



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Geographic Information Systems in Water Resources II							
Course Code		ZTY615		Couese Level		Third Cycle (Doctorate Degree)			
ECTS Credit	6	Workload	150 (<i>Hours</i>)	Theory	2	Practice	2	Laboratory	0
Objectives of the Course		Advanced teaching of geographical information systems in water resources management							
Course Content		Remote Sensing Techniques, collection of remote sensing data and using in geographical information systems, analysis of remote sensing data, evaluation and verification, integration of remote sensing and geographical information systems, modeling by geographical information systems							
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	Geographic Information Systems and Environmental Modeling Keith C. Clarke
2	Worboys M.F., 1995. GIS : A Computing Perspective. Department of Computer Science, University of Keele, Keele, UK. Taylor and Francis Ltd.1 Gunpowder Square, London EC4A 3DE. UK

Week	Weekly Detailed Course Contents	
1	Theoretical	Remote Sensing (RS) Techniques
2	Theoretical	Data collection by remote sensing
3	Theoretical	Using remote sensing data in geographical information systems
4	Theoretical	Analysis of remote sensing data
5	Theoretical	Evaluation of errors in remote sensing data
6	Theoretical	Verification in remote sensing data
7	Theoretical	Integration of remote sensing and geographical information systems
8	Theoretical	MIDTERM EXAM
9	Theoretical	Modeling techniques by geographical information systems
10	Theoretical	Data structure in GIS (vector data, raster data)
11	Theoretical	GIS applications and their relevance to culture technique applications
12	Theoretical	Introduction of some commonly used GIS software
13	Theoretical	Applications with some commonly used GIS software
14	Theoretical	Applications with some commonly used RS software
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	Advanced learning of geographical information systems in water resources management
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2	To learn Remote Sensing (RS) Techniques
3	Ability to make integration of remote sensing and geographical information systems
4	To learn modeling techniques by geographical information systems
5	To learn applications with some commonly used GIS and RS software

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

