

COURSE OUTLINE

(1) GENERAL

SCHOOL	SCHOOL OF ENGINEERING		
ACADEMIC UNIT	DEPARTMENT OF ELECTRONICS ENGINEERING		
LEVEL OF STUDIES	UNDERGRADUATE		
COURSE CODE	2605005	SEMESTER	5
COURSE TITLE	Quality Assurance Systems		
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 (ECTS)	
Lectures	2	3	
Laboratory	0		
<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>	General Background Course		
PREREQUISITE COURSES:	None		
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	NO		
COURSE WEBSITE (URL)	www.electronics.teipir.gr/		

(2) LEARNING OUTCOMES

Learning outcomes

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.

Consult Appendix A

- 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

The objective of this course is to analyze modern Quality Assurance Systems and focus on their application in academic institutions.

Upon successful completion of this course module students possess advanced knowledge, skills and competences in the subject of Quality Assurance that enable them to:

1. Know, recognize, distinguish, categorize all different systems and quality standards.
2. Select, study and apply a certain standard,
3. Analyze quality problems in realistic environments and implementation scenarios,
4. Design methods for the application of the standards and observe the quality according to the space or procedure based on the relevant standards.
5. Cooperate in groups in order to achieve the above goals.

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
.....
Others...
.....

- Search for, analysis and synthesis of data and information, with the use of the necessary technology
- Working independently
- Team work

(3) COURSE CONTENT

Lectures:

- In accordance with the objective of this course, the existing situation is being analyzed (structures, organization, administration), the Quality Assurance System prototype ISO 9001:2000 is being analyzed, as well as the main principles and demands and the ways that such System that focuses on the customer satisfaction (a.k.a. the student and the society) may be applied.
- An effort for the documentation of the Quality System is in process to accord with the standard ISO 9001:2000 via a quality management manual, the Quality Control Procedures and the Technical Instructions and control forms so as all the above are in correspondence to the Lab Policy and the demands of the standard.
- This course is a useful tool, not only to enrich one's knowledge on quality issues but to understand and apply a Quality Management System according to the Standard ISO 9001:2000 in any academic environment (Department, School, institution). The course is composed of seven modules, followed by the Quality Management manual and completed by the procedure, the documents, and the instructions.

The course is composed of seven modules or chapters, which are followed by the quality management manual and completed by the procedures, the documents and the instructions.

- Chapter 1, "The meaning of Quality" a summary of the meaning of Quality and the basic stages of programming are being presented.
- Chapter 2, "The standard ISO 9000:2000" a general view of the standards is being presented.
- Chapter 3, "Description of the demands of the standard". The Quality Assurance System is being analyzed, its importance and its demands are being explained as well as the requirements for its development.
- Chapter 4, "Total Quality Management". It refers to the Total Quality Management which is philosophy in Management. The Total Quality management is applied to all levels of a business, an organization, an educational institution and expresses the relationships with the students, the suppliers, the human resources and the information sharing inside and outside of the Institution.
- Chapter 5, "Cost". It summarizes the description of the Quality Cost.
- Chapter 6, "Conclusions". It describes the reasons why a business should use the ISO Standard,

it refers to the main application difficulties as well as to the advantages of such use.

- Chapter 7, “Summing up”. It refers to the reasons why an ISO 9000 System is successful or why it fails.
- “Quality Management Manual” and its application to a University/University of Applied Sciences. Sample Procedures, Instructions and the Documents.

(4) TEACHING and LEARNING METHODS - EVALUATION

<p style="text-align: center;">DELIVERY <i>Face-to-face, Distance learning, etc.</i></p>	Face to face lectures												
<p style="text-align: center;">USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, laboratory education, communication with students</i></p>	<ul style="list-style-type: none"> • Use of electronic presentation with multimedia content in class, • Student support through the course webpage and the departmental e-learning platform, • Electronic communication of instructors and students, through the course webpage and by e-mail. 												
<p style="text-align: center;">TEACHING METHODS <i>The manner and methods of teaching are described in detail. 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. 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></p>	<p>Lectures, case study / project assignment and study.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="background-color: #d3d3d3;">Activity</th> <th style="background-color: #d3d3d3;">Semester workload (hours)</th> </tr> </thead> <tbody> <tr> <td>Lectures</td> <td style="text-align: center;">26</td> </tr> <tr> <td>Study for lectures</td> <td style="text-align: center;">26</td> </tr> <tr> <td>Case study / project and report</td> <td style="text-align: center;">26</td> </tr> <tr> <td>Study and preparation for exams</td> <td style="text-align: center;">12</td> </tr> <tr> <td>Course Total</td> <td style="text-align: center;">90</td> </tr> </tbody> </table>	Activity	Semester workload (hours)	Lectures	26	Study for lectures	26	Case study / project and report	26	Study and preparation for exams	12	Course Total	90
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<p style="text-align: center;">STUDENT PERFORMANCE EVALUATION <i>Description of the evaluation procedure 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 Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</i></p>	<p>Final written exams on the taught material (80%). Individual work on taught material related issues, in the form of case study or project is also evaluated (20%)</p> <p>The exams are held in greek and include:</p> <ul style="list-style-type: none"> • development of a given issue • answers to questions of judgment and • answers to multiple choice questions 												

(5) ATTACHED BIBLIOGRAPHY

Recommended Books

1. The development of ISO 9001:2000, John Kostis, Synchroni Ekdotiki Publications, Athens, Greece (in greek)
2. Design for Quality, vol. A, Char. Angelopoulos, Hellenic Open University (in greek)
3. Total Quality, vol. B, St. Stefanatos, Hellenic Open University (in greek)

4. Quality Management, vol. C, Nik. Psychas, Hellenic Open University (in greek)
5. The cost of quality, vol. D, Andr. Tzogios, Hellenic Open University (in greek)
6. Programming for Quality, vol. E, Andr. Tzogias, Hellenic Open University (in greek)
7. ISO 9000:2000 I. Arvanitogiannis – L. Kouris (in greek)
8. ISO 9000 in Technical Entreprizes, Demetrios Angelides – M. Kirkinezou (in greek)
9. Construction and Services Sectors, Gower
10. ISO 9001:2000 simplified, P. Katsampanis, Athens, (in greek)
11. <http://www.iso.ch>
12. <http://class.eap.gr/diple>
13. Total Quality, Antony Spanos, Athens (in greek)