

COURSE OUTLINE

Ημερομηνία: 1 Νοε 2022

A. INFORMATION FOR THE COURSE

A1. School	School of Science and Technology of Information
A2. Department	Department of Statistics
A3. Master Programme	
A4. Course Code	6122
A5. Title of the Course	INTRODUCTION TO PROGRAMMING USING R

Lecturers

Name	Rank	Specialization
VRONTOS IOANNIS	Associate Professor	Statistics
PATERAS KONSTANTINOS	University Scholar	
BESBEAS PANAGIOTIS	Associate Professor	Applied Statistics
LERIOU ILIAS	PhD Candidate	
Apsemidis Anastasios	PhD Candidate	

B. TYPE OF COURSE

B1. Year of Study	1
B2. Semester	1st
B3. Level of Course (if applicable)	1st Cycle
B4. Type of course	Core
B5. Field	Scientific Field
B6. ECTS credits allocated (ECTS)	7.50
B7. Is the Course in the Syllabus?	Yes
B8. If yes, which is the reference Page?	29-68
B9. Is there a site for the course?	Yes https://www.dept.aueb.gr/el/stat-courses

C. INSTRUCTION

C1. Lectures Include:	Classroom lectures: Yes Distance learning lectures: No Seminars: No Laboratory exercises: Yes Field training exercise: No Literary analysis: No Tutorial: Yes Interactive teaching: No Educational visits: No Project: No Essays/reports: Yes Independent study: Yes Lectures given by scientists: No Internship: No
C2. Scheduled Hours for Lectures per week	4.00
C3. Scheduled Hours for Tutorials per week	
C4. Scheduled Hours for Workshops per week	4.00
C5. Scheduled Hours for Case Studies per week	
C6. Scheduled Hours for Other Activities per week	
C7. Scheduled Hours for Lectures per semester	52
C8. Scheduled Hours for Tutorials per semester	
C9. Scheduled Hours for Workshops per semester	52
C10. Scheduled Hours for Case Studies per semester	
C11. Scheduled Hours for Other Activities per semester	0
C12. Mode of Delivery	Face to Face
C13. Student's Evaluation	Written examination at the end of the semester: Yes Oral examination: No Midterm exam: No Homework: No Project: Yes Public Presentation: No Laboratory exercises: Yes Practical exercises: Yes Exempt work: No

C14. Language of Instruction	Greek
------------------------------	-------

D. PREREQUISITE COURSES**E. COURSE CONTENTS (Syllabus)**

This course introduces students to basic principles of programming with the use of the free statistical language R. The course material involves a detailed description of the following topics: Introduction in computers. Basic principles of programming. Introduction in SPLUS/R (basic elements of the software, command environment, windows environment) Arithmetic operations. Objects. Loop Commands and Syntax (for, while, repeat). Creating Programmes. Lists of results. Special commands. Graphs and figures, multiple graphs. Functions, Functions with multiple output. Statistical Methods, Descriptive analysis, Hypothesis testing.

F. LEARNING OUTCOMES

To analyse data with R.

To be able to produce basic programmes and functions using R.

G. LITERATURE

G1. Use of Multiple Literature	Yes
G2. Recommended or required reading	Yes