

COURSE OUTLINE

(1) General

School:	Social Sciences		
Academic Unit:	Geography		
Level of studies	Undergraduate		
Course Code:	GEO 440	Semester:	E
Course Title:	Information and communication technologies in Teaching Geography		
Independent Teaching Activities	Weekly Teaching Hours	Credits	
Lecture		2	
Laboratory practice		2	
		Course total	5
Course Type:	Required Elective		
Prerequisite Courses:	None		
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=440		

(2) Learning Outcomes

Learning Outcomes

The student is expected to be able to:

- recognize and describe applications of new technologies in classroom environment but also in various alternative learning environments (e.g. on distance learning, virtual environments, etc.) and indicate benefits of these applications
- identify the potential/benefits of ICT applications in teaching and learning
- explain the basic concepts of new learning and communication technologies and their connection with modern developments as well as with the historical evolution of technology in the educational context
- analyze and evaluate the use of technology as a tool for social justice (e.g. accessibility and equity in learning for all, regardless of abilities , disabilities, gender, cultural identity, age, etc)
- indicate risks and difficulties in the use of new technologies (such as social networks , web 2.0, simulations , virtual reality , etc.) from young students
- use new technologies - ICT - in the classroom in relation to different learning theories
- familiarize with a wide range of new technology tools and applications for designing and developing interactive and communicative learning environment
- evaluate critically with pedagogical and technical criteria, various educational tools and software in relation to their use in teaching and learning geography
- recognize the new role and prospects of geographic education in the era of the information society
- understand the new role of teachers in the era of the information society
- apply specific teaching methods and strategies for teaching geographical and environmental issues using a variety of media and softwares
- develop lesson plans with the integration of new communication and information technologies in geography
- develop teaching scenarios for specific geography lessons and learning sequences using ICT
- implement ICT in in-doors and out-doors activities

General Competences

1. Search for, analysis and synthesis of data and information, with the use of the necessary technology
2. Working independently
3. Working in an interdisciplinary environment
4. Criticism and self-criticism
5. Production of free, creative and inductive thinking

(3) Syllabus

- Educational Policy for the Information and Communication Technologies - Historical and Social Context
- Models for introducing and integrating new technologies in the educational process
- Possibilities of ICT's in Teaching and Learning
- Knowledge of ICT and the role of teachers in the information society.
- Educational Software: Types, selection and evaluation criteria.
- The introduction and use of new technologies in the subject of Geography in compulsory schools.
- Introduction of GIS in Education in Several Subjects (like Geography, Environmental Science, etc.)
- Production of educational material using a variety of multimedia - Develop teaching scenarios and students' activities.

(4) Teaching and Learning Methods - Evaluation

Delivery:	face-to-face	
Use of Information and Communication Technology:	Use of ICT in teaching, in laboratory and in communication with students All class material is available in electronic form to all students through the course web page (eclass).	
Teaching Methods:	Activity	Semester workload

Lecture	26
Laboratory practice	26
Project	39
Non-supervised study	52
Performance evaluation/Exams	2

Course total < 145

Formative (Laboratory Assignment) and Summative evaluation (Written exams) 40% from lab work assignment (during the whole semester) 60% from final written exams (with Short Answer Questions and problem solving questions) Assessment criteria are referred in the department's curriculum and in the course site on eclass. In the beginning of the semester all the details about the laboratory work deliverables are accessible to the students (number of exercises, dates, assessment criteria), from the course web page on eclass.

Student Performance Evaluation

(5) Attached Bibliography

Suggested bibliography:

1. Mikropoulos T. A. & Bellou I. (2010). *Teaching Scenarios with PC. Kleidarithmos, Athens.*
2. Galani, A. & Rokka, A. (2016). *Teaching Geography using PC - Geography and Free Access Software.*

Gutenberg Athens.

3. Newby, T.J., Stepich, D.A., Lehman, J.D., Russel, J.D. (2009). *Educational Technology in teaching and learning*. Epikentro, Athens.
4. Raptis, A. & Rapti, A. (2007). *Learning and Teaching in the Era of Information Vol. A' and B'*. Athens.
5. Kron Friedrich W., Sofos Alivizos (2007). *Teaching Media New Media in teaching and learning processes*. Gutenberg, Athens.
6. Vosniadou, S. (2006). *Children, Schools and Computers Prospects, Problems and suggestions for the effective use of new technologies in education*. Gutenberg, Athens.
7. Komis, V. (2004). *Introduction to CIT Applications in Education. New Technologies*, Athens.
8. Koutra, Ch. Holmberg, C., Midoro, V. (2001). *New Information Technologies in School Education*. Idryma Meleton Lampraki, Athens.

- Related academic journals:

1. *COMPUTERS IN THE SCHOOLS Interdisciplinary Journal of Practice, Theory, and Applied Research* (<http://www.tandfonline.com/toc/wcis20/current>)
2. *Education and Information Technologies* (<https://link.springer.com/journal/10639>)
3. *Education, Communication & Information* (<http://www.tandfonline.com/toc/reci20/current>)
4. *CITE (CONTEMPORARY ISSUES IN TECHNOLOGY AND TEACHER EDUCATION) JOURNAL* (<http://www.citejournal.org/>)
5. *Computers & Education* (<http://www.sciencedirect.com/science/journal/03601315>)
6. *JEMH (JOURNAL OF EDUCATIONAL MULTIMEDIA AND HYPERMEDIA)* (<http://www.aace.org/pubs/jemh/>)