AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title		Agricultural Mechanization							
Course Code		BSM213		Couse Level		First Cycle (Bachelor's Degree)			
ECTS Credit	4	Workload	100 *(Hours)*	Theory	2	Practice	2	Laboratory	0
Objectives of the Course		The aim of this course, learning the agricultural mechanization system, general features of agricultural equipment and machinery for agricultural production, agricultural tractors and energy resources in agriculture.							
Course Content		Definition of Agricultural Mechanization, Historical Development, Advantages; Agricultural Mechanization in Turkey (Agricultural Structure, Historical Development and Level, Important Factors to Delay of Development); Mechanization System on Agricultural Production, Energy Resources in Agriculture, Farm Tractors (General Feature), Agricultural Equipment and Machinery; Soil Tillage Equipment and Machinery, Fertilizer Distribution Machinery, Sowing and Planting Machinery, Irrigation Mechanization, Crop Protection Machinery, Harvesting and Threshing Machinery.							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation)					
Name of Lecturer(s)									

Assessment Methods and Criteria		
Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	70

Recommended or Required Reading	
1	* Mutaf,E., 1984. Tarım Alet ve Makinaları. E.Ü.Z.F. Yayın No: 218, Bornova-İzmir. * Mutaf,E., R.Uçucu, 1980. Tarımsal Mekanizasyon. E.Ü.Z.F. Ders teksiri, Bornova-İzmir.
2	Keçecioğlu,G., E.Gülsoylu, 2002. Toprak İşleme Makinaları. E.Ü.Z.F. Yayın No: 545, Bornova-İzmir. * Önal,İ., 1995. Ekim, Bakım, Gübreleme Makinaları. E.Ü.Z.F. Yayın No: 490, Bornova-İzmir.
3	ozan, M.; 1997. Tarımsal Mekanizasyon, E.Ü.Z.F. Yayın No: 46/1, Bornova-İzmir, 84 s. * Yağcıoğlu,K., 1993. Bitki Koruma Makinaları. E.Ü.Z.F. Yayın No: 508, Bornova-İzmir

Week	Weekly Detailed Course Contents	
1	Theoretical	Definition of agricultural mechanization, historical development, advantages
2	Theoretical	Agricultural mechanization in turkey (agricultural structure, historical development and level, important factors to delay of development)
3	Theoretical	Mechanization system on agricultural production, energy resources in agriculture Farm tractors (technical feature)
4	Theoretical	Farm tractors (working feature)
5	Theoretical	Soil tillage equipment and machinery (ploughing technics, ploughs, subsoiler)
6	Theoretical	Soil tillage equipment and machinery (cultivator, harrow, roller, rotovator)
7	Intermediate Exam	midterm exam
8	Theoretical	Fertilizer distribution machinery (organic, mineral)
9	Theoretical	Sowing machinery
10	Theoretical	Precision and special sowing, and planting machinery
11	Theoretical	Irrigation mechanization
12	Theoretical	Crop protection machinery
13	Theoretical	Harvesting and threshing machinery (forage harvesting machinery)
14	Final Exam	final exam

Workload Calculation				
Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	3	3	84
Midterm Examination	1	0	8	8

Final Examination	1	0	8	8
			Total Workload (Hours)	100
			[Total Workload (Hours) / 25*] = **ECTS**	4
**25 hour workload is accepted as 1 ECTS*				

Learning Outcomes	
1	Understanding the information of the definition of agricultural mechanization, its historical development, benefits, level of agricultural mechanization in Turkey.
2	Understanding agricultural mechanization system.
3	Understanding of the energy resources in agriculture and its use.
4	Soil tillage equipment and machinery (cultivator, harrow, roller, rotovator)
5	Precision and special sowing, and planting machinery

Programme Outcomes *(Horticulture)*	
1	To provide practical learning of production and cultivation techniques in the field of horticulture, to introduce the current status of new techniques and to create a perspective based on efficient, economical and quality production techniques for the future
2	To develop the ability to think in the professional field and to gain the ability to produce projects by making innovative approaches
3	To contribute to the development of appropriate breeding strategies in the field of horticulture, especially for sector-based areas, and to provide a perspective for breeding and new variety development in the commercial field
4	To contribute to the possibilities of using technology in the field of horticulture, to create awareness that they can develop activities in the sector in harmony with different disciplines
5	To gain the ability to analyze field work and hypothesis formulation, experiment planning, experiment and research management, data acquisition and evaluation skills related to research topics for the solution of problems encountered in horticultural issues, to shed light on the perspective of their use in public and private sector areas
6	To develop collaboration with different departments in the field of agricultural engineering, to develop the ability to plan research and to work in harmony with different stakeholders in an integrated manner
7	To provide candidates who plan a career in academia, public and private sectors with the skills of research planning, execution and evaluation, report writing, analyzing-understanding-evaluating written reports, and making presentations to sector stakeholders and academia.
8	To gain the ability to create awareness about accessing and developing information and technology within the framework of the principle of lifelong learning
9	To have knowledge about the principles of professional ethics, to gain the ability to make ethical responsibility sustainable throughout professional life
10	To have sufficient knowledge about the quality standards of horticultural crops, evaluation and preservation of products, to have the ability to take initiatives that will create awareness with innovative approaches on these issues
11	To have knowledge about the effects of Agricultural Engineering-Horticulture applications on the environment, human and animal health and sustainable agricultural systems; also to be aware of the legal consequences of engineering solutions to problems

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	5	5	5
P2	5	5	5	5	5
P5	5	5	5	5	5