

26922 - Thermodynamics

Información del Plan Docente

Academic Year	2018/19
Subject	26922 - Thermodynamics
Faculty / School	100 - Facultad de Ciencias
Degree	447 - Degree in Physics
ECTS	6.0
Year	3
Semester	First semester
Subject Type	Compulsory
Module	---

1.General information

1.1.Aims of the course

1.2.Context and importance of this course in the degree

1.3.Recommendations to take this course

2.Learning goals

2.1.Competences

2.2.Learning goals

2.3.Importance of learning goals

3.Assessment (1st and 2nd call)

3.1.Assessment tasks (description of tasks, marking system and assessment criteria)

4.Methodology, learning tasks, syllabus and resources

4.1.Methodological overview

4.2.Learning tasks

4.3.Syllabus

The course will address the following topics:

- Topic 1. Historical introduction to thermodynamics.
- Topic 2. The problem and the postulates.
- Topic 3. The conditions of equilibrium.
- Topic 4. Formal relationships.

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- Topic 5. Simple systems.
- Topic 6. Processes and the maximum work theorem.
- Topic 7. Thermal engines.
- Topic 8. Alternative formulations and Legendre transformation.
- Topic 9. Thermodynamic potentials.
- Topic 10. Maxwell relations.
- Topic 11. Stability of thermodynamic systems.
- Topic 12. Phase transitions.
- Topic 13. Properties of material.

4.4. Course planning and calendar

4.5. Bibliography and recommended resources