AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Plant Nutrition and Some of the Relations Between Quality Items								
Course Code	ZTO602		Couse Level	Third Cycle (Doctorate Degree)					
ECTS Credit	8	Workload	196 *(Hours)*	Theory	2	Practice	2	Laboratory	0
Objectives of the Course	The aim of the course is examining the effects of the amounts of organic and chemical fertilizer on product quality. The field crops (cereals, anchor and arbitrary crops), fruit trees (citrus, apricots, peaches, apples, olives, etc.) vegetables (watermelon, strawberries, tomatoes, eggplant, etc..) and ornamental plants and relationship between nutrition and quality criteria.								
Course Content	What is the Quality? The influences of plant nutrients on carbohydrates, proteins, organic nitrogen compounds, mineral elements and vitamins.								
Work Placement									
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Experiment, Demonstration, Discussion, Case Study, 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	B. Kacar ve V. Katkat. 2008 Bitki Besleme NOBEL Yayınları
2	B. Kacar ve V. Katkat. 2007 Gübreler ve gübreleme NOBEL Yayınları
3	M. Aktaş. 1991. Bitki Besleme ve Toprak Verimliliği. AÜ. Z.F. Yayını: 1202.ANKARA
4	D. Anac and P. Martin-Prevel 1999. Improved crop quality of nutrient management ISBN: 978-0-7923-5850-3- ISBN-10: 0-7923-5850-3
5	Joseph J. Jen, 1989. Quality factors of fruits and vegetables : chemistry and technology ISBN: 978-0-8412-1663-1-ISBN-10: 0-8412-1663-0

Week	Weekly Detailed Course Contents	
1	Theoretical	Organic fertilizer and usage
	Preparation Work	Making of compost
2	Theoretical	Chemical fertilizer and usage
	Preparation Work	How to make a sample for quality?
3	Theoretical	Nitrogen metebolism and quality
	Preparation Work	Measurement of the size of fruit and vegetables
4	Theoretical	Phosphorus, potassium and quality
	Preparation Work	Determination of dry matter
5	Theoretical	What are the quality criteria
	Preparation Work	Determination of hardness
6	Theoretical	Nutrition and quality criteria of field crops
	Preparation Work	Fertilizer account
7	Theoretical	Nutrition and quality criteria of field crops
	Preparation Work	Determination of protein
8	Intermediate Exam	Midterm Exam
9	Theoretical	Relationship between nutrition and quality criteria of fruit trees (citrus, apricots, peaches, apples, olives, etc.)
	Preparation Work	Determination of carbohydrate
10	Theoretical	Relationship between nutrition and quality criteria of fruit trees (citrus, apricots, peaches, apples, olives, etc.)
	Preparation Work	Determination of carbohydrate
11	Theoretical	Relationship between nutrition and quality criteria of vegetables (watermelon, strawberries, tomatoes, eggplant, etc..) and quality criteria

11	Preparation Work	Determination of starch
12	Preparation Work	Determination of oil
13	Theoretical	New approaches on the balanced nutrition
	Preparation Work	Determination of oil
14	Theoretical	Presentations of Homework
15	Theoretical	Presentations of Homework
	Preparation Work	practice exam
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	2	0	15	30
Term Project	1	0	30	30
Midterm Examination	1	0	30	30
Final Examination	1	0	50	50
			Total Workload (Hours)	196
			[Total Workload (Hours) / 25*] = **ECTS**	8

**25 hour workload is accepted as 1 ECTS*

Learning Outcomes

1	Able to recognize the quality parameters of culture plants.
2	Able to compare fertilization and plant factors.
3	Able to evaluate plant nutrition and the quality of their product.
4	Able to understanding the importance of fertilization on healthy plants.
5	Able to understanding the fundamental principles of plant nutrition

Programme Outcomes *(Soil Doctorate)*

1	To be able to apply the theoretical information achieved during the graduate study
2	To be able to collect data by scientific means, to evaluate and interpret
3	To be able to update himself continuously
4	To be able to assess the convenient analytical methods during the process of the scientific study
5	To be able to put forth solutions to soil use and plant development

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	5	5	5
P2	2	3	4	4	3
P3	3	4	4	4	3
P4	2	2	5	2	3
P5	2	2	4	5	3