

COURSE OUTLINE

(1) OVERVIEW

SCHOOL	MARITIME & INDUSTRY		
DEPARTMENT	INDUSTRIAL MANAGEMENT & TECHNOLOGY		
LEVEL OF STUDIES	UNDERGRADUATE		
COURSE CODE	TEOΔE12	SEMESTER	8
COURSE TITLE	CONTEMPORARY TOPICS IN INDUSTRIAL MANAGEMENT & TECHNOLOGY		
DISCRETE TEACHING ACTIVITIES <i>In cases where ECTS credits are awarded to distinct components of the course (e.g., Lectures, Laboratory Exercises, etc.), please indicate them separately. If the credits are awarded as a whole for the entire course, please state the weekly teaching hours and the total number of credits</i>		WEEKLY TEACHING HOURS	ECTS
Seminars & Project		3	2.5
<i>Please add additional rows if needed. A detailed description of the teaching organization and instructional methods is provided in Section (4).</i>			
COURSE TYPE <i>core (C), core elective (CE), elective (E) - background, specialization, skill development</i>	C – Skill Development		
PREREQUISITE COURSES:	None.		
LANGUAGE OF TEACHING AND EXAMINATIONS:	Greek (English for ERASMUS students)		
THIS COURSE IS AVAILABLE TO ERASMUS STUDENTS	Yes		
COURSE WEBPAGE (URL)			

(2) LEARNING OUTCOMES

Learning Outcomes <i>The learning outcomes of the course are described, specifying the particular knowledge, skills, and competencies at the appropriate level that students will acquire upon successful completion of the course.</i> <i>Please refer to Appendix A</i> • Description of the Level of Learning Outcomes for each study cycle according to the Qualifications Framework of the European Higher Education Area. • Descriptive Indicators of Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B. • Concise Guide for Writing Learning Outcomes	
The aim of this course is to familiarize students with various issues related to the practical application of Advanced Technologies and Managerial Methodologies that govern modern Industrial Enterprises and Production Units. In previous semesters, students have been introduced to — and have primarily acquired theoretical knowledge of — the core methodologies of Management Science as well as the fundamental technologies underpinning modern Production Systems. This course complements that foundational knowledge by presenting the practical implementation of such techniques through lectures, presentations, and talks that focus on real-world problems and case studies encountered by industrial enterprises. These sessions are delivered by invited professionals from relevant industries and/or distinguished researchers and academics. • Upon successful completion of the course, students will be able to: • Understand the current industrial landscape and the challenges it faces. • Deepen their knowledge of problem analysis and resolution methodologies. • Effectively apply the techniques taught in class to real-world situations.	
General Competences <i>Taking into account the general competences that a graduate should have acquired (as listed in the Diploma Supplement and outlined below), which of these competences does the course aim to develop?</i>	
<i>Searching, analyzing, and synthesizing data and information, using the necessary technologies</i> <i>Adaptation to new situations</i> <i>Decision making</i> <i>Autonomous work</i> <i>Teamwork</i>	<i>Project design and management</i> <i>Respect for diversity and multiculturalism</i> <i>Respect for the natural environment</i> <i>Demonstration of social, professional, and ethical responsibility and sensitivity to gender issues</i> <i>Exercising critical and self-critical thinking</i>

<i>Working in an international environment</i>	<i>Promotion of free, creative, and inductive thinking</i>
<i>Working in an interdisciplinary environment</i>	<i>...</i>
<i>Generation of new research ideas</i>	<i>Other competences: ...</i>
• Searching, analyzing, and synthesizing data and information, using the necessary technologies • Adaptation to new situations • Decision making • Autonomous work • Generation of new research ideas • Demonstration of social, professional, and ethical responsibility and sensitivity to gender issues • Exercising critical and self-critical thinking • Promotion of free, creative, and inductive thinking	

(3) COURSE CONTENT

During the course, the following topics are presented and discussed: • Introduction to the modern challenges of industry and production • Digitization and Industry 4.0 • Big data in production: collection, analysis, and application • ERP, MES, and SCADA systems • Lean Management and Six Sigma • Production planning and scheduling • Quality Management and Sustainability • Supply Chain and Logistics • Project management in production environments Furthermore, articles, audiovisual lecture material, web links to useful resources, exercises, and software are uploaded in electronic format on the eClass platform.

(4) TEACHING and LEARNING METHODS - ASSESSMENT

TEACHING MODE <i>Face-to-face, in-class lecturing, distance teaching and distance learning etc.</i>	• Distance teaching & learning												
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY <i>Use of ICT in Teaching, Laboratory Education, Communication with students</i>	Teaching: Learning support through the eClass electronic platform, synchronous distance teaching via MS Teams. Communication with students: face-to-face during office hours, email, eClass platform, MS Teams tools												
Organization of Teaching <i>A detailed description of the teaching methods and approach is provided.</i> <i>Lectures, seminars, laboratory exercises, fieldwork, study and analysis of literature, tutorials, internships (placements), clinical practice, artistic workshops, interactive teaching, educational visits, project work, writing assignments, artistic creation, etc.</i> <i>The student's study hours for each learning activity, as well as the hours of independent study, are specified in accordance with the principles of ECTS</i>	<table> <tr> <th>Activity</th><th>Semester Workload</th></tr> <tr> <td>Seminars</td><td>39</td></tr> <tr> <td>Project</td><td>8</td></tr> <tr> <td>Self-study of seminar material</td><td>15</td></tr> <tr> <td>Consultation Support</td><td>0.5</td></tr> <tr> <td>Course Total</td><td>62.5</td></tr> </table>	Activity	Semester Workload	Seminars	39	Project	8	Self-study of seminar material	15	Consultation Support	0.5	Course Total	62.5
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STUDENT ASSESSMENT <i>Description of the assessment process</i> <i>Language of assessment, assessment methods, formative or summative evaluation, multiple-choice tests, short-answer questions, essay questions, problem-solving, written assignments, reports, oral examinations, public presentations, laboratory work, clinical patient examination, artistic interpretation, other(s)</i>	Language of Assessment: Greek (English for ERASMUS students) Assessment Mode: Face-to-face and/or distance learning (if required) Assessment Methods: The final grade of the course is determined by the students' participation in course activities as well as by the completion of an individual assignment/written report. This assignment involves the study, analysis, and presentation of two (2) related scientific publications from international literature.												

<i>Explicitly state assessment criteria and information on whether and where these criteria are accessible to students are included.</i>	In the case that students have successfully participated in the course activities but have not submitted the individual assignment/written report during the first examination period, they may submit it during the September resits. It should be noted that the course grade is not included in the calculation of the overall degree grade. Students are evaluated on a pass/fail basis. Students with Learning Difficulties: Students with certified learning difficulties in reading and writing (as recognized by the competent authority) are assessed according to the procedures established by the Department. Disclosure of Assessment Criteria: The assessment criteria are communicated during the first class and are clearly stated on the course website and the eClass platform. Students have the right to receive explanations regarding their grades. In cases of further requests, the procedures outlined in the current Study Regulations apply.
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(5) SUGGESTED BIBLIOGRAPHY

- Books: - Journals: • Computers in Industry • International Journal of Advanced Manufacturing Technology • International Journal of Logistics Research & Applications • International Journal of Physical Distribution & Logistics Management • International Journal of Production Economics • International Journal of Production Research - Other educational material: • Seminar Notes and Supporting Material provided by the Instructor
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