

## COURSE OUTLINE

Ημερομηνία: 31 Οκτ 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	6153
A5. Title of the Course	INTRODUCTION TO OPERATIONAL RESEARCH

## Lecturers

Name	Rank	Specialization
KYRIAKIDIS EPAMEINONDAS	Professor	Applied Probability and Stochastic Operations Research

## B. TYPE OF COURSE

B1. Year of Study	3
B2. Semester	5th
B3. Level of Course (if applicable)	1st Cycle
B4. Type of course	Elective
B5. Field	General Knowledge
B6. ECTS credits allocated (ECTS)	7.00
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 <a href="https://www.dept.aueb.gr/el/stat-courses">https://www.dept.aueb.gr/el/stat-courses</a>

## C. INSTRUCTION

C1. Lectures Include:	Classroom lectures: Yes Distance learning lectures: No Seminars: No Laboratory exercises: No Field training exercise: No Literary analysis: Yes Tutorial: No Interactive teaching: No Educational visits: No Project: No Essays/reports: Yes Independent study: No 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	
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	52
C9. Scheduled Hours for Workshops per semester	
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: No Homework: No Project: No Public Presentation: No Laboratory exercises: No Practical exercises: No Exempt work: No

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C14. Language of Instruction	Greek
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**D. PREREQUISITE COURSES****E. COURSE CONTENTS (Syllabus)**

The problem of linear programming, examples, graphical solution, regular form, properties of solutions, Simplex algorithm, M-methods, dual problem, sensitivity analysis, the transportation problem, integer programming, the method of dynamic programming, the Secretary problem, replacement and maintenance problems

**F. LEARNING OUTCOMES**

The students after attending successfully the course will be able to solve linear programming problems graphically, using the Simplex method and using Excel. Furthermore, they will be able to find the optimal policy in finite-horizon problems using the method of dynamic programming. They will also be able to find optimal inventory policies in various inventory control problems.

**G. LITERATURE**

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