

UE Statistical physics I: Theory



Level
Baccalaureate
+4



ECTS
3 credits



Component
UFR PhITEM
(physique,
ingénierie, terre,
environnement,
mécanique)



Semester
Automne

- > **Teaching language(s):** English
- > **Open to exchange students:** Yes
- > **Code d'export Apogée:** PAX7NFAJ

Presentation

Description

Goal: Introduce the basic statistical physics concepts to address the equilibrium and evolution properties of nano-scale systems.

Objectives

Content:

- Statistical entropy
- Boltzmann factor, statistics in the canonical ensemble, mean values and fluctuations
- classical and quantum oscillators, applications
- chemical potential, grand canonical ensemble, applications: adsorption isotherms, quantum statistics
- fluctuations dynamics, linear response
- Monte-Carlo notions

Course parts

UE Statistical physics - CMTD

Lectures (CM) & Teaching Unit (UE)

24h

Period : Semester 7

Useful info

Campus

› [Grenoble - Saint-Martin d'Hères](#)