



**AYDIN ADNAN MENDERES UNIVERSITY**  
**KOÇARLI VOCATIONAL SCHOOL**  
**MECHANICAL AND METAL TECHNOLOGY**  
**AGRICULTURAL MACHINERY**  
**COURSE INFORMATION FORM**

Course Title	Soil Science								
Course Code	TAB104			Course Level		Short Cycle (Associate's Degree)			
ECTS Credit	6	Workload	100 (Hours)	Theory	2	Practice	2	Laboratory	0
Objectives of the Course	The aim of this course, is to teach to students defining soil formation and rocks, minerals, elements in soil, understanding relationships among soil physical, chemical and biological properties.								
Course Content	Soil elements and minerals, soil formation, soil morphology, physical, chemical and biological properties of soil, soil organic matter, soil erosion and conservation.								
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)									

#### Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	60

#### Recommended or Required Reading

1	AYDIN M. Ve KILIÇ Ş. 2010 Toprak Bilimi ISBN : 978-605-395-378-4
2	AKALAN İ. 1988 Toprak Bilgisi. Ankara Üniversitesi Ziraat Fakültesi Yayın No: 1058 Ders Kitabı: 309 Ankara

Week	Weekly Detailed Course Contents	
1	Theoretical	Introduction and soil definition
	Practice	field work
2	Theoretical	Soil elements and minerals
	Practice	introduction of different minerals in the soil
3	Theoretical	Igneous, sedimentary and metamorphic rocks
	Practice	Introduction of different rock types
4	Theoretical	Soil formation
	Practice	Examination of the soil profile
5	Theoretical	Soil morphology and profile
	Practice	Examination of soil profile horizons
6	Theoretical	Physical properties of soil
	Practice	soil sampling
7	Theoretical	Chemical properties of soil
	Practice	soil sampling
8	Intermediate Exam	Midterm Exam
9	Theoretical	Soil organisms
	Practice	soil analysis
10	Theoretical	Soil organic matter
	Practice	soil analysis
11	Theoretical	Soil erosion and conservation
	Practice	soil analysis
12	Theoretical	Soil classification
	Practice	soil analysis
13	Theoretical	Soil using
	Practice	soil analysis
14	Theoretical	Soil-environment relationships
	Practice	soil analysis



15	Theoretical	General Again
	Practice	soil analysis

Workload Calculation				
Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	0	2	28
Lecture - Practice	14	0	2	28
Assignment	10	0	0	0
Laboratory	5	2	1	15
Land Work	1	10	1	11
Midterm Examination	1	7	1	8
Final Examination	1	9	1	10
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 define soil formation and soil morphology
2	To be able to define soil physical properties and connected with soil fertility
3	To be able to define soil chemical properties and connected with soil fertility
4	To be able to define soil biological properties and connected with soil fertility
5	To be able to explain the causes of soil erosion and precaution type to be taken against water erosion,

Programme Outcomes (Agricultural Machinery)	
1	To be able to comprehend social, cultural and societal responsibility and keep up with national and international up contemporary issues and developments.
2	To be able to be bounded to the Atatürk nationalism, adopted to the national, ethic, spiritual and cultural value of the Turkish Nation, opened to the universal and modern development, adopted the richness, deep seated and productive properties of the Turkish language, having language sympathy and awareness, having reading pleasure and habit and having sufficient foreign language for their vocational necessities, In the directions of the Atatürk Principles and Revolutions,
3	To be able to recognize the basic computer hardware and operating systems , knowledge of internet usage being able to prepare documents, electronic tables and presentation by using office programs.
4	To be able to be aware of ethic responsibility and vocational profession and to have consciousness of a lifelong learning concept
5	To be able to know current vocational issues and to have skill to define and interpret them.
6	To be able to be aware of the universal and social dimensional effects in engineering solutions, and to be able to have knowledge about entrepreneurship and newfangledness.
7	To recognize the materials which used for preparation of agricultural machinery and have skill for the choosing the appropriate material.
8	To be able to acquire the skill of using the necessary tools and equipments which are used in the production and maintenance of agricultural machinery.
9	To be able to prepare the agricultural tools and machineries, to determine the breakdowns and to do periodic maintenance and repairs.
10	To be able to comprehend the picture of the agricultural tools and machinery and their fabrication , and have the skill to draw them via computer.
11	To be able to assemble and to combine machinery pieces by using demountable and nondetachable junction methods.
12	To be able to have the skill of resistance calculations of the agricultural tool and machinery on computer.
13	To be able to test and control the suitability of new machines and mechanic equipment to the definite standarts and technical properties.
14	To be able to have general knowledge of agricultural production.
15	To be able to have knowledge of basic sciences.

