



UNIVERSITY OF NICOSIA ΠΑΝΕΠΙΣΤΗΜΙΟ ΛΕΥΚΩΣΙΑΣ

University of Nicosia, Cyprus

Course Code EDUE-441	Course Title Technology applications in science	ECTS Credits 6
Department Paedagogical Studies	Semester Spring	Prerequisites EDUE-240, EDUE-340 & 2 electives in science education
Type of Course Required/specialization	Field Science	Language of Instruction Greek
Level of Course 1 st Circle	Year of Study 4	Lecturer(s) Dr Lucy Avraamidou
Mode of Delivery face-to-face	Work Placement N/A	Co-requisites None

Objectives of the course

This course aims at introducing prospective elementary teachers to the various uses of technology applications in science teaching and learning. In this course the students will:

- Explore the various uses of databases and the purposes for which they could be used
- Use computer and web-based applications in science teaching and learning
- Explore various software related to science teaching
- Use Internet applications for the design and implementation of science instructional activities
- Evaluate technology-based curriculum materials and instructional activities
- Design technology-enhanced science lesson plans

Learning outcomes:

With the completion of the course, the students will:

- Use computer applications for science teaching and learning at the elementary school
- Develop appropriate pedagogical strategies and methods for the use of various technology tools in science teaching
- Explore a variety of technology tools: modeling tools, information and communication tools, databases, synchronous and asynchronous communication, teleconferencing, social networking tools, mobile technologies and virtual reality tools

Course content:

Historical development of science teaching with the use of technology
Learning theories and their impact on the design of learning technologies
Categories and characteristic of learning technologies:

- Drill and practice
- Databases
- Electronic libraries
- Hypertext
- World wide web & web-based applications
- Microsoft office applications
- Electronic games
- Social networking tools: facebook, twitter, blogs
- Virtual reality: second life
- Wikipedia
- Teleconferencing
- Distance learning

Learning activities and teaching methods

Lecture, workshops, experiential seminars, individual and group work, individual feedback, case study analysis, student presentations

Assessment methods:

Formative assessment, feedback, individual research, collaborative work, presentations, discussions

Required textbooks/reading:

Authors	Title	Publisher	Year	ISBN
Layton David	<i>Η πρόκληση της τεχνολογίας στη διδασκαλία των Φ.Ε</i>	Αθήνα: Μεταίχμιο	2004	
Αβρααμίδου Λούση	Σημειώσεις μαθήματος	Copy Center/UNIC	2010	