



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

Course Title	Agricultural Products Processing Techniques								
Course Code	TAM233			Course Level		Short Cycle (Associate's Degree)			
ECTS Credit	2	Workload	50 (Hours)	Theory	2	Practice	0	Laboratory	0
Objectives of the Course	The objective of this course is to provide the gaining of knowledge and skills of evaluating the techniques of cleaning, sorting, drying, milling, mixing and peletting agricultural products for their professional career.								
Course Content	Theory and calculation of crop cleaning, sorting, classification, drying, packaging, breaking and milling.								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Discussion, Case 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	Yağcıoğlu, A., 1996. Ürün İşleme Tekniği. E.Ü.Z.F. Press Number: 517, İzmir.
2	Alayunt, F.N., 2000. Biyolojik Malzeme Bilgisi. E.Ü.Z.F. Press Number: 541, İzmir.

Week	Weekly Detailed Course Contents	
1	Theoretical	Introduction to the class, definitions and general information about lesson
	Preparation Work	Examining course contents
2	Theoretical	Physical Properties of biological materials (shape, size, roundness, sphericity, surface area, other properties of grain materials, volume, density, specific gravity)
	Preparation Work	Literature review about the subject
3	Theoretical	Structure of biological materials, mechanical damage, rheology, friction, mechanical behaviour of a material in terms of force
	Preparation Work	Literature review about the subject
4	Theoretical	Cleaning and sorting of grain materials by using some physical properties/separation of grains by weight and thickness
	Preparation Work	Literature review about the subject
5	Theoretical	Separation of grains by length
	Preparation Work	Literature review about the subject
6	Theoretical	Rotary screens
	Preparation Work	Literature review about the subject
7	Theoretical	Separation of grains by aerodynamic properties
	Preparation Work	Literature review about the subject
8	Intermediate Exam	Midterm Exam
9	Theoretical	Separation of grains by friction
	Preparation Work	Literature review about the subject
10	Theoretical	Separation of grains by mechanical properties
	Preparation Work	Literature review about the subject
11	Theoretical	Separation of grains by electrical and optical properties
	Preparation Work	Literature review about the subject
12	Theoretical	Separation and cleaning of fruit and vegetables,
	Preparation Work	Literature review about the subject
13	Theoretical	Drying of agricultural materials
	Preparation Work	Literature review about the subject
14	Theoretical	Related to drying problems and solutions
	Preparation Work	Literature review about the subject



15	Theoretical	Milling, mixing and peletting of feed materials
	Preparation Work	Literature review about the subject
16	Theoretical	Final Exam

### Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	0	2	28
Assignment	2	0	1	2
Midterm Examination	1	9	1	10
Final Examination	1	9	1	10
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 decide the assessment methods of agricultural products according to their properties
2	To be able to have knowledge of the principles of cleaning, sorting, drying, milling, mixing and peletting of agricultural products. Calculating and evaluating work efficiency.
3	To be able to understand the reasons of the drying process, drying stages and drying theory, dryers and their working conditions. The drying processes of some agricultural products.
4	To be able to understand the reasons of milling, mixing and peletting of feed- stuff, principles of the milling processes of seeds, kinetics of milling, hammer mills and roller mills, principles of mixing processes and peletting techniques.

### 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
P4	3	3	3	3
P5	3	4	4	4
P6	3	5	5	5
P7	4	4	4	4
P8		3	3	3



P14	5	4	4	4
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