28843 - Quality and Health and Safety Management

Información del Plan Docente

Academic Year	2017/18
Faculty / School	175 - Escuela Universitaria Politécnica de La Almunia
Degree	424 - Bachelor's Degree in Mechatronic Engineering
ECTS	4.0
Year	4
Semester	Second semester
Subject Type	Optional
Module	---

1.General information

1.1.Introduction

The subject is aimed at making the student familiar with the concept of quality, quality management, quality assurance and quality management systems in companies.
Since the publication of the Law on Prevention of Occupational Risks one of the essential pillars of any business activity is to execute its processes guaranteeing at all times the safety and occupational health of workers.
Many engineers develop their professional activity in the field of safety and quality, therefore for them it is fundamental to master both management techniques. Professionals who in principle are not apparently related to the content of the subject, work within an organization that always has as basic pillars of their activity quality and safety, so that their daily activity will always be to a lesser or greater extent related With this field.

1.2.Recommendations to take this course

This subject does not have any normative prerequisite or require specific complementary knowledge

1.3.Context and importance of this course in the degree

The subject of Quality Management and Prevention of Working hazard prevention Management is part of the Degree in Mechatronics Engineering taught by the EUPLA, framed within the group of subjects that make up the module called Instrumentales. It is a subject of fourth year located in the eighth semester and optional (OP), with a teaching load of 4 ECTS credits. The necessity of the subject in the curriculum of the present degree is more than justified since all the companies work from the point of view of the quality of its clients and all of them must comply with the Law of Prevention of Occupational Risks, with or Without management system. Many graduates have quality issues related to quality and safety.

1.4.Activities and key dates

A ctivities and key dates for the course
To achieve the learning outcomes, the following activities will be developed:
Generic face-to-face activities:
Theoretical-practical classes: The theoretical concepts of the subject will be explained and illustrative practical examples will be developed as support for the theory when it is deemed necessary.
Practical classes: Practical cases will be done as a complement to the theoretical concepts studied.
Generic non-presence activities:

28843 - Quality and Health and Safety Management

- Study and assimilation of the theory explained in the lectures.
-Comprehension and assimilation of examples and practical cases
- Preparation exercises and practical cases to be solved by the student
- Preparation of written tests of continuous assessment and final exams.
The weekly schedule of the subject and the dates in each call will be described on the EUPLA website.
The dates of the final exams will be those published officially at http://www.eupla.unizar.es

2.Learning goals

2.1.Learning goals

- The student, to overcome this subject, must demonstrate the following results ...
- Defining the concept of quality and its impact on the company.
- Explaining in a basic way the documentation of a quality management syste
- Defining the preventive regulations applicable in companies
- Explainning the regulations and stages of certification process of a quality system.
- Differencing and values the different preventive managers
- Identifing the mandatory preventive documentation in companies
- Identifing the different basic labor hazards that may arise in industrial activities.
- Desiging basic preventive measures adequate to eliminate or minimize the occupational hazards that can be presented
- Exhibiting in a basic way the documentation of a security management system
- Relating integrating quality, healty and environmental management systems

2.2.Importance of learning goals

The learning outcomes are focused on obtaining the competences established for this subject

3.Aims of the course and competences

3.1.Aims of the course

The subject and its expected results respond to the following approaches and objectives: The general objective of the course is to provide the necessary knowledge and skills for the planning and management of quality and safety within an industrial environment. To do this, it is necessary to know the concept of quality and safety beforehand to be able to recognize the activities necessary to carry out in the company before considering the implementation of a management system.

3.2.Competences

By passing the subject, the student will be more competent to ...

- GI03 Knowing basic and technological subjects, which will enable them to learn new methods and theories, and give them the versatility to adapt to new situations.
- GI04 Ability to solve problems with initiative, decision making, creativity, critical thinking and to communicate and transmit knowledge, skills and skills in the field of Industrial Engineering and in particular in the field of industrial electronics.
- GI06 Ability to handle specifications, regulations and mandatory rules.
- GI08 Ability to apply principles and methods of quality.
- GI09 Capacity of organization and planning in the scope of the company, and other institutions and organizations.
- GC03Ability for abstraction and logical reasoning.
- GC04 Ability to learn continuously, self-directed and autonomous.
- GC05Ability to evaluate alternatives.
- GC07 Ability to lead a team as well as being a committed member of the team.
- GC08 Ability to locate technical information, as well as its understanding and assessment.

28843 - Quality and Health and Safety Management

- GC10 Ability to write technical documentation and present it with the help of appropriate computer tools.
- GC11 Ability to communicate their reasoning and designs in a clear way to specialized and non-specialized audiences.
- GC12 Knowledge of safety, certification, industrial property and environmental impacts.
- GC13 Ability to assess the technical and economic feasibility of complex projects.

4.Assessment (1st and 2nd call)

4.1.Assessment tasks (description of tasks, marking system and assessment criteria)

The student must demonstrate that he / she has attained the expected learning outcomes through the following assessment activities In order to qualify for this system, it is necessary for the student to attend 80% of the classroom activities of which the subject is composed
- Assessment System throughout the semester
- Exercises, theoretical questions and proposed works: The teacher will propose exercises, problems, practical cases, theoretical questions, etc. To solve individually or in a group. These papers will have a score of 65% of the subject's grade
- Exam: A theoretical exam will be carried out, which will have a score of 35% of the total grade of the subject, with a required minimum mark of 1.6 points out of 3.5 in order to be able to add the other grades of the subject

- Call Assessment:
- Written test: A theoretical-practical exam will be carried out, which will have a score of 35% of the total grade of the subject, with a required minimum of 1.6 points out of 3.5 to be able to add the other grades of the subject. The parts approved during the semester will be saved for the exam of the call.

5.Methodology, learning tasks, syllabus and resources

5.1.Methodological overview

The learning process designed for this subject is based on the following:
- **Theoretical practical classes:** Theoretical activities given mostly in an expository way by the teacher, in such a way as to explain the theoretical supports of the subject, highlighting the fundamental issues, structuring them in units and / or sections and relating them to each other. A great part of the theoretical classes have an important practical component of interpretation and application of regulations to company associated.

- Individual tutorials: These are the ones made through the individual attention of the teacher in the department. They are intended to help solve the doubts that students find, especially those who for various reasons can not attend group tutorials or need more personalized attention. These tutorials can be face-to-face or virtual, through regular e-mail, mail through moodle or messages published in the forum for solving moodle doubts

5.2.Learning tasks

The program offered to the student **S** to help them achieve the expected results includes the following activities ...
It implies the active participation of the students, in such a way that, in order to achieve the learning outcomes, the following activities will be developed:
Generic face-to-face activities:
- Theoretical classes: The theoretical concepts of the subject will be explained and illustrative practical examples will be developed as support to the theory when it is deemed necessary.
- Practical classes: Exercises and practical cases will be done as a complement to the theoretical concepts studied
Generic non-class activities:
- Study and assimilation of the theory explained in the lectures.
- Comprehension, interpretation and application of the preventive regulations commented in class Preparation of tasks
- Preparation of exams

28843 - Quality and Health and Safety Management

5.3.Syllabus

Contents

Contents of the subjects indispensable for the achievement of learning outcomes.

Theoretical contents.

First part.Quality and Quality Management

- Basic concepts.
- Quality planning.
- Quality management ISO 9001: 2015.
- Process of implementation and certification of the company.

Second part. Security and Safety Management

- Basic Concepts of Risk.
- LPRL, RD Prevention Services, CAE.
- Offences and penalties in the area of prevention.
- Summary minimum provisions.
- Healhty and safety management systems. OHSAS 18.001: 2007.
- Integrated management systems: quality, safety and environment.

Practical contents: Each topic discussed in the previous section has associated practical content, such as:

- Examples of quality planning in real companies

- Drafting of documents belonging to quality management systems in companies

- interpretation of the corresponding regulations applied to the case of companies in the industrial environment

- analysis of situations that have created occupational accidents

- viewing photos and videos about unsafe working conditions

- design of preventive measures applicable in each of the proposed theoretical themes

- Drafting of documents pertaining to systems of management of the security in companies

Some of the practical contents should be made and exposed in class by the students individually and / or group. The dates of the final exams will be published officially at http://www.eupla.unizar.es

28843 - Quality and Health and Safety Management

5.4.Course planning and calendar

First part.Quality and Quality Management

- Basic concepts. Week 1
- Quality planning. Week 2
- Quality management ISO 9001: 2015. Weeks 3-4
- Process of implementation and certification of the company. Week 5

Second part. Security and Safety Management

- Basic Concepts of Risk. Week 6
- LPRL, RD Prevention Services, CAE. Week 7
- Offences and penalties in the area of prevention. Week 8
- Summary minimum provisions. Week 8-9
- Healhty and safety management systems. OHSAS 18.001: 2007. Week 10
- Integrated management systems: quality, safety and environment. Week 10

5.5.Bibliography and recommended resources

THE UPDATED BIBLIOGRAPHY OF THE SUBJECT CAN BE CONSULTED THROUGH THE LIBRARY WEB PAGE http://psfunizar7.unizar.es/br13/eBuscar.php?tipo=a

- Domingo Acinas, José de. Calidad y mejora continua / José de Domingo Acinas, Alberto Arranz Molinero San Sebastian : Donostiarra, D.L. 2000
- James, Paul. La gestión de la calidad total : un texto introductorio / Paul James ; traducción SIP ; revisión técnica Laura Guitart, José María Castán Madrid [etc] : Prentice Hall, imp. 1998
- Pfeifer, Tilo. Manual de gestión e ingeniería de la calidad / Tilo Pfeifer, Fernando Torres . - 1ª. ed. española act. y amp. Zaragoza : Mira, D.L. 1999
- Cortés Díaz, José María. Técnicas de prevención de riesgos laborales : seguridad e higiene del trabajo / José María Cortés Díaz . - 9ª ed. Madrid : Tébar, 2007
- Manual para la formación en prevención de riesgos laborales : programa formativo para el desempeño de las funciones de nivel básico / autores, Angel J. Gallego Morales [et al.] ; coordinador, José M. Viñas Armada ; director, José Vida Soria . - 3a. ed. Valladolid : Lex Nova, 2005
- Seguridad en el trabajo / Fernando Casadevante...[et al.]. - 2a ed. Madrid : Santillana, 2001
- Alexander Servat, Alberto G.. Manual para documentar sistemas de calidad / Alberto G. Alexander Servat ; revisión técnica, Guillermo Haaz Díaz Mexico [etc.] : Prentice Hall, Cop. 1999
- Bravo Silva, Roberto. Calidad total / Roberto Bravo. - 1ªedición San José de Costa Rica : Universidad Estatal a Distancia, 1998
- Campanella, Jack. Los costes de la calidad: principios, implantación y uso/ Jack Campanella. - 1ª edición Asociación Española de Normalización y Certificación, 2000
- Meléndez Morillo-Velarde, Lourdes. La prevención de riesgos laborales en la negociación colectiva / Lourdes Meléndez Morillo-Velarde . - [1ª ed.] Cizur Menor (Navarra) : Aranzadi, [2004]
- García Mestanza, Josefa. Calidad total / Josefa García Mestanza. - 1ªedición Málaga : Universidad de Málaga, DL. 1997