AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Soil and Environmental Pollution								
Course Code	TBB202		Couse 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 agrıcultural soils and irrigation water; pollution limit values for agrıcultural 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 Ilişkiler 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 Aveneu, 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 *(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 Ataturk’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