

Table of contents

Introduction	2
Teaching profile	3
- Learning outcomes	3
- Detailed programme	3
- Programme by subject	3
- Course prerequisites	4
- The programme's courses and learning outcomes	4
Information	5
- Access Requirements	5
- Evaluation	5
- Possible trainings at the end of the programme	5
- Contacts	5
- Pratical informations	5

APPHYS - Introduction

Introduction

Introduction

The additional module in physics allows you to:

- deepen and broaden your knowledge and skills in different areas of physics;
- to study topics complementary to those addressed in the teaching units of the major in physics.

APPHYS - Teaching profile

Learning outcomes

The additional module in physics aims to deepen and broaden your knowledge and skills in different fields of physics and related disciplines, with a view to, among other things, facilitating your choice of purpose and / or options for your Master.

Detailed programme

PROGRAMME BY SUBJECT

● Mandatory

△ Courses not taught during 2020-2021

⊕ Periodic courses taught during 2020-2021

⊗ Optional

⊖ Periodic courses not taught during 2020-2021

■ Activity with requisites

Click on the course title to see detailed informations (objectives, methods, evaluation...)

The student chooses in the following list 30 credits that he/she distributes according to the following model: 10 credits during the second semester of the second annual unit, 10 or 15 credits during the first semester of the third annual unit, and 10 or 5 credits during the second semester of the third annual unit.

Year

2 3

Content:

⊗ Specialized training in physics

⊗ LMECA1901	Continuum mechanics.	Philippe Chatelain Issam Doghri	30h+30h	5 Credits	q2		x
⊗ LPHYS1214	Astronomy and geophysics	Véronique Dehant Patricia Lampens	22.5h +15h	5 Credits	q2	x	
⊗ LPHYS2114	Nonlinear dynamics	Christian Hagendorf	22.5h +22.5h	5 Credits	q1		x
⊗ LPHYS2143	Optics and lasers	Clément Lauzin	22.5h +22.5h	5 Credits	q1		x
⊗ LPHYS2162	Introduction to the physics of the climate system and its modelling	Hugues Goosse Jean-Pascal van Ypersele de Strihou	22.5h +22.5h	5 Credits	q1		x

⊗ Training in mathematics

⊗ LMAT1221	Mathematical analysis : integration	Heiner Olbermann	30h+30h	5 Credits	q1		x
⊗ LMAT1223	Differential equations	Heiner Olbermann	30h+15h	5 Credits	q2	x	x
⊗ LMAT1231	Multilinear algebra and group theory	Pierre-Emmanuel Caprace	30h+30h	5 Credits	q1		x
⊗ LMAT1241	Geometry II	Pierre Bieliavsky	45h+30h	6 Credits	q2	x	x
⊗ LPHYS2211	Group theory	Philippe Ruelle	22.5h +22.5h	5 Credits	q2		x

⊗ Training in digital and instrumental techniques, data science and computer science

⊗ LMAT1271	Calculation of probability and statistical analysis	Mickaël De Backer (compensates Rainer von Sachs)	30h+30h	6 Credits	q2	x	x
⊗ LPHYS2101	Analog and digital electronics	Eduardo Cortina Gil Krzysztof Piotrkowski	45h+45h	10 Credits	q1	x	x
⊗ LEPL1106	Signaux et systèmes	Luc Vandendorpe Vincent Wertz	30h+30h	5 Credits	q2	x	x

Year

2 3

⌘ Training in chemistry

⌘ LCHM1141A	Organic chemistry	Benjamin Elias (coord.) Charles-André Fustin	30h+20h	5 Credits	q2	x	
-------------	-------------------	---	---------	-----------	----	---	--

COURSE PREREQUISITES

There are no prerequisites between course units (CUs) for this programme, i.e. the programme activity (course unit, CU) whose learning outcomes are to be certified and the corresponding credits awarded by the jury before registration in another CU.

THE PROGRAMME'S COURSES AND LEARNING OUTCOMES

For each UCLouvain training programme, a [reference framework of learning outcomes](#) specifies the competences expected of every graduate on completion of the programme. You can see the contribution of each teaching unit to the programme's reference framework of learning outcomes in the document "*In which teaching units are the competences and learning outcomes in the programme's reference framework developed and mastered by the student?*"

APPHYS - Information

Access Requirements

Specific access requirements

The additional module in physics is accessible, from the second annual unit, to the only students enrolled in the Bachelor's programme in physics.

Evaluation

*The evaluation methods comply with the **regulations concerning studies and exams** (<https://uclouvain.be/fr/decouvrir/rgee.html>). More detailed explanation of the modalities specific to each learning unit are available on their description sheets under the heading "Learning outcomes evaluation method".*

Possible trainings at the end of the programme

At the end of their Bachelor in physics, students have direct access to the Master [120] in physics and Master [60] in physics.

Contacts

Curriculum Management

Entity	
Structure entity	SST/SC/PHYS
Denomination	(PHYS)
Faculty	Faculty of Science (SC)
Sector	Sciences and Technology (SST)
Acronym	PHYS
Postal address	Chemin du Cyclotron 2 - bte L7.01.04 1348 Louvain-la-Neuve Tel: +32 (0) 10 47 32 94 - Fax: +32 (0) 10 47 30 68 https://uclouvain.be/fr/facultes/sc/phys
Website	
Academic supervisor: Michel Crucifix	
Useful Contact(s)	<ul style="list-style-type: none">• Philippe Ruelle• Nathalie Micha• Julie Genbrugge

Practical informations

Registration for an additional module

A registration for the 2nd annual unit via the web allows you to register for an additional module (the student who wishes to change his/her choice of additional module or minor must contact the secretariat of the faculty). The student may defer his/her registration to an additional module and proceed with this operation when he/she registers on line for the teaching units of his/her major.

When the student re-enrolls via the web the following year, he/she is automatically re-enrolled in the same additional module as the previous year. At this stage, any request for change is subject to the approval of the study advisor.

Registration for the teaching units of an additional module

The registration for the teaching units of an additional module is done at the same time as the registration to the teaching units of the major. The same goes for exam registration.

Timetable of courses and examinations

<https://uclouvain.be/fr/facultes/sc/horaires-ti.html> (<https://uclouvain.be/fr/facultes/sc/horaires-ti.html>)

