

Course guide

240ST1024 - 240ST1024 - Quality Management in the Supply Chain

Last modified: 31/01/2024

Unit in charge: Barcelona School of Industrial Engineering
Teaching unit: 732 - OE - Department of Management.

Degree: MASTER'S DEGREE IN INDUSTRIAL ENGINEERING (Syllabus 2014). (Optional subject).
MASTER'S DEGREE IN SUPPLY CHAIN, TRANSPORT AND MOBILITY MANAGEMENT (Syllabus 2014). (Optional subject).
MASTER'S DEGREE IN MANAGEMENT ENGINEERING (Syllabus 2021). (Optional subject).

Academic year: 2023 **ECTS Credits:** 5.0 **Languages:** English

LECTURER

Coordinating lecturer: Mateo Doll, Manuel

Others: Cuevas Baquero, Daniel

TEACHING METHODOLOGY

A teaching-learning methodology is used that combines the teacher's theoretical explanations with activities and cases in which the student puts into practice the theoretical concepts explained in the classroom.

In addition, the student will prepare presentations of some theoretical parts with practical applications, individually and in small groups.

LEARNING OBJECTIVES OF THE SUBJECT

Students will learn the concepts related to quality management to be able to implement a quality management system based on the ISO 9001 standard, which guarantees customer satisfaction through planning, assurance, control and improvement of quality in the company.

At the end of the course the student will be able to:

- Understand the language and basic nomenclature used in the field of quality.
- Understand the three levels of quality (product/service, process and system) and apply them in the supply chain.
- Identify the client's requirements and transfer them to the organization.
- Identify the necessary processes to be able to fulfill the client's requirements and write the associated procedures.
- Define the necessary indicators to control and improve a logistics service.
- Apply the ISO 9001 quality management model in a logistics environment.
- Use the EFQM model as an improvement tool in the company.
- Carry out quality audits to control and improve the company's processes.
- Understand the role of the quality director and the necessary skills.

STUDY LOAD

Type	Hours	Percentage
Hours small group	15,0	12.00
Hours large group	30,0	24.00
Self study	80,0	64.00

Total learning time: 125 h

CONTENTS

Topic 1: Introduction to quality

Description:

Concept of quality
Internal and external customer
No quality, no conformity, corrective actions, preventive actions, the 5 whys
Historical evolution of quality
Quality gurus
The four activities of quality management: planning, assurance, control and quality improvement
The three levels of quality: product/service, process, system

Related activities:

Activities
Presentations

Full-or-part-time: 11h

Theory classes: 8h
Practical classes: 3h

Topic 2: Quality in products/services

Description:

Definition of the quality of a product or service
Kano model
GAP model
Customer surveys
Servqual

Related activities:

Activities
Presentations

Full-or-part-time: 11h

Theory classes: 3h
Practical classes: 8h

Topic 3: Quality in processes

Description:

Process map
Flow chart
Process files
Procedures
indicators
Daily lean meetings to review indicators
Process risk analysis

Related activities:

Activities
Practical exercises
Presentations
Test

Full-or-part-time: 8h

Theory classes: 3h
Practical classes: 5h

Topic 4: Quality in systems

Description:

ISO 9001

Understanding of the organization and its context, understanding of the needs and expectations of the interested parties

Other quality standards

EFQM

Related activities:

Activities

Presentations

Full-or-part-time: 5h

Theory classes: 3h

Practical classes: 2h

Topic 5: Quality audits

Description:

Three types of audit: first part, second part, third part

Product, process, system audits

Phases for the development of an audit

Audit report

Related activities:

Activities

Presentations

Full-or-part-time: 5h

Theory classes: 3h

Practical classes: 2h

Topic 6: The profile of the quality director

Description:

Competences of the quality director

Qualification of the auditors

Related activities:

Activities

Practical exercises

Presentations

Full-or-part-time: 5h

Theory classes: 3h

Practical classes: 2h

GRADING SYSTEM

The evaluation system is composed by:

- (1) Continuous evaluation in class through test (15%).
- (2) Class presentations of previously prepared topics (20%)
- (3) Work on quality management systems (40%)
- (4) Mid-term exam (25%)



EXAMINATION RULES.

- * Continuous evaluation: The assignments are presented in class.
- * Class presentations: Each day, a different group presents a task (book summary by topics). They are notified in advance. This is explained at the beginning of the course and a schedule is fixed.
- * Work on quality management systems: During the whole course, it is individual. Topics are presented along the course and a presentation is required at the end of the course.
- * Mid-term exam: Topics 1 to 3 are assessed; this is done in a class day and anything can be used during the exam.

BIBLIOGRAPHY

Basic:

- Rizzi, Antonio. Supply chain : fundamentals and best practices to compete by leveraging the network [on line]. Cham, Switzerland: Springer, 2022 [Consultation: 21/03/2024]. Available on : <https://link-springer-com.recursos.biblioteca.upc.edu/book/10.1007/978-3-030-95707-0>. ISBN 9783030957070.
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- EFQM. Modelo EFQM 2020. 2020. Madrid: EFQM, 2019.