		ZBY516		Course Level		Second Cycle (Master's Degree)			
ECTS Credit	8	Workload	200 (<i>Hours</i>)	Theory	3	Practice	0	Laboratory	0
Objectives of the Course		Biotechnology is for Livestock sector opens that new horizons for the range of services. Can teach that collection of oocytes and embryos and sperm. also these can learn the replication process, and transfer operations.The production and development of animals contributes for the highest genotype.The information teaches about Cloning and re-cloning studies.Can make Marker Assisted Selection and Molecular Identification							
Course Content		Biotechnological methods used in animal breeding, the production of sperm and artificial insemination, get embryo and transfer technique of embryo. Cloning and Molecular Identification with Marker Assisted.							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Demonstration, Discussion, Project Based Study					
Name of Lecturer(s)		Lec. Ferhat KİREMİT							

Assessment Methods and Criteria

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

Recommended or Required Reading

1	Öner, C., Zafer, C., Oymak, O., 2008. Introduction to Genetic Engineering Lecture Notes
2	Renaveille, R. Burny, A. 2001. Biotechnology in Animal Husbandry Kluwer Academic.

Week	Weekly Detailed Course Contents	
1	Theoretical	Biotechnology and Historical Development
2	Theoretical	Sperm Retrieval Methods, Inspection and Evaluation of sperm
3	Theoretical	Preservation of semen, the Artificial Insemination Methods
4	Theoretical	What is embryo? History of the Development Process of the embryo transfer and its studies.
5	Theoretical	Synchronization of donor animals and formation of the super-ovulation
6	Theoretical	Obtaining eggs and embryos from cattle. Transfer Technique of Egg or Embryo
7	Theoretical	Materials Used in the Study of Embryo Transfer, duplication of embryos - in vitro conditions, gemini or so many puppies production-
8	Intermediate Exam	Midterm
9	Theoretical	Production methods of many puppies with cloning and re-cloning
10	Theoretical	Replication of DNA and protein production
11	Theoretical	Nucleic acid extraction, electrophoresis, PCR techniques
12	Theoretical	Molecular Genetic Characterization of Farm Animals
13	Theoretical	Marker Assisted Selection and Molecular Identification
14	Theoretical	Molecular Diagnosis of Animal Diseases
15	Theoretical	Production of transgenic animals and Genetically Modified Organisms (GMOs).

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	10	3	182
Midterm Examination	1	8	1	9
Final Examination	1	8	1	9
Total Workload (Hours)				200
[Total Workload (Hours) / 25*] = ECTS				8
*25 hour workload is accepted as 1 ECTS				



Learning Outcomes

1	Can understand the works about production of sperm and artificial insemination
2	Can have the knowledge about the cloning
3	Can have the knowledge about the recombinant DNA technology.
4	The production of transgenic animals is learned
5	Genetic characterization, protection, superior productivity, resistance to diseases and pests

Programme Outcomes (Agricultural Biotechnology Master)

1	Students learn various techniques and evaluates resources about agricultural biotechnology
2	Make the necessary projects in agricultural biotechnology and to conduct a study of the basic level independently
3	Students learns how to conduct a scientific research and prepares themselves for the scientists in the direction of their ideals.
4	Students may reveal new ideas in social and scientific issues and can benefit from the ideas and produce something new winning independent and teamwork skills.
5	Students can use its products for the benefit of humanity, they can produce technology and collaborate with industry

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

	L1	L2	L3	L4	L5
P1	4	5	5	4	4
P2	4	5	5	5	4
P3	4	5	5	4	4
P4	5	5	4	3	3
P5	5	5	3	3	4

