

29736 - Combustion Engines

Información del Plan Docente

Academic Year	2016/17
Academic center	110 - Escuela de Ingeniería y Arquitectura
Degree	434 - Bachelor's Degree in Mechanical Engineering
ECTS	6.0
Course	4
Period	First semester
Subject Type	Optional
Module	---

1. Basic info

1.1. Recommendations to take this course

1.2. Activities and key dates for the course

2. Initiation

2.1. Learning outcomes that define the subject

2.2. Introduction

3. Context and competences

3.1. Goals

3.2. Context and meaning of the subject in the degree

3.3. Competences

3.4. Importance of learning outcomes

4. Evaluation

5. Activities and resources

5.1. General methodological presentation

5.2. Learning activities

5.3. Program

- Introduction. Comparison of actual tendencies on design and application of internal combustion engines.
- Real cycles. Determination and interpretation.
- Definition of fundamental engine parameters: geometrical and operating.
- Engine performance curves and their analysis.
- Similarity laws for four stroke engines.

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- Principles of gas exchange processes.
- Exhaust process. Silencer elements.
- Fuel characteristics.
- Combustion process. Characteristic and influence factors.
- Engine emissions and treatment systems.
- Mechanical and heat losses. Cooling and lubrication.
- Principles of supercharging.

5.4.Planning and scheduling

5.5.Bibliography and recommended resources