AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Design of Harvesting Machinery						
Course Code	ZTM510		Couse Level	Second Cycle (Master's Degree)			
ECTS Credit	8	Workload	196 *(Hours)*	Theory	3	Practice	0	Laboratory	0
Objectives of the Course	The aim of this course is to teach the basic functions of the harvesting process and harvesting process.						
Course Content	General Principles of Prototype Making. Effects of Function and Economy. Examination of Production, Maintenance and Operating Safety. Cutting Theory in Plant Material. Rake of Handle Material. Compression-Crushing Theory. Baling Machines. Blending Methods. Separation and Cleaning Methods and Layouts. Power Transmission Systems in Harvesting Machines. Capacity Calculations.						
Work Placement	N/A						
Planned Learning Activities and Teaching Methods			Explanation (Presentation), Discussion, Case Study, Project Based Study, Problem Solving				
Name of Lecturer(s)							

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	20
Final Examination	1	60
Laboratory	14	20

Recommended or Required Reading

1	Agrıcultural Machınes Theory and Constructıon, Vol.2. Kanafojski, Cz., T.Karwowski, . Crop-Harvesting Machines, Foreign Scientificlications Dept. Of the National Center for Scientific, Technical and Economic Information, Warsaw, Poland, 1976
2	Hasat-Harman İlkeleri ve Makinaları. Güzel, E.,, Ç.Ü. Ziraat Fakültesi Ders Kitapları Yayın No: A-60, Adana, 1998.
3	Biçer-döverler. Erol, M.A., M.,Dilmaç, TZDK Mesleki Yayınları, 1982.

Week	Weekly Detailed Course Contents		
1	Theoretical	Biological and physicomechanical properties of the plant material- Harvesting machines presentation	
2	Theoretical	The general principles of the construction of the prototype- General information on the design of the machine, the calculations	
3	Theoretical	The effects of function and economy- Studies on the machine	
4	Theoretical	Operation, maintenance and operation mode of manufacturing evaluate the safety of-Studies on the machine	
5	Theoretical	Harvesting machines, mechanisms- Studies on the machine	
6	Theoretical	Theory of plant material being cut- cutting applications	
7	Intermediate Exam	Midterm Exam	
8	Theoretical	Rake handle material-raking applications	
9	Theoretical	Compression-crushing theory-Studies on the machine	
10	Theoretical	baling machines-Studies on the machine	
11	Theoretical	Method of Blending-Blending the introduction of machines	
12	Theoretical	Separation and cleaning methods and layouts-Studies on the machine	
13	Theoretical	Harvesting machines, power transmission systems,-Studies on the machine	
14	Theoretical	capacity calculations	
15	Theoretical	sample calculations	
16	Final Exam	final exam	

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	3	2	70
Lecture - Practice	14	2	2	56
Assignment	14	0	1	14
Reading	14	0	2	28

Midterm Examination	1	10	1	11
Final Examination	1	16	1	17
			Total Workload (Hours)	196
			[Total Workload (Hours) / 25*] = **ECTS**	8

25 hour workload is accepted as 1 ECTS

Learning Outcomes

1	Design philosophy of learning
2	To understand the biological and physicomechanical properties of the plant
3	To understand the theory of Interruption
4	To understand the theory of raking
5	To understand the theory of compression and crushing.

Programme Outcomes *(Agricultural Machinery Master)*

1	Identification, formulation and solving the problems in the field of Agricultural Machinery
2	The ability to use modern engineering tools and techniques
3	The ability to use the information, which is obtained by following the scientific and technological developments, in the academic life and practice.
4	The ability to evaluate multi-faced relationship between them by understanding interaction among agricultural technology, soil, plants and animals
5	Professionalism and ethical responsibility
6	The ability to work in disciplinary and multi-disciplinary teams
7	The ability to communicate effectively
8	The ability to do research for accessing information and to use data base and other resources
9	The ability to do analyze and interpret the experimental results and the design of experiment
10	The ability to identify and interpret knowledge of current professional issues and events
11	The ability to get aware the universal and social effects of engineering solutions and applications
12	Accordance with the requirements of science and technology, ability to use scientific knowledge creative

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	5		5		
P2		5	4		5
P3	5	5	3	5	5
P4	2		4	4	
P5	5				
P6	5	5	5	5	5
P7	5	5	5	5	5
P8	5	5	5	5	5
P10	5	5	5	5	5
P11	5	5	5	5	5
P12	5	5	5	5	5