AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Plant Physiology								
Course Code	TAB105		Couse Level	Short Cycle (Associate's Degree)					
ECTS Credit	3	Workload	76 *(Hours)*	Theory	2	Practice	0	Laboratory	0
Objectives of the Course	To give information about basic facts and events related to plant metabolism.								
Course Content	Chapters of Plant Physiology, Chemical composition of plant cells, water metabolism in plants, water uptake, loss and transport in plants, mineral nutrition in plants, solute transport, photosynthesis and chemosynthesis, transport of organic matter in plants, respiration and fermentation, lipid metabolism, assimilation of mineral nutrients, phytonutrients hormones								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation)								
Name of Lecturer(s)	Assoc. Prof. İlkay YAVAŞ								

Prerequisites & Co-requisities	
Equivalent Course	BYL105

Assessment Methods and Criteria		
Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	70

Recommended or Required Reading	
1	Taiz, L and Zeiger, E. 2007 Bitki Fizyolojisi (Çeviri editörü: İsmail TÜRKAN), Palme yayıncılık, Ankara
2	Kaçar, B., Katkat, V., Öztürk, Ş. 2002. Bitki Fizyolojisi. Nobel Yayınevi, Ankara

Week	Weekly Detailed Course Contents	
1	Theoretical	Introduction to Plant Physiology, Chemical composition of Plant Cells
2	Theoretical	Structure and properties of water
3	Theoretical	Uptake and transport of water in plants
4	Theoretical	Water loss events in plants; transpiration, guttation and exudation
5	Theoretical	Mineral nutrition in plants, soil, roots and microorganisms
6	Theoretical	Dissolved matter transport
7	Theoretical	Photosynthesis; light reactions
8	Theoretical & Practice	An overview
9	Theoretical	Photosynthesis; Carbon dioxide fixation reactions
10	Theoretical	transport in phloem
11	Theoretical	Respiration (Glycolysis, Citric acid cycle, Electron Transport System and ATP synthesis)
12	Theoretical	Oxidative Pentose Phosphate Metabolic Pathway, Photorespiration, Fermentation
13	Theoretical	lipid metabolism
14	Theoretical	assimilation of mineral nutrients
15	Theoretical	Herbal Hormones
16	Final Exam	Final Exam

Workload Calculation				
Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	1	2	42
Reading	4	0	2	8
Midterm Examination	1	12	1	13

Final Examination	1	12	1	13
			Total Workload (Hours)	76
			[Total Workload (Hours) / 25*] = **ECTS**	3
**25 hour workload is accepted as 1 ECTS*				

Learning Outcomes	
1	Gains knowledge about the sub-branches of plant physiology and the chemical composition of plants. Understands the importance of water for life by learning the structure and properties of water. Understands the uptake, transport and loss of water in plants.
2	Understands the plant-mineral nutrient relationship and requirements. Understands the basic relationships between soil, roots and microorganisms. Comprehends the solute transport events in plants at the level of cells, tissues and organs.
3	Comprehends the light reactions phase of photosynthesis in detail. Photosynthesis; Understands carbon dioxide fixation reactions and carbon dioxide accumulation mechanisms. Understands and interprets how photosynthesis mechanism is affected by environmental factors.
4	Comprehend organic matter transport pathways and transport patterns
5	To be able to understand the basic processes of the respiratory event and the factors affecting these processes. Understand the Oxidative Pentose Phosphate Metabolic Path, Fermentation events. Gains information about lipid metabolism.
6	Comprehend the nitrogen cycle and biological nitrogen fixation, assimilation of mineral nutrients and plant hormones.

Programme Outcomes *(Organic Agriculture)*	
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	

Contribution of Learning Outcomes to Programme Outcomes *1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High*

	L1	L2	L3	L4	L5	L6
P6	3	3	3	3	3	3
P8	4	4	4	4	4	4
P9	4	4	4	4	4	4