

History of Physics

Code: 100170
ECTS Credits: 6

Degree	Type	Year	Semester
2500097 Physics	OT	4	0

Contact

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Use of languages

Principal working language: catalan (cat)
Some groups entirely in English: No
Some groups entirely in Catalan: Yes
Some groups entirely in Spanish: No

Prerequisites

The subject does not require a previous knowledge of history nor any specific subject of the degree. The program does take into account that the student has an advanced knowledge of physics.

Objectives and Contextualisation

The subject deals with the past and present of Physics with 4 aims:

- 1 To describe the main changes in the structure, methods and concepts of Physics.
 - 2 To identify the different ways of practising Physics, taking into account the institutional structure of the discipline.
 - 3 To analyze the social, cultural, and gender relations of Physics.
 - 4 To recognize the historical sources of Physics and the methodological problems that they pose.
- The subject also has the general aim of improving the student's capacity to advance and contrast arguments.

Content

The contents are grouped in two chronological parts. The first one deals with the rise of classical physics, from Antiquity through the Enlightenment; the second deals with the development of contemporary physics.

Part 1

- 1 Introduction: physics and history
- 2 *Physis*, movement and cosmology
- 3 The astronomical revolution
- 4 Newton and *The Mathematical Principles of Natural Philosophy*
- 5 Electricity and Enlightened physics

Part 2

- 6 The birth of a discipline: classical physics

- 7 The new physics: matter, energy and radiation
- 8 The quantum and relativistic revolutions
- 9 Physics, gender, culture and society in the 20th century
- 10 Physics in Spain and Catalonia