COURSE OUTLINE

1. GENERAL

SCHOOL			
DEPARTMENT	Department of Informatics		
LEVEL OF STUDIES	ISCED level 6 – Bachelor's or equivalent level		
COURSE CODE	305ΓΥΥΕ	**SEMESTER**	3rd Semester
COURSE TITLE	Education Research Methodology		

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	5.0

COURSETYPE Background, General Knowledge, Scientific Area, Skill Development	Scientific Area
PREREQUISITES	
TEACHING & EXAMINATION LANGUAGE:	Greek
COURSE OFFERED TO ERASMUS STUDENTS:	NO
COURSE URL:	https://moodle.cs.duth.gr/course/view.php?id=3

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.
By the end of the course, the students are expected to - Understand the basic types and methods of conducting research - Select a research area and formulate the problem and aims of a research - Select a research sample correctly - Select appropriate measuring instruments and quantitative methods as appropriate to the situation - Understand the definitions and differences between quantitative and qualitative research - Select appropriate measurement instruments - Convert proposals into research hypotheses - Recognise the importance of the research hypothesis and its characteristics - Properly designs the methodology for carrying out a research project - Code and record research data in a correct way - Analyse quantitative data

- Convert the research hypothesis into a statistical test
- Know the basic functions of the SPSS program for statistics
- Write and present the results of educational research and scientific work
- Develops collaborative and critical thinking skills
- Evaluate their own and their peers' work

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

Search, analysis and synthesis of data and information, ICT Use Autonomous work
Teamwork
Project design and management Equity and Inclusion
Critical thinking
Promoting free, creative and inductive reasoning

3. COURSE CONTENT

1. Introductory Concepts, Research, Methods, Types of Research, Theories, Stages of Research
2. Selection of Area and Research Topic, Formulation of Research Problem and Purpose
3. Literature Review, Review Steps, Efficient Locating, Internet Sources, Searching Bibliographic Databases, Synthesis, Organisation of Literature
4. Preparation and evaluation of a research plan
5. Sample selection, measuring instruments, quantitative methods
6. Quantitative and Qualitative Research, Research Process, Data Collection Instruments, Questionnaire, Interview, Observation
7. Basic Definitions of Applied and Experimental Research, Conceptual Constructs, Variables, Scales of Measurement, Validity and Reliability of Measurements
8. Proposal and Research Hypothesis, Conversion of Proposal into Research Hypothesis, Separation of Theoretical and Empirical Levels, Examples of Propositions and Cases
9. Importance of Research Hypothesis, Characteristics of Research Hypothesis, Types of Research Hypothesis
10. Methodology and Procedure for Conducting Research, Population and Sample Determination, Sample Selection Strategies
11. Data Organization and Recording (Coding), Data Types, Data Analysis and Interpretation of Results
12. Analysis of quantitative data: descriptive and inferential statistics.
13. Converting a Research Hypothesis into a Statistical Hypothesis Test, Research Case Tests with Inductive Statistics.
14. Writing and Presenting Results of Educational Research and Scientific Work
15. Seminar on Statistics using SPSS package. File creation and data management in SPSS.
16. Ethics in research.

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 Use of ICT in Communication with students
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	
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	**Student evaluation languages** Greek **Method (Formative or Concluding)** Formative **Student evaluation methods** — **Rate** Written Assignment 70% Presentation in audience 20% Written Exam with Short Answer Questions 10%

Activity	Workload/semester
Lectures	39
Study / creation	40
Bibliographic research & analysis	29
Writing project	17
Exams	**2**
Total	**125**

5. Suggested Bibliography

1. E. G. Mills, L. R. Gay & P. Airasian (2017). Εκπαιδευτική Έρευνα, ποσοτικές και ποιοτικές μέθοδοι – εφαρμογές, Εκδόσεις Προπομπός
2. Κ. Παπαναστασίου, Κ.Ε. Παπαναστασίου. Μεθοδολογία Εκπαιδευτικής Έρευνας. Εκδόσεις Ιδιωτική, 2016.
3. L. Cohen, L., Manion, K. Morrison. Μεθοδολογία Εκπαιδευτικής Έρευνας. Εκδόσεις Μεταίχμιο.
4. J. Creswell. Η Έρευνα στην Εκπαίδευση. (Μετ. Ν. Κουβαράκου, Επιμ. Χ. Τσορμπατζούδης). Αθήνα: Ιών.
5. Σαραφίδου, Γιασεμή-Όλγα (2011). Συνάρθρωση Ποσοτικών και Ποιοτικών Προσεγγίσεων: η εμπειρική έρευνα. Αθήνα: Gutenberg.

Eudoxus

Βιβλίο [102071601]: Μεθοδολογία της Έρευνας και Συγγραφή Επιστημονικών Εργασιών, 2η έκδοση, Λιαργκόβας Παναγιώτης, Δερμάτης Ζαχαρίας, Κομνηνός Δημήτριος. Εκδόσεις Τζιόλα
Βιβλίο [68370025]: Εκπαιδευτική Έρευνα, L.R. Gay, Geoffrey E. Mi lls, Peter Airasian. Εκδόσεις Προπομπός