

## COURSE DESCRIPTION

### 1. GENERAL

<b>SCHOOL</b>	ENVIRONMENT, GEOGRAPHY AND APPLIED ECONOMICS		
<b>DEPARTMENT</b>	GEOGRAPHY		
<b>LEVEL OF COURSE</b>	Undergraduate		
<b>COURSE CODE</b>	ΓΦ1201	<b>SEMESTER</b>	5 <sup>th</sup>
<b>COURSE TITLE</b>	GEOGRAPHICAL INFORMATION SYSTEMS I		
<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>	Compulsory		
<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/GEO105/">https://eclass.hua.gr/courses/GEO105/</a>		

### 2. EXPECTED LEARNING OUTCOMES

<p><b>Learning outcomes</b>  <i>Describe the objectives of the course as well as the expected learning outcomes</i></p>
<p>The main aim of the course is the introduction (in both theoretical and practical terms) to the Geographical Information Systems. Upon successful completion of the course the students should be able to: Understand the basics about GIS, and to design and implement simple GIS projects by using open source and commercial GIS packages.</p>

### 3. COURSE CONTENTS

<p>GIS Introduction - Parts of a GIS: hardware, software, data - Spatial and thematic data - Data models and structures - GIS design - Geographical data organization and storage - GIS and Cartography - Data sources, input and maintenance - Digitising - Introduction to GIS applications - Introductory GIS laboratories - Practice in commercial GIS software.</p>
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### 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

TEACHING STRUCTURE	<i>Activity</i>	<i>Hours per semester</i>
	Lectures	26
	Laboratory	13
	Weekly assignments	33
	Projects	30
	Studying – personal work	25
	<b>TOTAL</b>	<b>127</b>
ASSESSMENT METHODS	<p>Assessment Language: Greek</p> <p>Assessment Methods</p> <p>The final rate of the course is computed by three parts as follows:</p> <p>Mid-term exams (30%)</p> <p>Weekly assignments and projects (30%)</p> <p>Final written exams (40%)</p>	

## 5. RECOMMENDED READING

Longley P.A., M.F. Goodchild, D.J. Maguire, D.W. Rhind, 2005. Συστήματα και Επιστήμη Γεωγραφικών Πληροφοριών. John Wiley and Sons, New Jersey, 517 p. Ελληνική μετάφραση, Εκδόσεις Κλειδάριθμος.

Bonham-Carter, Graeme F., 1994. Geographic Information Systems for Geoscientists, Chang, K.T., 2003. Introduction to Geographic Information Systems. McGraw Hill, New York. Bernhardsen, Tor, 2002. Geographic Information Systems. New York, NY ; Chichester : J. Wiley & Sons.

Wise , S., 2002. GIS basics, London: Taylor & Francis.

Schuurman , N., 2004. GIS : a short introduction, Malden, MA ; Oxford : Blackwell Pub.

DeMers , M. N., 2000. Exercises in GIS to accompany Fundamentals of Geographic Information System. New York : J. Wiley & Sons.

Krygier , J., Wood , D., 2005. Making maps : a visual guide to map design for GIS, New York, NY ; London : Guilford Press.

Kennedy, M., 2006. Introducing geographic information systems with ArcGIS : featuring GIS software from Environmental Systems Research Institute , NJ : J. Wiley & Sons.