



Course guide

295907 - FABAD1 - Additive Manufacturing 1

Last modified: 14/06/2023

Unit in charge: Barcelona East School of Engineering
Teaching unit: 712 - EM - Department of Mechanical Engineering.

Degree: BACHELOR'S DEGREE IN BIOMEDICAL ENGINEERING (Syllabus 2009). (Optional subject).
BACHELOR'S DEGREE IN CHEMICAL ENGINEERING (Syllabus 2009). (Optional subject).
BACHELOR'S DEGREE IN ELECTRICAL ENGINEERING (Syllabus 2009). (Optional subject).
BACHELOR'S DEGREE IN ENERGY ENGINEERING (Syllabus 2009). (Optional subject).
BACHELOR'S DEGREE IN INDUSTRIAL ELECTRONICS AND AUTOMATIC CONTROL ENGINEERING (Syllabus 2009). (Optional subject).
BACHELOR'S DEGREE IN MECHANICAL ENGINEERING (Syllabus 2009). (Optional subject).
BACHELOR'S DEGREE IN MATERIALS ENGINEERING (Syllabus 2010). (Optional subject).

Academic year: 2023 **ECTS Credits:** 3.0 **Languages:** Spanish

LECTURER

Coordinating lecturer: JOSE ANTONIO TRAVIESO RODRIGUEZ

Others: Primer quadrimestre:
JOSE ANTONIO TRAVIESO RODRIGUEZ - Grup: M10
ERIC VELÁZQUEZ CORRAL - Grup: M10

PRIOR SKILLS

Drawing 3D pieces, Graphical expression

TEACHING METHODOLOGY

There will be theory sessions and team work sessions based on a project

LEARNING OBJECTIVES OF THE SUBJECT

The subject pretends that the student:

1. Have the ability to select and design the manufacturing process for parts using additive manufacturing techniques.
2. Apply and integrate the connections to develop the project of the manufacture of a mechanical assembly, using CAD-CAM-CAE techniques and additive manufacturing.
3. Be able to control the quality of the manufactured parts.

STUDY LOAD

| Type | Hours | Percentage |
|-------------------|-------|------------|
| Self study | 45,0 | 60.00 |
| Hours large group | 30,0 | 40.00 |

Total learning time: 75 h



CONTENTS

Generals issues about additive manufacturing techniques

Description:

content english

Specific objectives:

Acquire knowledge about the different techniques of additive manufacturing

Full-or-part-time: 3h

Theory classes: 2h

Practical classes: 1h

Project development

Description:

content english

Full-or-part-time: 3h 20m

Theory classes: 3h

Guided activities: 0h 20m

GRADING SYSTEM

The evaluation of the project will be based on the presentation of the report and a final presentation. Partial deliveries will be distributed throughout the semester

This subject does not have re-evaluation test

EXAMINATION RULES.

$$NF = 0.6 NP + 0.4 * E$$

NF-Final mark

NP- Project Mark

E- Partial deliveries