AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Fundamental Principles of Geographic Information Systems						
Course Code	TBB414		Couse Level		First Cycle (Bachelor's Degree)		
ECTS Credit	4	Workload	100 *(Hours)*	Theory	2	Practice	2	Laboratory	0
Objectives of the Course	Geographic Information Systems teach basic information about the theoretical and practical level and give the ability to take advantage of the information professional purposes.						
Course Content	Lessons will include introduction of Geographic Information System, fundamentals, data input, data management, data transfer and Remote sensing and GIS integration inquiry subjects.						
Work Placement	N/A						
Planned Learning Activities and Teaching Methods		Explanation (Presentation), Demonstration, Discussion, Case Study, Individual Study					
Name of Lecturer(s)	Lec. Levent ATATANIR						

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	70

Recommended or Required Reading

1	Coğrafi Bilgi Sistemleri: Temel Kavramlar ve Uygulamalar, 3. Baskı Akademi Kitapevi, Trabzon, Yomralıoğlu, T., 2005.
2	Coğrafi Bilgi Sistemleri (CBS) Teknolojisi ve Veri Analiz Yöntemleri, Çukurova Üni. Fen Bil. Ens. Yayın No: FBE-2000-1, Dinç, A.O., 2000.
3	Getting to Know Arc View GIS, the geographic information system (GIS) for everyone. Redlands CA: Environmental Systems Research Institute, Inc., ESRI, 1996.
4	The ESRI Guide to GIS Analysis: Vol.2, Spatial measurements and statistics. ESRI press, USA. 238p., Mitchell, A. 2005.

Week	Weekly Detailed Course Contents	
1	Theoretical	Introduction of geographic information systems (GIS) .
	Preparation Work	To introduce software, hardware and tools of GIS Laboratory.
2	Theoretical	General definition.
	Preparation Work	Visual presentation.
3	Theoretical	Using areas.
	Preparation Work	Visual presentation.
4	Theoretical	Application areas.
	Preparation Work	Visual presentation.
5	Theoretical	GIS software.
	Preparation Work	Visual presentation.
6	Theoretical	Geographic Information System Data Types.
	Preparation Work	Vector Data, Raster Data, Thematic Data (Attribute Data).
7	Theoretical	Remote Sensing and Image Processing.
	Preparation Work	Visual presentation.
8	Intermediate Exam	Midterm Exam.
9	Theoretical	Cartographic-Purpose Digital Geographic Data Collection.
	Preparation Work	Cartographic materials.
10	Theoretical	Geographical Data Acquisition by digitizing.
	Preparation Work	Digitizing.
11	Theoretical	Preparation of Database.
	Preparation Work	Entering of different data into computer.
12	Theoretical	Interpretation of Database.
	Preparation Work	Interpretation and analyze of database for different purposes.
13	Theoretical	Digital Maps .
	Preparation Work	Visual presentation.

14	Theoretical	The data output and data presentation capabilities of GIS.
	Preparation Work	Creating images maps.
15	Theoretical	Principles of design and implementation of GIS in the field of vocational.
	Preparation Work	Visual presentation.
16	Final Exam	Final Exam.

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	0	2	28
Lecture - Practice	14	0	2	28
Midterm Examination	1	0	20	20
Final Examination	1	0	24	24
			Total Workload (Hours)	100
			[Total Workload (Hours) / 25*] = **ECTS**	4

25 hour workload is accepted as 1 ECTS

Learning Outcomes

1	To be able to describe geographic information systems (GIS).
2	To be able to make a definition of GIS, list principles and elements of GIS, and use GIS.
3	To be able to use GIS software at basic level.
4	To be able to use GIS techniques to monitor and manage natural resources.
5	To be able to use Geographic Information Systems for professional purposes.

Programme Outcomes *(Agricultural Biotechnology)*

1	To be able to develop skills in identifying, modeling and solving problems in agricultural biotechnology
2	To be able to synthesize life and engineering sciences for the effective resource planning of agricultural biotechnology applications
3	To be able to interpret about living organisms structure, metabolic and physiological processes in order to propose biotechnological solutions to the agricultural problems
4	To be able to analyze genomic, metabolomic and proteomic information via bioinformatic tools.
5	To have the ability to analyze collected data and interpret the results.
6	To have the ability of individual working ability and to make independent decisions, to work in inter-disciplinary and interdisciplinary teamwork, to communicate by expressing their ideas orally and in writing, clearly and concisely
7	To have the awareness of professional liabilities and ethics
8	To be able to follow current national and international problems

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