

Orbital Dynamics

Academic Year: (2023 / 2024)

Review date: 08-09-2023

Department assigned to the subject: Aerospace Engineering Department

Coordinating teacher: NAVARRO CAVALLE, JAUME

Type: Compulsory ECTS Credits : 3.0

Year : 1 Semester : 1

DESCRIPTION OF CONTENTS: PROGRAMME

Common topics:

The subjects in this matter provide the necessary knowledge for a correct understanding of space vehicles, subsystems of space platforms and their dynamics.

Specific topics of each subject:

Orbital dynamics. The program of the subject includes:

- 1 Two Body Problem
- 2 Orbital Maneuvering
- 3 Relative Motion
- 4 Central Body Gravity Field
- 5 Special Perturbation Techniques
- 6 Patched Conics
- 7 Three Body Problem
- 8 Nonlinear Dynamical Systems

LEARNING ACTIVITIES AND METHODOLOGY

Theory sessions in master classes
Problem sessions in reduced groups
Personal and group work

ASSESSMENT SYSTEM

End-of-term exam (25%)
Continuous evaluation (75%)

In order to pass the subject, two requirements need to be met:

- 1) to have a MINIMUM mark of 4.0/10 in the end-of-term exam;
- 2) to have a minimum overall mark of 5.0/10 (weighing 25% the end-of-term exam mark and 75% the mark of the continuous evaluation).

% end-of-term-examination:	25
% of continuous assessment (assigments, laboratory, practicals...):	75