Quality, Environment and Safety

Calendar: 6th semester

Contact Hours: TP: 45,0; OT:15,0

Intended learning outcomes of the curricular unit:
Enable the students to implement and manage a integrated Quality, Environmental and Safety management system.
The students should acquire the following competences: To interpret and apply the ISO standards for Quality, Safety and Environment; To apply quality management procedures; To apply safety management procedures; To apply environmental management procedures; To identify and characterize the occupational risks in industrial environments. To define procedures for the industrial licensing.

Syllabus:
1-Introduction: Concepts and definitions. 2-. Quality Management. 2.1 Implementation of a QMS to one case study. 2.2 Techniques and Quality Tools. 2.3 Statistical Control procedure. 2.4 Metrology and calibration. 2.5 Quality Costs 3- Environmental Management. 3.1 Implementation of an EMS to one case study. 3.2 Management of Waste. 3.3 Management of effluents. 3.4. Emissions Management 3.5 Environmental Noise Management. 3.6 Environmental Legislation / Licensing. 3.7 Rationalization of energy. 4. OSH management. 4.1 Implementing an OHSMS. 4.2 Basics of Hygiene at Work. 4.3 Legislation and Regulations on SHW. 4.4 Assessment and Control Safety. 5- Preparation for implementation of a QAS integrated System: Diagnosis, Project implementation 6 – Implementation of a QAS integrated System.

Demonstration of the syllabus coherence with the curricular unit's intended learning outcomes.
The Quality, Environmental and Safety management systems have common principles, but require a very different technical knowledge. Therefore, the UC focuses on the common aspects of management and not on the technical aspects. Students will leave empowered to manage, but also will understand the need to find answers to specific technical areas. The UC seeks a thorough understanding and comparison between the three reference standards requirements and provide the student with diagnostic and project management tools.

Teaching methodologies (including evaluation):
The teaching methodology will focus on structure and resolution of practical cases based on real ones. The requirements will be studies in the course of 2 practical exercises: 1- Comparative study between the tree referential standards and 2- Resolution of a simulated audit by an audit report (students must identify the requirements in question and understand the acceptable limits and what constitutes a non-compliance. A third work includes application to a known case by the student or a project application.
The assessment includes the three previous practical works (75%) and a final written.

Demonstration of the teaching methodologies coherence with the curricular unit's intended learning outcomes.
Being in concern diagnose, preparation for a project implementation and systems management skills attainment and being these issues of a conceptual and management order, the methodologies presented (already proven in other IPS courses) guarantees a proximity with the reality business.