

Nanophysics

Lecturers

Pierre GASPARD (Coordinator) and James LUTSKO

Course mnemonic

PHYS-F475

ECTS credits

5 credits

Language(s) of instruction

English

Course period

First term

Course content

Chapters selected among the following themes : Microscopy techniques ; atomic and molecular clusters ; magnetism and optical properties of nanoparticles ; fullerenes and carbon nanotubes ; self-assembly in colloidal phases : micelles, nanocrystals... ; nanostructures at interfaces ; nanostructured materials ; out-of-equilibrium nanosystems ; ultimate electronic conduction ; growth of nanostructures at interfaces ; oscillating reactions at the nanoscale ; proteins; biological nanomotors.

Objectives (and/or specific learning outcomes)

Introduction to the physics of nanometer-sized systems.

Pre-requisites and co-requisites

Co-requisites courses

PHYS-F442 | Physique statistique II | 5 crédits

Teaching method and learning activities

Lectures and homework

Other information

Contact(s)

Pierre Gaspard Email: gaspard@ulb.ac.be Localisation du bureau: Campus Plaine, bâtiment NO, 5e étage. Adresse postale: Université Libre de Bruxelles, Center for Nonlinear Phenomena and Complex Systems, Campus Plaine, Code Postal 231, B-1050 Bruxelles, Belgique.

James F. Lutsko Email: jlutsko@ulb.ac.be Localisation du bureau: Campus Plaine, bâtiment NO, 5e étage. Adresse postale: Université Libre de Bruxelles, Center for Nonlinear Phenomena and Complex Systems, Campus Plaine, Code Postal 231, B-1050 Bruxelles, Belgique.

Evaluation method(s)

Other

Programmes

Programmes proposing this course at the faculty of Sciences

MA-PHYS | **Master in Physics** | finalité Research/unit 2 and finalité Teaching/unit 2

Programmes proposing this course at the Brussels School of Engineering

MS-NATE | **Specialized Master in Nanotechnology** | unit U