PHYS2460 Statistical mechanics

[22.5h+15h exercises] 4 credits

This course is taught in the 2nd semester

Teacher(s): Jean Bricmont
Language: French
Level: Second cycle

Aims

General principles of thermodynamics and of equilibrium statistical mechanics.
Applications to various examples.

Main themes

1. General principals of classical thermodynamics
2. Statistical mechanics in equilibrium
3. Kinetic theory

Other information (prerequisite, evaluation (assessment methods), course materials recommended readings, ...)

Prerequisites: General physics II, 3d statistical part PHYS 1130.
Support: reference books:
H.B. Callen, Thermodynamics and an introduction to thermostatistics, 2d edition, Wiley, N.Y. 1987. Chap. 1-8, 12, 15-18;
Colin J. Thomson, Mathematical Statistical Mechanics, Princeton University Press, 1979, Chap. 1;
Kerson Huang, Statistical Mechanics, 2d edition, Wiley, N.Y. 1987.

Other credits in programs

PHYS21/A	Première licence en sciences physiques (Physique appliquée)	(4 credits)	Mandatory
PHYS21/G	Première licence en sciences physiques	(4 credits)	Mandatory
PHYS21/T	Première licence en sciences physiques (Physique de la terre, de l'espace et du climat)	(4 credits)	