

■ CE75 - Statistical Data Analysis

GENERAL

SCHOOL	EXACT SCIENCES		
DEPARTMENT	MATHEMATICS		
LEVEL OF STUDIES	UNDERGRADUATE		
COURSE CODE	CE75	SEMESTER	G
COURSE TITLE	STATISTICAL DATA ANALYSIS		
INDEPENDENT TEACHING ACTIVITIES	WEEKLY TEACHING HOURS	ECTS	
Lectures	4	6	
COURSE TYPE	Scientific Field		
PREREQUISITE COURSES	-		
LANGUAGE OF TEACHING AND EXAMINATIONS	Greek/English		
THE COURSE IS OFFERED TO ERASMUS STUDENTS	YES		
COURSE WEBSITE (URL)	http://eclass.uowm.gr/		

LEARNING OUTCOMES

Learning Outcomes
<p>Upon completion of the course the student will be able to:</p> <ul style="list-style-type: none"> • enter data into the computer, • conduct descriptive statistical analysis, i.e. to summarize the available data, • conduct basic data analyzes (outlier testing, normality, basic hypothesis testing with dependent and independent samples, one-factor analysis of variance), • adapt linear models, mainly simple regression, checking whether or not the assumptions of their application are violated, • present the results of the above analyzes (reference report).

General Competencies

- Search for, analysis and synthesis of data and information, with the use of the necessary technology.
- Individual work.
- Production of free, creative and inductive thinking.
- Work in an interdisciplinary environment.

CONTENT OF THE COURSE

In this course, the statistical theory developed in "Statistics I" is applied, with the help of the computer and the use of the statistical program SPSS. More specifically, it is applied to hypothesis testing concerning the mean value of a population, the mean values of two populations with dependent and independent samples, simple and multiple linear regression, as well as analysis of variance by one factor.

TEACHING AND LEARNING METHODS - EVALUATION

TEACHING METHOD	In the classroom.	
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY	Use of e-class. Communication through face-to-face discussions and e-mails.	
TEACHING ORGANIZATION	Activity	Semester Workload
	Lectures	52 hours
	Individual Study	73 hours
	Solving exercises- Projects	25 hours
	Course Total (25 hours per ECTS)	150 hours
STUDENT EVALUATION	Written final examination 100%.	

RECOMMENDED BIBLIOGRAPHY

- Suggested Bibliography:

1. Exploring Statistics Using IBM SPSS, Andy Field.
2. A GUIDE TO DATA ANALYSIS WITH IBM SPSS 19, MARIJA J. NORUSIS.

- Additional bibliography for study:

1. Carver and Nash (2006). Doing data analysis with SPSS version 18.0 Coakes and Steed (1999).SPSS: Analysis Without Anguish.