COURSE DISCRIPTION

1. GENERAL

SCHOOL	ENVIRONMENT, GEOGRAPHY AND APPLIED ECONOMICS		
DEPARTMENT	GEOGRAPHY		
LEVEL OF COURSE	Postgraduate		
COURSE CODE		**SEMESTER**	1st
COURSE TITLE	APPLIED GEOGRAPHICAL ANALYSIS WITH THE USE OF GIS		

STRUCTURE OF TEACHING ACTIVITIES	**TEACHING HOURS PER WEEK**	**NUMBER OF CREDITS ALLOCATED (ECTS)**
Lectures and Laboratory Classes	2	7,5

TYPE OF COURSE	Compulsory
PREREQUISITES	-
LANGUAGE OF INSTRUCTION	GREEK
COURSE OFFERED TO ERASMUS STUDENTS	YES (in English if required)
(URL)	https://eclass.hua.gr/courses/GEO112/

2. EXPECTED LEARNING OUTCOMES

Learning outcomes *Describe the objectives of the course as well as the expected learning outcomes*
This course implements theoretical and practical skills to analyze spatial phenomena with the use of GIS technology. To achieve this goal a series of exercises aimed at the implementation of theoretical knowledge through practical applications is implemented. After completing the course, the postgraduate students will be able to analyse various types of spatial data and to define modeling strategies and detailed geographic data management processes.

3. COURSE CONTENTS

Course content: Advances issues on GIS, spatial data models, spatial transformations, sophisticated methods of data entry, advanced visualization and analysis of terrain, identification of spatial patterns, modeling using raster data, Map Algebra, spatial decision support systems and GIS, analytic hierarchy process, cartographic modeling, GIS and network analysis, data visualization as a spatial analysis tool, application development by using GIS software packages.

4. TEACHING AND ASSESSMENT METHODS

<table>
<tr><td>TYPE OF LECTURES</td><td>In class lectures
Laboratory Lectures and Practice, preparation of the projects</td></tr>
<tr><td>ICT USE</td><td>ICT use, Internet use and e-class</td></tr>
<tr><td>TEACHING STRUCTURE</td><td>
<table>
<tr><th>Activity</th><th>Hours per semester</th></tr>
<tr><td>Lectures</td><td>26</td></tr>
<tr><td>Projects</td><td>84</td></tr>
<tr><td>Teacher – Student contact</td><td>35</td></tr>
<tr><td>Studying – personal work</td><td>40</td></tr>
<tr><td>TOTAL</td><td>185</td></tr>
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<tr><td>ASSESSMENT METHODS</td><td>Assessment Language: Greek

Assessment Methods
The final rate of the course is computed by two parts as follows:
Projects (70%)
Final written exams (30%)</td></tr>
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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.