COURSE OUTLINE

SCHOOL	ECONOMICS AND BUSINESS ADMINISTRATION				
DEPARTMENT	BUSINESS ADMINISTRATION				
LEVEL OF COURSE	POSTGRADUATE				
COURSE CODE	ACC_104	**SEMESTER OF STUDIES**	1st 2nd		
			x		
COURSE TITLE	DATA ANALYSIS METHODS FOR DECISION MAKING				

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	**TEACHING HOURS PER WEEK**	**ECTS CREDITS**
Lectures	3	6
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*	Field of science
PREREQUISITE COURSES:	There are no Prerequisite Courses:
TEACHING AND ASSESSMENT LANGUAGE:	Greek
THE COURSE IS OFFERED TO ERASMUS STUDENTS	
COURSE WEBPAGE (URL)	https://eclass.upatras.gr/courses/BMA657/

1. LEARNING OUTCOMES

Leraning 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*

The aim of the course is to introduce the necessary mathematical tools to the postgraduate students of the Department regarding data analysis and research methodology.

At the end of this course the student will be able to:

• design surveys,

• perform multidimensional statistical analysis to summarize and analyze data

•   employ sampling methods and forecasting techniques

• use item response theory,

• perform structural equation models.

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

Others:

2. COURSE CONTENT

1. Sampling methods, confidence intervals and hypothesis testing
2. Analysis of Variance
3. Linear Regression for forecasting purposes
4. Multiple and nonlinear regression
5. Statistical Modeling
6. Item Response Theory
7. Principal Components Analysis
8. Factor Analysis
9. Structural Equation Modeling

3. TEACHING AND LEARNING METHODS - ASSESSMENT

TEACHING METHOD *Face-to-face, Distance learning, etc.*	Face to face	x
	Distance learning (asynchronous)	
	Distance learning (synchronous)	
	Others:	

USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES *Use of ICT in teaching, laboratory education, communication with students*	Slides		
	E-class	x	
	Virtual (simulated) laboratory training		
	Others		

TEACHING ORGANIZATION *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*	*Δραστηριότητα*	*Φόρτος Εργασίας Εξαμήνου*
	Lectures	39
	Tutorials	
	Laboratory practice	
	Essay writing	
	Seminars	
	Exersices	26
	Project	
	Study and analysis of bibliography	
	Placements	
	Clinical practice	
	Art workshop	
	Interactive teaching	
	Educational visits	
	Artistic creativity	
	Private study	60
	Others:	
	Total number of hours for the Course (25 hours of work-load per ECTS credit)	**125 hours (total student work-load)**

STUDENT ASSESSEMNT *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 work, essay/report	x	30%
	Problem solving	x	
	Multiple choice questionnaires		
	Final exam with Multiple choice questionnaires	x	
	Oral examination		
	Clinical examination of patient		
	Mid-term exam (concluding)		
	Final exam with developing questions	x	70%

	Public presentation		
	Mid-term exam (formative)		
	Laboratory work		
	Art interpretation		
	Others :		

4. RECOMMENDED LITERATURE

Berenson, M., Levine, D., Szabat, K. A., & Krehbiel, T. C. (2012). Basic business statistics: Concepts and applications. Pearson higher education AU.
Aczel, A. D., & Sounderpandian, J. (1999). Complete business statistics. Boston, MA: Irwin/McGraw Hill.
Crawley, M. J. (2012). The R book. John Wiley & Sons.