



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Soil Science							
Course Code		TBB104		Course Level		First Cycle (Bachelor's Degree)			
ECTS Credit	4	Workload	100 (<i>Hours</i>)	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 chemical properties and connected with soil fertility

Programme Outcomes (Dairy Technology)

1	Having sufficient infrastructure in basic sciences and engineering subjects and ability to use the theoretical and applied info instantly in this field.
2	Determining the modern techniques, tools and information technologies required for applications related with his field and ability to use them efficiently
3	Ability for planning, projecting, and designing, following up, analyzing and finding target-driven solutions related with his field
4	Ability to have professional ethic and awareness.
5	Ability to work, decide, express opinions orally and in written individually
6	Ability to participate team studies, taking responsibility, making leadership.
7	Ability to conceive Atatürk's principles and reforms, to communicate in Turkish and foreign language.
8	Ability to comprehend the necessity to learn for a life time, to monitor developments in science and technology and continuously renew himself.
9	Having sufficient level of information about production and quality control of milk and dairy products and also product development, increasing product quality and food security fields.
10	Ability to detect, define, solve problems related with his field and to select and apply suitable methods and modeling techniques for this purpose.
11	To be conscious about workplace applications, worker health, work security and environment subjects, to have knowledge about legal results of the engineering applications related with his subject.

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
P8	4	4	4	4	4

