

GEOGRAPHIC INFORMATION SYSTEMS

1	Course Title:	GEOGRAPHIC INFORMATION SYSTEMS	
2	Course Code:	TPR1904	
3	Type of Course:	Compulsory	
4	Level of Course:	First Cycle	
5	Year of Study:	1	
6	Semester:	2	
7	ECTS Credits Allocated:	3.00	
8	Theoretical (hour/week):	1.00	
9	Practice (hour/week):	2.00	
10	Laboratory (hour/week):	0	
11	Prerequisites:	yok	
12	Language:	Turkish	
13	Mode of Delivery:	Face to face	
14	Course Coordinator:	Prof. Dr. ERTUĞRUL AKSOY	
15	Course Lecturers:	Doç. Dr. Gökhan ÖZSOY	
16	Contact information of the Course Coordinator:	Prof. Dr. Ertuğrul AKSOY Tel: 0-224-2941534 E-posta: aksoy@uludag.edu.tr	
17	Website:		
18	Objective of the Course:	To gain knowledge and skills about the basic principles of Geographic Information System (GIS), the tools and software used; the place, importance and benefits of GIS in the management of natural resources, GIS techniques applications in land management and agriculture.	
19	Contribution of the Course to Professional Development:	knows and can apply Geographic Information System techniques in the management of land and natural resources and use a GIS program and tools for this purpose.	
20	Learning Outcomes:		
		1	Knows the definition, basic principles, elements and usage areas of Geographic Information Systems.
		2	Knows and can use GIS hardware and software that are widely used in our country and in the world.
		3	Comprehend the subjects of databases and analysis in Geographic Information System.
		4	Knows and applies Geographic Information System techniques in monitoring and managing important natural resources such as soil, water and forest.
		5	
		6	
		7	
		8	
		9	
		10	
21	Course Content:		
		Course Content:	
Week	Theoretical	Practice	

1	Introduction to GIS Geographic information system concept and history of GIS	To Introduce software, hardware and tools of Remote sensing and GIS laboratory		
2	Basic principles of GIS	Former systems used in GIS.		
3	Hardware and software needs in GIS, data input and output	Data input with a digitizer. data editing on screen (screen digitizing)		
4	Spatial data base concept	To show and explain toolbox and modules of Arc GIS software program		
5	Vector model in GIS (vector data types and their properties)	To present vector data and their properties in ArcGIS media		
6	Raster model in GIS (raster data types and their properties)	To present raster data and their properties on different satellite data in ArcGIS media		
7	Basic coordinate systems and their importance	Basic coordinate systems and coordinate transformation examples.		
8	Widely used GIS software programs in national and international scale	NetCAD, ENVI, Geomedia, Global Mapper, ILWIS, ArcGIS.		
9	Data analysis and modeling concept	To show data analysis and modeling methods in ArcGIS Media		
10	Data input (geographic correction, digitizing,	To show and teach data input tools of ArcGIS program		
Activites		Number	Duration (hour)	Total Work Load (hour)
11	Theoretical Continuous Surface Creation (DEM, TIN)	14	1.00	14.00
Practicals/Labs		14	2.00	28.00
Self study and preperation		0	0.00	0.00
12	3D Modeling and analysis in relation to land	4	4.00	16.00
Homeworks		4	4.00	16.00
Projects		0	0.00	0.00
13	Output creation and error sources in GIS	0	0.00	0.00
Field Studies		0	0.00	0.00
14	Mid term Presentation of homework reports and	15	15.00	15.00
Others		0	0.00	0.00
Final Exams		1	24.00	24.00
Total Work Load				112.00
Total work load/ 30 hr				3.23
ECTS Credit of the Course				3.00

Contribution Level:	1 very low	2 low	3 Medium	4 High	5 Very High
----------------------------	-------------------	--------------	-----------------	---------------	--------------------