AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Agricultural Control Machines								
Course Code	BKR215		Couse Level	Short Cycle (Associate's Degree)					
ECTS Credit	2	Workload	50 *(Hours)*	Theory	2	Practice	0	Laboratory	0
Objectives of the Course	To know the use and characteristics of the machines used in agricultural struggle								
Course Content	To learn the techniques of disposal of solid, liquid and gaseous pesticides used in agricultural struggle and the working principles and uses of agricultural tools and machinery used in their disposal.								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Demonstration, Discussion, Case Study, Individual Study, Problem Solving								
Name of Lecturer(s)	Ins. Muammer ERDEN								

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

Recommended or Required Reading	
1	Course notes of Lecturers
2	Presentations and Lecture Notes Compiled From Different Sources
3	Prof. Dr. İbrahim Çilingir ve Doç. Dr. Engin Dursun 2002. Bitki Koruma Makinaları. A.Ü. Ziraat Fakültesi Yayınları
4	Prof. Dr. Abdülkadir Yağcıoğlu 1993. Bitki Koruma Makinaları Ege. Ü. Ziraat Fakültesi Yayınları
5	IMPLEMENT project

Week	Weekly Detailed Course Contents	
1	Theoretical	Agricultural pest control methods and machines used
2	Theoretical	Pesticides for spraying liquid medicines
3	Theoretical	Parts of sprayers, Drug store, Mixer, Pump
4	Theoretical	Various Pumps Used in Pulverizers Useful and Objective Aspects
5	Theoretical	Sprayer Pump Power Requirements, Air Cell, Pressure Regulator, Pressure Gauge
6	Theoretical	Filters Used in Pulverizers, Pipes and Hoses Used in Pulverizers, Valves Used in Pulverizers
7	Theoretical	Sprayer Memories; Pressure-energy-operated nozzles, Pressure energy and measurement of working drops
8	Intermediate Exam	Midterm exam
9	Theoretical	Parts of hydraulic tanks, Numbers of hydraulic tanks, Characteristics of hydraulic tanks, Theoretical basis of hydraulic tanks.
10	Theoretical	Air-operated nozzles, Centrifugal force-driven nozzles, Work-powered nozzles, Electrostatic and electro-dynamic energy operated nozzles
11	Theoretical	Spraying rods and ramps, Structural and functional properties of some mechanical sprayers. Hand operated mechanical treadmill
12	Theoretical	Mechanical field sprayer, Calibration of mechanical sprayer, Auxiliary air flow mechanical pulverizator Sprayer with rotating disk, Sprayers for field and fruit garden
13	Theoretical	Machines for dispensing solid drugs, Powder medicament dispensing machines, Granule type solid medicament dispensing machines, Gas medicines Dispensing machines
14	Theoretical	Helicopters and Airplanes Used in Agricultural Pest Control, Seed Drilling Machines, Before and After Internal Treatment of Drug Machines,Spraying with Unmanned Aerial Vehicles
15	Theoretical	Prior to commencement of operation with the spreading machinery, medicines for sales of medicines, safety precautions for medicines preparation, medicinal works

Workload Calculation				
Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	0	2	28
Assignment	1	2	0	2

Individual Work	1	2	0	2
Midterm Examination	1	7	1	8
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	Know agricultural pest control systems and types of machines used in chemical contol
2	Know all parts of agricultural pest control machines
3	To be able to adjust and maintain agricultural pest control machines
4	To be able to calibrate agricultural pest control machines
5	To be able to perform calculations on agricultural pest control machines

Programme Outcomes *(Plant Protection)*	
1	To be able to learn about systematics, morphological, biological, ecological and epidemiological information about diseases, pests and weeds that cause the loss of the crop at every stage of production,
2	To be able to become familiar with agricultural management control methods and their use in control of plant diseases, pests and weeds in cultivated agricultural crops,
3	To be able to diagnose and identify plant diseases, insect, mite or nematode pests or weeds that cause economical losses in stored crops and products,
4	To be able to use pesticides safely and effectively and informed about their hazardous non-target effects on the environment and human health.
5	To be able to learn plant protection products and their practice in organic agriculture,
6	To be able to evaluate the information obtained throughout the learning process with cause-effect relations, to be able to collect data and transfer the results to practice, and to predict where, when and why to use the information
7	To be able to comply with professional, cultural, social ethic rules in his / her field and to be entrepreneurial
8	To be able to have conscious of the universality of social rights, social justice, quality and cultural values, environment protection, occupational health and safety issues
9	To be able to use information and communication technologies together with the required computer software of his / her field
10	To be able to have the necessary background and qualifications to work in public and private agriculture sectors, to be able to conduct a study independently / as a team member and to be able to comply with the relevant legislation

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	1	1	1	4	2
P2	1	2	2	3	1
P3	1	1	1	4	1
P4	3	3	2	2	2
P5	1	1	2	1	1
P6	1	1	2	3	2
P10	2	2	3	3	3