Universidad Zaragoza

Academic Year/course: 2024/25

30267 - Occupational Risk Prevention Applied to Engineering

Syllabus Information

Academic year: 2024/25
Subject: 30267 - Occupational Risk Prevention Applied to Engineering
Faculty / School: 326 - Escuela Universitaria Politécnica de Teruel
Degree: 443 - Bachelor's Degree in Informatics Engineering
ECTS: 4.0
Year:
Semester: Second semester
Subject type: Optional
Module:

1. General information

Course Description
The course is designed with comprehensive content and a practical approach to ensure that students have the foundational knowledge to integrate occupational risk prevention into any production process within a company in which they participate.

Main Objectives

1. **Emphasize the Importance of the Subject**: Demonstrate the extensive applications and implications of this field within companies, aimed at improving working conditions, safety, process quality, and productivity.
2. **Introduce Practical Tools and Applications**: Equip students with the skills to navigate this field, including the ability to seek out and utilize updated regulations and other relevant literature.
3. **Enable Risk Identification and Management**: Train students to identify risk factors, assess unavoidable risks, propose preventive measures to minimize consequences through preventive planning, and establish a control system.

2. Learning results

1. **Decision-Making in Occupational Risk Prevention**: Capable of making necessary decisions in occupational risk prevention to ensure the proper professional development of engineers with responsibilities in safety and health.
2. **Integration of Risk Prevention**: Integrates occupational risk prevention into all actions and decisions within a company.
3. **Compliance with Safety Norms**: Understands the importance of carrying out productive and/or professional activities in compliance with occupational risk prevention regulations.
4. **Awareness of Non-Compliance Consequences**: Aware of the implications of non-compliance with occupational risk prevention regulations and capable of identifying the main applicable regulations for a specific production process.
5. **Project Safety Development**: Prepares the safety component of a project.
6. **Knowledge of Rights and Obligations**: Knows the main obligations and rights of both employers and employees related to safety and health.
7. **Risk Identification and Prevention**: Capable of identifying, evaluating, and proposing preventive measures to mitigate risks associated with productive activities.

3. Syllabus

1. Introduction to Occupational Risk Prevention and Applicable Regulations.
2. Preventive Specialties: Safety, Industrial Hygiene, Applied Ergonomics and Psychosociology, and Preventive Medicine.
3. Prevention of Occupational Accidents and Occupational Diseases: Emerging Risks.
4. Occupational Risk Assessment and Prevention Plan.
5. Management of Occupational Risk Prevention.
6. Technical Safety Issues.

4. Academic activities

Type 1 activity (lectures): These will consist of expository sessions covering the theoretical and practical content of the subject.

Type 2 activity (problem classes): These will involve the completion of several practical cases, some of which will be graded as indicated in the evaluation system. Each practical case will have a guide for its completion.

Type 3 activity (practical classes): These will involve the completion of several laboratory practices, some of which will be graded as indicated in the evaluation system. Each practice will have a guide for its completion.

Additional Activities: Depending on the progress of the course, other activities that are considered beneficial for student learning may be proposed, with prior notice given through the course's Moodle platform.

5. Assessment system

ChatGPT

Continuous Assessment

1. **Problem-Solving and Case Studies**: These will consist of two practical cases, each constituting 20% of the final grade, evaluated out of 10 points each.

   For these, students must:

   - Read the provided information.
   - Search for additional information.
   - Comprehend and reflect on all documentation.
   - Propose a justified solution along with a final reflection.
2. **Laboratory Practices**: These will consist of two laboratory practices, each constituting 20% of the final grade, evaluated out of 10 points each.

   For these, students must:

   - Read the provided information.
   - Search for additional information.
   - Comprehend and reflect on all documentation.
   - Use a proposed application and/or tool.
   - Propose a justified solution along with a final reflection.
3. **Course Project**: This will consist of an Occupational Risk Assessment of a real environment or a Health and Safety Study of an engineering project, constituting 60% of the final grade.

   For this, students must:

   - Follow the guidelines detailed by the instructor.
   - Present the project in class.
   - Obtain a minimum grade of 5 to average with the rest of the grades.

Global Assessment (100%)

This will consist of a final exam with theoretical-practical questions and problems related to the course content. The exam will be presented to the instructor.

6. Sustainable Development Goals

3 - Good Health & Well-Being
5 - Gender Equality
8 - Decent Work and Economic Growth