

PHYS1BA

2015 - 2016

Bachelor in Physics

At Louvain-la-Neuve - 180 credits - 3 years - Day schedule - In frenchDissertation/Graduation Project : **NO** - Internship : **NO**Activities in English: **YES** - Activities in other languages : **NO**Activities on other sites : **NO**Main study domain : **Sciences**Organized by: **Faculté des sciences (SC)**Programme code: **phys1ba** - Francophone Certification Framework: 6**Table of contents**

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PHYS1BA - Introduction

Introduction

PHYS1BA - Teaching profile

Learning outcomes

The programme aims at the acquisition of : Mastery of the basic concepts and fundamental laws of physics The specific approach of the physicist, namely that of comprehension, critical analysis and modelling the physical phenomena of nature, with the help of mathematical and numerical tools and experimental techniques proper to physics Professional qualities such as the capacity to analyse problems related to physics, abstraction and modelling; rigour in reasoning and expression; a critical mind; self-evaluation capacities and communication skills.

On successful completion of this programme, each student is able to :

1. Démontrer une connaissance approfondie des savoirs fondamentaux de la physique et maîtriser et utiliser les concepts de base des mathématiques.

1.1 Maîtriser de manière approfondie la physique générale, la physique théorique et mathématique, la physique microscopique, la physique macroscopique et statistique, la physique expérimentale et et la simulation numérique en physique.

1.2 Connaître et comprendre un socle fondamental de mathématiques : analyse, algèbre, géométrie et statistique.

1.3 Reconnaître les concepts fondamentaux des théories scientifiques.

1.4 Appliquer des théories physiques et mathématiques à la résolution d'un problème.

1.5 Employer adéquatement les principes de base de la physique expérimentale: les mesures, leurs incertitudes, les instruments de mesure, le traitement basique de données par des outils informatiques.

1.6 Expliquer une méthode de mesure.

1.7 Modéliser des systèmes simples et prédire leur évolution par des méthodes numériques, y inclus des simulations informatisées.

1.8 Retracer l'évolution historique des concepts de base de la physique.

2. Démontrer des compétences méthodologiques, techniques et pratiques utiles à la résolution des problèmes en physique.

2.1 Justifier le choix des méthodes et des outils utilisés pour la résolution des problèmes connus en physique.

2.2 Utiliser adéquatement les instruments pour effectuer une mesure ou pour étudier un système physique.

2.3 Manipuler correctement des outils informatiques d'aide à la résolution de problèmes en physique.

2.4 Appliquer des outils de base pour modéliser des systèmes physiques simples et résoudre des problèmes connus dans les domaines fondamentaux de la physique.

3. Décrire et appliquer la démarche et le raisonnement scientifique.

3.1 Evaluer la simplicité, la clarté et la rigueur d'un raisonnement scientifique.

3.2 Construire un raisonnement physique et le formaliser.

3.3 Argumenter la validité d'un résultat scientifique.

3.4 Calculer les ordres de grandeur d'un problème en physique.

3.5 Reconnaître les analogies entre différents problèmes en physique.

3.6 Juger la pertinence d'une démarche scientifique et l'intérêt d'une théorie physique.

4. Apprendre et agir de manière autonome.

4.1 Rechercher, à l'aide de références pertinentes, des compléments d'informations concernant les concepts de base de la physique.

4.2 Lire et interpréter seul(e) ces informations.

4.3 Intégrer ces informations afin d'avoir une compréhension complète d'un concept.

4.4 Organiser et gérer son temps et son étude.

5. Travailler en équipe et collaborer avec des étudiants et des enseignants afin d'atteindre des objectifs communs et de produire des résultats.

5.1 Partager les savoirs et les méthodes.

5.2 Identifier les objectifs et responsabilités individuels et collectifs et travailler en conformité avec ces rôles.

5.3 S'insérer dans une équipe.

5.4 Reconnaître et respecter les points de vue et opinions des membres d'une équipe.

6. Communiquer en français et en anglais dans le cadre académique.

6.1 Lire et comprendre des textes scientifiques, en français et en anglais.

6.2 Suivre un exposé scientifique en anglais.

6.3 Présenter oralement un sujet d'une façon structurée en français.

6.4 Rédiger des rapports scientifiques de façon structurée.

6.4 Utiliser des outils médiatiques et informatiques variés pour communiquer et expliquer des concepts et des résultats scientifiques.

Programme structure

Erreur de transformation xhtml vers fo pour 'structure' erreur=org.xml.sax.SAXParseException; lineNumber: 278; columnNumber: 1178; Des guillemets ouvrants sont attendus pour l'attribut "{1}" associé à un type d'élément "class".

PHYS1BA Detailed programme




Programme by subject

Year





1 2 3

o Majeure (150 credits)

o Physique générale (30 credits)

○ LPHY1111	General Physics 1	Jan Govaerts, Vincent Lemaitre	45h+45h	8 Credits	1q	x		
○ LPHY1112	General Physics 2	Jan Govaerts, Vincent Lemaitre	45h+45h	8 Credits	2q	x		
○ LPHY1211	General Physics 3 	Jan Govaerts, Vincent Lemaitre	30h+30h	4 Credits	1q		x	
○ LMAFY1181	Actualities in Mathematics and Physics	Pascal Lambrechts, Bernard Piroux	15h	2 Credits	1 + 2q	x		
○ LPHY1212	Integrated exercices in general physics and data processing 	Alain Cornet, Thierry Fichet, Krzysztof Piotrkowski	15h+30h	3 Credits	2q		x	
○ LPHY1311	Classical electromagnetism 	Jan Govaerts	37.5h +15h	5 Credits	1q			x

o Physique théorique et mathématique (23 credits)

○ LPHY1223	Special Relativity 	Jean-Marc Gérard	22.5h +15h	4 Credits	1q		x	
○ LPHY1222	Quantum Physics 	Fabio Maltoni	30h+30h	4 Credits	2q		x	
○ LPHY1322	Quantum Physics 2 	Christophe Ringeval	45h +22.5h	6 Credits	1q			x
○ LPHY1323	General Relativity 	Jean-Marc Gérard	30h +22.5h	5 Credits	2q			x
○ LPHY1224	Méthodes mathématiques pour la physique 	Christian Hagendorf, Christophe Ringeval	15h+30h	4 Credits	1q		x	

o Atomes et molécules, noyaux, particules (15 credits)

○ LPHY1331	Elementary nuclei and particules	Vincent Lemaitre	30h +22.5h	5 Credits	2q			x
○ LPHY1341	Atoms and molecules	Clément Lauzin, Xavier Urbain	30h +22.5h	5 Credits	2q			x
○ LPHY1342	Etat solide	Giacomo Bruno, Christophe Delaere	30h +22.5h	5 Credits	2q			x

o Astronomie et géophysique (2 credits)

○ LPHY1261	Astronomy and geophysics	Véronique Dehant (coord.), Patricia Lampens	15h+7.5h	2 Credits	2q			x
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o Physique macroscopique et statistique (14 credits)

○ LPHY1251	Statistical physics and Thermodynamics I	Hugues Goosse, Christian Hagendorf	30h +22.5h	4 Credits	2q			x
○ LPHY1351	Statistical and thermodynamic physics 2	Christian Hagendorf	30h+30h	5 Credits	2q			x
○ LPHY1352	Physics of fluids	Eric Deleersnijder, Vincent Legat	45h +22.5h	5 Credits	1q			x

o Physique expérimentale et numérique (10 credits)

○ LMAT1151	Numerical analysis : tools and software of calculus	Tom Claeys	30h+45h	6 Credits	2q	x		
○ LPHY1271	Computer Science and Numerical Methods	Giacomo Bruno	15h+30h	4 Credits	1q		x	

o Mathématique (42 credits)

○ LMAT1131	Linear Algebra	Enrico Vitale	45h+45h	8 Credits	1q	x		
○ LMAT1122	Mathematical analysis 2	Augusto Ponce, Jean Van Schaftingen	30h+30h	5 Credits	2q	x		
○ LMAT1121	Mathematical analysis 1	Augusto Ponce, Jean Van Schaftingen	30h+30h	5 Credits	1q	x		
○ LMAT1141	Geometry I	Pascal Lambrechts	45h+30h	7 Credits	2q	x		
○ LMAT1161	Mathematical methods in classical mathematics 1	Christian Hagendorf, Luc Haine	22.5h +30h	5 Credits	2q	x		
○ LMAT1261	Mathematical methods of classic mechanics 2	Christian Hagendorf, Luc Haine	22.5h +30h	4 Credits	1q		x	
○ LMAT1271	Calculation of probability and statistical analysis	Catherine Timmermans (compensates Rainer von Sachs), Rainer von Sachs	30h+30h	4 Credits	2q		x	
○ LMAT1222	Complex analysis	Luc Haine	30h+15h	4 Credits	2q		x	

o Chimie (3 credits)

○ LCHM1112	General Chemistry	Yaroslav Filinchuk	22.5h +22.5h	3 Credits	1q	x		
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o Anglais (7 credits)

○ LANG1861	English: reading and listening comprehension of scientific texts	Ahmed Adriouèche (coord.), Catherine Avery (compensates Fanny Desterbecq), Fanny Desterbecq, Sandrine Meirlaen (compensates Charlotte Peters), Charlotte Peters, Annick Sonck (coord.)	10h	3 Credits	2q	x		
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						Year		
						1	2	3
○ LANG1862	English: reading and listening comprehension of scientific texts	Ahmed Adriouèche (coord.), Isabelle Druant, Sandrine Meirlaen (compensates Isabelle Druant), Annick Sonck, Anne-Julie Toubeau (compensates Isabelle Druant)	30h	2 Credits	1q		x	
○ LANG1863	English for Political Science (Upper-Intermediate level)	Ahmed Adriouèche (coord.), Julie Crombois (compensates Fanny Desterbecq), Fanny Desterbecq (coord.), Marielle Henriët (coord.), Susan Jackman, Sandrine Jacob (compensates Susan Jackman), Sabrina Knorr (coord.), Nevin Serbest, Colleen Starrs, Françoise Stas (coord.), Shaïma Wasfy (compensates Sabrina Knorr)	30h	2 Credits	1 ou 2q			x

○ Sciences religieuses (2 credits)

L'étudiant choisit 2 crédits parmi les UE suivantes

⊗ LTECO2100	Questions of religious sciences: Biblical readings	Hans Ausloos	15h	2 Credits	1q		x	
⊗ LTECO2200	Questions of religious sciences: reflections about Christian faith	Dominique Martens	15h	2 Credits	2q		x	
⊗ LTECO2300	Questions of religious sciences: questions about ethics	Marcela Lobo Bustamante	15h	2 Credits	1q		x	

○ Philosophie

L'étudiant choisit une UE parmi les suivantes

⊗ LSC1120	Philosophy	Bernard Feltz	30h	2 Credits	1q			x
⊗ LFILO1210	Philosophy of Nature	Alexandre Guay	30h	3 Credits	1q			x

○ Option (30 credits)

Tout en veillant au nombre de crédits requis, l'étudiant complète sa formation avec une mineure qu'il choisit dans la liste suivante : - Mineure d'approfondissement en sciences physiques - Mineure en géographie - Mineure en mathématiques. L'étudiant peut éventuellement choisir une autre mineure sur base d'un projet qu'il élabore avec le conseiller aux études en physique.

⊗ Mineure ou approfondissement au choix (30 credits)

Students choose courses depending on the restrictions related to the minor and in conjunction with their study adviser.

○	Cours de 2e bloc annuel	N.		Credits			x	
○	Cours de 3e bloc annuel	N.		Credits				x

List of available minors

In addition to the major in Physics, the students have three other possibilities : either to opt for more in-depth studies in Physics (30 credits), with complements in the different sub-disciplines of Physics or to opt for a minor in Mathematics, Geography or Applied Sciences and Engineering : Applied Physics and Chemistry or to opt for another minor from the University programme list, on the basis of a project to be elaborated together with the study advisor.

- > [Additionnal module in Physics](https://www.uclouvain.be/en-prog-2015-app-lphys100p) [<https://www.uclouvain.be/en-prog-2015-app-lphys100p>]
- > [Minor in Culture and Creation](https://www.uclouvain.be/en-prog-2015-min-lcucr100i) [<https://www.uclouvain.be/en-prog-2015-min-lcucr100i>]
- > [Minor in Gender Studies](https://www.uclouvain.be/en-prog-2015-min-lgenr100i) [<https://www.uclouvain.be/en-prog-2015-min-lgenr100i>]
- > [Minor in Geography](https://www.uclouvain.be/en-prog-2015-min-lgeog100i) [<https://www.uclouvain.be/en-prog-2015-min-lgeog100i>]
- > [Minor in Mathematics](https://www.uclouvain.be/en-prog-2015-min-lmath100i) [<https://www.uclouvain.be/en-prog-2015-min-lmath100i>]
- > [Minor in Scientific Culture](https://www.uclouvain.be/en-prog-2015-min-lcusc100i) [<https://www.uclouvain.be/en-prog-2015-min-lcusc100i>]

Course prerequisites

A document entitled [en-prerequis-2015-phys1ba.pdf](#) specifies the activities (course units - CU) with one or more pre-requisite(s) within the study programme, that is the CU whose learning outcomes must have been certified and for which the credits must have been granted by the jury before the student is authorised to sign up for that activity.

These activities are identified in the study programme: their title is followed by a yellow square.

As the prerequisites are a requirement of enrolment, there are none within a year of a course.

The prerequisites are defined for the CUs for different years and therefore influence the order in which the student can enrol in the programme's CUs.

In addition, when the panel validates a student's individual programme at the beginning of the year, it ensures the consistency of the individual programme:

- It can change a prerequisite into a corequisite within a single year (to allow studies to be continued with an adequate annual load);
- It can require the student to combine enrolment in two separate CUs it considers necessary for educational purposes.

For more information, please consult [regulation of studies and exams](#).

The programme's courses and learning outcomes

For each UCL 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?"

The document is available by clicking [this link](#) after being authenticated with UCL account.

Programme type

PHYS1BA - 1ST ANNUAL UNIT

○ Mandatory

△ Courses not taught during 2015-2016

⊕ Periodic courses taught during 2015-2016

⊗ Optional

⊙ Periodic courses not taught during 2015-2016

■ Activity with requisites

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

o Majeure

o Physique générale

○ LPHY1111	General Physics 1	Jan Govaerts, Vincent Lemaitre	45h+45h	8 Credits	1q
○ LPHY1112	General Physics 2	Jan Govaerts, Vincent Lemaitre	45h+45h	8 Credits	2q
○ LMAFY1181	Actualities in Mathematics and Physics	Pascal Lambrechts, Bernard Piraux	15h	2 Credits	1 + 2q

o Physique expérimentale et numérique

o LMAT1151	Numerical analysis : tools and software of calculus	Tom Claeys	30h+45h	6 Credits	2q
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o Mathématique

o LMAT1131	Linear Algebra	Enrico Vitale	45h+45h	8 Credits	1q
o LMAT1122	Mathematical analysis 2	Augusto Ponce, Jean Van Schaftingen	30h+30h	5 Credits	2q
o LMAT1121	Mathematical analysis 1	Augusto Ponce, Jean Van Schaftingen	30h+30h	5 Credits	1q
o LMAT1141	Geometry I	Pascal Lambrechts	45h+30h	7 Credits	2q
o LMAT1161	Mathematical methods in classical mathematics 1	Christian Hagendorf, Luc Haine	22.5h +30h	5 Credits	2q

o Chimie

o LCHM1112	General Chemistry	Yaroslav Filinchuk	22.5h +22.5h	3 Credits	1q
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o Anglais

o LANG1861	English: reading and listening comprehension of scientific texts	Ahmed Adriouèche (coord.), Catherine Avery (compensates Fanny Desterbecq), Fanny Desterbecq, Sandrine Meirlaen (compensates Charlotte Peters), Charlotte Peters, Annick Sonck (coord.)	10h	3 Credits	2q
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PHYS1BA - 2ND ANNUAL UNIT

○ Mandatory

△ Courses not taught during 2015-2016

⊕ Periodic courses taught during 2015-2016

⊗ Optional

⊖ Periodic courses not taught during 2015-2016

■ Activity with requisites

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

o Majeure**o Physique générale**

○ LPHY1211	General Physics 3 ■	Jan Govaerts, Vincent Lemaitre	30h+30h	4 Credits	1q
○ LPHY1212	Integrated exercices in general physics and data processing ■	Alain Cornet, Thierry Fichetef, Krzysztof Piotrkowski	15h+30h	3 Credits	2q

o Physique théorique et mathématique

○ LPHY1223	Special Relativity ■	Jean-Marc Gérard	22.5h +15h	4 Credits	1q
○ LPHY1222	Quantum Physics ■	Fabio Maltoni	30h+30h	4 Credits	2q
○ LPHY1224	Méthodes mathématiques pour la physique ■	Christian Hagendorf, Christophe Ringeval	15h+30h	4 Credits	1q

o Astronomie et géophysique

○ LPHY1261	Astronomy and geophysics	Véronique Dehant (coord.), Patricia Lampens	15h+7.5h	2 Credits	2q
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o Physique macroscopique et statistique

○ LPHY1251	Statistical physics and Thermodynamics I	Hugues Goosse, Christian Hagendorf	30h +22.5h	4 Credits	2q
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o Physique expérimentale et numérique

○ LPHY1271	Computer Science and Numerical Methods	Giacomo Bruno	15h+30h	4 Credits	1q
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o Mathématique

○ LMAT1261	Mathematical methods of classic mechanics 2 ■	Christian Hagendorf, Luc Haine	22.5h +30h	4 Credits	1q
○ LMAT1271	Calculation of probability and statistical analysis ■	Catherine Timmermans (compensates Rainer von Sachs), Rainer von Sachs	30h+30h	4 Credits	2q
○ LMAT1222	Complex analysis ■	Luc Haine	30h+15h	4 Credits	2q

o Anglais

○ LANG1862	English: reading and listening comprehension of scientific texts ■	Ahmed Adriouèche (coord.), Isabelle Druant, Sandrine Meirlaen (compensates Isabelle Druant), Annick Sonck, Anne-Julie Toubeau (compensates Isabelle Druant)	30h	2 Credits	1q
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o Sciences religieuses

L'étudiant choisit 2 crédits parmi les UE suivantes

⊗ LTECO2100	Questions of religious sciences: Biblical readings	Hans Ausloos	15h	2 Credits	1q
⊗ LTECO2200	Questions of religious sciences: reflections about Christian faith	Dominique Martens	15h	2 Credits	2q

⌘ LTECO2300	Questions of religious sciences: questions about ethics	Marcela Lobo Bustamante	15h	2 Credits	1q
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o Option

Tout en veillant au nombre de crédits requis, l'étudiant complète sa formation avec une mineure qu'il choisit dans la liste suivante : - Mineure d'approfondissement en sciences physiques - Mineure en géographie - Mineure en mathématiques. L'étudiant peut éventuellement choisir une autre mineure sur base d'un projet qu'il élabore avec le conseiller aux études en physique.

⌘ Mineure ou approfondissement au choix

Students choose courses depending on the restrictions related to the minor and in conjunction with their study adviser.

o	Cours de 2e bloc annuel	N.		Credits	
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PHYS1BA - 3RD ANNUAL UNIT

● Mandatory

△ Courses not taught during 2015-2016

⊕ Periodic courses taught during 2015-2016

⊗ Optional

⊖ Periodic courses not taught during 2015-2016

■ Activity with requisites

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

o Majeure**o Physique générale**

● LPHY1311	Classical electromagnetism ■	Jan Govaerts	37.5h +15h	5 Credits	1q
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o Physique théorique et mathématique

● LPHY1322	Quantum Physics 2 ■	Christophe Ringeval	45h +22.5h	6 Credits	1q
● LPHY1323	General Relativity ■	Jean-Marc Gérard	30h +22.5h	5 Credits	2q

o Atomes et molécules, noyaux, particules

● LPHY1331	Elementary nuclei and particules ■	Vincent Lemaître	30h +22.5h	5 Credits	2q
● LPHY1341	Atoms and molecules ■	Clément Lauzin, Xavier Urbain	30h +22.5h	5 Credits	2q
● LPHY1342	Etat solide ■	Giacomo Bruno, Christophe Delaere	30h +22.5h	5 Credits	2q

o Physique macroscopique et statistique

● LPHY1351	Statistical and thermodynamic physics 2 ■	Christian Hagendorf	30h+30h	5 Credits	2q
● LPHY1352	Physics of fluids ■	Eric Deleersnijder, Vincent Legat	45h +22.5h	5 Credits	1q

o Anglais

● LANG1863	English for Political Science (Upper-Intermediate level)	Ahmed Adriouche (coord.), Julie Crombois (compensates Fanny Desterbecq), Fanny Desterbecq (coord.), Marielle Henriët (coord.), Susan Jackman, Sandrine Jacob (compensates Susan Jackman), Sabrina Knorr (coord.), Nevin Serbest, Colleen Starrs, Françoise Stas (coord.), Shaima Wasfy (compensates Sabrina Knorr)	30h	2 Credits	1 ou 2q
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o Philosophie

L'étudiant choisit une UE parmi les suivantes

⊗ LSC1120	Philosophy	Bernard Feltz	30h	2 Credits	1q
⊗ LFILO1210	Philosophy of Nature	Alexandre Guay	30h	3 Credits	1q

o Option

Tout en veillant au nombre de crédits requis, l'étudiant complète sa formation avec une mineure qu'il choisit dans la liste suivante : - Mineure d'approfondissement en sciences physiques - Mineure en géographie - Mineure en mathématiques. L'étudiant peut éventuellement choisir une autre mineure sur base d'un projet qu'il élabore avec le conseiller aux études en physique.

⌘ Mineure ou approfondissement au choix

Students choose courses depending on the restrictions related to the minor and in conjunction with their study adviser.

<input type="radio"/>	Cours de 3e bloc annuel	N.		Credits	
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PHYS1BA - Information

Admission

Decree of 7 November 2013 defining the landscape of higher education and the academic organization of studies.
The admission requirements must be met prior to enrolment in the University.

In the event of the divergence between the different linguistic versions of the present conditions, the French version shall prevail

- [> General requirements](#)
- [> Specific requirements](#)
- [> Knowledge of the French language exam](#)
- [> Special requirements](#)

General requirements

Except as otherwise provided by other specific legal provisions, admission to undergraduate courses leading to the award of a Bachelor's degree will be granted to students with one of the following qualifications :

1. A Certificate of Upper Secondary Education issued during or after the 1993-1994 academic year by an establishment offering full-time secondary education or an adult education centre in the French Community of Belgium and, as the case may be, approved if it was issued by an educational institution before 1 January 2008 or affixed with the seal of the French Community if it was issued after this date, or an equivalent certificate awarded by the Examination Board of the French Community during or after 1994;
2. A Certificate of Upper Secondary Education issued no later than the end of the 1992-1993 academic year, along with official documentation attesting to the student's ability to pursue higher education for students applying for a full-length undergraduate degree programme;
3. A diploma awarded by a higher education institution within the French Community that confers an academic degree issued under the above-mentioned Decree, or a diploma awarded by a university or institution dispensing full-time higher education in accordance with earlier legislation;
4. A higher education certificate or diploma awarded by an adult education centre;
5. A pass certificate for one of the [entrance examinations](#) organized by higher education institutions or by an examination board of the French Community; this document gives admission to studies in the sectors, fields or programmes indicated therein;
6. A diploma, certificate of studies or other qualification similar to those mentioned above, issued by the Flemish Community of Belgium (this qualification does not grant exemption from the [French language proficiency examination](#)), the German Community of Belgium or the Royal Military Academy;
7. A diploma, certificate of studies or other qualification obtained abroad and deemed equivalent to the first four mentioned above by virtue of a law, decree, European directive or international convention;

Note:

Requests for equivalence must be submitted no later than 14 July 2015 to the Equivalence department ([Service des équivalences](#)) of the Ministry of Higher Education and Scientific Research of the French Community of Belgium.

The following two qualifications are automatically deemed equivalent to the Certificate of Upper Secondary Education (Certificat d'enseignement secondaire supérieur – CESS):

- European Baccalaureate issued by the Board of Governors of a European School,
- International Baccalaureate issued by the International Baccalaureate Office in Geneva.

These two qualifications do not, however, provide automatic exemption from the [French language proficiency examination](#).

8. Official documentation attesting to a student's ability to pursue higher education (diplôme d'aptitude à accéder à l'enseignement supérieur - DAES), issued by the Examination Board of the French Community.

Specific requirements

Admission to undergraduate studies on the basis of accreditation of knowledge and skills obtained through professional or personal experience (Accreditation of Prior Experience)

Subject to the general requirements laid down by the authorities of the higher education institution, with the aim of admission to the undergraduate programme, the examination boards accredit the knowledge and skills that students have obtained through their professional or personal experience.

This experience must correspond to at least five years of documented activity, with years spent in higher education being partially taken into account: 60 credits are deemed equivalent to one year of experience, with a maximum of two years being counted. At the end of an assessment procedure organized by the authorities of the higher education institution, the Examination Board will decide whether a student has sufficient skills and knowledge to successfully pursue undergraduate studies.

After this assessment, the Examination Board will determine the additional courses and possible exemptions constituting the supplementary requirements for the student's admission.

Exam of knowledge of the French language

Anyone not demonstrating sufficient [French language proficiency](#) will not be admitted to the first-year undergraduate examinations.

Special requirements

- Admission to **undergraduate studies in engineering: civil engineering and architect**

Pass certificate for the [special entrance examination for undergraduate studies in engineering: civil engineering and architect](#).

Admission to these courses is always subject to students passing the special entrance examination. Contact the faculty office for the programme content and the examination arrangements.

- Admission to **undergraduate studies in veterinary medicine**

[Admission to undergraduate studies in veterinary medicine is governed by the Decree of 16 June 2006 regulating the number of students in certain higher education undergraduate courses \(non-residents\)](#).

- Admission to **undergraduate studies in physiotherapy and rehabilitation**

[Admission to undergraduate studies in physiotherapy and rehabilitation is governed by the Decree of 16 June 2006 regulating the number of students in certain higher education undergraduate courses \(non-residents\)](#).

- Admission to **undergraduate studies in psychology and education: speech and language therapy**

[Admission to undergraduate studies in psychology and education: speech and language therapy is governed by the Decree of 16 June 2006 regulating the number of students in certain higher education undergraduate courses \(non-residents\)](#).

- Admission to **undergraduate studies in medicine and dental science**

[Admission to undergraduate studies in medicine and dental science is governed by the Decree of 16 June 2006 regulating the number of students in certain higher education undergraduate courses \(non-residents\)](#).

Note: students wishing to enrol for a Bachelor's degree in Medicine must first sit an aptitude test.

Teaching method

En première année :

- Des séances sont organisées autour des questions de méthode de travail comme la manière d'aborder les différentes matières et la gestion du temps.
- Les monitorats permettent aux étudiants qui le souhaitent de faire le point sur les matières vues aux cours : les enseignants de chaque discipline répondent aux questions et réexpliquent les notions moins bien comprises.
- Des interrogations obligatoires intervenant dans la note finale de chaque matière sont organisées un mois après le début des cours au premier quadrimestre.

Pour les trois années :

- Les séances d'exercices et de laboratoire sont organisées en petits groupes et sont encadrés par des assistants. Certains travaux pratiques font l'objet de contrôles de connaissances en début de séance et de rapports à remettre en fin de séance.
- Des travaux personnels et/ou de groupe sont prévus pour certaines activités.
- Des sites internet sont associés à la plupart des cours : des informations utiles y sont déposées.

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".

Différentes modalités sont mises en oeuvre pour l'évaluation des connaissances et des compétences acquises au cours de la formation; elles sont adaptées aux types de prestations : évaluation continue notamment pour les exercices pratiques, évaluation des travaux personnels et de groupe, évaluation globale (écrite et/ou orale) durant les sessions d'examens.

Mobility and/or Internationalisation outlook

Sauf cas exceptionnels, la mobilité internationale n'est recommandée que dans le cadre des programmes de master.

Possible trainings at the end of the programme

Erreur de transformation xhtml vers fo pour 'formations_accessible' erreur=org.xml.sax.SAXParseException; lineNumber: 277; columnNumber: 13; Des guillemets ouvrants sont attendus pour l'attribut "{1}" associé à un type d'élément "class".

Contacts

Curriculum Managment

Entite de la structure PHYS

Acronyme	PHYS
Dénomination	Ecole de physique
Adresse	Chemin du Cyclotron 2 bte L7.01.04 1348 Louvain-la-Neuve Tél 010 47 32 94 - Fax 010 47 30 68
Site web	https://www.uclouvain.be/phys
Secteur	Secteur des sciences et technologies (SST)
Faculté	Faculté des sciences (SC)
Commission de programme	Ecole de physique (PHYS)

Academic Supervisor : [Eduardo Cortina Gil](#)

Jury:

Président des jurys de 2ème et de 3ème année : [Vincent Lemaître](#)

Secrétaire des jurys de 2ème et de 3ème année : [Giacomo Luca Bruno](#)

Usefull Contacts

Secrétaire de l'Ecole de physique : [Roseline Van Dyck](#)

