
Academic Year: (2024 / 2025)**Review date: 26-04-2024**

Department assigned to the subject: Bioengineering Department**Coordinating teacher: RIPOLL LORENZO, JORGE****Type: Compulsory ECTS Credits : 3.0****Year : 2 Semester : 1**

REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

There are no recommendations.

OBJECTIVES

This subject is an approach to know how to apply quality control and safety plans in medical devices and in all processes for the maintenance of electromedical equipment and hospital infrastructures, taking into account current regulations on risk prevention labor and environmental protection.

COMPETENCES THAT THE STUDENT ACQUIRES WITH THIS MATTER

CB6 Possess and understand knowledge that provides a base or opportunity to be original in the development and / or application of ideas

CB7 That students know how to apply the knowledge acquired and their ability to solve problems in new or unfamiliar environments within broader (or multidisciplinary) contexts related to their area of study

CB8 That students are able to integrate knowledge and face the complexity of formulating judgments based on information that, being incomplete or limited, includes reflections on social and ethical responsibilities linked to the application of their knowledge and judgments

CB9 That students know how to communicate their conclusions and the knowledge and ultimate reasons that sustain them to specialized and non-specialized audiences in a clear and unambiguous way

CB10 That students have the learning skills that allow them to continue studying in a way that will be largely autonomous.

CG3 Ability to design and carry out technological projects in the field of the application of engineering to medicine, as well as to analyze and interpret their results.

CE13 Ability to plan, manage and supervise hospital infrastructures under quality criteria, in safety conditions and complying with current regulations.

LEARNING RESULTS THAT THE STUDENT ACQUIRES

In overcoming this subject, students should be able to:

Accomplish the regulation for of occupational risks prevention and environmental protection, identifying the associated risks, the measures and the equipment to prevent them.

Plan and manage the treatment generated waste in a hospital, identifying the polluting agents and describing their effects on the environment.

Apply quality plans in all the processes carried out and supervised, describing the quality assurance and management regulations.

Analyze and evaluate the working conditions and the risk factors present in the hospital environment.

Apply prevention and protection measures, analyzing risk situations in the hospital environment.

Recognize the main risks of the patient's environment in a health center, describing their characteristics and their repercussion.

DESCRIPTION OF CONTENTS: PROGRAMME

The subject content is:

Prevention of occupational risks.

- o Basic concepts
 - o Prevention techniques
 - o PRL in electromedical infrastructures
 - o Current PRL regulations
- Quality management.
- o Basic concepts
 - o Current quality regulations

LEARNING ACTIVITIES AND METHODOLOGY

LEARNING ACTIVITIES

- Theoretical class
- Theoretical-practical class
- Practical seminars
- Tutorials
- Individual and team work

TEACHING METHODOLOGIES

- Exhibitions in the teacher's class with support of computer and audiovisual media, in which the main concepts of the subject are developed and the bibliography is provided to complement the students' learning.
- Resolution of practical cases, problems, etc. raised by the teacher individually or in groups.
- Exhibition and discussion in class, under the teacher's moderation of topics related to the content of the subject, as well as practical cases.
- Preparation of papers and reports individually or in groups.

ASSESSMENT SYSTEM

% end-of-term-examination:	50
% of continuous assessment (assignments, laboratory, practicals...):	50

Continuous assessment: 50%

- Carrying out work, problems and/or practical activities.
- Student participation: It includes contribution to seminars, forum in Aula Global, attitude, classwork (quizzes or exercises to be solved in groups or individually), or other activities.

Final exam: 50%

- The final exam will cover the whole subject and will count 40 % of the final score. The minimum score in the final exam to pass the subject is 4.0 over 10, notwithstanding the mark obtained in continuous evaluation.

Extraordinary exam:

- The final score for students who attend the extraordinary exam will be 40% of the extraordinary exam and 60% of the continuous assessment, if available. In case of not presenting continuous assessment, the final score will be 100% the extraordinary exam.

% end-of-term-examination:	50
% of continuous assessment (assignments, laboratory, practicals...):	50

Extraordinary call:

- The final grade for students who attend the extraordinary call may be:
 - (1) 50% of the extraordinary exam and 50% of the continuous evaluation, with the option of improving the grade of the latter by a new submission of the continuous evaluation activities.
 - (2) 100% of the extraordinary exam.

BASIC BIBLIOGRAPHY

- AENOR UNE-EN ISO 9001:2015, Sistemas de gestión de la calidad (ISO 9001:2015)., AENOR.
- AENOR UNE-EN ISO 14001:2015, Sistemas de gestión ambiental (ISO 14001:2015)., AENOR.

- AENOR UNE-EN ISO 45001:2018, Sistemas de seguridad y salud en el trabajo (ISO 45001:2018)., AENOR.