



## AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Fertility Analysis							
Course Code		ZTO502		Couse Level		Second Cycle (Master's Degree)			
ECTS Credit	8	Workload	200 ( <i>Hours</i> )	Theory	2	Practice	2	Laboratory	0
Objectives of the Course		In this course, basic methods of pot experiments used in determination of soil fertility status are explained.Attendance will have skill for using pot experiments in determination of soil fertility status							
Course Content		Fertility properties of soils, and their evaluation methods in terms of statistics like correlation analysis. Experiment types and some cautions for soil fertility determination. Statistical analysis methods, their applications and interpretation.							
Work Placement									
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Experiment, Discussion, Case 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	Açıkgöz, N., E. İlker, A. Gökçöl, 2004. Biyolojik Araştırmaların Bilgisayarda Değerlendirilmeleri. ISBN: 973-483-607-8 E.Ü. Tohum Teknolojisi Araştırma ve Uygulama Merkezi Yayın No:2 Bornova-İzmir 2.Açıkgöz, N., 1994. Tarımda Araştırma ve Deneme Metodları, , Ege Üniv. Ziraat Fak Yay No. 478, İzmir.
2	Açıkgöz, N., 1994. Tarımda Araştırma ve Deneme Metodları, , Ege Üniv. Ziraat Fak Yay No. 478, İzmir.
3	Steel, R.G.D and Torrie, J.H., 1981. Prensiples and procedures of statistics. Mc graw and HillInt. Editions.Auckland USA.
4	Cochran, W.G. and G.M. Cox, 1957. Experimental designs. II. Edition, John Wiley and sons Inc., Newyork

Week	Weekly Detailed Course Contents	
1	Theoretical	Methods of determination soil fertility status
	Preparation Work	Literature research
2	Theoretical	Basic principles of experimental methods, planning of experiments,
	Preparation Work	Determination of homework
3	Theoretical	Some important laws on soil fertility
	Preparation Work	Presentation and discussion
4	Theoretical	The concept of soil fertility
	Preparation Work	Presentation and discussion
5	Theoretical	Evaluation of soil fertility properties in survey researches
	Preparation Work	Presentation and discussion
6	Theoretical	Methods used in determining plant fertility status evaluation
	Preparation Work	Presentation and discussion
7	Theoretical	Pot experiment carried out in greenhouse
	Preparation Work	Presentation and discussion
8	Intermediate Exam	Midterm Exam
9	Theoretical	Greenhouse experiments carried out in soilless culture
	Preparation Work	Presentation
10	Theoretical	Some technical aspects taking into consideration in fertilizer experiments in field conditions
	Preparation Work	Presentation and discussion
11	Theoretical	Completely randomized design and randomized complete block design
	Preparation Work	Presentation and discussion
12	Theoretical	Factorial and split plot design
	Preparation Work	Presentation and discussion
13	Theoretical	Interpretation of field and greenhouse experiments



13	Preparation Work	Presentation and discussion
14	Theoretical	Regressions and their interpretation in field and greenhouse experiments
	Preparation Work	Presentation and discussion
15	Theoretical	Use of nuclear techniques in soil fertility experiments
	Preparation Work	Seasonal project
16	Final Exam	Final exam

**Workload Calculation**

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	0	2	28
Lecture - Practice	14	0	2	28
Assignment	2	0	30	60
Term Project	1	0	40	40
Midterm Examination	1	0	14	14
Final Examination	1	0	30	30
Total Workload (Hours)				200
[Total Workload (Hours) / 25*] = ECTS				8

\*25 hour workload is accepted as 1 ECTS

**Learning Outcomes**

1	To be able to comprehend the techniques in application of experiments
2	To be able to comprehend the calculation of fertilizer requirement and fertilizer application techniques in experiments
3	To be able to explain the evaluation of agricultural researches
4	Being able to have an ability of selection of best methods for soil and plant analysis and interpretation of results
5	Being able to have skill for the interpretation of analysis results in view of soil fertility

**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	4	4	4	4	4
P2	4	4	4	4	4
P3	4	4	4	4	4
P4	4	4	4	4	4
P5	4	4	4	4	4
P6	4	4	4	4	4
P7	4	4	4	4	4
P8	4	4	4	4	4
P9	4	4	4	4	4
P10	4	4	4	4	4

