AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Soil Science								
Course Code	TBB104		Couse Level	First Cycle (Bachelor's Degree)					
ECTS Credit	4	Workload	100 *(Hours)*	Theory	2	Practice	2	Laboratory	0
Objectives of the Course	Giving information to students about the history of soil science, the main material which forms the soil, the factors which creates the soil properties and the soil classification system.								
Course Content	Soil basic material, soil origin, formation and classification, mechanical and chemical weathering processes; factors affecting soil formation, soil profile, soil classification, some important physical properties of mineral soils, soil nutrient, the nature of the soil colloids and their practical importance, soil reaction; soil water, lime content of mineral soils, soil air, soil temperature and organic soils.								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Experiment, Demonstration, Discussion, Individual Study, Problem Solving								
Name of Lecturer(s)	Lec. Alper YORULMAZ, Lec. Levent ATATANIR, Lec. Mehmet Reşat SÜMER, Lec. Selçuk GÖÇMEZ, Prof. Gönül AYDIN								

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

Recommended or Required Reading	
1	Akalan, İ. 1983. Toprak Bilgisi, A.Ü. Ziraat Fak.Yay.: 878, Ders Kitabı: 234, 346 pp., Ankara.
2	Sağlam, T., Bahtiyar, M, Cangir, C. ve Tok, H. 1993. Toprak Bilimi, Tekirdağ Üniv. Zir. Fak. Yayınları, Tekirdağ.
3	Brady, N. C., 1990. The nature and properties of soils (10 th edition). Macmillan Publishing Company, New York.
4	Schachtschabel, P., Blume, H.P., Brümmer, G., Hartge, K.H., Schwertmann, U. 2007. Scheffer/Schachtschabel Toprak Bilimi, yeniden ele alınarak hazırlanmış 12. baskı, Çeviri: H. Özbek, Z. Kaya, M. Gök, H. Kaptan, Ç.Ü. Ziraat Fakültesi Yayın No:73, Ders Kitapları yayın No: A-16, Adana.
5	Tan, K.H., 1994. Environmental Soil Science. Marcel Dekker, Inc. Madison Avenue, New York/USA. 3.
6	Kacar, B., Katkat, V., 2007. Bitki Besleme. Nobel Yay. 659 p.

Week	**Weekly Detailed Course Contents**	
1	Theoretical	The importance of soil science in Turkey
	Practice	Presentation Laboratory
2	Theoretical	The definition of soil and the main structure materials
	Practice	Laboratory rules and cleaning the laboratory
3	Theoretical	The main material of soil
	Practice	The main material of soil, rocks
4	Theoretical	Soil formation
	Practice	Soil sampling
5	Theoretical	The facts of soil characteristics
	Practice	Soil moisture analysis
6	Theoretical	Soil profile
	Practice	Study of the soil profile
7	Theoretical	Soil classification
	Practice	The determination of the soil saturation percentage
8	Intermediate Exam	Midterm exam
9	Theoretical	The physical properties of mineral soils
	Practice	The total salt content in soils
10	Theoretical	The plant nutrient elements of mineral soils
	Practice	The calcium carbonate analysis in soils
11	Theoretical	Soil colloids
	Practice	The soil texture analysis

12	Theoretical	Soil reaction
	Practice	The soil reaction (pH) analysis
13	Theoretical	Soil water
	Practice	The soil moisture content at field capacity and at wilting point
14	Theoretical	Evapotranspiration in soils
	Practice	The soil moisture content
15	Theoretical	Soil organisms and soil organic matter
	Practice	Practice examination
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
Midterm Examination	1	1	16	17
Final Examination	1	1	26	27
			Total Workload (Hours)	100
			[Total Workload (Hours) / 25*] = **ECTS**	4
**25 hour workload is accepted as 1 ECTS*				

Learning Outcomes	
1	To be able to list the factors that shape the characteristics of the soil and soil formation.
2	To be able to explain the reasons of soil erosion and take precautions against the soil erosion
3	To be able to talk about the main material of soil and how to protect the soils
4	To be able to analyze some basic parameters of the soil.
5	Able to define soil physical and chemichal properties and connected with soil fertility