

FACULTY OF **ENGINEERING**

DEGREE COURSE: **INDUSTRIAL ENGINEERING**

MASTER DEGREE: **INDUSTRIAL ENGINEERING / DESIGN**

**SUBJECT:** FLUID MACHINERY

**LECTURER:** MATTEO SANTOLINI

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### **OBJECTIVES**

- 1 To Supply basic expertise to study fluid machines;
- 2 To Describe operating principles and characteristics of some common typology of fluid machines;
- 3 To Supply preliminary sizing of some common typology of fluid machines.

### **CONTENTS**

- One-dimensional thermodynamics and fluidodynamics of fluid machine
- Similarity theory
- Centrifugal pumps
- Reciprocating compressor
- Internal combustion engine

### **LEARNING OUTCOMES**

- 1 Learn basic expertise needed to analyze fluid machines;
- 2 Be familiar with some common typology of fluid machines;
- 3 Gain knowledge of preliminary sizing criteria of some common typology of fluid machines.

### **ASSESSMENT**

Written exam: multiple choice and open questions

## **RECOMMENDED TEXTBOOKS**

Educational material supplied by the Lecturer