

COURSE OUTLINE

(1) GENERAL

SCHOOL	SCHOOL OF ENGINEERING		
ACADEMIC UNIT	DEPARTMENT OF FINANCIAL & MANAGEMENT ENGINEERING		
LEVEL OF STUDIES	UNDERGRADUATE		
COURSE CODE	ΔΕ0117	SEMESTER	10th
COURSE TITLE	SUPPLY CHAIN MANAGEMENT II		
INDEPENDENT TEACHING ACTIVITIES <i>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</i>		WEEKLY TEACHING HOURS	CREDITS
LECTURE		3	5
<i>Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).</i>			
COURSE TYPE <i>general background, special background, specialised general knowledge, skills development</i>	Specialized course in stream II: Engineering Management)		
PREREQUISITE COURSES:	-		
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	YES		
COURSE WEBSITE (URL)	http://www.fme.aegean.gr/en/node/7171		

(2) LEARNING OUTCOMES

Learning outcomes <i>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.</i> <i>Consult Appendix A</i> <ul style="list-style-type: none"> • 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
<ul style="list-style-type: none"> • Understanding the complexity of fundamental problems in supply chain design and management • Understanding the contribution of quantitative methods in the analysis, design and management of supply chains • Use of operational research methods in optimizing supply chain management systems • Familiarization with supply chain management systems • Understanding of performance assessment methods of supply chains and of the value of supply chain analytics • Familiarization with the Greek supply chain industry: challenges and opportunities

General Competences

Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?

Search for, analysis and synthesis of data and information, with the use of the necessary technology

Adapting to new situations

Decision-making

Working independently

Team work

Working in an international environment

Working in an interdisciplinary environment

Production of new research ideas

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

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Others...

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- Systems analysis and design
- Decision making in a complex environment
- Use of quantitative methods in problem solving
- Use of digital tools in problem solving

(3) SYLLABUS

This course will help undergraduate student to drill down to a) fundamental issues of supply chain design and operations, b) the use of advanced quantitative methods for solving related problems, c) how to deal with critical parameters of supply chain organization and management, and d) understanding the challenges and opportunities of the Greek supply chain

The specific course contents include:

I. Background

- Review of basic methods of operational research (Linear Programming, Integer and Mixed Integer Linear Programming)
- Review of key topics in supply chain management

II. Supply chain (SC) system design

- SC network design and optimization: Minimizing cost
- SC network design and optimization: Maximizing sustainability (via multi-objective methods)
- Warehouse science 1
- Warehouse science 2
- Warehouse science 3

III Distribution systems

- Distribution and the vehicle routing problem

IV Quantitative and qualitative data analytics

- Quantitative methods in procurement management
- Quantitative methods in forecasting
- Supply chain analytics 1
- Supply chain analytics 2

V The Greek Supply Chain

- Role, challenges and opportunities

(4) TEACHING and LEARNING METHODS - EVALUATION

DELIVERY <i>Face-to-face, Distance learning, etc.</i>	Live lectures	
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, laboratory education, communication with students</i>	Use of ICT in teaching, laboratory education, communication with students	
TEACHING METHODS <i>The manner and methods of teaching are described in detail.</i> <i>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.</i> <i>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</i>	Activity	Semester workload
	Lectures	39
	Weekly Homework	44
	Study	46
	One Midterm Exam	3
	Term Project	15
	Final Exam	3
	Course total	150
STUDENT PERFORMANCE EVALUATION <i>Description of the evaluation procedure</i> <i>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</i> <i>Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</i>	Assessment Methods: <ul style="list-style-type: none"> - Homework 10% - One intermediate exam 20% - Term project 20% - Final exam 50% 	

(5) ATTACHED BIBLIOGRAPHY

Recommended references

- Minis, I. and Arampantzi, C. Supply chain management II, lecture notes, , University of the Aegean, 2019
- Chopra Sunil - Meindl Peter, “Διοίκηση Εφοδιαστικής Αλυσίδας”, 2015, Εκδόσεις A. TZIOΛΑΣ & YIOI A.E.
- Μαρινάκης, Ι., Μυγδαλάς, Α., 2018, “Σχεδιασμός Βελτιστοποίηση της Εφοδιαστικής Αλυσίδας”, Εκδόσεις Σοφία.

Relevant Scientific Journals

European Journal of Operations Research
 Networks
 International Journal of Logistics Management
 International Journal of Supply Chain Management
 International Journal of Production Research