



## AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Field Crop Physiology							
Course Code		ZTB505		Course Level		Second Cycle (Master's Degree)			
ECTS Credit	8	Workload	200 ( <i>Hours</i> )	Theory	3	Practice	0	Laboratory	0
Objectives of the Course		Evaluation of principles of Plant Physiology for Field Crops, plant mechanism and physiological considerations.							
Course Content		Assimilation and photorespiration in C3 and C4 crops, differentiations, possible estimations in global climatic change, stress factors							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Experiment, Discussion, Case Study, Project Based Study, Individual Study, Problem Solving					
Name of Lecturer(s)		Prof. Aydın ÜNAY							

### Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	60

### Recommended or Required Reading

1	1. Taiz, L. And Zeiger, E. 1987. Plant Physiology. The Benjamin /Cummings Publishing Company, Inc.
2	2. Kacar, B., Katkat, V., Öztürk, Ş. 2002. Bitki Fizyolojisi. Vipaş AŞ Yayın No: 74. Bursa.
3	3. Avcıoğlu, R., Gürel, A. 2000. Bitki Fizyolojisi. EÜZF Ofset Basımevi. Ders Notları: 64/1.
4	4. Hay, R.K.M., Walker, A.J. 1995. An Introduction to The Physiology of Crop Yield

Week	Weekly Detailed Course Contents	
1	Theoretical	Plant Canopy and Leaf Area Characteristics
	Preparation Work	Literature review
2	Theoretical	Photosynthetic Efficiency: Photosynthesis and Photorespiration
3	Theoretical	C3 and C4 Photosynthesis
	Preparation Work	Term paper
4	Theoretical	Endogenous Factors in Photosynthesis
	Preparation Work	Presentation and discussion
5	Theoretical	Environmental Factors in Photosynthesis
	Preparation Work	Presentation and discussion
6	Theoretical	Water Stress
	Preparation Work	Demonstration-Remodelling
7	Theoretical	Water Use Efficiency
	Preparation Work	Demonstration-Remodelling
8	Theoretical	Nutrient Absorption
9	Intermediate Exam	Midterm exam
10	Theoretical	Transportation of Water and Nutrient
11	Theoretical	Dry Matter Analysis
	Preparation Work	Demonstration-Remodelling
12	Theoretical	Respiration
	Preparation Work	Presentation and discussion
13	Theoretical	Hormones
	Preparation Work	Presentation and discussion
14	Theoretical	Seconder Metabolites
	Preparation Work	Term paper
15	Theoretical	Stress Physiology
	Preparation Work	Term Project



16	Final Exam	Final exam
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**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*] = <b>ECTS</b>				8

\*25 hour workload is accepted as 1 ECTS

**Learning Outcomes**

1	1. To be able to detail and develop the information lin the scope of field crop physiology
2	2. To be able to establish physiological relationships with field crops quality and yield
3	3. To be able to determine and develop ideas physiologically in complex problems
4	4. To be able to establish relationships between physiology and other discipline
5	5. To be able to monitor and transfer current developments in physiology

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

