



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Soil and Environmental Pollution							
Course Code		TBB202		Course Level		First Cycle (Bachelor's Degree)			
ECTS Credit	4	Workload	100 (Hours)	Theory	2	Practice	2	Laboratory	0
Objectives of the Course		The core of this course is to help student to identify pollution problems in agricultural soils and irrigation water and able take necessary measurement against soil and water pollution.							
Course Content		Reasons and resources of environmental pollution problems in agricultural soils and irrigation water; pollution limit values for agricultural soils and irrigation water; taking necessary measurement against environmental pollution in agricultural soils and irrigation water							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Experiment, Demonstration, Discussion, Case Study, Individual Study, Problem Solving					
Name of Lecturer(s)		Lec. Selçuk GÖÇMEZ							

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	70

Recommended or Required Reading

1	Çevre Kirliliği, Haktanır, K., Arcak, S. 1998. Ankara Üniversitesi Ziraat Fakültesi Yayınları 1503. A. Ü. Ziraat Fakültesi Halkla İlişkiler ve Yayın Ünitesi, Ankara, 323 s.
2	Çevre Kirliliği. Topbaş, M.T., Brohi, A. R., Karaman, M.R., T.C. Çevre Bakanlığı Yayınları, Ankara
3	Environmental Soil Science, Tan, K.H., 1994.. Markel Dekker Inc., 270 Madison Avenue, New York, 10016 U.S.A., ISBN 0-8247-9198-3, 255 p.
4	Agricultural Pollution, Environmental problems and practical solutions, Merrington, G., Winder, L., Parkinson, R., and Redman, M., 2005, Spon's Environmental Science and Engineering Series, Spon Press is an imprint of the Taylor & Francis Group, New York, ISBN 0-203-34177-5 (Adobe eReader Format)
5	Su Kalitesi, Tuncay, H., 1994. Ege Üniversitesi Ziraat Fakültesi Yayınları: 512, Bornova-İzmir.
6	Water quality for agriculture, Ayers, R. S. & Westcot, D. W., 1989.. FAO, Irrigation and Drainage Paper 29 Rev. 1, Rome, 174 p.
7	Su Kirliliği ve Kontrolü, Uslu, O., Türkman, A. 1987.. T.C. Başbakanlık Çevre Genel Müdürlüğü Yayınları Eğitim Dizisi No 1. Ankara, 364 s.

Week	Weekly Detailed Course Contents	
1	Theoretical	General knowledge about lecture; reasons of environmental problems
2	Theoretical	Terms and their meaning about environment and air and soil and water pollution
3	Theoretical	Reasons of air pollution and acid rain
4	Theoretical	Reasons of water resources pollution
5	Theoretical	Reasons of soil pollution
6	Theoretical	Relationships between agricultural activities and environment
7	Theoretical	Heavy metal pollution and resources in agricultural soils
8	Intermediate Exam	Midterm exam
9	Theoretical	Effects of trace and heavy metals in soil on agricultural production
10	Theoretical	Use of sewage sludge and industrial wastes in agriculture
11	Theoretical	Soil pollution caused by sewage sludge and industrial wastes in agriculture
12	Theoretical	Reuse of treated wastewater in agriculture
13	Theoretical	Pollution problem in Rivers and Lakes of Turkey
14	Theoretical	Take of necessary measurements against soil and water and environmental pollution
15	Theoretical	Used methods for treatment of soils and waters; Phytoremediation, Bioremediation, Biodegradation
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	0	20	20
Final Examination	1	0	24	24
Total Workload (Hours)				100
[Total Workload (Hours) / 25*] = ECTS				4

*25 hour workload is accepted as 1 ECTS

Learning Outcomes

1	On completion of this course students will be able to understand terms about soil and water and environmental pollution
2	To be able to determine reasons and resources of environmental pollution problems in agricultural soils and irrigation water
3	To be able to evaluate soil and water pollution with using recommended limit values
4	To be able to determine taking necessary measurement against environmental pollution in agricultural soils and irrigation water
5	To be able to demonstrate cleaning and treatment technologies for contaminated soil and water resources

Programme Outcomes (Agricultural Biotechnology)

1	To be able to develop skills in identifying, modeling and solving problems in agricultural biotechnology
2	To be able to synthesize life and engineering sciences for the effective resource planning of agricultural biotechnology applications
3	To be able to interpret about living organisms structure, metabolic and physiological processes in order to propose biotechnological solutions to the agricultural problems
4	To be able to analyze genomic, metabolomic and proteomic information via bioinformatic tools.
5	To have the ability to analyze collected data and interpret the results.
6	To have the ability of individual working ability and to make independent decisions, to work in inter-disciplinary and interdisciplinary teamwork, to communicate by expressing their ideas orally and in writing, clearly and concisely
7	To have the awareness of professional liabilities and ethics
8	To be able to follow current national and international problems

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	3	3
P2	4	4	4	4	4
P3	2	2	3	3	3
P4	1	1	1	1	1
P5	2	2	2	2	2
P6	2	2	2	2	2
P7	2	2	2	2	2
P8	2	2	2	2	2

