ATHENS UNIVERSITY OF ECONOMICS AND BUSINESS

COURSE OUTLINE

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	6042
A5. Title of the Course	CALCULUS II

Lecturers

Name	Rank	Specialization
YANNACOPOULOS ATHANASIOS	Professor	Applied Stochastic Analysis
MAMALOUKAS CHRISTOS	EDIP	MATHEMATICS, APPLIED MATHEMATICS, COMPUTATIONAL MATHEMATICS, INFORMATICS

B. TYPE OF COURSE

B1. Year of Study	1
B2. Semester	2nd
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: No 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	2.00
C4. Scheduled Hours for Workshops per week	2.00
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	26
C9. Scheduled Hours for Workshops per semester	26
C10. Scheduled Hours for Case Studies per semester	
C11. Scheduled Hours for Other Activities per semester	
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: Yes Homework: Yes Project: No Public Presentation: No Laboratory exercises: No Practical exercises: No Exempt work: No

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C14. Language of Instruction	Greek

D. PREREQUISITE COURSES

E. COURSE CONTENTS (Syllabus)

Series of functions (power series, Taylor series, Fourier series) and applications.

Pointwise and uniform convergens and applications.

Geometry of R^{n}

Functions of more than one variables.

Limit, continuity, differentiation, integration.

Optimization and Lagrange multipliers with applications

F. LEARNING OUTCOMES

Upon successful completion of the course, students should be able to obtain the series of functions and the fundamental concepts of calculus of functions of more than one variable (including Lagrange multiplier theory) focusing on possible applications to statistics and probability and its applications in various fields related to the economic sciences. The course is assessed by a combination of intermediate tasks and a final exam.

G. LITERATURE

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