



PERSONA CIENCIA EMPRESA

UNIVERSITAT RAMON LLULL

Code: 80310
Name of the subject: Quality Management

GENERAL CHARACTERISTICS

Number of credits ECTS:	3.0
Language/s	Catalan Spanish English
Type	Normal
Professor/s	González Sabaté, Lucinio

DESCRIPTION

BRIEF DESCRIPTION AND JUSTIFICATION

This subject is devoted to presenting the Six Sigma strategy and the tools that allow to improve the quality of continuous form. The concepts are explained with the help of real cases and programs that do not require prior specialist knowledge.

COMPETENCIES

- The student should be able to do the functions of planning, organizing, leading and controlling activities within the company and also to know the legal and social environment in which the company works. (CE7)
- The student should be able to understand the importance and effective use of information technologies in business. (CE8)
- The student should be able to address the problems that arise in a business environment and know how to prepare to solve them. The student should be able to adapt to changes in the external and internal environment and turn them into opportunities to achieve established objectives. The student should be able to make selective judgments oriented to choose between one or several possible alternatives, developing sufficient criteria to discern what is a good choice, considering the number of alternatives, the characteristics of each, and their influence on the final. (CT6)
- The student should be able to understand and work in technological and industrial environments, assimilating and incorporating technological advances and organizational changes derived from its implementation in order to ensure quality. (CT9)

PREREQUISITES

- Requirements legally established to access postgraduate programs.
- Degree in the scientific or technological field.

CONTENTS

1. Quality: Concepts. The voice of the client: Levitt, Kano, QFD.
2. Quality in purchases. Sampling by attributes and by variables.
3. Process control.
4. Validation of the process.
5. Factors that influence the quality of the process. Experimental designs, response surfaces and optimization.
6. Six Sigma. Implementation Strategy and DMAIC Cycle.

METHODOLOGY

TRAINING ACTIVITIES:

Training activities	ECTS Credits	Competencies
Lectures presenting concepts and procedures	0,60	CE7/CE8/CT6/CT9
Practical sessions (exercises, case resolution)	0,60	CE7/CE8/CT6/CT9
Assignments by Students	0,60	CE7/CE8/CT6/CT9
Seminars or tutorials	0,25	CE7/CE8/CT6/CT9
Personal study activities	0,70	CE7/CE8/CT6/CT9
Assessment sessions	0,25	CE7/CE8/CT6/CT9
Internship in Company		
TOTAL	3,0	

EXPLANATION OF TEACHING METHODOLOGY

The face-to-face sessions combine theoretical exposition with accomplishment of exercises, problems and cases where the students have to apply the concepts explained; Some of the exercises are corrected immediately in the classroom, while others are proposed as personal study activities; In this last case students can consult the doubts generated in the following classes or in the hours of consultation that the professor has planned in his office. Evaluation activities are periodically carried out so that students can become aware of their progress in acquiring the knowledge and abilities of the subject. Some of these assessments are carried out without prior notice, so that students carry the subject a day, but those who have more weight in the final grade (work at the end of each chapter) are made by warning in advance, According to the calendar planned and announced at the beginning of the course. For the personal study, the student must support in the notes obtained in class complementing them with the consultation of some of the recommended books.

EVALUATION

METHODS OF EVALUATION

Evaluation Methods	Weight	Competencies
Final exam	40	CE7/CE8/CT6/CT9
Partial exams		
Following up activities	30	CE7/CE8/CT6/CT9
Homework and presentations	30	CE7/CE8/CT6/CT9
Experimental work or fieldwork		
Projects		
Evaluation of the company or institution		
Participation		

LEARNING OUTCOMES

The student must demonstrate that he understands the concepts and knows how to use the techniques that make up the contents of the subject; This will assess the competences through the activities carried out in class, the work and the final exam.

EVALUATION

The evaluation of the subject will be done using three methods of evaluation: Activities performed in class (C), Presentation of a work (P), Final Exam (F) and weighting their notes according to the assigned weights (see table of methods evaluation). According to CALL:

- First call (ordinary). o If you have completed schooling By calling A1 to the final exam note, the final mark (NF) will be obtained by applying the formula: $NC = (0.3C + 0.30P + 0.4F)$ Followed by the condition: SI ($C \geq 3.5$ and $A1 \geq 3.5$ and $P \geq 3.5$) THEN $NF = NC$; IN THE CASE OF CONTRARY $NF = \min(C, E, A1, P)$ or If you have not yet completed school: $NCM = \text{"Suspended due to lack of schooling"}$
- Call for JULY (ordinary): o If you have completed schooling By calling A2 to the July test note, the final mark (NF) will be obtained according to the formula $NF = (0.3C + 0.7A2)$ or If you have not yet completed school: $NC = \text{"Suspended due to lack of schooling"}$
- Extraordinary calls: The note of the call is the one obtained in the corresponding examination.

EVALUATION OF COMPETENCIES

The competences will be evaluated in the presentation of the reports of work done and in the final exam.

BIBLIOGRAPHY

Bibliography

- Barba, E. (2000). Boix F. Cuatrecasas L. (2000). Seis Sigma (Una iniciativa de calidad total).

- Fraile, F. G., Barrio, J. V., & Monzón, M. T. (2003). Seis Sigma 2da Edición. *Madrid: Fundación Confemetal*,
- Prat, A., Tort-Martorell, X.Grima, P. Pozueta, L y Solé I. (2004). Métodos estadísticos. Control y mejora de la calidad. Edicions UPC
- Straker, D. (1995). A toolbox for quality improvement and problem solving. Macmillan College. ISBN-13: 978-0137468928

DOCUMENT RECORD

PREVIOUS CHANGES

September, 2016. Lucinio Gonzalez, PhD

LAST REVISION

September, 2017. Lucinio Gonzalez, PhD