

SOIL, PLANT AND WATER RELATIONSHIPS

1	Course Title:	SOIL, PLANT AND WATER RELATIONSHIPS	
2	Course Code:	TPR4921-S	
3	Type of Course:	Optional	
4	Level of Course:	First Cycle	
5	Year of Study:	4	
6	Semester:	7	
7	ECTS Credits Allocated:	3.00	
8	Theoretical (hour/week):	2.00	
9	Practice (hour/week):	0.00	
10	Laboratory (hour/week):	0	
11	Prerequisites:	No	
12	Language:	Turkish	
13	Mode of Delivery:	Face to face	
14	Course Coordinator:	Doç.Dr. ZEYNAL TÜMSAVAŞ	
15	Course Lecturers:	Yok	
16	Contact information of the Course Coordinator:	zeynal@uludag.edu.tr, 0224.2941536, U.Ü. Ziraat Fak. Toprak Bilimi ve Bitki Besleme Bölümü. Görükle-Nilüfer/Bursa	
17	Website:		
18	Objective of the Course:	Provide better plant development and create the optimum plant root conditions in rhizosphere by examining the the relation among plant root, soil, atmosphere and water.	
19	Contribution of the Course to Professional Development:		
20	Learning Outcomes:		
		1	Knows environmental factors which are important for plant growth and agricultural production and how to ensure the environmental factors in optimum level condition which are important for agricultural production.
		2	Knows the relationships between soil mass and volume in soil phases, a change in a phase how would lead to change to the other phases and its affect to plant development.
		3	Knows the function of water and the affects of the changes in water status (transition solid,liquid and gas phases of water) on plant and soil.
		4	Knows the potential energy of soil water, can make assessments about the status of soil water.
		5	Knows the movement of the water in the continuity of soil-plant-atmosphere and can evaluate its affect on plant growth.
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21	Course Content:		
		Course Content:	
Week	Theoretical	Practice	

1	Description of the topics which are given as week, examinations of the course and their contribution to the succes score, course process, statements about students' expectations.			
2	Environment, environmental factors and its characteristics.			
3	Soil as a factor of environment			
4	Relative water content of soil and relations of other mass and volume properties of soil phases			
5	Definition of soil texture, texture classes, mechanical analysis method, importance of soil texture.			
6	Properties of clay, structure and properties of electrostatic double layer.			
7	Specific surface of soil, soil structure, formation of soil aggregates and its stability.			
8	Functions of water as a factor of environment and its important properties.			
9	Midterm exam, course assessment			
10	Water in soil			
11	Water in plants			
12	The movement of water in plant.			
13	The movement of water in continuity of the			
Activites		Number	Duration (hour)	Total Work Load (hour)
22	Theoretical	12	2.00	24.00
Textbooks, References and/or Other Materials:		Yesilsoy, M.S. 1994. Toprak, Bitki, Su İlişkileri. G.U. Ziraat Fakültesi, Genel Yayın No: 89. Ders Kitapları Yayın No:21.		
Practicals/Labs		0	0.00	0.00
Self study and preperation		14	2.00	28.00
Homeworks		0	0.00	0.00
Projects		0	0.00	0.00
Field Studies		0	0.00	0.00
Midterm exams		1	15.00	15.00
23	Assesment			
Others		0	0.00	0.00
Final Exams		R	1	19.00
Total Work Load				105.00
Quiz		0	0.00	3.00
ECTS Credit of the Course				3.00
Final Exam		1	60.00	
Total		2	100.00	
Contribution of Term (Year) Learning Activities to Success Grade		40.00		
Contribution of Final Exam to Success Grade		60.00		
Total		100.00		
Measurement and Evaluation Techniques Used in the Course				
24	ECTS / WORK LOAD TABLE			

25	CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS															
	PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ10	PQ11	PQ12	PQ13	PQ14	PQ15	PQ16
ÖK1	0	0	4	0	0	0	3	0	0	0	0	0	0	0	0	0
ÖK2	0	0	3	0	0	0	0	0	0	0	3	0	0	0	0	0
ÖK3	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0
ÖK4	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0
ÖK5	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
LO: Learning Objectives PQ: Program Qualifications																
Contribution Level:	1 very low		2 low			3 Medium			4 High			5 Very High				