AYDIN ADNAN MENDERES UNIVERSITY
GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES
FIELD CROPS
FIELD CROPS
FIELD CROPS MASTER
COURSE INFORMATION FORM

Course Title	Population Biology								
Course Code	ZTB501		Couse Level	Second Cycle (Master's Degree)					
ECTS Credit	8	Workload	200 *(Hours)*	Theory	3	Practice	0	Laboratory	0
Objectives of the Course	To determine the relationship between gene and genotypes in population and to stressed the population equilibrium and factors affecting equilibrium.								
Course Content	Determining the structure of populations, changing the genetic structure of the population, mutation, migration, selection and random drift factors such as the theory of evolution and quantitative genetic theory are examined and the student to gain basic knowledge about these areas.								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Discussion, Project Based Study, Individual Study, Problem Solving								
Name of Lecturer(s)									

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

Recommended or Required Reading	
1	1. Wilson, E. O. And Bossert, W.H. 1973. Einführung in die populationsbiologie
2	2. Wricke, G. 1972. Populationsgenetik.

Week	Weekly Detailed Course Contents	
1	Theoretical	Population as a basic unit of ecology
	Preparation Work	Literature review
2	Theoretical	Dynamic of a population
	Preparation Work	Literature review
3	Theoretical	Interaction of populations
	Preparation Work	Literature review
4	Theoretical	Genetic structure of populations
	Preparation Work	Literature review
5	Theoretical	Hardy-Weinberg’s populations
	Preparation Work	Literature review
6	Theoretical	Factors affecting genetic structure of population
	Preparation Work	Literature review
7	Theoretical	Mutation
	Preparation Work	Literature review
8	Intermediate Exam	Midterm exam
9	Preparation Work	Literature review
10	Theoretical	Selection I
	Preparation Work	Literature review
11	Theoretical	Selection II
	Preparation Work	Literature review
12	Theoretical	Essential selection types
	Preparation Work	Literature review
13	Theoretical	The combine effects of factors affecting genetic structure of population
	Preparation Work	Literature review
14	Theoretical	Genetic polymorphism
	Preparation Work	Literature review
15	Theoretical	Presentation of assignments

15	Preparation Work	Literature review
16	Final Exam	Final exam

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	3	3	84
Term Project	2	13	20	66
Midterm Examination	1	0	10	10
Final Examination	1	10	30	40
			Total Workload (Hours)	200
			[Total Workload (Hours) / 25*] = **ECTS**	8

**25 hour workload is accepted as 1 ECTS*

Learning Outcomes

1	1. To be able to comprehend the historical development of population biology and evolution
2	2. To be able to comprehend the balance of population, mutation, migration, selection and adaptation
3	3. To be able to estimate the population size for breeding purpose
4	4. To be able to produce an idea about the genetic structure of populations
5	5. To be able to create variation to improve new genotypes, and predict the effects of gene

Programme Outcomes *(Field Crops Master)*

1	To be able to improve and deepen the level of expertise in field crops on the basis of the departments licenses qualifications.
2	To be able to recognize the subjects related to field crops, to be able to solve these and make interpretation.
3	To be able to have the skills of acting independently, to have power to decide and to create.
4	To be able to work in teams between departments
5	To be able to give briefing about latest information of Field Crops in written, oral and visual ways.
6	To be able to take responsibility for developing the new approaches and to formulate a solution facing unforeseen complex situations of applications,
7	To be able to defend the original opinions in both Turkish and in foreign languages by using these languages and communicating effectively.
8	To be able to contribute to science by producing knowledge for the aim of improving quality, efficiency and sustainability
9	To be able to apply breeding methods in order to improve new varieties for Field Crops.
10	To be able to maintain and select the appropriate statistical methods within the framework of the study, evaluation of scientific ethics; to convert the results into a report/dissertation and to offer them by producing scientific publications.

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	4	4	5	5
P2	3	2	3	2	2
P3	2	2	1	1	1
P4	2	2	3	3	2
P5	4	4	4	3	2
P6	3	3	3	3	3
P7	2	2	3	4	3
P8	4	5	5	5	4
P9	5	5	5	5	5
P10	3	4	3	3	3