

COURSE OUTLINE

(1) OVERVIEW

SCHOOL	MARITIME & INDUSTRY		
DEPARTMENT	INDUSTRIAL MANAGEMENT & TECHNOLOGY		
LEVEL OF STUDIES	UNDERGRADUATE		
COURSE CODE	TEΠAP28-1	SEMESTER	7
COURSE TITLE	QUALITY ASSURANCE & CONTROL		
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
Lectures		4	5.5
<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 - Specialization		
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 the course is to familiarize students with the concept of quality assurance in process systems as well as the implementation of quality management standards. Students are also trained in the use of statistical quality control tools, such as control maps, average values and variations, defect rates and number of defects, as well as in the assessment of quality indicators. Upon successful completion of the course, the students will be able to: • Understand the terms of quality and its characteristics. • Demonstrate knowledge on the basic principles of statistics and probabilities. • Create, process and evaluate quality control charts. • Understand sampling principles. • Apply quality assurance systems to production systems according to ISO 9000 standards series.	
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>Working in an international environment</i> <i>Working in an interdisciplinary environment</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>Promotion of free, creative, and inductive thinking</i> <i>...</i>

Generation of new research ideas	Other competences: ...
• 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

The course covers the following topics:

Week	Topics
1	Introduction to Quality Assurance
2	Quality Standards and Accreditation
3	Quality Control
4-5	Acceptance Control
6	Process Capability
7	Statistical Process Control with control charts
8	Mean and Range Control Charts ($\bar{x}$ and R)
9	Percent defective chart (p-chart)
10	Defective chart (np-chart)
11	Total defective chart (c-chart)
12	Process Design
13	Revision

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>	• Face-to-face in a classroom • Distance teaching & learning (if required)														
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY <i>Use of ICT in Teaching, Laboratory Education, Communication with students</i>	Teaching: Lectures using modern audiovisual equipment, learning support through the eClass electronic platform, synchronous distance teaching via MS Teams. Laboratory: open-access software for laboratory exercises 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,</i>	<table> <tr> <th>Activity</th><th>Semester Workload</th></tr> <tr> <td>Lectures</td><td>52</td></tr> <tr> <td>Case studies / exercises</td><td>42</td></tr> <tr> <td>Self-study of lecture material and exercises</td><td>41</td></tr> <tr> <td>Consultation Support</td><td>0.5</td></tr> <tr> <td>Exams (written)</td><td>2</td></tr> <tr> <td>Course Total</td><td>137.5</td></tr> </table>	Activity	Semester Workload	Lectures	52	Case studies / exercises	42	Self-study of lecture material and exercises	41	Consultation Support	0.5	Exams (written)	2	Course Total	137.5
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are specified in accordance with the principles of ECTS	
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> <i>Explicitly state assessment criteria and information on whether and where these criteria are accessible to students are included.</i>	Language of Assessment: Greek (English for ERASMUS students) Assessment Mode: Face-to-face and/or distance learning (if required) Assessment Methods: The final course grade is formed 100% by written exams either in the form of midterms or in the final exam taken in the examination period of the winter semester and, in case of failure, in the September resits. The written exam includes problem-solving exercises, short-answer and essay questions. It is conducted closed-book. 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. The exam syllabus is announced on eClass following the final lecture of the semester. The exam answers are posted on eClass after the examinations take place. Students have the right to review their graded exams and receive explanations regarding their grades. In cases of further requests, the procedures outlined in the current Study Regulations apply.

(5) SUGGESTED BIBLIOGRAPHY

- Books: • Blesios, N.P. (2013). Quality Management and Control, Varvarigou Publications, ISBN: 9789607996381 [59374080] – in Greek • Tagaras, G.N. (2001). Statistical Process Control, Zitis Publications, ISBN: 9604317067 [11368] – in Greek - Journals: - Other educational material: • Lecture Notes and Supporting Material provided by the Instructor
