Aerospace Design I

Academic Year: (2022 / 2023) **Review date: 31-05-2022**

Department assigned to the subject: Aerospace Engineering Department

Coordinating teacher: CINI , ANDREA

Type: Compulsory ECTS Credits : 6.0

Year : 3 Semester : 2

REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

Aerospace Materials I and II
Engineering Graphics
Thermal Engineering
Aerospace Structures

OBJECTIVES

The goal of this course is that the student acquires a basic knowledge of aerospace design and manufacturing.

DESCRIPTION OF CONTENTS: PROGRAMME

1. Introduction to production.
2. Automation of Manufacturing Processes.
3. Geometrical and dimensional specification.
4. Metrology.
5. Metal casting processes.
6. Forming and shaping processes.
7. Machining processes.
8. Nontraditional manufacturing processes.
9. Manufacturing cost estimating.

LEARNING ACTIVITIES AND METHODOLOGY

Theory sessions.
Problem sessions working individually and in groups.
Lab-sessions.

ASSESSMENT SYSTEM

Final exam (60%)
Continuous evaluation (40%)

The following requirements have to be met in order to pass the subject:

1) to have a MINIMUM mark of 4.0/10 in the final exam;
2) to have a minimum overall mark of 5.0/10 (weighing 60% the final exam mark and 40% the mark of the continuous evaluation).

% end-of-term-examination:	60
% of continuous assessment (assigments, laboratory, practicals…):	40

BASIC BIBLIOGRAPHY

- S. Kalpakjian & S. R. Schmid Manufacturing and Engineering Technology, Prentice Hall; 6th Revised edition , 2009

ADDITIONAL BIBLIOGRAPHY

- Mikell P. Groover (Author) Fundamentals of Modern Manufacturing: Materials, Processes, and Systems, JOHN WILEY & SONS, INC., 2012