Universidad Zaragoza

Academic Year/course: 2023/24

30126 - Quality

Syllabus Information

Academic year: 2023/24
Subject: 30126 - Quality
Faculty / School: 175 - Escuela Universitaria Politécnica de La Almunia
179 - Centro Universitario de la Defensa - Zaragoza
Degree: 425 - Bachelor's Degree in Industrial Organisational Engineering
563 - Bachelor's Degree in Industrial Organisational Engineering
ECTS: 6.0
Year: 3
Semester: 563-First semester o Second semester
425-Second semester
457-Second semester
107-Second semester
Subject type: Compulsory
Module:

1. General information

The overall objective of the subject is to provide the knowledge and skills necessary for the planning, management, control and continuous improvement of the tasks, activities and operational processes that take place in today's organizations in order to ensure the total satisfaction of the parties acting on quality management.

Specifically, the following academic objectives are pursued:

- To enable the student to understand the different meanings of the concept of quality, to differentiate between standardization, homologation and certification activities and to use the different management techniques and tools.
- That the students know and use the fundamental aspects of quality assurance in the design, manufacturing process and purchasing strategy.
- The student should be able to analyze the procedural and documentary structure of different quality management systems.

These approaches and objectives are aligned with the following Sustainable Development Goals (SDGs) of the United Nations Agenda 2030 (https://www.un.org/sustainabledevelopment/es/), in such a way that the acquisition of the learning results of the subject provides training and competence to contribute to some extent to their achievement.

Company Profile

- 8.3 Promote development-oriented policies that support productive activities, the creation of decent jobs, entrepreneurship, creativity, and innovation, and encourage the formalization and growth of microenterprises and small and medium-sized enterprises, including through access to financial services.
- 9.2 Promote inclusive and sustainable industrialization and, by 2030, significantly increase the contribution of industry to employment and gross domestic product, in line with national circumstances, and double that contribution in the least developed countries.
- 9.4 By 2030, modernize infrastructure and convert industries to make them sustainable, using resources more efficiently and promoting the adoption of clean and sustainable industrial technologies and environmentally sound industrial processes and technologies, with all countries taking action in accordance with their respective capabilities.

Defense Profile

- Goal 4: Quality Education.
- Goal 5: Gender Equality.
- Goal 8: Decent Work and Economic Growth
- Goal 9: Industry, innovation and infrastructure.
- Goal 12: Responsible Production and Consumption
- Goal 16: Peace, Justice and Strong Institutions

2. Learning results

To pass this subject, students shall demonstrate they has acquired the following results:

- Know and apply quality management techniques
- Distinguish the elements that are part of the quality measurement process in industrial and service companies.
- Recognize the existence of errors in any measurement process, analyzing their nature and the causes that provoke them.causes.

- Check whether or not a measurement process meets the established quality requirements.
- Calculate the correction and uncertainty as a result of the calibration of an instrument.

Know the regulations and the stages of the certification process of a quality system

3. Syllabus

Company profile

Part 1

Topic 1. Quality basics

Topic 2. Historical evolution of quality

Topic 3. Quality costs

Topic 4. Quality planning

Topic 5. Quality in design, purchasing and processes

Topic 6. Product and process quality control

Topic 7. Measurement assurance. Metrology.

Part 2

Topic 8. Quality improvement tools

Topic 9. ISO 9001 Standard

Topic 10. Certification of companies

Topic 11. Integrated Management Systems

Defense profile

The contents of the subject are:

1. Introduction. Definition and scope of quality
2. Measurement assurance. Metrology
3. Quality planning
4. Tools and techniques applied to quality control
5. Quality in design
6. Manufacturing quality
7. Quality in purchasing
8. Quality management systems

4. Academic activities

Company profile:

- Lectures: presentation of the syllabus, duration 20 hours
- Exercises and practical problems, duration 40 hours
- Study and personal work: completion of evaluable work and preparation for exams, duration 84 hours.
- Assessment tests. 6 hours

Defense profile:

- Lectures: sessions to develop the content of the subject.
- Resolution of exercises and practical problems
- Study and personal work: completion of evaluable work and preparation for exams, Assessment tests.

5. Assessment system

Company profile

The evaluation activities planned for this subject in this center will have the following weighting:

Part 1.

- Practical work 35% (minimum 1.4 points to be able to add up the score for the exam)
- Exam 15% (minimum 0.6 points to be able to add up the score for papers)
- In global assessment theoretical-practical exam 50%

Part 2.

- Practical work 35% (minimum 1.4 points to be able to add up the score for the exam)
- Exam 15% (minimum 0.6 points to be able to add up the score for papers)

- In global assessment theoretical-practical exam 50%

Defense profile

FIRST CALL

The student will be able to pass the total of the subject by the continuous assessment procedure. The student must demonstrate that they have achieved the expected learning results through the assessment activities that will be distributed throughout the term.

- Practical works. Its weight in the final grade is 40%.
- 3 partial theoretical tests. Its weight in the final grade is 60% (20% for each of the tests).

The final continuous assessment grade (100%) will be calculated according to the specific weight of each continuous assessment test . In order to pass the subject, the student must obtain a final grade of 5 or higher. In addition, in order to pass the subject through continuous evaluation, the average grade obtained in the partial theoretical tests must be equal to orhigher than 5.

Students who do not pass the subject by continuous evaluation or who would like to improve their grade, will have the right to take the overall test set in the academic calendar, prevailing, in any case, the best of the grades obtained. In the global assessment, the assessment instruments will have the following weighting:

- Practical work 40%.
- Global theoretical test 60%.

The final grade for overall assessment (100%) will be calculated according to the specific weight of each assessment instrument.

In order to pass the subject, the student must obtain a final grade of 5 or higher. In this case, to pass the subject the grade obtained in the overall theoretical test must be equal to or higher than 5.

SECOND CALL

Students who do not pass the subject in the first exam may sit for a Global Test set in the academic calendar for the second exam. In the global assessment, the assessment instruments will have the following weighting:

- Practical work 40%.
- Global theoretical test 60%.

The final grade for overall assessment (100%) will be calculated according to the specific weight of each assessment instrument.

In order to pass the subject, the student must obtain a final grade of 5 or higher. In this case, to pass the subject the grade obtained in the overall theoretical test must be equal to or higher than 5.

Assessment instruments:	**RA-1**	**RA-2**	**RA-3**	**RA-4**	**RA-5**	**RA-6**
Papers	X	X	X	X	X	
practical						
Partial Tests.	X	X	X	X	X	X
Global theoretical test	X	X	X	X	X	X