AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title		Modelling Techniques in River Basins					
Course Code		ZTY614		Couse Level	Third Cycle (Doctorate Degree)		
ECTS Credit	6	Workload	150 *(Hours)*	Theory	2	Practice	2	Laboratory	0
Objectives of the Course		Teaching modeling applications of basin systems using various models.					
Course Content		Modeling applications of basin systems using various models.					
Work Placement		N/A					
Planned Learning Activities and Teaching Methods		Explanation (Presentation), Demonstration, Discussion, Case Study, Project Based 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	Distributed Hydrologic Modeling Using GIS B.E. Vieux

Week	Weekly Detailed Course Contents	
1	Theoretical	Introduction to basin systems
2	Theoretical	Methods of modeling
3	Theoretical	Model determination and formulation
4	Theoretical	Calibration techniques of models
5	Theoretical	Validation techniques of models
6	Theoretical	Modeling of basin hydrology
7	Theoretical	Models and applications
8	Intermediate Exam	MIDTERM EXAM
9	Theoretical	BASINS model and its applications
10	Theoretical	TOPMODEL and its applications
11	Theoretical	HEC model and its applications
12	Theoretical	Integration techniques of stochastic models
13	Theoretical	Integration techniques of deterministic models
14	Theoretical	Identification of suitable model
15	Final Exam	FINAL EXAM

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	3	2	70
Lecture - Practice	14	2	2	56
Midterm Examination	1	8	2	10
Final Examination	1	12	2	14
			Total Workload (Hours)	150
			[Total Workload (Hours) / 25*] = **ECTS**	6

*25 hour workload is accepted as 1 ECTS

Learning Outcomes

1	Model determination and formulation
2	Making model calibration and validation
3	being able to determine suitable model
4	To be able to run models such as BASINS, TOPMODEL and HEC

5	Modeling basin hydrology

Programme Outcomes *(Agricultural Structures and Irrigation Doctorate)*

1	Ability to analyze, synthesize and evaluate different forms of scientific knowledge in the field of studies
2	Approach to information systematically, and gain skills related to their field the research methods
3	Innovative science to develop a scientific method or a method that is known to practice in their field
4	Ability to organize and manage the project and advanced scientific research
5	Advanced technologies, find solutions to engineering problems taking advantage of the software and model approaches
6	Creative, unbiased and critical thinking
7	A topic in the field of written, verbally and visually as the ability to express
8	Ability to publish in refereed journals National and international the results of studies

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	4	4	3	4
P2	5	4	4	3	2
P3	4	3	4	3	4
P4	2	4	5	4	3
P5	4	2	4	4	4
P6	5	3	3	3	4
P7	2	3	2	3	3
P8	1	2	3	2	3