



ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ
Α.ΔΙ.Π.
ΑΡΧΗ ΔΙΑΣΦΑΛΙΣΗΣ & ΠΙΣΤΟΠΟΙΗΣΗΣ
ΤΗΣ ΠΟΙΟΤΗΤΑΣ ΣΤΗΝ ΑΝΩΤΑΤΗ
ΕΚΠΑΙΔΕΥΣΗ

HELLENIC REPUBLIC
H.Q.A.
HELLENIC QUALITY ASSURANCE
AND ACCREDITATION AGENCY

ΤΕΧΝΟΛΟΓΙΚΟ ΕΚΠΑΙΔΕΥΤΙΚΟ ΙΔΡΥΜΑ ΑΝΑΤΟΛΙΚΗΣ ΜΑΚΕΔΟΝΙΑΣ ΚΑΙ ΘΡΑΚΗΣ
ΜΟΝΑΔΑ ΔΙΑΣΦΑΛΙΣΗΣ ΤΗΣ ΠΟΙΟΤΗΤΑΣ ΤΕΙ ΑΜΘ

Quality Assurance in Higher Education Course Data Collection Form

ΤΕΧΝΟΛΟΓΙΚΟ ΕΚΠΑΙΔΕΥΤΙΚΟ ΙΔΡΥΜΑ
ΑΝΑΤΟΛΙΚΗΣ ΜΑΚΕΔΟΝΙΑΣ & ΘΡΑΚΗΣ
ΑΓΙΟΣ ΛΟΥΚΑΣ,
65404 ΚΑΒΑΛΑ

EASTERN MACEDONIA AND THRACE
INSTITUTE OF TECHNOLOGY
AGIOS LOUKAS
65404 KAVALA

COURSE OUTLINE

1. GENERAL

SCHOOL	School of Technological Applications		
ACADEMIC UNIT	Department of Electrical Engineering		
DEGREE LEVEL	Undergraduate		
COURSE CODE	ΣΤΝ5	SEMESTER	6th
COURSE TITLE	TOTAL QUALITY MANAGEMENT – [TQM]		
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
Lectures and Exercises		2TH	3
Laboratory		-	-
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail at (d).			
COURSE TYPE <i>general background, special background, specialised general knowledge, skills development</i>	Of Scientific Area		
Required passed courses:	-		
TEACHING AND EXAMS LANGUAGE:	Greek - English		
THE COURSE IS OFFERED TO ERASMUS STUDENTS:	YES		
COURSE WEBPAGE (URL)	http://eclass.teikav.edu.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 course aims to cover the most important methods for the Management and Control of Total Quality and to get to know the students the relations that should exist in:

- Statistical theory and practice
- Management and workforce
- Quality applications in manufacturing industries and service companies
- Besides -series and in-line quality control
- Taguchi and Deming in quality improvement
- Safety standards and environmental protection
- Quality, transportation and Logistics

The students, after successful completion of the course,

- will be aware of major Certification, Quality Control and Total Quality Management theories
- will be familiar in using Quality Control Systems (flow charts, check sheets, histograms etc.), the Statistical Process Control and Quality Measurements
- will be able to study economics (cost of quality and non-quality)
- finally will have gained a significant knowledge on the Standards and Quality Systems (ISO 9000 and BS 7850) capable of give them the possibility of studying, designing, supervising and control of production lines and innovative products and products evaluating the results with statistical tools.

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

Project planning and management

Respect for difference and multiculturalism

<i>Adapting to new situations</i> <i>Decision-making</i> <i>Working independently</i> <i>Team work</i> <i>Working in an international environment</i> <i>Working in an interdisciplinary environment</i> <i>Production of new research ideas</i>	<i>Respect for the natural environment</i> <i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i> <i>Criticism and self-criticism</i> <i>Production of free, creative and inductive thinking</i> <i>.....</i> <i>Others...</i> <i>.....</i>
<ul style="list-style-type: none"> • Investigation, analysis and synthesis of data and information, by use of the required technologies. • Decision making. • Work in a multidisciplinary environment. • Autonomous Work. • Teamwork. • Design and Project Management. • Production of new research ideas. • Work in an international environment. • Exercise criticism and self-criticism. • Προσαρμογή σε νέες καταστάσεις. 	

3. COURSE CONTENT

<ul style="list-style-type: none"> • Introduction to Quality and to Total Quality Management. • The Fundamentals/Principles of Total Quality Management. • The basic philosophy of Total Quality Management Gurus. • Application of Principles of Total Quality Management - Case Studies. • Quality Assurance - Quality Management Systems ISO 9000. • Total Quality Management Models EQA / MBNQA. • Total Quality Management Models - Case Studies. • Framework (CAF). • Statistical Process Control (SPC) and Process Capability Analysis. • Basic Tools of Quality Improvement - Methodology Six Sigma3. • The “Home” of Quality (Quality Function Deployment). • Quality Improvement Tools - Case Studies. • Statistical Design of Experiments Off Line - Quality Control - Taguchi Techniques. • On line - Quality Control. • Control of Quality Assumptions. • Preventive Quality Control. • Reconstructive Quality Control. • The quality cost/Not Quality. • Reliability Engineering- Quality Assurance. • Innovation - Entrepreneur ship. • Using Charts MINITAB/ SPSS.

4. TEACHING AND LEARNING METHODS - ASSESSMENT

TEACHING METHOD <i>Face-to-face, Distance learning, etc.</i>	In the room - In Computers [Exercises]
UTILISATIONS OF INFORMATION AND COMMUNICATION TECHNOLOGIES <i>Use of ICT in teaching, laboratory education, communication with students</i>	Presentation of the theory by means of slides [ppt]. Website of the course with supporting and assistant material. Creation of asynchronous platform. Using applications [MINITAB] – You tube

<p><i>The manner and methods of teaching are described in detail.</i></p> <p><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></p> <p><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></p>	Activity	Semester workload
	Lectures	20
	Tutorial Exercises	10
	Applied Exercises [MINITAB]	15
	Project Work writing	10
	Independent Study	20
STUDENT ASSESSMENT	Course Summary (Total contact hours and training)	75
	<p>Description of the evaluation procedure</p> <p><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></p> <p><i>Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</i></p>	

5. RECCOMENDED READING

- Suggested bibliography:

1. "Total Quality Management", Grower (Editor D. Lock Greek translation), Ellin Publications
2. "Total Quality Management", N. Logothetis (Greek translation From Deming to Taguchi and SPC) - Prentice Hall
3. "Total Quality Management", C.N. Weaver (Greek translation), Anubis Publications
4. "Total Quality Management", P.T.J. James (Greek translation), Prentice Hall.
5. "Advanced Tools and Methods for Quality Control" George Georgakakou – GOU Publishing
6. "Factories Organization and Management", D.P. Psinos, Ziti Publications
7. "Introduction to factories organization", S.K. Karvouni, A. Stamoulis Publications
8. "Industrial Organization Theory", N.G. Haritakis, Eleftheroudakis Editions
9. "Statistics for managers" - using EXCEL – D. Levine, D. Stephan
10. "Total Quality Management", S. George & A. Weimerkirch, John Wiley & Sons, Inc
11. "Statistical Quality Control", Grant-Leavenworth
12. "Statistical Methods for Quality Improvement", Thomas Ryan, Wiley
13. "Taguchi Techniques for Quality Engineering", Phillip J. Ross, McGraw
14. "Managing in a time of great change", P.F. Drucker, Truman Talley Books/Dutton
15. "Leading change", J.P. Kotter, Harvard Business School Press
16. "Market-driven Management", F.E. Webster, John Wiley & Sons, Inc
17. "Competitive strategy", M.E. Porter, The Free Press

- Related academic journals:

1. Total Quality Management
2. Journal of Quality Technology
3. Quality and Reliability Engineering International
4. Quality Forum
5. Quality Magazine
6. Quality Progress
7. The TQM Magazine

