



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Biology of the Laboratory Animal and Basic Techniques							
Course Code		VFZ626		Couse Level		Third Cycle (Doctorate Degree)			
ECTS Credit	6	Workload	150 (<i>Hours</i>)	Theory	1	Practice	2	Laboratory	0
Objectives of the Course		To be practical knowledge about laboratory animals biology and experimental procedures performed on laboratory animals							
Course Content		Definition of laboratory animal, general care and feeding of laboratory animals, rat, mouse, hamster, gerbil, guinea pigs and rabbits biology, basic experimental procedures applied to laboratory animals, anesthesia, euthanasia, drug delivery methods, and blood collection							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Experiment, Demonstration, Discussion, Individual Study, Problem Solving					
Name of Lecturer(s)		Assoc. Prof. Cengiz ÜNSAL							

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	38
Final Examination	1	60
Quiz	4	1
Term Assignment	1	1

Recommended or Required Reading

1	1. Hau J., Van Hoosier, Jr. G.L. (2003). Handbook of Laboratory Animal Science 2nd Ed. Volume II Animal Models. CRC Press.
2	2. Monamy V. (2009). Animal Experimentation. A Guide to the Issues, Second Edition. Cambridge University Press.
3	3. Singer M.A. (2007). Comparative Physiology, Natural Animal Models and Clinical Medicine. Imperial College Press.
4	4. Alfredo Rigalli A., Di Loreto V.E. (2007) Experimental Surgical Models in the Laboratory Rat. CRC Press.

Week	Weekly Detailed Course Contents	
1	Theoretical	Laboratory animal ethics and animal rights
	Practice	The rules of the Laboratory animal units
2	Theoretical	Animal welfare
	Practice	Cage types
3	Theoretical	Behaviors of laboratory animals
	Practice	The monitoring of the laboratory animals behaviors
4	Practice	Basic applications and interventions in mouse
5	Practice	Basic applications and interventions in rat
6	Theoretical	Gerbil
	Practice	Basic applications and interventions in gerbil
7	Theoretical	Hamster
	Practice	Basic applications and interventions in hamster
8	Theoretical	Midterm
	Practice	Midterm
9	Practice	Basic applications and interventions in Guinea pig
10	Theoretical	Rabbit
	Practice	Basic applications and interventions in rabbit
11	Theoretical	The holding in the laboratory animals
	Practice	Reproductive behaviors in laboratory animals
12	Theoretical	Routes of Administration
	Practice	Specimen collection in the laboratory animals
13	Theoretical	Blood Collection
	Practice	Euthanasia methods in the laboratory animals-I



14	Theoretical	Anesthesia and euthanasia
	Practice	Euthanasia methods in the laboratory animals-I
15	Theoretical	General and special surgical techniques
	Practice	Autopsy in the laboratory animals

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	1	1	28
Lecture - Practice	14	2	2	56
Assignment	4	2	1	12
Term Project	1	24	1	25
Quiz	4	2	1	12
Midterm Examination	1	6	1	7
Final Examination	1	9	1	10
Total Workload (Hours)				150
[Total Workload (Hours) / 25*] = ECTS				6

*25 hour workload is accepted as 1 ECTS

Learning Outcomes

1	1. To be aware of the animal rights
2	2. To be informed about the animal rights ethics and animal welfare
3	3. To be knowledge about the behavior of experimental animals
4	4. To approach and keep in the laboratory animals
5	5. To get the blood and other tissue fluids in variously ways in the laboratory animals
6	6. To performed in anesthesia and small surgical interventions in laboratory animals and could be euthanized appropriate methods

Programme Outcomes (Physiology (Veterinary Medicine) Doctorate)

1	Has a deep and broad knowledge about the field and the interdisciplinary area related with the field through the achievements gained in undergraduate and professional levels
2	Has the knowledge to create original ideas, analyze them and develop definition/product/diagnosis methods by using the knowledge gained in undergraduate and/or professional experience, when needed
3	Is knowledgeable about theories and practices in methodological and scientific research methods to run an independent research
4	Excels in the laboratory, clinical and similar fields by using the theoretical and practical information gained in former education, and has the ability to create solutions in related fields
5	Designs and develops scientific methodology for the advanced level/newly defined/emerged problems about the field
6	Excels in the known scientific methods in the field for the advanced level/ newly defined/emerged problems
7	Designs unique researches and implements independently
8	Analyzes, synthesizes and evaluates the new ideas in related fields by using critical thinking
9	Plans, creates teams and carries out the interdisciplinary research projects in order to create solutions to the known/newly defined problems
10	Joins to congresses, panels, symposiums, workshops, seminars, article discussions and problem solving sessions in different disciplines, and exchanges information with the other professionals to contribute to the solutions
11	Broadens the borders of scientific information by publishing scientific articles in national and/or international peer-reviewed journals
12	Creates new ideas and methods to contribute to the technological, social and cultural progress, or to help the development of information society by using the theoretical, practical, independent research, abilities responsibly
13	Designs and implements social projects with the awareness of creating an information society
14	Compiles and interprets any type of data (field observation, scientific knowledge etc.) in accordance with the aims
15	Develops and uses strategies about related topics with the field
16	Implements and defends institutional and practical information and abilities in accordance with the needs of the country and the world, and changes when necessary
17	Follows up and uses all the updates about the field (scientific information, legislations etc.), and has the qualification to change them
18	Adopts lifelong learning as a principle and acknowledges that the information gained through research is the most valuable gain



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

	L1	L2	L3	L4	L5	L6
P1	3	3	3	3	3	3
P2	3	3	3	3	3	3
P4	4	4	4	4	4	4
P5	4	4	4	4	4	4
P6	4	4	3	4	4	4
P7	3	3	3	3	3	4
P8	3	3	3	3	3	3
P10	3	3	3	3	3	3
P11	4	4	4	4	4	4
P12	2	2	2	2	2	2
P13	4	4	4	4	4	4
P14	5	5	5	5	5	5
P15	5	5	5	5	5	5
P16	5	5	5	5	5	5
P17	5	5	5	5	5	5
P18	5	5	5	5	5	5

