



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

Course Title	Agricultural Ecology								
Course Code	ORT117			Course Level		Short Cycle (Associate's Degree)			
ECTS Credit	2	Workload	50 (Hours)	Theory	2	Practice	0	Laboratory	0
Objectives of the Course	To comprehend the ecological factors that create natural and agricultural ecosystems, and to figure out the planning of basic agricultural activities in terms of sustainability								
Course Content	Ecological definitions and terms; natural and agricultural ecosystems; the relationship between climate and agriculture; the relationship between soil and agriculture; the soil productivity and microorganisms; biotic and abiotic stress factors; global climatic change; environmental problems; photosynthesis; transpiration; water use efficiency; drought; conventional and alternative farming systems; pollution; sustainability; erosion								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Discussion								
Name of Lecturer(s)	Ins. Nuri KİLİMCİ								

#### Assessment Methods and Criteria

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

#### Recommended or Required Reading

1	GÖKMEN S. 2011 Genel Ekoloji Nobel Yayın No: 37 Fen Bilimleri No: 5 ISBN: 978-605-5426-36-1
2	MUSLU Y. 2000 Ekoloji ve Çevre Sorunları Aktif Yayınevi İstanbul
3	ÖZDEMİR Ş. 1997 Temel Ekoloji Bilgisi ve Çevre Sorunları Hatipoğlu Yayınları: 105 Yüksek Öğretim Dizisi: 32 ISBN: 975-7527-84-x

Week	Weekly Detailed Course Contents	
1	Theoretical	Ecological definitions and terms
2	Theoretical	Ecological definitions and terms
3	Theoretical	Natural and agricultural ecosystems
4	Theoretical	Biotic and abiotic stress factors
5	Theoretical	Agriculture-climate relations, climate groups
6	Theoretical	Global climatic change, environmental problems and pollution
7	Theoretical	Effects of temperature and light on agriculture, Precipitation and drought
8	Intermediate Exam	Mid-term Exam
9	Theoretical	Agriculture-soil relations and soil factors
10	Theoretical	Soil productivity and erosion
11	Theoretical	Photosynthesis, transpiration, water use efficiency
12	Theoretical	Respiration
13	Theoretical	Conventional and alternative farming systems
14	Theoretical	Conventional and alternative farming systems
15	Theoretical	General evaluation of topics and students' evaluation

#### Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	0	2	28
Midterm Examination	1	10	1	11
Final Examination	1	10	1	11
Total Workload (Hours)				50
[Total Workload (Hours) / 25*] = ECTS				2

\*25 hour workload is accepted as 1 ECTS



**Learning Outcomes**

1	To be able to comprehend ecological definitions and to develop the ability of making relations between ecological factors,
2	To be able to interpret natural and agricultural ecosystems,
3	To be able to compare conventional and alternative agricultural systems,
4	To be able to discuss the possible effects of global climate change on agricultural activities,
5	To be able to evaluate and interpret biotic and abiotic environmental factors,
6	To be able to comprehend and solve the problems related to ecological factors in agricultural production.

**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.

**Contribution of Learning Outcomes to Programme Outcomes 1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High**

	L1	L2	L3	L4	L5	L6
P14	4	4	4	4	4	4

