

Course Description					
Name	Code	Semester	T+A Hour	Credit	ECTS
GEOGRAPHIC INFORMATION SYSTEMS	MIM3215254	Spring Semester	2+1	2,5	4
<b>Prerequisites Courses</b>					
<b>Recommended Elective Courses</b>					
<b>Language of Instruction</b>	Turkish				
<b>Course Level</b>	First Cycle (Bachelor's Degree)				
<b>Course Type</b>	Elective				
<b>Course Coordinator</b>	Assist.Prof. Mustafa ERDEM				
<b>Name of Lecturer(s)</b>	Lect.Dr. Burcu ÇEVİK DEĞERLİ				
<b>Assistant(s)</b>					
<b>Aim</b>	This lecture includes theory and implementations of Geographic Informations Systems (GIS); aims at increasing students' abilities to govern GIS concept in optimum way within their professional lives and let them develop GIS based products. The lecture will depend on the knowledge of space. On top of that, fundamentals of spatial information systems; techniques and tools to of GIS development techniques, data modelling, data analysis and visualization techniques will be handled. Lessons will include and establish the relation between Urban Design and Landscape Architecture and Architecture disciplines and GIS.				
<b>Course Content</b>	This course contains; General information about the course content and GIS,What is geography, why is it important? What is the role of geography in disciplines such as Architecture / Spatial Planning?,What is GIS, what is it for? What are the areas of use of GIS in disciplines such as Architecture / Spatial Planning?,World Coordinate GeometryThree Dimensional SystemsPlane Coordinate SystemsMap Projections and its relationship with GIS Projection Surfaces,Vector Data, Cellular Data, Data entry using existing graphics or images Digitization process Data Management, Database types, Database properties, Relational Database Management Systems (İVTYS), Data types, Mid-term exam, QGIS software and its general use, ArcGIS software and its general use, Cartographic techniques, data visualization and map production, Correction / Classification / Generalization, Measurements Overlay Analysis Neighborhood Analysis, Modeling physical and environmental processes, Modeling human processes, Modeling Decision Making Processes, Spatial plan production in GIS ,City Information system production in GIS ,Project presentations.				
<b>Course Learning Outcomes</b>				<b>Teaching Methods</b>	<b>Assessment Methods</b>
<b>Teaching Methods</b>					
<b>Assessment Methods</b>					
<b>Lecture Schedule</b>					
Sequence	Topics	Preliminary Preparation			
1	General information about the course content and GIS				
2	What is geography, why is it important? What is the role of geography in disciplines such as Architecture / Spatial Planning				
3	What is GIS, what is it for? What are the areas of use of GIS in disciplines such as Architecture / Spatial Planning?				
4	World Coordinate GeometryThree Dimensional SystemsPlane Coordinate SystemsMap Projections and its relationship with GIS Projection Surfaces				
5	Vector Data, Cellular Data, Data entry using existing graphics or images Digitization process Data Management, Database types, Database properties, Relational Database Management Systems (İVTYS), Data types				
6	Mid-term exam				
7	QGIS software and its general use				
8	ArcGIS software and its general use				
9	Cartographic techniques, data visualization and map production				
10	Correction / Classification / Generalization, Measurements Overlay Analysis Neighborhood Analysis				
11	Modeling physical and environmental processes, Modeling human processes, Modeling Decision Making Processes				
12	Spatial plan production in GIS				
13	City Information system production in GIS				
14	Project presentations				
<b>Evaluation Methods</b>		<b>Weight(%)</b>			
Midterm Exam		50			
General Exam		50			

Resources
- Coğrafi Bilgi Sistemleri, Harita Tabanlı Bilgi Yönetimi; Doç Dr. Vahap Tecim, DEU Fen Bilimleri Enstitüsü, 2008
- Coğrafi Bilgi Sistemleri; Prof. Dr. Hasar Özdemir; İÜ Açık ve Uzaktan Eğitim Fakültesi, 2017
<a href="https://learn.gis.org/">https://learn.gis.org/</a>
<a href="https://www.esri.com.tr/tr-tr/anasayfa">https://www.esri.com.tr/tr-tr/anasayfa</a>
<a href="https://www.esri.com/en-us/home">https://www.esri.com/en-us/home</a>
<a href="https://ocw.metu.edu.tr/course/view.php?id=127">https://ocw.metu.edu.tr/course/view.php?id=127</a>
<a href="https://www.gislounge.com/">https://www.gislounge.com/</a>
<a href="http://www.sektorharita.com/ders-notlari-cograf-bilgi-sistemi-cbs.html">http://www.sektorharita.com/ders-notlari-cograf-bilgi-sistemi-cbs.html</a>
<a href="https://mangomap.com/what-is-gis">https://mangomap.com/what-is-gis</a>
<a href="https://mangomap.com/gis-mapping">https://mangomap.com/gis-mapping</a>
<a href="https://mangomap.com/gis-data">https://mangomap.com/gis-data</a>
<a href="https://mangomap.com/gis-software">https://mangomap.com/gis-software</a>
<a href="https://mangomap.com/web-gis">https://mangomap.com/web-gis</a>
<a href="https://www.nationalgeographic.org/encyclopedia/geographic-information-system-gis/">https://www.nationalgeographic.org/encyclopedia/geographic-information-system-gis/</a>