COURSE OUTLINE

(1) GENERAL

SCHOOL	School of Education		
ACADEMIC UNIT	Department of Primary Education		
LEVEL OF STUDIES	Undergraduate		
COURSE CODE	DEE108	**SEMESTER**	**4**
COURSE TITLE	Numerical Analysis		

INDEPENDENT TEACHING ACTIVITIES *if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits*	**WEEKLY TEACHING HOURS**	**CREDITS**
Lectures	3	5
Tutor: Dimitris Mavridis		
Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).		

COURSE TYPE *general background, special background, specialised general knowledge, skills development*	Special background – specialised general knowledge
PREREQUISITE COURSES:	Introduction to Statistics (DEE101)
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek English for Erasmus students
IS THE COURSE OFFERED TO ERASMUS STUDENTS	Yes
COURSE WEBSITE (URL)	http://ecourse.uoi.gr/course/view.php?id=434

(2) LEARNING OUTCOMES

Learning outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.

Consult Appendix A

- *Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area*
- *Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B*
- *Guidelines for writing Learning Outcomes*

Students, at finishing the course, are expected to

1) **Know how to describe and analyse different types of variables**
2) **Be able to use statistical software SPSS**
3) **Understand statistical methods and their assumptions and limitations**

General Competences

Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma

Supplement and appear below), at which of the following does the course aim?

Search for, analysis and synthesis of data and information, with the use of the necessary technology	*Project planning and management*
Adapting to new situations	*Respect for difference and multiculturalism*
Decision-making	*Respect for the natural environment*
Working independently	*Showing social, professional and ethical responsibility and sensitivity to gender issues*
Team work	*Criticism and self-criticism*
Working in an international environment	*Production of free, creative and inductive thinking*
Working in an interdisciplinary environment	*……*
Production of new research ideas	*Others…*
	…….

Decision-making
Working independently
Build abstract thinking
Build creative and inductive thinking

(3) SYLLABUS

The course covers advanced statistical topics placing emphasis on their application to social sciences and more specifically to Education. We will show how to do statistical hypothesis testing in SPSS. We will present methods of design experiment and statistical models for analysing questionnaire data. Familiarization with basic statistical concepts is desirable. The course has a series of mandatory assignements.

Contents of the course: Statistical Inference, confidence intervals, hypothesis testing, design of experiments, effect sizes, factor analysis

General aim of the course

The aim of the course is to familiarise students with statistical thinking and advanced statistical methods

(4) TEACHING and LEARNING METHODS - EVALUATION

DELIVERY *Face-to-face, Distance learning, etc.*	Face-to-face Using computers
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY *Use of ICT in teaching, laboratory education, communication with students*	**Use of powerpoint slides** **Seeking literature in the internet** Using computers in class
TEACHING METHODS *The manner and methods of teaching are described in detail.* *Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc.* *The student's study hours for each learning activity are given as well as the hours of non-directed study according to the principles of*	

Activity	*Semester workload*
Lectures	39
Literature investigation	31
Written project	53
Exams	2

the ECTS		
	Course total	***125***
STUDENT PERFORMANCE EVALUATION *Description of the evaluation procedure* *Language of evaluation, methods of evaluation, summative or conclusive, multiple choice questionnaires, short-answer questions, open-ended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other* *Specifically-defined evaluation criteria are given, and if and where they are accessible to students.*	Written exams Laboratory work Mandatory assignment Oral exam in the mandatory assignment and in SPSS	

(5) ATTACHED BIBLIOGRAPHY

None
The topics covered are very general and the students can easily seek information themselves