Machine design and test

Academic Year: (2019 / 2020) **Review date: 01-05-2019**

Department assigned to the subject: Mechanical Engineering Department

Coordinating teacher: QUESADA GONZALEZ, ALEJANDRO

Type: Electives ECTS Credits : 6.0

Year : 4 Semester : 2

OBJECTIVES

Knowing mechanical elements for transmiting, absorving or storing rotational mechanical energy. Working and sizing principles.
Aplying computational analysis methods to machines design and calculation.
Knowing importance of experimental mechanics in machines design.
Knowing importance of maintenance service and different philosophies used to deal with it.

DESCRIPTION OF CONTENTS: PROGRAMME

1. Mechanical elements design for transmission, absorption or storage of rotation mechanical energy.
2. FEM application to stress analysis and fatigue design.
3. Experimental techniques in Mechanical Engineering.
4. Experimental analysis methods.
5. Industrial maintenance and safety.

LEARNING ACTIVITIES AND METHODOLOGY

Masterly expositions, exercises in classroom and/or laboratories and personal work.

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

BASIC BIBLIOGRAPHY

- A. J. Besa Gonzálvez Componentes de Máquinas, Prentice Hall.
- J. L. Pedrero Tecnología de Máquinas, UNED.
- Profesores de la asignatura Apuntes de Diseño y Ensayo de Máquinas, a, 2016
- R. L. Nortopn Diseño de Máquinas, Prentice Hall.