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

Course Title	Soil-Water-Plant Nutrients Relaitons								
Course Code	ZTO514		Couse Level	Second Cycle (Master's Degree)					
ECTS Credit	8	Workload	206 *(Hours)*	Theory	2	Practice	2	Laboratory	0
Objectives of the Course	Providing information about the water and soil properties as environmental factors to make able to interpret the mechanism of the water intake and transport in the soil plant atmosphere system.								
Course Content	Environment and environmental factors, environmental factors as the soil, environmental factors as water, soil water, plant water, plants, water movement, water movement in soil-plant-atmosphere system, crop-environment relationships.								
Work Placement									
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Discussion, 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	Toprak Su İlişkileri (Prof. Dr. Nuri MUNSUZ), Toprak Bitki Su İlişkileri (Prof. Dr. M. Şefik YEŞİLSOY)
2	Soil Physics (Marshall-Holmes-Rose).

Week	Weekly Detailed Course Contents	
1	Theoretical	Environment and environmental factors
	Preparation Work	Literature review
2	Theoretical	Soil as an environmental factor
3	Theoretical	Soil as an environmental factor
	Preparation Work	Determination of homework theme
4	Theoretical	Water as an environmental factor
	Preparation Work	Presentation and Discussion
5	Theoretical	Soil water
	Preparation Work	Presentation and Discussion
6	Theoretical	Saturated and unsaturated hydraulic conductivity
	Preparation Work	Sampling
7	Theoretical	Saturated and unsaturated hydraulic conductivity
	Preparation Work	Sampling
8	Intermediate Exam	Midterm Exam
9	Theoretical	Midterm Exam Plant water
10	Theoretical	Plant water potentials
11	Theoretical	The movement of water in plants
	Preparation Work	Sampling
12	Theoretical	The movement of water in plants
	Preparation Work	Presentation and Discussion
13	Theoretical	The movement of water in the soil-plant-atmosphere system
	Preparation Work	Presentation and Discussion
14	Theoretical	The movement of water in the soil-plant-atmosphere system
	Preparation Work	Determination of homework theme
15	Theoretical	Plant-environment relations
	Preparation Work	Semester 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	1	0	20	20
Term Project	2	0	25	50
Midterm Examination	1	0	30	30
Final Examination	1	0	50	50
			Total Workload (Hours)	206
			[Total Workload (Hours) / 25*] = **ECTS**	8
**25 hour workload is accepted as 1 ECTS*				

Learning Outcomes	
1	To be able to comprehend the environment as a factor of the basic physical properties of soils.
2	To be able to comprehend the properties of the soil water.
3	To be able to comprehend the soil water retention situations, the energy and the soil moisture
4	To be able to comprehend the relationships between the basic properties of soil water and soil.
5	To be able to comprehend and evaluate the movement of water in plants

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