



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Plant Physiology							
Course Code		BYL105		Course Level		Short Cycle (Associate's Degree)			
ECTS Credit	3	Workload	75 (Hours)	Theory	2	Practice	0	Laboratory	0
Objectives of the Course		Teaching basic concepts and events on plant metabolism							
Course Content		Subdivisions of plant physiology. Chemical composition of plant cells, water metabolism in plants. Water, uptake, loss and transportation, mineral nutrition, dissolved substance transportation, photosynthesis and chemosynthesis, transportation of organic substances in plants, respiration and fermentation, lipid metabolism, assimilation of mineral nutrients and plant hormones							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation)					
Name of Lecturer(s)									

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 Plant Physiology. Palme Press, Ankara.
2	Kacar, B., Katkat, V., Ozturk, S. 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	Water uptake and transport in plants
4	Theoretical	Water loss events in plants; transpiration, glutation and exudation
5	Theoretical	Mineral nutrition in plants; soil, roots and microorganisms
6	Theoretical	Dissolved matter transport
7	Theoretical	Photosynthesis; Light reactions
8	Intermediate Exam	Mid term exam
9	Theoretical	Fotosentez; Karbondioksit fiksasyon reaksiyonları
10	Theoretical	Phloem transporation
11	Theoretical	Respiration (Glycolysis, Citric acid cycle, Electron Transport System and ATP synthesisi)
12	Theoretical	Oxidative Pentose Phosphate Metabolic Pathway, Photorspiration, Fermantation
13	Theoretical	Lipid metabolism
14	Theoretical	Assilimation of Mineral Nutrient
15	Theoretical	Plant Growth Regulators
16	Final Exam	FINAL EXAM

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	0	2	28
Assignment	14	0	2	28
Individual Work	9	0	1	9
Midterm Examination	1	4	1	5
Final Examination	1	4	1	5
Total Workload (Hours)				75
[Total Workload (Hours) / 25*] = ECTS				3

*25 hour workload is accepted as 1 ECTS



Learning Outcomes

1	Have knowledge about the sub-branches of plant physiology and chemical composition of plants. Understands the importance of water for life by learning the structure and properties of water. Understands water absorption, transport and loss of plants.
2	Comprehend plant-mineral nutrient relationship and its requirements. Understands the basic relationships between soil, roots and microorganisms. Comprehends the transport of dissolved substance in plants at cell, tissue, organ level
3	Comprehends the phases of the light reactions of photosynthesis. Photosynthesis; Comprehends the mechanisms of carbon dioxide fixation reactions and carbon dioxide deposition. Understands and interprets how the mechanism of photosynthesis is affected by environmental
4	Handling organic substance transport and transportation models
5	Understand the basic processes of respiration and the factors affecting these processes. Oxidative Pentose Phosphate Metabolic Path, fermentation events can grasp. Learn about lipid metabolism.
6	Understand the nitrogen cycle and biological nitrogen fixation, mineral nutrient extraction and plant growth regulators issues.

Programme Outcomes (Laboratory Technology)

1	To be able to comprehend social, cultural and social responsibilities, to be able to follow national and international contemporary problems and developments
2	Atatürk is bound to Atatürk nationalism in the direction of principles and reforms; Adopting the national, moral, spiritual and cultural values of the Turkish people, open to universal and contemporary developments, the Turkish language is a rich, rooted and productive language; Have a love of language and a consciousness; To have the ability to use as much of a foreign language as he would need to read, taste and habit and professionally.
3	To be able to recognize the basic hardware units and operating systems of a computer, having information about internet usage and preparing documents, spreadsheets and presentations on computer by using office programs.
4	Acquires theoretical and practical knowledge at the basic level in mathematics, science and vocational field.
5	With the knowledge of laboratory technology in the field, he knows and analyzes problems, brings interpretation of data and suggests solutions.
6	In laboratories, according to the prepared business plan and program, necessary work can be done to obtain the desired quality products.
7	To have professional and ethical responsibility in business life.
8	Development and change are open, follow scientific social and cultural innovations, and develop themselves constantly.

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
P4	5	5	5	5	5	5

