

## DISCRIPTION

### 1. GENERAL

<b>SCHOOL</b>	ENVIRONMENT, GEOGRAPHY AND APPLIED ECONOMICS		
<b>DEPARTMENT</b>	GEOGRAPHY		
<b>LEVEL OF COURSE</b>	Undergraduate		
<b>COURSE CODE</b>	ΓΦ1202	<b>SEMESTER</b>	6 <sup>th</sup>
<b>COURSE TITLE</b>	GEOGRAPHICAL INFORMATION SYSTEMS II		
<b>STRUCTURE OF TEACHING ACTIVITIES</b>		<b>TEACHING HOURS PER WEEK</b>	<b>NUMBER OF CREDITS ALLOCATED (ECTS)</b>
Lectures and Laboratory Classes		3	5
<b>TYPE OF COURSE</b>	Optional		
<b>PREREQUISITES</b>	-		
<b>LANGUAGE OF INSTRUCTION</b>	GREEK		
<b>COURSE OFFERED TO ERASMUS STUDENTS</b>	YES (in English if required)		
<b>(URL)</b>	<a href="https://eclass.hua.gr/courses/GEO151/">https://eclass.hua.gr/courses/GEO151/</a>		

### 2. EXPECTED LEARNING OUTCOMES

#### Learning outcomes

*Describe the objectives of the course as well as the expected learning outcomes*

In this course a thorough examination of Geographical Information Systems is implemented. The main aims are the presentation of GIS analytical functionality, the integration of GIS with other related technologies (e.g. Remote Sensing and Global Positioning Systems) and the construction advanced technical skills on the topic. Upon successful completion of the module the students should be able to design a GIS project in both theoretical and practical terms, and carry out, successfully, case studies concerning various GIS applications in Geography.

### 3. COURSE CONTENTS

GIS architectures - Geographical data processing - GIS analytical functions - GIS and Spatial Analysis - Topology/ graph theory - Geographical data output and visualization - GIS applications (cadastral, earth sciences, environment, local government, etc.) - GIS software customization - GIS modern trends - GIS and related technologies (Remote sensing, GPS, etc). Commercial GIS overview - GIS laboratory series.

### 4. TEACHING AND ASSESSMENT METHODS

<b>TYPE OF LECTURES</b>	In class lectures Laboratory Lectures and Practice, projects	
<b>ICT USE</b>	ICT use, Internet use and e-class	
<b>TEACHING STRUCTURE</b>	<b>Activity</b>	<b>Hours per semester</b>
	Lectures	13
	Laboratory	26
	Weekly assignments	26
	Projects – Final Project	37
	Studying – personal work	25
	<b>TOTAL</b>	<b>127</b>
<b>ASSESSMENT METHODS</b>	Assessment Language: Greek  Assessment Methods The final rate of the course is computed by three parts as follows: Mid-term exams (20%) Projects and Final Project (30%) Final written exams (50%)	

## 5. RECOMMENDED READING

Chalkias, C., 2015. Geographical Analysis with the use of Geoinformatics. [ebook] Athens:Hellenic Academic Libraries Link. Available Online at: <http://hdl.handle.net/11419/4546>

Longley P.A., M.F. Goodchild, D.J. Maguire, D.W. Rhind, 2005. Geographical Information Systems and Science. John Wiley and Sons, New Jersey, 517 p. Greek Translation, Kleidarithmos pub.