

Academic Year: (2022 / 2023)

Review date: 16-05-2022

Department assigned to the subject: Department of Bioengineering and Aerospace Engineering

Coordinating teacher: SANJURJO RIVO, MANUEL

Type: Compulsory ECTS Credits : 3.0

Year : 2 Semester : 1

OBJECTIVES

Basic competences

CB6 To possess and understand knowledge that provides a basis or opportunity to be original in the development and / or application of ideas, often in a research context

CB7 Students must 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 Students must be able to integrate knowledge and face the complexity of making 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 Students must 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 Students must have the learning skills allowing them to continue studying in a way that will be largely self-directed or autonomous.

General competences

CG1 Capacity for the formulation, critical verification and defense of hypotheses, as well as the design of experimental tests for verification.

CG5 Ability to handle the English, technical and colloquial language.

Specific competences

CE15 Ability to develop a professional activity in an organization, being aware of the business and enterprise context.

DESCRIPTION OF CONTENTS: PROGRAMME

Common topics:

It is considered relevant for the present program that students can shape part of their space engineering curriculum according to their interests and motivations, in a personalized way. To this end, this subject includes mainly a set of optional subjects. The optionality also has a double benefit: it allows first to monitor the topics of greater demand and interest on the part of the students and secondly to adapt every few years the offer of courses to the new trends in space engineering.

Given that the number of elective courses is equivalent to 5 of 3 ECTS each, the offer of the master will be equivalent to 10 courses of 3 ECTS. A minimum number of students enrolled is required for the courses to take place. This number cannot be, in any case, higher than 50% of students enrolled in the master.

In-company internships are offered within this subject, optionally. In the same way, students will be able to participate in supervised development projects, in which they would work in a practical and specialized way some of the aspects dealt with in the previous subjects (1-4).

In the same way, those subjects of other masters that cover topics of interest for space engineering will also be considered within this matter. Finally, this matter will include, within the optional offer, regulated mentoring of students by professionals in the space sector.

Specific topics to each subject:

Seminars on advanced topics

Seminars are oriented towards the presentation of advanced topics of aerospace engineering. They may consist of single sessions or mini-courses of up to 1.5 ECTS. With all this, a complementary training is sought for students, providing complementary knowledge to the one acquired in the previous matters of the master's degree. Talks aimed at improving the transversal skills of graduates are also included here. Specifically, seminars related to entrepreneurship and leadership would come to cover aspects not included in the master's compulsory program, but included in the CDIO competency system. The seminars and mini-courses are dynamically defined throughout the course, preferably offered in both quarters, according to the availability of the speakers. Although the subject is mandatory, the offer of seminars will allow some degree of choice for students.

LEARNING ACTIVITIES AND METHODOLOGY

- AF1 Theoretical class
- AF2 Practical classes
- AF3 Practices in computer classroom
- AF6 Group work
- AF7 Individual student work
- AF8 Evaluation activities

ASSESSMENT SYSTEM

SE2 Individual or group work carried out during the course

% end-of-term-examination:	0
% of continuous assessment (assignments, laboratory, practicals...):	100