COURSE OUTLINE

(1) GENERAL

SCHOOL	SCHOOL OF SCIENCES		
DEPARTMENT	DEPARTMENT OF CHEMISTRY		
LEVEL OF STUDIES	ISCED level 6 – Bachelor's or equivalent level		
COURSE CODE	PEDN501	**SEMESTER**	5th
COURSE TITLE	Methodology of Didactic Research		

TEACHING ACTIVITIES *If the ECTS Credits are distributed in distinct parts of the course e.g. lectures, labs etc. If the ECTS Credits are awarded to the whole course, then please indicate the teaching hours per week and the corresponding ECTS Credits.*	**TEACHING HOURS PER WEEK**	**ECTS CREDITS**
	3	3
Please, add lines if necessary. Teaching methods and organization of the course are described in section 4.		

COURSE TYPE *Background, General Knowledge, Scientific Area, Skill Development*	Specialised background / specialization
PREREQUISITES:	NONE
TEACHING & EXAMINATION LANGUAGE:	Greek
COURSE OFFERED TO ERASMUS STUDENTS:	NO
COURSE URL:	https://chem.duth.gr/courses/%ce%bc%ce%b5%ce%b8%ce%bf%ce%b4%ce%bf%ce%bb%ce%bf%ce%b3%ce%af%ce%b1-%ce%b4%ce%b9%ce%b4%ce%b1%ce%ba%cf%84%ce%b9%ce%ba%ce%ae%cf%82-%ce%ad%cf%81%ce%b5%cf%85%ce%bd%ce%b1%cf%82/

(2) LEARNING OUTCOMES

Learning Outcomes *Please describe the learning outcomes of the course: Knowledge, skills and abilities acquired after the successful completion of the course.*
At the end of the course, the student is able to: • define basic concepts and approaches of didactic and educational research; • analyse and compare different research methods in the field of education; • formulate appropriate research questions and select the corresponding methodologies;

- design and organise small-scale research in an educational environment;
- apply techniques for data collection and analysis using appropriate tools;
- evaluate the reliability and validity of research findings;
- identify and ethically manage issues that arise during the research process.

General Skills

Name the desirable general skills upon successful completion of the module

Search, analysis and synthesis of data and information,
ICT Use
Adaptation to new situations
Decision making
Autonomous work
Teamwork
Working in an international environment
Working in an interdisciplinary environment
Production of new research ideas
Project design and management
Equity and Inclusion
Respect for the natural environment
Sustainability
Demonstration of social, professional and moral responsibility and sensitivity to gender issues
Critical thinking
Promoting free, creative and inductive reasoning

He/She is able to:

- analyse and synthesise scientific data in the educational field;
- use ICT for the search, processing and presentation of data;
- design and implement research projects within educational practice;
- develop a research-oriented and reflective mindset;
- develop skills for autonomous and lifelong learning.

More specifically, the content of the course promotes the following competences:

- Search for, analysis and synthesis of data and information, using the necessary technologies;
- Working in an interdisciplinary environment;
- Respect for diversity and multiculturalism;
- Exercise of criticism and self-criticism;
- Promotion of free, creative and inductive thinking.

(3) COURSE CONTENT

1. Didactic research as a basis for improving educational practice: definitions, fields of application, examples, connection between theory and practice.

2. Reflection and the role of the teacher as a researcher of practice (teacher-researcher): integration of research culture in everyday teaching.

3. Formulation of research questions and hypotheses: from the articulation of the problem to design, selection of framework and variables.

4. Research methodologies in education: quantitative, qualitative and mixed methods – characteristics, uses and limitations.

5. Data collection techniques: observation, interview, questionnaire, document analysis – comparative examples.

6. Analysis and interpretation of educational data: tools and strategies for analysis, choice of statistical and qualitative techniques.

7. Ethical and deontological issues in educational research: informed consent, anonymity, handling sensitive data.

8. Technology as a support for the research process: software, presentation of findings, dissemination.

9. Applied research in didactic practice – case studies: how small-scale research transforms teaching, classroom action plans.

10. Evaluation of educational programmes based on research findings: from needs assessment to the revision of curricula.

11. Participatory and action research in educational planning: student engagement, teacher collaboration, cycles of reflection.

12. International trends in educational research: intercultural data, digital education, social innovation.

13. Design of a small-scale research intervention: student application project – designing research for school reality.

(4) LEARNING & TEACHING METHODS - EVALUATION

TEACHING METHOD *Face to face, Distance learning, etc.*	Face to face
USE OF INFORMATION & COMMUNICATIONS TECHNOLOGY (ICT) *Use of ICT in Teaching, in Laboratory Education, in Communication with students*	Use of ICT in teaching and communication with students: • digital slides; • videos; • MsTeams / e-class, webmail.
TEACHING ORGANIZATION *The ways and methods of teaching are described in detail.* *Lectures, Seminars, Laboratory Exercise, Field Exercise, Bibliographic research & analysis, Tutoring, Internship (Placement), Clinical Exercise, Art Workshop, Interactive learning, Study visits, Study / creation, project, creation, project. Etc.* *The supervised and unsupervised workload per activity is indicated here, so that total workload per semester complies to ECTS standards.*	**Activity** / **Workload/semester** Lectures: 39 Assignment writing: 10 Bibliographic research & analysis: 10 Final examination: 2 Mid-term test: 1 Student's study hours: 13 Total: 75
STUDENT EVALUATION *Description of the evaluation process* *Assessment Language, Assessment Methods, Formative or Concluding, Multiple Choice Test, Short Answer Questions, Essay Development Questions, Problem Solving, Written Assignment, Essay / Report, Oral Exam, Presentation in audience, Laboratory Report, Clinical examination of a patient, Artistic interpretation, Other/Others* *Please indicate all relevant information about the course assessment and how students are informed*	Final (cumulative) written evaluation with multiple-choice or short-answer questions in Greek. Samples of the questions are provided during the last class of the semester. Final grade = 30% × assignment grade + 20% × mid-term test grade + 50% × final examination grade.* *Participation in the final examination is compulsory for all students in order for a grade to be announced. The written individual or group assignment (up to 5 students) is optional and is prepared extensively during the course of the semester.

(5) SUGGESTED BIBLIOGRAPHY

1. Kasimati, A. (2008). Εισαγωγή στη διδακτική μεθοδολογία – Μεθοδολογία εκπαιδευτικής έρευνας. National and Kapodistrian University of Athens – ASPAITE.
2. Papanastasiou, K., & Papanastasiou, E. (2021). Μεθοδολογία Εκπαιδευτικής Έρευνας (4η έκδοση). Self-published.
3. Joyce, B., Weil, M., & Calhoun, E. (2009). Διδακτική Μεθοδολογία. Ellin Publications.

4. Newby, P. (2019). Μέθοδοι έρευνας στην εκπαίδευση. Μετάφραση: Ι. Φυριππή, επιστημονική επιμέλεια: Γ. Μανωλίτσης. Εκδόσεις Πεδίο.
5. Gazi, A., & Gardikiotis, A. (2021). Το Α και το Ω των ψηφιακών μεθόδων έρευνας. Μετάφραση: Ι. Φυριππή. Εκδόσεις Πεδίο.