



# UNIVERSITY OF NICOSIA ΠΑΝΕΠΙΣΤΗΜΙΟ ΛΕΥΚΩΣΙΑΣ

## University of Nicosia, Cyprus

<b>Course Code</b> EDUS440	<b>Course Title</b> Contemporary approaches in science education	<b>ECTS Credits</b> 6
<b>Department</b> Paedagogical Studies	<b>Semester</b> Spring	<b>Prerequisites</b> EDUE240, EDUE340 & 2 electives in science education
<b>Type of Course</b> Required/specialization	<b>Field</b>	<b>Language of Instruction</b> Greek
<b>Level of Course</b> 1 <sup>st</sup> Cycle	<b>Year of Study</b> 4th	<b>Lecturer(s)</b> Lucy Avraamidou
<b>Mode of Delivery</b> face-to-face	<b>Work Placement</b> N/A	<b>Co-requisites</b>

### Objectives of the course

This course aims at introducing prospective elementary teachers to contemporary paradigms, approaches, methods and strategies for teaching science at the elementary school.

In this course, the students will:

- Develop knowledge about contemporary theoretical perspectives applied in science education
- Develop argumentation skills and associate pedagogical knowledge in order to teach science as argument
- Develop understandings about the nature of science
- Design instructional approaches based on theories of learning and research findings
- Develop knowledge and skills of teaching science in contemporary manner in line with recommendations for reform.

### Learning outcomes:

With the completion of the course, the students will:

- Analyze contemporary theoretical approaches and related research regarding science teaching and learning
- Develop basic scientific inquiry skills
- Be able to design inquiry-based instructional activities
- Develop contemporary understandings about the nature of science and the work of scientists and design instructional activities to teach the nature of science
- Develop basic research skills that will enable them to interpret current research findings regarding students' ideas about science

**Course content:**

Recent trends in science teaching and learning  
History and philosophy of science  
Argumentation in science education  
Nature of science and work of scientists  
Socioscientific issues in science  
Informal learning in science education  
The use of narrative in science education  
The role of women in science education

**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:**

<b>Authors</b>	<b>Title</b>	<b>Publisher</b>	<b>Year</b>	<b>ISBN</b>
Matthews, M. R	<i>Διδάσκοντας φυσικές επιστήμες: ο ρόλος της ιστορίας και της φιλοσοφίας των φυσικών επιστημών στη διδασκαλία των φυσικών επιστημών</i>	Επίκεντρο	2007	
Αβρααμίδου Λούση	<i>Σημειώσεις μαθήματος</i>	Copy Center/UNIC	2010	