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

Course Title	Quantatif Genetic								
Course Code	ZTB502		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 properties of basic characteristics affected by multiply genes. To examine the theoretical basics of these characters.								
Course Content	Learn basic knowledge on genotypic structure of hybrid populations and biometric methods using in plant breeding.								
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. Wricke, G. 1972. Populationsgenetik.
2	2. Falconer, D.S. 1970. Introduction to quantitative Genetics
3	3. Demir, İ. 1990. Genel Bitki Islahı. Ege Üniversitesi Basımevi, İzmir

Week	Weekly Detailed Course Contents	
1	Theoretical	Continues variations and its causes
	Preparation Work	Literature review
2	Theoretical	Values and population means
	Preparation Work	Literature review
3	Theoretical	Population variances
	Preparation Work	Literature review
4	Theoretical	Components of variances
	Preparation Work	Literature review
5	Theoretical	The estimation of variance components
	Preparation Work	Literature review
6	Theoretical	The ratio of variances components and the importance in terms of breeding
	Preparation Work	Literature review
7	Preparation Work	Literature review
8	Intermediate Exam	Midterm Exam
9	Preparation Work	Literature review
10	Theoretical	Heritability degrees
	Preparation Work	Literature review
11	Theoretical	The importance of heritability degrees in plant breeding and the methods of its calculations
	Preparation Work	Literature review
12	Theoretical	Selection and inbreeding I
	Preparation Work	Literature review
13	Theoretical	Selection and inbreeding II
	Preparation Work	Literature review
14	Theoretical	Heterosis
	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
Assignment	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 applications and methods on plant breeding populations
2	2. To be able to analyse the genotypic structure of hybrid population according to its reproduction biology
3	3.To be able to form selection methods to improve cultivars in a breeding program
4	4. To be able to comprehend which breeding method will be used for quantitative characters in cultivar improvement
5	The genetic composition of the population can be changed positively by selection

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