

# Introduction to accelerator physics

## Lecturers

Pierre-Etienne LABEAU (Coordinator) and Cédric HERNALSTEENS

## Course mnemonic

PHYS-H504

## ECTS credits

3 credits

## Language(s) of instruction

English

## Course period

First term

## Campus

Outside campus ULB

## References, bibliography and recommended reading

"Introduction aux accélérateurs de particules", P.Germain (édité par D.Dekkers et D.Manglunki), CERN/89-07.

<https://cds.cern.ch/record/199445/files/CERN-89-07.pdf>

## Other information

### Place(s) of teaching

Outside campus ULB

### Contact(s)

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## Course content

Description of the various types of accelerators and of their use. Fundamental equations of the transverse and longitudinal motions of particles in circular accelerators. Recent examples of accelerators and visits to CERN installations. Tutorials make students familiar with the fundamental equations and concepts of accelerator physics.

## Objectives (and/or specific learning outcomes)

Introduction to particle accelerators, on the site of the European Organisation for Nuclear research (CERN), Geneva, Switzerland.

## Teaching method and learning activities

33% lectures - 33% exercises - 34% visits.

## Evaluation method(s)

Other and Oral examination

### Evaluation method(s) (additional information)

TP + oral.

### Main language(s) of evaluation

English

### Other language(s) of evaluation, if applicable

French

## Programmes

Programmes proposing this course at the Brussels School of Engineering

MA-IRPH | Master of science in Physical Engineering | finalité  
Professional/unit 2