

Hydraulic Machines

Academic Year: (2017 / 2018)

Review date: 18-04-2017

Department assigned to the subject: Thermal and Fluids Engineering Department

Coordinating teacher: HUETE RUIZ DE LIRA, CESAR

Type: Compulsory ECTS Credits : 3.0

Year : 1 Semester : 1

REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

Fluid Mechanics. Ordinary Differential Equations, Physics

DESCRIPTION OF CONTENTS: PROGRAMME

- 1 Introduction to hydraulic machinery
- 2 Ideal Theory of Hydraulic machines
- 3 2D Theory of Hydraulic machines
- 4 3D Theory of Hydraulic machines
- 5 Similarity
- 6 Cavitation
- 7 Coupling systems with hydraulic installations

ASSESSMENT SYSTEM

The work of the students is evaluated during the whole course by grading exercises that will be proposed periodically. At the end of the academic period, a final exam will complete the grade of the students in a 60% exam 40 % exercises basis

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

BASIC BIBLIOGRAPHY

- S.L. Dixon and C.A. Hall Fluid Mechanics and Thermodynamics of Turbomachinery, Elsevier.
- Antonio Viedma Robles, Blas Zamora Parra Teoría y Problemas de Máquinas Hidráulicas, Horacio Escarbajal Editores.
- Claudio Mataix Mecanica de fluidos y maquinas hidraulicas, Alfaomega.
- HERNÁNDEZ KRAHE, José M^a MECÁNICA DE FLUIDOS Y MÁQUINAS HIDRÁULICAS, UNED.
- Round GF Incompressible flow turbomachines , Elsevier.