COURSE OUTLINE

(1) GENERAL

SCHOOL	Economics & Management Science		
ACADEMIC UNIT	Economics		
LEVEL OF STUDIES	Bachelor		
COURSE CODE		**SEMESTER**	**4**
COURSE TITLE	Statistics I		
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	4	
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, and skills development		
PREREQUISITE COURSES:			
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	No		
COURSE WEBSITE (URL)			

(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*

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…*
	…….

1. Search for, analysis and synthesis of data and information, with the use of the necessary technology
2. Decision-making
3. Working in an interdisciplinary environment
4. Production of free, creative and inductive thinking

(3) SYLLABUS

Descriptive Statistics

Statistical Data:
- frequency distribution
- relative frequency distribution

Measures of Central Tendency:
- Mean (arithmetic, deometric, harmonic)
- Median

Measures of variability:
- Quantiles and Interquantile range
- Variance
- Standard deviation

Elements of Probability Theory

Random Experiment, Sampling Space, Events

Kolmogorov's axioms

Definitions of probability:
- Classical probability (Laplace)
- Objective probabvility (von. Mises)
- Subjective probabvility

Probability algebra, Bayes' Theorem

Random Variable(Discretε, Continuous)

Distribution of a random variable

Measures of Central Tendency of a random variable:
- Mean (arithmetic, deometric, harmonic)
- Median

Measures of variability:
- Variance
- Standard deviation

Useful Distributions

Normal distribution

χ-square distribution

t-Student distribution

F distribution

(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*	Use of ICT in teaching: laboratory teaching and exercises
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	
laboratory exercises	
Course total	

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. Written examination: Problemes to be solved and/or multiple choice questionnaires 2. Laboratory work 3. coaching work

(5) ATTACHED BIBLIOGRAPHY

- Suggested bibliography:

Text-books: choose one of the following:

1. Ζαχαροπούλου Χρ.(Εκδόσεις Σοφία, 20218): Στατιστική Τόμος Α' 7η Έκδοση

Bibliography:

- Related academic journals: