



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Excel Applications in Irrigation and Drainage Systems							
Course Code		ZTY540		Couse Level		Second Cycle (Master's Degree)			
ECTS Credit	7	Workload	175 (<i>Hours</i>)	Theory	2	Practice	0	Laboratory	0
Objectives of the Course		Students will learn the fundamentals of using EXCEL, the functions commonly used by engineers, evaluation of the data obtained using these functions							
Course Content		Intorduction of EXCEL, graphical solutions with spreadsheets, EXCEL functions for mathematics, statistics. Curve fitting, matrix operations, linear equations, linear regression with EXCEL, optimization with Solver, macro techniques and VBA, numerical integration techniques, Runge-kutte methods.							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Discussion, Case Study, Individual 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	Engineering with Excel Ronald W. Larsen
---	---

Week	Weekly Detailed Course Contents	
1	Theoretical	Introduction of Excel
2	Theoretical	Excel mathematic and statistics functions
3	Theoretical	Excel graphics applications
4	Theoretical	Mathematical modeling with Excel
5	Theoretical	Statistical modeling with Excel
6	Theoretical	Matris applications with Excel
7	Theoretical	Solution of Excel linear equations
8	Intermediate Exam	Midterm exam
9	Theoretical	Visual Basic applications with Excel
10	Theoretical	Makro programing
11	Theoretical	Numerical integration techniques
12	Theoretical	Optimization problems and SOLVER
13	Theoretical	Integration of Excel and other softwares
14	Final Exam	Final Exam

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	8	3	154
Midterm Examination	1	7	2	9
Final Examination	1	10	2	12
Total Workload (Hours)				175
[Total Workload (Hours) / 25*] = ECTS				7

*25 hour workload is accepted as 1 ECTS

Learning Outcomes

1	Students can use, explain and able to discuss Excel software
2	Be able to prepare a graphic chart
3	Be able to apply numerical decision making techniques by Excel
4	Can explain and discuss basic operations, various functions and form control elements



5	Be able to apply the knowledge gained in the course to culture technique applications
---	---

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

