AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Principles of Poulation Genetics								
Course Code	BİO642		Couse Level	Third Cycle (Doctorate Degree)					
ECTS Credit	7	Workload	179 *(Hours)*	Theory	3	Practice	0	Laboratory	0
Objectives of the Course	The aim of this course is to teach genetic diversity in populations and the influence of various evolutionary forces on it, molecular population genetics, quantitative genetics and ecological genetics.								
Course Content	Diversity in populations, natural selection and genetic drift, population genetics analyses using computer software								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), 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	Hartl DL & Clarck AG (1988). Principles of Population Genetics. Sinauer Associates, Inc. Sunderland, Massachusetts.
2	Freeman S & Herron JC (2009). Evolutionary analysis. Palme Yayınevi, Ankara. (Çeviri)

Week	Weekly Detailed Course Contents	
2	Theoretical	Darwinian Evolution in Mendelian Populations
3	Theoretical	Diversity in populations and its measurments
4	Theoretical	Hardy-Weinberg equilibrium
5	Theoretical	Random Genetic Drift
6	Theoretical	Mutation and Neutral Teory
7	Theoretical	Natural Selection
8	Intermediate Exam	Midterm exam
9	Theoretical	Inbreeding and ather forms of Nonrandom mating
10	Theoretical	Population subdivisions and Migrations
11	Theoretical	Molecular Population genetics
12	Theoretical	Evolutionary Genetics of Quantitative Characters
13	Theoretical	Ecological genetics and Speciation
14	Theoretical	Population genetic analyses using computer softwares
15	Theoretical	Population genetic analyses using computer softwares
16	Theoretical	Population genetic analyses using computer softwares
17	Final Exam	Final exam

Workload Calculation				
Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	15	3	3	90
Assignment	6	2	3	30
Reading	8	2	1	24
Midterm Examination	1	15	2	17
Final Examination	1	15	3	18
			Total Workload (Hours)	179
			[Total Workload (Hours) / 25*] = **ECTS**	7
**25 hour workload is accepted as 1 ECTS*				

Learning Outcomes	
1	To be able to understand the reasons of the diversity in populations
2	To be able to learn the Hardy weinberg equilibrium
3	To be able to make the population genetics analyses by using computer softwares
4	
5	

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
P1	5				
P2		5			
P3			5		
P4				2	2