UCLouvain

PHYS2M4

2025 - 2026

Master [120] of Education, Section 4 : Physics

The version you're consulting is not definitive. This programme still may change. The final version will be published on 1th June.

At Louvain-la-Neuve - 120 credits - 2 years - Day schedule - In French
Dissertation/Graduation Project : **YES** - Internship : **YES**
Activities in English: **NO** - Activities in other languages : **NO**
Activities on other sites : **NO**
Main study domain : **Sciences de l'éducation et Enseignement**
Organized by: **Faculty of Science (SC)**
Programme acronym: **PHYS2M4**

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PHYS2M4 Programme

Detailed programme by subject

CORE COURSES

- Mandatory
- Optional
- Not offered in 2025-2026
- Not offered in 2025-2026 but offered the following year
- Offered in 2025-2026 but not the following year
- Not offered in 2025-2026 or the following year
- Activity with requisites
- Open to incoming exchange students
- Not open to incoming exchange students
- [FR] Teaching language (FR, EN, ES, NL, DE, ...)

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

				Year 1	Year 2
Didactique et pédagogie (25 credits)					
Un cours parmi :					
LEISS2101	Pédagogie générale [C] *Cours dispensé à LLN en horaire de jour*		FR [q1] [37.5h] [5 Credits]	x	
LEISS2102	Pédagogie générale [C] *Cours dispensé à LLN en horaire décalé*		FR [q1] [37.5h] [5 Credits]	x	
MEISS2103	Pédagogie générale [C] *Cours dispensé à Mons en horaire décalé*		FR [q1] [30h] [5 Credits]	x	
LEISS2107	Ecole et diversités [C]		FR [q1] [22.5h+15h] [5 Credits]		x
LSCI2360	Teaching and learning core sciences [C]		FR [q1] [37.5h] [5 Credits]	x	
LPHYS2320	Didactics ans epistemology of science and physics [C] *Sera prochainement remplacé par les partims LPHYS2320A et LPHYS2320B*		FR [q1+q2] [45h+15h] [6 Credits]		x
Un cours parmi :					
LCHM2320	Didactics and epistemology of science and chemistry [C] *Sera prochainement remplacé par le partim LCHM2320C*		FR [q1+q2] [45h+15h] [4 Credits]		x
LBIO2320	Didactics and epistemology of science and biology [C] *Sera prochainement remplacé par le partim LBIO2320C*		FR [q1+q2] [45h+15h] [4 Credits]		x
LMAT2320C	Didactics and epistemology of mathematics - Part A (general questions) and listening session		FR [q1] [22.5h+7.5h] [4 Credits]		x
LGEO2320C	Didactics and epistemology of geography - Part A (general questions) and listening session		FR [q1] [22.5h+7.5h] [4 Credits]		x

				Year 1	Year 2

Sciences humaines et sociales (15 credits)

Un cours parmi :

LEISS2201	Psychologie du développement et des apprentissages [C] *Cours dispensé à LLN en horaire de jour*		FR [q2] [37.5h+15h] [4 Credits]	x	
LEISS2202	Psychologie du développement et des apprentissages [C] *Cours dispensé à LLN en horaire décalé*		FR [q2] [37.5h+15h] [4 Credits]	x	

Un cours parmi :

LEISS2203	Approches sociale, culturelle et politique de l'éducation [C] *Cours dispensé à LLN en horaire de jour*		FR [q2] [37.5h+15h] [4 Credits]	x	
LEISS2204	Approches sociale, culturelle et politique de l'éducation [C] *Cours dispensé à LLN en horaire décalé*		FR [q2] [37.5h+15h] [4 Credits]	x	

Un cours parmi :

LEISS2205	Ethique de l'éducation, neutralité et citoyenneté [C] *Cours dispensé à LLN en horaire de jour*		FR [q2] [22.5h] [2 Credits]	x	
LEISS2206	Ethique de l'éducation, neutralité et citoyenneté [C] *Cours dispensé à LLN en horaire décalé*		FR [q2] [22.5h] [2 Credits]	x	

Un cours parmi :

LEISS2104	Communication en contexte scolaire [C] *Cours dispensé à LLN en horaire de jour*		FR [q1] [22.5h+15h] [5 Credits]	x	
LEISS2105	Communication en contexte scolaire [C] *Cours dispensé à LLN en horaire décalé*		FR [q1] [22.5h+15h] [5 Credits]	x	
MEISS2106	Communication en contexte scolaire [C] *Cours dispensé à Mons en horaire décalé*		FR [q1] [15h+15h] [5 Credits]	x	

Stages (20 credits)

LSCI2370	Observation internship in common core sciences (24 hours) and support seminar [C]		FR [q1] [15h] [5 Credits]	x	
LPHYS2350	Long internship (90 hours) and accompanying seminar in physics and science [C]		FR [q1+q2] [45h+22.5h] [15 Credits]		x

Formation disciplinaire (40 credits)

LMAT1222	Complex analysis 1	Tom Claeys	FR [q2] [30h+15h] [5 Credits] *> English-friendly*	x	
LMAT1261	Lagrangian and Hamiltonian mechanics	Christian Walmsley Hagendorf	FR [q1] [22.5h+30h] [5 Credits] *> English-friendly*	x	
LPHYS1213	Physics of fluids		FR [q2] [37.5h+30h] [5 Credits]	x	

15 à 25 crédits parmi :

LPHYS1214	Astronomy and geophysics		FR [q2] [22.5h+15h] [5 Credits]	x	x
LPHYS1322	Electromagnetism 2		EN [q1] [37.5h+22.5h] [5 Credits] *> English-friendly*	x	x
LPHYS1332	General Relativity		FR [q1] [30h+22.5h] [5 Credits] *> English-friendly*	x	x
LPHYS1342	Quantum Physics 2		FR [q1] [45h+22.5h] [5 Credits] *> English-friendly*	x	x
LPHYS1343	Statistical physics		EN [q2] [45h+30h] [6 Credits] *> English-friendly*	x	x
LPHYS1345	Solid state physics		FR [q2] [30h+22.5h] [5 Credits] *> English-friendly*	x	x
LPHYS1347	Physique atomique et moléculaire		FR [q2] [22.5h+22.5h] [5 Credits]	x	x
LPHYS2101	Analog and digital electronics [S]		EN [q1] [45h+45h] [10 Credits] *> French-friendly*	x	x
LPHYS2102	Ionizing Radiation Detection and Nuclear Instrumentation		EN [q1+q2] [26h+26h] [6 Credits]	x	x
LPHYS2112	Mathematical physics		EN [q1] [30h] [5 Credits] *> French-friendly*	x	x
LPHYS2113	Critical phenomena		EN [q1] [22.5h+7.5h] [5 Credits] *> French-friendly*	x	x

				Year 1	2
⊠ LPHYS2122	Cosmology		EN [q2] [30h] [5 Credits] > *French-friendly*	x	x
⊠ LPHYS2131	Fundamental interactions and elementary particles		EN [q1] [52.5h+7.5h] [10 Credits] > *French-friendly*	x	x
⊠ LPHYS2132	Quantum field theory 1		EN [q1] [52.5h+7.5h] [10 Credits] > *French-friendly*	x	x
⊠ LPHYS2141	Introduction to quantum optics		EN [q1] [22.5h+7.5h] [5 Credits] > *French-friendly*	x	x
⊠ LPHYS2143	Optics and lasers		EN [q1] [22.5h+22.5h] [5 Credits] > *French-friendly*	x	x
⊠ LPHYS2161	Internal geophysics of the Earth and planets		EN [q1] [22.5h+7.5h] [5 Credits] > *French-friendly*	x	x
⊠ LPHYS2162	Introduction to the physics of the climate system and its modelling		EN [q1] [22.5h+22.5h] [5 Credits] > *French-friendly*	x	x
⊠ LPHYS2163	Atmosphere and ocean : physics and dynamics		EN [q1] [52.5h+7.5h] [10 Credits] > *French-friendly*	x	x

0 à 10 crédits parmi :

⊠ LBIO1110	Life : diversity and evolution		EN [q1] [30h+10h] [4 Credits]	x	x
⊠ LECGE1108	Pratiquer l'économie (1) - Économie politique [C]		FR [q1] [45h+15h] [6 Credits]	x	x
⊠ LGEO1111	Earth and society : perspectives from geography	Eric Lambin	FR [q2] [30h+15h] [5 Credits]	x	x

Recherche et intégration (20 credits)

LEISS2902	Initiation à la recherche en éducation [C] *Cours dispensé à LLN en horaire de jour*		FR [q1] [15h] [2 Credits]		x
LSCI2351	Master thesis support seminar [C]		FR [q1+q2] [22.5h+22.5h] [3 Credits]		x
LSCI2350	Master thesis [C]		FR [q1+q2] [] [15 Credits]		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 the skills expected of every graduate on completion of the programme. Course unit descriptions specify targeted learning outcomes, as well as the unit's contribution to reference framework of learning outcomes.

PHYS2M4 - Information

Access Requirements

SUMMARY

University Bachelors

Diploma	Special Requirements	Access	Remarks
UCLouvain Bachelors			
Others Bachelors of the French speaking Community of Belgium			
Bachelors of the Dutch speaking Community of Belgium			
Foreign Bachelors			

Non university Bachelors

Holders of a 2nd cycle University degree

Diploma	Special Requirements	Access	Remarks
"Licenciés"			
Masters			

Access based on validation of professional experience

Admission and Enrolment Procedures for general registration

Evaluation

The evaluation methods comply with the regulations concerning studies and exams. More detailed explanation of the modalities specific to each learning unit are available on their description sheets under the heading "Learning outcomes evaluation method".