

Academic Year: (2023 / 2024)

Review date: 05-09-2023

Department assigned to the subject: Thermal and Fluids Engineering Department

Coordinating teacher: RUBIO RUBIO, MARIANO

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 Review of fundamental fluid mechanics
- 3 Ideal Theory of Hydraulic machines
- 4 2D Theory of Hydraulic machines
- 5 3D Theory of Hydraulic machines
- 6 Dimensional Analysis and Similarity
- 7 Cavitation
- 8 Coupling systems with hydraulic systems

ASSESSMENT SYSTEM

The assessment system includes both an end-of-term examination and the continuous assessment of the student work.

The grade will be weighted as: 55% continuous assessment - 45% end-of-term-exam.

The continuous assessment includes a midterm and a project, the latter to be carried out in groups.

The final written-exam will globally evaluate the acquired knowledge, skills and abilities.

To pass the course it is mandatory to get minimum grade in the examination papers.

% end-of-term-examination: 45

% of continuous assessment (assignments, laboratory, practicals...): 55

BASIC BIBLIOGRAPHY

- S.L. Dixon and C.A. Hall Fluid Mechanics and Thermodynamics of Turbomachinery, Elsevier, 2013

ADDITIONAL BIBLIOGRAPHY

- Round GF Incompressible flow turbomachines , Elsevier, 2004