COURSE OUTLINE

(1) General

School:	Social Sciences		
Academic Unit:	Geography		
Level of studies	Undergraduate		
Course Code:	GEO 341	**Semester:**	F
Course Title:	Thematic Cartography		
Independent Teaching Activities	**Weekly Teaching Hours**	**Credits**	
Lecture	2		
Laboratory practice	2		
		Course total	5
Course Type:	Required		
Prerequisite Courses:			
Language of Instruction and Examinations	Greek		
Is the course offered to Erasmus students:	No		
Course Website (Url):	https://geography.aegean.gr/pps/index_en.php?content=0&lesson=341		

(2) Learning Outcomes

Learning Outcomes

The aim of the Thematic Cartography course of E semester is to offer Geographers Students all the necessary theoretical knowledge related to Thematic Cartography. Through a series of lectures and laboratory exercises, students will gain the knowledge required to geographers in order to select the most suitable mapping methods for designing efficient thematic 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 thematic map.At the end of the course students should be able to choose and apply relevant mapping techniques to develop thematic 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 digital classification of geographical data for cartographic representation
- Perform numerical and logical operations fro thematic map production
- Describe the structure of thematic maps
- Use automation applications (ARCMAP, colourBrewer)
- Design thematic maps
- Use online cartography applications
- Recognize the contribution of digital thematic 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 new research ideas
4. Production of free, creative and inductive thinking

(3) Syllabus

First Module

- Cartographic Methods
- Cartographic symbols, visual variables cartographic symbols.
- Visual perception and color. Color theory and models
- Creation and color specifications and pattern

Second Module

- Organization and Analysis of Quantitative Data
- Cartographic methods for designing thematic maps quantitative data.
- Dot Maps
- Flow Thematic Maps
- Processing and manufacturing data for visualization.
- Creation and combination of geographical and quantitative data

Third Module

- Dynamic - Interactive thematic maps.
- 3D Maps, 3D visualizations of geographic information, 3D animation.

Fourth Module

- Teamwork project for processing quantitative data and the construction of thematic maps.

(4) Teaching and Learning Methods - Evaluation

Delivery:	Face-to-face with oral Lectures	
Use of Information and Communication Technology:	Use of ARCMAP, ColourBrewer, ARCscene, ARCGIS ONLINE	
Teaching Methods:	**Activity**	**Semester workload**
Lecture	26	
Laboratory practice	26	
Project	39	
Performance evaluation/Exams	3	
Non-supervised study	36	
	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. Dorling D and Fairbairn D. 1997. Mapping: Ways of Representing the World (Insights Into Human Geography), Prentice Hall, pp. 192.
5. Keates JS. 1989. Cartographic Design and Production, Longman, pp. 261.
6. Brewer CA. 2005. Designing Better Maps: A Guide for GIS Users. ESRI, pp. 220.

7. Barber P. and Harper T. 2010. Magnificent Maps: Power, Propaganda and Art. The British Library Publishing Division, pp. 176.
8. Παρασχάκης Ι, Παπαδοπούλου Μ και Πατιάς Π. 1990. Αυτοματοποιημένη Χαρτογραφία, Εκδόσεις Ζήτη. σελ. 280.