



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Biology of Amphibians							
Course Code		BİÖ646		Course Level		Third Cycle (Doctorate Degree)			
ECTS Credit	7	Workload	170 (<i>Hours</i>)	Theory	3	Practice	0	Laboratory	0
Objectives of the Course		The aim of this course is to enable students to have detailed information about the biology of amphibians.							
Course Content		Amphibia is a vertebrate class between fishes and reptiles that lead terrestrial life. In this course, the information will be given on the morphological characteristics, anatomy, physiology, reproductive biology and life strategies of amphibians.							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Discussion, Individual Study					
Name of Lecturer(s)									

Assessment Methods and Criteria

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

Recommended or Required Reading

1	Duellman, W. E. and Trueb, L. 1994. Biology of Amphibians. McGraw-Hill Book Company, USA
2	Zug, G. R., Vitt, L. V. and Caldwell, J. P. 2001. Herpetology: an introductory biology of amphibians and reptiles. San Diego, Calif. : Academic Pres, 630 pp.
3	Başoğlu, M., Özeti, N ve Yılmaz, İ. 1994. Türkiye Amfibileri. Ege Üniversitesi Basımevi, İZMİR
4	Wells, D. 2007. The Ecology and Biology of Amphibians. The University of Chicago Pres, Chicago

Week	Weekly Detailed Course Contents	
1	Theoretical	Introduction to amphibians and their characteristics
2	Theoretical	Amphibian orders and their distributions in the world
3	Theoretical	Morphological and anatomical characteristics of amphibians: skull, axial system and appendicular system.
4	Theoretical	Integument and sensory receptor systems
5	Theoretical	Digestive, respiratory and circulatory systems
6	Theoretical	Urogenital and nervous systems
7	Theoretical	Reproductive strategies: reproductive cycles, parental care and evolution of reproductive strategies.
8	Intermediate Exam	Midterm exam
9	Theoretical	Courtship and mating: selection of breeding site, secondary sexual characters, courtship behavior, sexual selection and mating
11	Theoretical	Amphibian eggs and development
12	Theoretical	Amphibian larvae: morphology, types, physiology and ecology of larvae
13	Theoretical	Metamorphosis: endocrine control, other biochemical changes, morphological changes
14	Theoretical	Neoteny and paedomorphosis
15	Theoretical	Population biology

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	15	3	3	90
Assignment	10	0	5	50
Land Work	3	3	5	24
Midterm Examination	1	0	3	3



Final Examination	1	0	3	3
Total Workload (Hours)				170
[Total Workload (Hours) / 25*] = ECTS				7
*25 hour workload is accepted as 1 ECTS				

Learning Outcomes

1	The student is able to identify the characteristics of amphibians.
2	The student is able to learn the orders of amphibians and their distributions on the world.
3	The student is able to comprehend the morphological and anatomical characteristics of amphibians.
4	The student is able to have information about their digestive, respiratory, circulation, excretion and nerve systems.
5	The student is able to analyze their reproduction strategies, especially courtship and mating behaviors.
6	The student is able to comprehend the communication and especially the role of voice in it.
7	The student is able to understand the types of eggs and larvae, their morphology and physiology by learning embryological development of amphibians.
8	The student is able to define the metamorphosis, neoteny and paedomorphosis, and analyze the effects of hormones on these events.
9	The student is able to comprehend the formation of amphibian populations and the factors regulating them

Programme Outcomes (Biology Doctorate)

1	To have enough scientific background knowledge towards a specific study and research area
2	To have an ability to identify, evaluate and develop a solution for a problem on biological aspects
3	To be able to evaluate scientific observations and results of experiments using statistical analysis methods
4	To have basic skills in areas related to field of biological studies
5	To have the ability to develop cooperation with different disciplines with the high level of social communication required for studies
6	To have knowledge of technology and use of methods and means used in biological researches
7	To have an ethical understanding which will be a guide for their investigations and publications
8	For PhD; to have European Language Portfolio C1 general level language skill
9	To be able to present and discuss own research results in accordance with scientific discipline using technological tools in scientific research environments
10	To be able to detect and evaluate economic and social impacts of an own original research results
11	To be equipped with ability of carrying out independent study in biological field
12	To be able to publish at least one an international/national peer reviewed scientific paper and/or produce or interpret an original work related to biology in order to expand the frontiers of knowledge
13	To be able to develop new approaches or adaptations to be used in solving scientific and biological problems
14	To be able to develop new understanding and approaches in order to explain a new phenomenon or a biological event under investigation
15	To have abilities and experience to create new search area through inspiration gained from subject searched

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	L7	L8	L9
P1	5	5	5	5	5	5	5	5	5
P2	5	5	5	5	5	5	5	5	5
P3	2	4	2	2	4	5	3	5	5
P4	5	5	5	5	5	5	5	5	5
P5	3	3	4	4	4	4	3	3	3
P6	3	3	3	4	5	5	5	5	5
P7	5	5	5	5	5	5	5	5	5
P8	3	3	3	3	4	4	4	4	4
P9	3	4	3	3	5	5	5	5	5
P10	4	5	5	5	5	5	5	5	5
P11	4	4	4	4	5	5	5	5	5
P12	4	5	4	4	5	5	5	5	5
P13	3	4	3	3	5	5	4	4	4
P14	4	5	5	5	5	5	5	5	5
P15	5	5	5	5	5	5	5	5	5

