COURSE OUTLINE

(1) GENERAL

SCHOOL	ECONOMIC AND SOCIAL SCIENCES		
ACADEMIC UNIT	DEPARTMENT OF ECONOMICS		
LEVEL OF STUDIES	3rd and 4th Years		
COURSE CODE	ECON 408	**SEMESTER**	6-8
COURSE TITLE	Statistics III		

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**
	4	6 ECTS
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*	General background
PREREQUISITE COURSES:	Statistics I and II
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	HELLENIC, HELLENIC (ENGLISH, ENGLISH TO ERASMUS STUDENTS)
IS THE COURSE OFFERED TO ERASMUS STUDENTS	No
COURSE WEBSITE (URL)	https://ecourse.uoi.gr/course/view.php?id=2190

(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*

Knowledge of advanced statistical tools
Understanding statistical analysis
Applications to real-world phenomena
Writing a short report of a small-scale original empirical research
Evaluation of statistical results

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
Team work
Working in an international environment
Working in an interdisciplinary environment
Production of new research ideas

(3) SYLLABUS

Goodness-of-fit tests. Chi-square tests for independence. Non-parametric tests. Linear regression with stochastic explanatory variables. Non-linear regression. Correlation: simple, multiple, partial, multiple-partial, non-linear, rank correlation, spurious. One-way analysis of variance. Testing the randomness of a sample. Elementary index number theory. Elements of modern time-series analysis. Tests based on Gauss-Newton regressions.

(4) TEACHING and LEARNING METHODS - EVALUATION

DELIVERY *Face-to-face, Distance learning, etc.*	Face-to-face
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY *Use of ICT in teaching, laboratory education, communication with students*	**YES**

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 the ECTS

Activity	*Semester workload*
LECTURES	48 HOURS
RECITATIONS	8 HOURS
LABORATORY	8 HOURS
Course total	***64 HOURS***

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.

(1) MIDTERM EXAMINATION (optional, 20%),
(2) FINAL EXAMINATION (compulsory: 80% for students who do better in the mid-term test, and 100% for those who do not take the mid-term test, or take it but do better in the final).
(3) PROJECT (up to two extra marks, provided a student gets 5/10 or better in the exams, weighted as was indicated above).

The midterm test consists of 20 multiple-choice questions, whereas the final exam consists of 30 multiple-choice questions, all in Greek.

(5) ATTACHED BIBLIOGRAPHY

- Suggested bibliography:
- Related academic journals:

1. *Statistics for Economists*, D. Hatzinikolaou, Ioannina 2002, (Chs. 10-17, in Greek).

2. Three sets of typed notes, one on regression (51 pages, in Greek), another on time-series (13 pages, in Greek), and a third on Gauss-Newton regressions (9 pages, in Greek).

3. Three problem sets (in Greek, uploaded in https://ecourse.uoi.gr/course/view.php?id=2190)