

## COURSE OUTLINE

### 1. GENERAL INFORMATION

<b>SCHOOL</b>	MARITIME AND INDUSTRIAL STUDIES		
<b>DEPARTMENT</b>	INDUSTRIAL MANAGEMENT AND TECHNOLOGY		
<b>LEVEL OF STUDY</b>	UNDERGRADUATE		
<b>COURSE UNIT CODE</b>	TEΠAP28-1	<b>SEMESTER OF STUDY</b>	7 <sup>th</sup>
<b>COURSE TITLE</b>	QUALITY ASSURANCE AND CONTROL		
<b>INDEPENDENT TEACHING ACTIVITIES</b> <i>in case in which credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the whole of the course, give the weekly teaching hours and the total credits</i>		<b>WEEKLY TEACHING HOURS</b>	<b>CREDITS</b>
Lectures		4	5.5
<i>Add rows if necessary. The organization of teaching and the teaching methods used are described in detail at section 4.</i>			
<b>COURSE TYPE</b> <i>general background, special background, specialized general knowledge, skills development</i>	Special background		
<b>PREREQUISITE COURSES:</b>	Statistics (for students with student ids starting from T22 and later)		
<b>LANGUAGE OF INSTRUCTION and EXAMINATION/ASSESSMENT:</b>	Greek		
<b>THE COURSE IS OFFERED TO ERASMUS STUDENTS</b>	No		
<b>COURSE WEBSITE (URL)</b>			

### 2. LEARNING OUTCOMES

<p><b>LEARNING OUTCOMES</b></p> <p><i>The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:</i></p> <p><b>APPENDIX A</b></p> <ul style="list-style-type: none"> <li>• <i>Description of the level of learning outcomes for each qualifications' cycle, according to the European Higher Education Area's Qualification Framework.</i></li> <li>• <i>Descriptors for Levels 6, 7 &amp; 8 of the European Qualifications Framework for Lifelong Learning and APPENDIX B</i></li> <li>• <i>Guidelines for writing Learning Outcomes</i></li> </ul>
<p>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.</p> <p>Upon successful completion of the course, the students will be able to:</p> <ul style="list-style-type: none"> <li>• Understand the terms of quality and its characteristics</li> <li>• Demonstrate knowledge on the basic principles of statistics and probabilities</li> <li>• Create, process and evaluate quality control charts</li> <li>• Understand sampling principles</li> <li>• Apply quality assurance systems to production systems according to ISO 9000 standards series</li> </ul>

### General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aims

Search for, analysis and synthesis of data and information, by the use of technologies that are necessary according the case

Adapting to new situations

Decision-making

Independent work

Team work

Working in an international environment

Working in an interdisciplinary environment

Introduction of innovative research

Project planning and management

Respect for difference and multiculturalism

Environmental awareness

Social, professional and ethical responsibility and sensitivity to gender issues

Critical consciousness, criticism and self-criticism

Development of free, creative and inductive thinking

- Search for, analysis and synthesis of data and information, by the use of technologies that are necessary according the case
- Adapting to new situations
- Decision-making
- Independent work
- Team work
- Introduction of innovative research
- Social, professional and ethical responsibility and sensitivity to gender issues
- Critical consciousness, criticism and self-criticism
- Development of free, creative and inductive thinking

## 2. COURSE CONTENT

The course covers the following topics:

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

In addition, articles, audiovisual lecture material, web addresses, useful information and exercises are posted at eclass.

## 3. TEACHING METHODS - ASSESSMENT

<b>TEACHING MODE</b> <i>Face-to-face, in-class lecturing, on distance teaching and distance learning etc.</i>	In-class lecturing	
<b>USE OF INFORMATION AND COMMUNICATION TECHNOLOGY</b> <i>Use of ICT in Teaching, Laboratory Education, Communication with students</i>	<b>Teaching:</b> Lectures with audiovisual media, support of the learning process through the eclass platform <b>Communication with students:</b> face-to-face at office hours, email, eclass	
<b>COURSE DESIGN</b>	<b>Activity / Method</b>	<b>Semester Workload</b>

<p><i>Description of teaching techniques, practices and methods:</i> Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, clinical practice, Art Workshop, Interactive teaching, Educational visits, project, Essay writing, Artistic creativity, etc.</p> <p><i>The study hours for each learning activity as well as the hours of non- directed study are given according to the principles of the ECTS</i></p>	Lectures	52
	Case studies/exercises	42
	Self-study of lecture material and exercises	41
	Counselling	0.5
	Exams (written)	2
	Course Total	<b>137.5</b>
<p><b>STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS</b></p> <p><i>Detailed description of the evaluation procedures:</i> Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice questionnaires, short- answer questions, open-ended questions, problem solving, written work, Essay/report, oral exam, public presentation, laboratory work, art interpretation, other.....etc</p> <p><i>Evaluation criteria are specifically defined and given as well as if and where they are reported and accessible to students.</i></p>	<p><b>Language of exams:</b> Greek</p> <p><b>Assessment Methods:</b> After the last lecture, the exam material is posted at eclass. The final course grade is formed by the written exams (100%) taken in the examination period of the winter semester and, in case of failure, in the September resits</p> <p>The written examination includes problem solving/exercises, short-answer and open-ended questions. It is conducted with closed books.</p> <p>The evaluation of students with special learning difficulties in writing and reading (as certified and qualified by a competent institution) is performed according to the relevant procedure decided by the Department Assembly.</p> <p><b>Notification of the Assessment Criteria:</b> The evaluation criteria are made known during the first lecture and are clearly stated on the course website and e-class. The answers to the exam questions are posted at eclass after the exam date. Students have the opportunity to discuss their exam paper with the course instructor (at the posted office hours) after the announcement of the course grades.</p>	

#### 4. SUGGESTED BIBLIOGRAPHY

*-Suggested Bibliography :*

- Book [59374080]: Quality Control and Management [in Greek], N.P. Blessios
- Book [11368]: Statistical Quality Control, G.N. Tagaras

*-Scientific Journals: not applicable*

*-Lecture Notes*