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|---|---|---|---|---|---|---|---|
| **INSTITUTION** | NATIONAL AND KAPODISTRIAN UNIVERSITY OF ATHENS | | | | | | |
| **SCHOOL** | SCHOOL OF SCIENCE | | | | | | |
| **DEPARTMENT** | INFORMATICS AND TELECOMMUNICATIONS | | | | | | |
| **COURSE LEVEL** | UNDERGRADUATE | | | | | | |
| **COURSE TITLE** | **Information and Communications Technology (ICT) in Learning** | | | | | | |
| **COURSE CODE** | **ΥΣ15** | | **Semester** | **5** | **ECTS** | **6** | |
| **TEACHING HOURS per week** | **THEORY** | **2** | **SEMINAR.** | | **LABORATORY** | **2** | |
| **COURSE TYPE** | **Select one of the following and delete the rest**<br>Electives (ΠΜ)<br><br>**K** A-B; **E1** E; **E2** E; **E3** E; **E4** E; **E5** E; **E6** E<br>*Fill the table as in the curriculum:* Track (A-Computer Science, B- Computer Engineering) / Specialization Compulsory (Y) / Core Specialization (B)/ Elective Specialization (E) | | | | | | |
| **URL** | https://eclass.uoa.gr/courses/D58/ | | | | | | |
| **EXPECTED PRIOR KNOWLEDGE/ PREREQUISITES AND PREPARATION:** | | | | | | | |
| **TEACHING AND EXAMINATIONS LANGUAGE:** | GREEK | | | | | | |
| **THE COURSE IS OFFERED TO ERASMUS STUDENTS** | NO | | | | | | |

| **COURSE CONTENT** |
|---|
| The main aim of the course is to introduce students in educational environments and learning tools, give them the opportunity to discuss and comment on their exploitation in teaching and learning practice and support them in the development of skills for learning design that support technology enhanced learning. The content involves: learning theories, teaching strategies, lesson design/planning, curriculum design, Informatics curriculum, Multidisciplinarity, the technological pedagogical content knowledge framework, educational environments and applications that address learning theories principles, learning objects, open educational resources and repositories, models on introducing ICT in education, Web 2.0 tools for education, Webquests, didactical practices for general purpose software |

| STUDENT LEARNING OBJECTIVES |
|---|
| Expected Learning Outcomes<br>Upon successful completion of the course the student will be able to:<br>• describe the main principles of dominant learning theories<br>• name teaching techniques and use them in the context of designing a learning scenario<br>• interpret the ICT curriculum of the primary and secondary education and design relevant learning activities<br>• search for open educational resources, appreciate their educational value and use them in learning scenarios<br>• list educational Web 2.0 tools and construct learning objects<br>• design learning activities and scenarios by choosing educational applications and teaching techniques in order to achieve specific learning outcomes<br>• design projects |

| TEACHING AND LEARNING METHODS - ASSESSMENT | |
|---|---|
| **TEACHING METHOD** | In Class (Face to Face) |
| **USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES** | Learning process supported by the e-class platform: course description, provision of material, announcements, messages, assignment/submission of activities, provision of feedback, discussions concerning the activities/assignments<br>Email communication<br>Live transmission of lectures<br>Ability to track recorded lectures<br>Utilization of Specialized Software during labs |
| **TEACHING ORGANIZATION**<br>*Describe in detail the way and methods of teaching:*<br>*Enhanced Lectures,*<br>*Online Lectures,*<br>*Seminars,*<br>*Tutorial,*<br>*Laboratory,*<br>*Laboratory Exercise,*<br>*Study & analysis of literature,*<br>*Practice (Positioning),*<br>*Interactive teaching,*<br>*Developing a project,*<br>*Individual / group work*<br>*Telework (reference to tools) etc.*<br><br>*Details of the student's study hours for each learning activity and hours of non-guided study are shown to ensure that the total workload at the semester corresponds to the ECTS* | The theoretical part of the course is taking place in a typical classroom using slides, videos and teaching methods that promote students active involvement and the elicitation of their prior knowledge such as brainstorming, Q & A, discussion and activities to introduce them in the subject.<br>The practical part is taking place in a Microsoft Windows lab where dedicated software is installed. The students are engaged in activities that give them the chance to use various computer-based/web-based educational environments that address characteristics from specific learning theories, use Web 2.0 tools in order to develop learning objects e.g. comics, timelines, mind maps), design and evaluate learning activities and project designs and discuss learning design scenario issues. The students have to submit all the lab activities plus their personal assignment (different for each student). They present and support their work in front of their colleagues. The students participate in written exams having at their disposal and for |

use the course material in order to perform adequate knowledge and skills in the course content.

| Activity | *Student Workload* *(hours)* |
|---|---|
| Lectures | 26 |
| Laboratory | 26 |
| Completion of lab activities | 26 |
| Study and presentation of relevant literature | 10 |
| Personal assignment | 35 |
| Presentations and commentary of assignments | 15 |
| Preparation for the exams | 12 |
| ***Total Course*** | ***150*** |

**ASSESSMENT OF STUDENTS**

*Description of the assessment process*

*Assessment Methods, Formative or Concluding, Multiple Choice Test, Quick Response Questions, Test Development Questions, Problem Solving, Written Work, Report / Report, Oral Examination, Public Presentation, Laboratory Work, Other / Other*

*Fully defined evaluation criteria are mentioned and if and where they are accessible to students.*

In the framework of the course formative and summative assessment is followed. For each lab activity, feedback is provided to each student. As feedback to the personal assignment, they receive a rubric enriched with comments. The feedback is provided through eclass.

| Assessment methods | *Number* | *Percentage* |
|---|---|---|
| Written examination | 1 | 50% |
| Activities (lab & literature) | 13 | 20% |
| Personal assignment | 1 | 30% |

**LITERATURE AND STUDY MATERIALS / READING LIST**

Προτεινόμενα συγγράμματα (Εύδοξος): Προτεινόμενα συγγράμματα (Εύδοξος):

1. Εισαγωγή στις εκπαιδευτικές εφαρμογές των Τεχνολογιών της Πληροφορίας και των Επικοινωνιών, Βασίλης Ι. Κόμης
2. Μάθε Ψηφιακά... Παίζοντας Συνεργατικά, Κορδάκη Μ., Μάνεσης Ν., Νταραντούμης Θ.

Επιπλέον βιβλιογραφία

1. Γρηγοριάδου, Μ., Γόγουλου, Α., Γουλή, Ε., Γλέζου, Κ., Μπούμπουκα, Μ., Παπανικολάου, Κ., Τσαγκάνου, Γ., Κανίδης, Ε., Βεργίνης, Η., Δουκάκης, Δ. (2009). Διδακτικές Προσεγγίσεις και Εργαλεία για τη διδασκαλία της Πληροφορικής. Αθήνα: Εκδόσεις Νέων Τεχνολογιών.
2. Δημητριάδης Στ. (2015). *Θεωρίες Μάθησης & Εκπαιδευτικό Λογισμικό*. Ελληνικά Ακαδημαϊκά Ηλεκτρονικά Συγγράμματα και Βοηθήματα.