

Machine testing techniques

Academic Year: (2020 / 2021)

Review date: 26-01-2021

Department assigned to the subject: Mechanical Engineering Department

Coordinating teacher: QUESADA GONZALEZ, ALEJANDRO

Type: Electives ECTS Credits : 6.0

Year : 4 Semester :

REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

- Machine Mechanics
- Elasticity and strength of materials
- Production systems and manufacturing technologies
- Machines Technology

OBJECTIVES

- ¿ Acquire a global vision of different techniques involved in mechanical testing design
- ¿ Train up criteria on technique selection to apply mechanical actions to a system
- ¿ Know different instrumentation systems for testing data acquisition

DESCRIPTION OF CONTENTS: PROGRAMME

- 1.- Instrumentation systems
 - Transducers fundamental aspects
 - Extensometers
 - Accelerometers
 - Load cells
 - Signal conditioners
 - Recording techniques
- 2.- Driving systems
 - Pneumatic actuators
 - Pneumatic valves
 - Pneumatic circuits
 - Electro-pneumatic systems
 - Electronic control
- 3.- Universal testing machines
- 4.- Vibration tests

% end-of-term-examination:	50
% of continuous assessment (assignments, laboratory, practicals...):	50