

COURSE OUTLINE

(1) GENERAL

SCHOOL	School of Education		
ACADEMIC UNIT	Department of Primary Education		
LEVEL OF STUDIES	Undergraduate		
COURSE CODE	DEE101	SEMESTER	5
COURSE TITLE	Introduction to Statistics		
INDEPENDENT TEACHING ACTIVITIES <i>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</i>	WEEKLY TEACHING HOURS	CREDITS	
Lectures	3	4	
Tutor: Dimitris Mavridis			
<i>Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).</i>			
COURSE TYPE <i>general background, special background, specialised general knowledge, skills development</i>	General background – specialised general knowledge		
PREREQUISITE COURSES:	none		
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	no		
COURSE WEBSITE (URL)	http://ecourse.uoi.gr/course/view.php?id=402		

(2) LEARNING OUTCOMES

<p>Learning outcomes</p> <p><i>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.</i></p> <p><i>Consult Appendix A</i></p> <ul style="list-style-type: none"> • <i>Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area</i> • <i>Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B</i> • <i>Guidelines for writing Learning Outcomes</i>
<p>Students, at finishing the course, they are expected to</p> <ol style="list-style-type: none"> 1) Comprehend basic elements and concepts of probability theory and statistics 2) Comprehend the concept of uncertainty 3) Know the basic analyses methods for the various types of variables 4) Know how to find associations between variables 5) Understand the importance of statistics in Education and the Social Sciences

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?

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| 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 aims to introduce students to probability theory, descriptive statistics and statistical inference

Contents of the course: combinatorics, random experiment, sample space, event, probability of an event, Venn diagrams, theorem of total probability, Bayes theorem, probability distributions, expected value and variance, discrete probability distributions (Bernoulli, Binomial, Geometric, Hypergeometric, Poisson), continuous probability distributions (normal distribution, t-distribution, χ^2 distribution), central limit theorem, confidence intervals for the mean/proportion/difference of means/proportions, hypothesis testing (t-test, χ^2 independence test)

General aim of the course

The aim of the course is to familiarise students with the basic concepts of probability and statistics and emphasize their importance through practical problems

(4) TEACHING and LEARNING METHODS - EVALUATION

DELIVERY <i>Face-to-face, Distance learning, etc.</i>	Face-to-face	
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, laboratory education, communication with students</i>	Use of powerpoint slides Seeking literature in the internet	
TEACHING METHODS <i>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.</i>	Activity	Semester workload
	Lectures	39
	Literature investigation	59
	Exams	2

<p><i>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 the ECTS</i></p>		
	Course total	100
<p align="center">STUDENT PERFORMANCE EVALUATION</p> <p><i>Description of the evaluation procedure</i></p> <p><i>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</i></p> <p><i>Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</i></p>	<p>Written exams</p> <p>Assignments during course</p>	

(5) ATTACHED BIBLIOGRAPHY

<p><i>The topics covered are very general and the students can easily seek information themselves</i></p> <ol style="list-style-type: none"> 1. Μπαγιάτης, Κ. (1970). Στατιστική. Εκδόσεις: Χριστοδουλίδη (1997) 2. Λουκάς, Σ. Β. (2003) Στατιστική. Εκδόσεις: Κριτική
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