



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Operation and Control Techniques in Micro-irrigation Systems							
Course Code		ZTY516		Course Level		Second Cycle (Master's Degree)			
ECTS Credit	8	Workload	200 (Hours)	Theory	2	Practice	2	Laboratory	0
Objectives of the Course		The aim of this course is to provide students to understanding information about the basic elements and components of the micro irrigation system that required for the operation the system.							
Course Content		Basic concepts in micro-irrigation system management, Evapotranspiration and irrigation scheduling, Field Performance and Evaluation, Equipment and methods for fertilizer and chemical application, Clogging and preventative maintenance (filtration and chemical water treatment) in micro-irrigation systems, system maintenance. System Maintenance							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Discussion, Project Based Study, Individual Study, Problem Solving					
Name of Lecturer(s)		Assoc. Prof. Ersel YILMAZ							

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	60

Recommended or Required Reading

1	Ders Kitabı : Cuenca, R., "Irrigation System Design, An Engineering Approach". Prince Hall Inc., New Jersey, (1989).
2	James, L.G., 1988. Farm Irrigation System Design, John Wiley and Sons Inc., ISBN 0-471-83954-X, Canada, 543 p
3	Kanber, R., 1999. Irrigation (Sulama), Ç.Ü. Ziraat Fakültesi Yayınları, No: 174, Adana, 350 s.
4	Ferreres E., "Drip Irrigation Management" Leaflet 21259. University of California.

Week	Weekly Detailed Course Contents	
1	Theoretical	Basic concepts in micro-irrigation system management
2	Theoretical	Crop responses to micro irrigation
3	Theoretical	Determination and estimation of crop evapotranspiration
4	Theoretical	Determination and estimation of plant water requirements
5	Theoretical	Irrigation scheduling in micro irrigation systems
6	Theoretical	Importance of water quality in micro irrigation systems
7	Theoretical	Salinity management in micro irrigation systems
8	Theoretical	Field Performance in micro irrigation systems
9	Intermediate Exam	MID-TERM EXAM
10	Theoretical	Evaluation of Micro irrigation systems
11	Theoretical	Equipment for fertilizer and chemical application micro irrigation systems
12	Theoretical	Methods for fertilizer and chemical application
13	Theoretical	Emitter clogging and preventative maintenance (filtration)
14	Theoretical	Emitter clogging and preventative maintenance (water management)
15	Theoretical	System Maintenance
16	Final Exam	FINAL EXAM

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	5	2	98
Lecture - Practice	14	4	2	84
Midterm Examination	1	6	2	8



Final Examination	1	8	2	10
Total Workload (Hours)				200
[Total Workload (Hours) / 25*] = ECTS				8
*25 hour workload is accepted as 1 ECTS				

Learning Outcomes

1	Understanding the basics of micro irrigation systems
2	Ability to identify the problems occur while managing the irrigation system
3	Ability to use the available irrigation system to its maximum efficiency
4	To be able to calculate and determine the preliminary design factors for pressurized irrigation system
5	Having basic knowledge regarding pressurized irrigation

Programme Outcomes (Agricultural Structures and Irrigation Master)

1	Ability to use, evaluate and improve the knowledge gained from field of study at an expert level
2	Ability to reach necessary the knowledge
3	To able to conduct scientific studies (research) related to the field
4	Ability to consider academical and ethical values the studies
5	Ability to improve editing method and evaluate the results of researches
6	The studies, the ability to reach result and application, develop new approaches
7	A topic in the field of written, verbally and visually as the ability to express
8	Effective use of Turkish language and ability to communicate in a foreign language both written and verbal

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	4	5	5	5	5
P2	5	4	4	4	4
P3	4	4	3	4	5
P4	4	4	4	5	4
P5	5	5	4	4	5
P6	5	5	5	5	5
P7	4	4	4	5	4
P8	4	5	5	5	5

