

## COURSE OUTLINE

### (1) General

School:	Social Sciences		
Academic Unit:	Geography		
Level of studies	Undergraduate		
Course Code:	GEO 105	Semester:	B
Course Title:	Introduction to Cartography		
Independent Teaching Activities	Weekly Teaching Hours	Credits	
Lecture	2		
Laboratory practice	2		
	<i>Course total</i>	5	
Course Type:	Required		
Prerequisite Courses:	None		
Language of Instruction and Examinations	Greek		
Is the course offered to Erasmus students:	No		
Course Website (Url):	<a href="https://geography.aegean.gr/pps/index_en.php?content=0&amp;lesson=105">https://geography.aegean.gr/pps/index_en.php?content=0&amp;lesson=105</a>		

### (2) Learning Outcomes

#### *Learning Outcomes*

The aim of the Introduction Cartography course is to offer to second semester Geographers Students all the necessary theoretical knowledge related to Cartography. Through a series of lectures and laboratory exercises, students will gain the knowledge required in order to select the most suitable mapping methods for designing efficient maps. Through this course, students are trained in map design emphasizing the concepts and techniques that determine how to design and create the most effective map. The contents of this course gives the opportunity to students to experience fundamental aspects of cartographic synthesis and to learn how to visualise with the most efficient way the geographic entities using tools geoinformatics. At the end of the course students should be able to choose and apply relevant mapping techniques to develop maps suitable for effectively revealing and communicating the spatial structure of particular phenomena.

Upon completion of the course, the learner is expected to:

- List the methods for analog and digital visualization of geographical data
- Perform numerical operations for the calculation of distances and surfaces by using cartographic scales
- Describe the structure of the maps
- Use automation applications for map design
- Design maps using ARCMAP
- Use online cartography applications

- Recognize the contribution of digital cartography to Geography Science

### General Competences

1. Search for, analysis and synthesis of data and information, with the use of the necessary technology
2. Working independently
3. Production of free, creative and inductive thinking

### (3) Syllabus

- Basic principles and concepts of the science of cartography. History of cartography.
- Cartographic projections and projection systems.
- Scale in Cartography. The use of scale in cartographic visualisation. Scale conversion exercises.
- Types of maps, atlases and cartographic series of maps. Cartographic Data sources.
- Cartographic datasets. Using the appropriate cartographic symbols and visual variables to mapping the geographic entities.
- Topographic maps and methods of representing relief
- Visual perception and color Theory. Using color for creating the specifications and pattern.
- Internet cartography and applications. Dynamic - Interactive cartography.
- Cartography and GPS systems. Mapping through tablets.

### (4) Teaching and Learning Methods - Evaluation

Delivery:

Face-to-face with oral Lectures

Use of Information and Communication Technology:

ARCMAP, COLOURBREWER, ARC SCENE

Teaching Methods:

Activity

Semester workload

Lecture

26

Laboratory practice

26

Project

36

Non-supervised study

39

Performance evaluation/Exams

3

*Course total*

130

Student Performance Evaluation

Evaluation of Laboratory exercises (Grade A)  
Written Exams (Grade B) Final Grade 0,4\*A + 0,6\*B

### (5) Attached Bibliography

1. Elements Of cartography , Robinson, A.H., Morrison, J.L., Muehrcke, P.C., Guptill, S.C., 2012,, Πανεπιστημιακές

Εκδόσεις ΕΜΠ

2. Λιβιεράτος Ε. 1988. Γενική Χαρτογραφία και Εισαγωγή στη Θεματική Χαρτογραφία. Εκδόσεις Ζήτη. σελ. 216.
3. Slocum TA, McMaster RB, Kessler FC, and Howard HH. 2009. Thematic Cartography and Geovisualization. Pearson Education (3rd edition), pp. 576.
- 4.
5. Dorling D and Fairbairn D. 1997. Mapping: Ways of Representing the World (Insights Into Human Geography), Prentice Hall, pp. 192.
6. Keates JS. 1989. Cartographic Design and Production, Longman, pp. 261.
7. Brewer CA. 2005. Designing Better Maps: A Guide for GIS Users. ESRI, pp. 220.
8. Barber P. and Harper T. 2010. Magnificent Maps: Power, Propaganda and Art. The British Library Publishing Division, pp. 176.
9. Παρασχάκης Ι, Παπαδοπούλου Μ και Πατιάς Π. 1990. Αυτοματοποιημένη Χαρτογραφία, Εκδόσεις Ζήτη. σελ. 280.