



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Simulation Technique							
Course Code		ZTM521		Course Level		Second Cycle (Master's Degree)			
ECTS Credit	8	Workload	200 (<i>Hours</i>)	Theory	3	Practice	0	Laboratory	0
Objectives of the Course		The data obtained from studies conducted in the field of Agricultural Mechanization will provide knowledge and skills that they will gain a mathematical form.							
Course Content		Linear and non-linear models. The basic principles and approaches to model development. Single and multiple regression analysis. Approaches to non-linear model. Choosing the best model.							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Discussion, 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	Discrete-Event System Simulation, J.Banks,J.S.Carson,B.L.Nelson,Prentice-Hall International Series,New Jersey,1999. ISBN:0-13-217449-9. Simulation modeling and analysis / Averill M. Law, W. David Kelton, New York: McGraw-Hill, c1982. ISBN: 0070366969
---	--

Week	Weekly Detailed Course Contents	
1	Theoretical	Mathematical Modeling and Its Importance
2	Theoretical	Mathematical modeling stages
3	Theoretical	Mathematical modeling stages
4	Theoretical	Linear Models
5	Theoretical	Linear Models
6	Theoretical	Linear Models
7	Theoretical	Linear Models
8	Intermediate Exam	midterm exam
9	Theoretical	Nonlinear Models
10	Theoretical	Nonlinear Models
11	Theoretical	Nonlinear Models
12	Theoretical	Model Selection and Selection Criteria
13	Theoretical	Determination of the model and the model with the variables to Participate
14	Theoretical	Comparison of Model and Experimental Results
15	Theoretical	Mathematical Model for Developing the Field of Agricultural Mechanization, Other Tools and Methods that can be used
16	Final Exam	final exam

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	2	2	56
Lecture - Practice	14	0	2	28
Assignment	14	0	2	28
Term Project	2	0	22	44
Midterm Examination	1	20	2	22



Final Examination	1	20	2	22
Total Workload (Hours)				200
[Total Workload (Hours) / 25*] = ECTS				8
*25 hour workload is accepted as 1 ECTS				

Learning Outcomes

1	To define a system or process
2	Variables in a system or process to define an effective
3	To examine relationships between variables
4	Trials of a system or process execution
5	Mathematical Model of learning to achieve
6	Learning more than one approach to model development
7	The best model selection and interpretation of the mathematical model of the form
8	Mathematical model test

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	L6	L7	L8
P1	5	5				5		
P2	5	5	3	5				
P4	5	5						
P8	5	3	5	4				
P9	5	3					5	5
P10					5		3	
P11	3							

