

AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Biocemistry Of Plant										
Course Code		ZTO505		Couse Level		Second Cycle (Master's Degree)						
ECTS Credit 7		Workload	176 <i>(Hours)</i>	Theory	'	2	Prac	tice	2		Laboratory	0
Objectives of the Course		Structure of plant cell, organic matter, nutrient physiology of plants, components of organic matter (carbon hydrates, proteins, lipids), inorganic components and their roles on enzymatic reactions and photosynthesis carbon assimilation of different plants, Glico lyses, fermentation, DNA and RNA molecules.										
Course Content		Knowledge of plant biochemistry, known enzymes, proteins, photosynthesis, knowledge of the cycle of craps knowledge, relationships with lipids, known and knowledge of plant nutrients						cycle of				
Work Placement												
Planned Learning Activities		and Teaching	Methods	Explan Study,	ation Probl	(Presentat em Solving	tion), g	Experime	ent, Discu	ussior	n, Case Study,	Individual
Name of Lecturer(s)												

Assessment Methods and Criteria

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

Recommended or Required Reading

1	Mengel, K., Ernahrung und Stoffwechsel der Pflanze
2	Kacar, B.,Katkat,V., Bitki Besleme
3	Öztürkcan, O., Biyokimyaya Giriş
4	Marschner, H., Mineral Nutrition of Higher Plants Second Edition

Week	Weekly Detailed Course Contents						
1	Theoretical	The structure of plant cell and photosynthesis.					
	Preparation Work	Introduction to laboratories					
2	Theoretical	Carbon Assimilations					
3	Theoretical	Organic matter and decomposition of organic matter					
	Preparation Work	Preparation of Solutions					
4	Theoretical	Inorganic components					
	Preparation Work	Indicator and use of analyses					
5	Theoretical	Inorganic components and role of the photosynthesis.					
	Preparation Work	Organic matter analysis of plant samples					
6	Theoretical	Protein metabolism					
	Preparation Work	Protein analysis					
7	Theoretical	Carbon hydrate metabolism					
	Preparation Work	Carbon hydrate analysis					
8	Intermediate Exam	Midterm Exam					
9	Theoretical	Lipids					
10	Theoretical	Lipids of decomposition					
11	Theoretical	Nitrogen metabolism					
	Preparation Work	Oil acid analysis					
12	Theoretical	Nitrogen metabolism					
	Preparation Work	Glycol analysis					
13	Theoretical	Recognizes the Krebs cycle					
	Preparation Work	Show of the power point					
14	Theoretical	Glycolhysis, fermentation					
	Preparation Work	Project					
15	Theoretical	DNA and RNA molecules					



15	Preparation Work	Project		
16	Final Exam	FİNAL EXAM		

Workload Calculation

Activity	Quantity		Preparation	Duration	Total Workload
Lecture - Theory	14		0	2	28
Lecture - Practice	14		0	2	28
Assignment	2		0	15	30
Term Project	1		0	40	40
Midterm Examination	1		0	20	20
Final Examination	1		0	30	30
	176				
	7				

*25 hour workload is accepted as 1 ECTS

Learning Outcomes

1	To be able to comprehend the plant metabolic events
2	To be able to recognise proteins
3	To be able to recognise enzymes
4	To be able to recognise coenzyme and substrate
5	To be able to recognise the elements of the biochemistry of plant relationships

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

