



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

Course Title	Mechanization in Plant Production								
Course Code	TAM123			Course Level		Short Cycle (Associate's Degree)			
ECTS Credit	5	Workload	100 (Hours)	Theory	3	Practice	1	Laboratory	0
Objectives of the Course	The aim of this course, is learning the agricultural mechanization system, general features of agricultural equipment and machinery for agricultural production, agricultural tractors and energy resources in agriculture.								
Course Content	The importance of agricultural mechanization, the basic units of international, tractors, tillage, sowing, planting and fertilizing machinery, irrigation and harvesting machines have knowledge about.								
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	Önal, İ., 2011. Ekim Bakım Gübreleme Makinaları. Ege Üniversitesi Ziraat Fakültesi Publications Number:490 İzmir.
2	Yağcıoğlu, A., 2008. Bitki Koruma Makineleri. EÜZF Publications Number:508 İzmir.
3	Erdoğan, D., 2005. Tarım Makinaları. Ankara Üniversitesi Ziraat Fakültesi Publications Number: 1548, Course Book: 501, Ankara Üniversitesi Printery, 142 s., Ankara.
4	Çilingir, İ. ve E. Dursun, 2002. Bitki Koruma Makinaları. AÜZF Publications Number: 1531, Course Book Number: 484, Ankara.
5	Keçecioğlu, G. ve E. Gülsoylu, 2002. Toprak İşleme Makinaları. E.Ü.Z.F. Publications Number: 545, Bornova-İzmir.
6	Kasap, E., B. Engürülü, Ö. Çiftçi, S.Kılınç, M.Gölbaşı ve M.Akkurt, 1999. Bitki Koruma Makineleri. Republic of Turkey Ministry of Food, Agriculture and Livestock. Ankara.

Week	Weekly Detailed Course Contents	
1	Theoretical	Introduction to the class, definitions and general information about lesson
	Practice	Introduction of agricultural machines
	Preparation Work	Examining course contents
2	Theoretical	In our country, the areas of agriculture and agricultural tractor with the tractor park status for the numbers, the structural characteristics of tractors and tractor use in agriculture forms
	Practice	Introduction of agricultural machines
	Preparation Work	Literature review about the subject
3	Theoretical	Current status and future of our country, agricultural tools and machines
	Practice	Introduction of agricultural machines
	Preparation Work	Literature review about the subject
4	Theoretical	Power resources in agriculture, Working principle of engines, motor fuels and oils
	Practice	Introduction of tractors
	Preparation Work	Literature review about the subject
5	Theoretical	The importance of energy in agriculture
	Practice	Introduction of tractors
	Preparation Work	Literature review about the subject
6	Theoretical	Tillage tools and machinery
	Practice	Introduction of tillage tools and machinery
	Preparation Work	Literature review about the subject
7	Theoretical	Tillage tools and machinery
	Practice	Introduction of tillage tools and machinery
	Preparation Work	Literature review about the subject



8	Intermediate Exam	Midterm Exam
9	Theoretical	Sowing and planting machinery
	Practice	Introduction of sowing and planting machinery
	Preparation Work	Literature review about the subject
10	Theoretical	Fertilizing machinery
	Practice	Introduction of fertilizing machinery
	Preparation Work	Literature review about the subject
11	Theoretical	Plant protection machinery
	Practice	Introduction of plant protection machinery
	Preparation Work	Literature review about the subject
12	Theoretical	Harvesting machinery
	Practice	Introduction of harvesting machinery
	Preparation Work	Literature review about the subject
13	Theoretical	Bale and silage machinery
	Practice	Introduction of bale and silage machinery
	Preparation Work	Literature review about the subject
14	Theoretical	Threshing machinery
	Practice	Introduction of threshing machinery
	Preparation Work	Literature review about the subject
15	Theoretical	Practice Exam
	Practice	Explanation of agricultural machinery in the form of questions and answers
	Preparation Work	Practice Exam preparation
16	Theoretical	Final Exam

### Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	0	3	42
Lecture - Practice	14	0	1	14
Assignment	5	0	1	5
Term Project	1	0	4	4
Studio Work	5	0	1	5
Midterm Examination	1	14	1	15
Final Examination	1	14	1	15
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 understand agricultural mechanization systems
2	To be able to have knowledge of Agricultural areas in Turkey and the machine park.
3	To be able to acquire the basic concepts of agricultural tools and machinery
4	To be able to understand the working principles of agricultural tools and machines
5	To be able to acquire the characteristics of agricultural tools and machinery construction
6	To be able to recognize and study the properties of tractors
7	To be able to understand the energy resources in agriculture

### Programme Outcomes (Agricultural Machinery)

1	To be able to comprehend social, cultural and societal responsibility and keep up with national and international 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 standards 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	L7
P4	3	3	4	4	4	4	3
P5	3	4	4	4	4	4	4
P6			4	4	4	4	3
P7				4	5	5	
P8				5	5	5	
P9				5	5	5	

