Molecular motors and stochastic processes

Lecturer
Pierre GASPARD (Coordinator)

Course mnemonic
PHYS-F512

ECTS credits
5 credits

Language(s) of instruction
English

Course period
First term

Course content

Theory of stochastic processes; thermodynamics of small systems; non-equilibrium fluctuation relations; mechano-chemical coupling; the FoF1-ATPase rotary motor; the myosin-actin, kinesin-microtubule, and dynein-microtubule linear motors; transmission processes of genetic information.

Objectives (and/or specific learning outcomes)

The goal of the course is to give an overview of current knowledge on molecular motors and the tools for their modelization.

Teaching method and learning activities

Lectures and exercices

Other information

Contact(s)

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Evaluation method(s)

Other

Evaluation method(s) (additional information)

Oral test

Programmes

Programmes proposing this course at the faculty of Sciences

MA-BINF | Master in Bio-informatics and Modelling | finalité Research/unit 2, MA-IRBC | Master in Chemistry and Bio-industries Bioengineering | finalité Professional/unit 2 and MA-PHYS | Master in Physics | finalité Research/unit 2 and finalité Teaching/unit 2

Programmes proposing this course at the Brussels School of Engineering

MA-IRBC | Master in Chemistry and Bio-industries Bioengineering | finalité Professional/unit 2 and MS-NATE | Specialized Master in Nanotechnology | unit U