

Collective and cooperative phenomena in solids

Lecturers

Nicolas PAULY (Coordinator) and Xavier ROTTENBERG

Course mnemonic

PHYS-H402

ECTS credits

5 credits

Language(s) of instruction

English

Course period

Second term

Course content

Cohesion energy
classification of solids
Bloch electron transport formalisms
electrical and thermal conductivities
de Haas-van Alphen effect
Physics of phonons
electron-electron interaction in metals, plasmons,...

Teaching method and learning activities

24h course
24h exercises
24h laboratories

References, bibliography and recommended reading

N.W. Ashcroft and N.D. Mermin, Solid State Physics, Saunders College Publishing.

Other information

Contact(s)

Prof. Nicolas Pauly
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Evaluation method(s)

Other

Evaluation method(s) (additional information)

Course + exercises : written examination
laboratories : continuous evaluation

Determination of the mark (including the weighting of partial marks)

course : 50%
exercises : 25%
laboratories: 25%

Main language(s) of evaluation

French

Programmes

Programmes proposing this course at the Brussels School of Engineering

MA-IRPH | Master of science in Physical Engineering | finalité
Professional/unit 1