



## AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Fertilization Techniques in Horticulture							
Course Code		ZTO513		Course Level		Second Cycle (Master's Degree)			
ECTS Credit	8	Workload	200 ( <i>Hours</i> )	Theory	2	Practice	2	Laboratory	0
Objectives of the Course		The aim of the course provides the student to get information about nutrient need,nutrient uptake patterns,fertilization, relationships between mineral nutrition and quality of common grown fields crops (cereals, corn, tobacco, potatoes,cotton, sunflower and sugarbeet)							
Course Content		Main factors concerning field crop fertilization, fertilizer recommendation tables, fertilizing the most widespread field crops; application methods, timing, fertilizer type and amount, effect of fertilization on yield and quality							
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	IFA, 1992. World Fertilizer Use Manual. Int. Fert. Assoc. Paris.
2	Kacar, B., Katkat, A.V., 2007. Gübreler ve Gübreleme. 2. Baskı. Nobel Yayınları, Ankara.
3	Fageri, N.K., Baligar, V.C., and Jones, C.A., 1997. Growth and Mineral Nutrition of Field Crops. 2nd Ed. Marcel Dekker Inc. New York.

Week	Weekly Detailed Course Contents	
1	Theoretical	Importance of fertilizer use in field crops
	Preparation Work	Literature research
2	Theoretical	Importance and portion of fertilizer consumption in field crops
	Preparation Work	Determination of homework
3	Theoretical	Evaluation of soil analysis in fertilizer diagnosis determination
	Preparation Work	Presentation and discussion
4	Theoretical	Evaluation of plant analysis in fertilizer diagnosis determination
	Preparation Work	Presentation and discussion
5	Theoretical	Economical fertilizer use
	Preparation Work	Presentation and discussion
6	Theoretical	Fertilizer use schedules of fertilizing field crops in Turkey
	Preparation Work	Presentation and discussion
7	Theoretical	Fertilizing barley
	Preparation Work	Presentation and discussion
8	Intermediate Exam	Midterm Exam
9	Theoretical	Fertilizing wheat
	Preparation Work	Presentation and discussion
10	Theoretical	Fertilizing corn
	Preparation Work	Presentation and discussion
11	Theoretical	Fertilizing cotton
	Preparation Work	Presentation and discussion
12	Theoretical	Fertilizing potato
	Preparation Work	Presentation and discussion
13	Theoretical	Fertilizing sunflower
	Preparation Work	Presentation and discussion



14	Theoretical	Fertilizing sugarbeet
	Preparation Work	Presentation and discussion
15	Theoretical	Fertilizing forage crops
	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*] = <b>ECTS</b>				8

\*25 hour workload is accepted as 1 ECTS

**Learning Outcomes**

1	To be able to comprehend the optimum growing conditions for field crops
2	To be able to comprehend nutrient uptake rate of field crops
3	To be able to comprehend nutrient uptake pattern of field crops
4	To be able to interpret the relations between mineral nutrition and quality criteria of field crops
5	To be able to comprehend identify the nutrient disorders in field crops

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

