FSA1BA

2015 - 2016

Bachelor in Engineering

At Louvain-la-Neuve - 180 credits - 3 years - Day schedule - In french
Dissertation/Graduation Project : **NO** - Internship : **NO**
Activities in English: **NO** - Activities in other languages : **NO**
Activities on other sites : **NO**
Main study domain : **Sciences de l'ingénieur et technologie**
Organized by: **Ecole Polytechnique de Louvain (EPL)**
Programme code: **fsa1ba** - Francophone Certification Framework: 6

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General objectives

The bachelor's programme in Engineering Sciences : Engineering, leads to the degree of "Bachelor of Engineering Sciences : Engineering" of the French-speaking Community of Belgium. Upon successful completion of this first cycle of studies, the student will have access to one or several titles in Engineering Sciences, awarded by the Faculty of Applied Sciences, by doing one of the corresponding master's programmes.

The general objectives of the bachelor's programme in Engineering Sciences are, therefore, aimed at the acquisition of :

- lasting scientific knowledge : a solid grounding in the sciences as well as the practice and integration of previously acquired knowledge
- a solid basis in specialised studies, entitling access to a master's (either at UCL, within the French-speaking Community or abroad) : progressive orientation, one or two specialisations in Engineering Sciences
- high level competence and skills : analysis, critical spirit, self-evaluation, conception (of models, tools, systems, processes and procedures), sound written and oral communication skills and professional team-work qualities. The programme is designed to integrate the necessary skills within a pluridisciplinary context (including the Human Sciences, Ethics, the Environment and Sustainable Development).

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

démontrer la maîtrise d'un corpus de connaissances en sciences fondamentales et polytechniques, lui permettant de résoudre des problématiques disciplinaires cadrées (Axe 1).

1.1. Appliquer les concepts, lois, raisonnements à une problématique disciplinaire de complexité cadrée.
1.2. Décrire des outils de modélisation et de calcul adéquats pour résoudre une problématique disciplinaire cadrée.

d'organiser et de mener à son terme une démarche d'ingénierie appliquée au développement d'un produit (et/ou d'un service) répondant à un besoin ou à une problématique cadrée, à l'analyse d'un phénomène physique donné, un système (Axes 2 et 3).

2.1. Décrire et formuler le problème à résoudre ou le besoin fonctionnel sous la forme d'un cahier des charges générique.
2.2. Se documenter sur l'état des connaissances actuelles dans le domaine de la problématique posée.
2.3. Poser des hypothèses de travail pour la modélisation d'une problématique cadrée.
2.4. Modéliser un problème et concevoir une ou plusieurs solutions techniques répondant au cahier des charges.
2.5. Implémenter et tester une solution sous la forme d'une maquette, d'un prototype et/ou d'un modèle numérique.
2.6. Synthétiser en vue d'expliciter : les hypothèses, la modélisation et la solution proposée.
2.7. Porter un regard critique sur des hypothèses prises et sur la pertinence des solutions (autoévaluation individuelle).
2.8. Formuler des recommandations pour améliorer la solution étudiée, le système analysé.

de contribuer, en équipe, à la réalisation d'un projet disciplinaire ou pluridisciplinaire en respectant une approche cadrée (Axe 4).

4.1. S'engager collectivement sur un plan de travail, un échéancier (et des rôles à tenir).
4.2. Fonctionner en équipe : gérer des points de désaccord, prendre des décisions lorsqu'il y a des choix à faire, se répartir le travail.
4.3. Porter un regard critique sur la manière de travailler en équipe pour résoudre un projet (autoévaluation collective).

de communiquer efficacement oralement et par écrit les résultats des missions qui lui sont confiés. Il sera capable communiquer en anglais en plus du français (Axe 5).

5.1. Argumenter et convaincre au sein de l'équipe et vis-à-vis des enseignants et des jurys.
5.2. Communiquer sous forme graphique et schématique ; interpréter un schéma, présenter les résultats d'un travail, structurer des informations.
5.3. Lire, analyser et exploiter des documents techniques (normes, plans, cahier de charge, spécifications, …).
5.4. Rédiger des documents écrits de synthèse en tenant compte des exigences posées dans le cadre des missions (projets et problèmes).
5.5. Faire un exposé oral convaincant en utilisant les techniques modernes de communication.

de faire preuve de rigueur et d'esprit critique dans ses démarches scientifiques et techniques en **se souciant de l'éthique** (axe 6).

- d'utiliser des ressources bibliographiques pour réaliser et agrémenter un travail, en tenant compte des règles éthiques (sans faire de plagiat).

Programme structure

The bachelor's programme in Engineering Sciences : Engineering, totals 180 credits spread over 3 years. The student will choose one of the six majors on offer (150 credits). Each major comprises a general, common, polyvalent course of 107 credits and a specialised course of 43 credits. There is a range of six specialisations to choose from : Applied Chemistry and Physics, Construction, Electricity, Computer Studies, Applied Mathematics and Mechanics. The student will complete his programme with a minor from a course in Polytechnics, or an opening minor, or an ensemble of options for 30 credits.

The student who opts for a minor in specialised Polytechnics, will choose it in an orientation which is different from the major. The courses which will already have been taken into account in the major will have to be replaced by other options to attain the 30 credits. The aim of this major/minor in Polytechnics is to enable the student, if he so wishes, to acquire a basic training in two specialities in Engineering Sciences, thus increasing his technical polyvalence, or to prepare for a master's in Engineering Sciences situated mid-way between the basic orientations at the bachelor's level. It is the case, for example, with the major/minor association in "Electricity - Mechanics " or " Mechanics - Electricity" which constitutes the normal access path to the master's in Electromechanics and likewise via the combination" Electricity- Applied Chemistry and Physics " which paves the way for the domain of the Nanotechnologies.

The minors in Polytechnics organised by the FSA for the bachelor's of Engineering Sciences are as follows : Applied Chemistry and Physics, Construction, Electricity, Computer Studies, Applied Mathematics, Mechanics, Biomedical engineering and Architecture. The first six are described below. Contrary to the other minors organised at UCL, the dividing up of the work volumes for the minors in Polytechnics are equivalent to around 10 credits in the second year and around 20 credits in the third year, instead of 15 and then 15 credits respectively.

FSA1BA Detailled programme

General core programme by subject

Cours de formation générale et polyvalente (110 credits)

All the students attend all these courses which divide up over three years of the program of bachelor.

						Year 1	Year 2	Year 3
LFSAB1101	Mathematics 1	Abdou Kouider Ben-Naoum (coord.), Olivier Pereira, Michel Verleysen, Vincent Wertz	40h+40h	8 Credits	1q	x		
LFSAB1102	Mathematics 2	François Glineur, Roland Keunings, Enrico Vitale (coord.)	45h+45h	9 Credits	2q	x		
LFSAB1103	Mathematics 3	Jean-François Remacle (coord.), Grégoire Winckelmans	30h+30h	5 Credits	1q		x	
LFSAB1104	Numerical methods	Vincent Legat	30h+30h	5 Credits	1q		x	
LFSAB1105	Probability and statistics	Anouar El Ghouch, Rainer von Sachs	30h+30h	4 Credits	1q			x
LFSAB1106	Applied mathematics : Signals and systems	Luc Vandendorpe, Vincent Wertz	30h+30h	5 Credits	2q		x	
LFSAB1201	Physics 1	Roland Keunings, Jean-Didier Legat (coord.)	30h+30h	6 Credits	1q	x		

						Year 1	2	3
LFSAB1202	Physics 2	Paul Fisette, Laurent Francis, Claude Oestges	30h+30h	6 Credits	2q	x		
LFSAB1203	PHYSICS 3	Jean-Christophe Charlier, Jérôme Louveaux, Claude Oestges	30h+30h	5 Credits	1q		x	
LFSAB1301	Chemistry and Physical Chemistry 1	Sophie Demoustier, Alain Jonas, Bernard Nysten	30h+30h	6 Credits	2q	x		
LFSAB1302	Chemistry and Physical Chemistry 2	Hervé Jeanmart, Joris Proost	30h+30h	5 Credits	1q		x	
LFSAB1401	Informatic 1	Olivier Bonaventure, Charles Pecheur	30h+30h	6 Credits	1q	x		
LFSAB1402	Informatics 2	Peter Van Roy	30h+30h	5 Credits	1q		x	
LFSAB1501	project 1	Abdou Kouider Ben-Naoum, Xavier Bollen (compensates Benoît Raucent), Christine Jacqmot (compensates Benoît Raucent), Roland Keunings, Jean-Didier Legat, Charles Pecheur, Benoît Raucent (coord.)	40h+40h	8 Credits	1q	x		
LFSAB1502	Project 2	Laurent Francis (coord.), François Glineur, Jérôme Louveaux, Bernard Nysten, Claude Oestges	30h+30h	6 Credits	2q	x		
LFSAB1503	Project 3	Juray De Wilde, Patricia Luis Alconero, Denis Mignon	30h+30h	5 Credits	1q		x	
LFSAB1803	Economy of the firm	Jean-Pierre Hansen, Julien Hendrickx	30h	3 Credits	2q		x	

Huamn sciences Courses (3 credits)

The students choose a course of human sciences among the following ones.

LFSAB1801	Critical History of Science and Technology	Patricia De Grave, Jacques Riche, David Vanderburgh	30h	3 Credits	2q	x		
LFSAB1802	Philosophy. Introductory Course	Stéphane Mercier	15h+15h	3 Credits	2q	x		

Projet de troisième année de bachelier (4 credits)

Les étudiants choisissent en 3ème année un projet parmi les suivants. Ce projet doit être celui qui correspond à leur majeure ou à leur mineure si celle-ci est interne à l'EPL.

LFSAB1504	Project 4 (Mechanical engineering)	Nicolas Docquier, Paul Fisette	22.5h +22.5h	4 Credits	2q			x
LFSAB1505	Project 4 (in Chemical & Physical Engineering)	Bernard Nysten, Thomas Pardoen	22.5h +22.5h	4 Credits	2q			x
LFSAB1506	Project 4 (in Biomedical Engineering)	Philippe Lefèvre, Jean-Louis Thonnard	22.5h +22.5h	4 Credits	2q			x
LFSAB1507	Project 4 (in Mathematical Engineering)	Pierre-Antoine Absil, François Glineur, Julien Hendrickx (coord.), Yurii Nesterov	22.5h +22.5h	4 Credits	2q			x
LFSAB1508	Project 4 (in Electrical Engineering)	Christophe Craeye, Danielle Janvier, Luc Vandendorpe	22.5h +22.5h	4 Credits	2q			x
LFSAB1509	Project 4 (in Computer Science)	Yves Deville, Marc Lainez (compensates Yves Deville)	22.5h +22.5h	4 Credits	2q			x

						Year 1	2	3
⊠ LFSAB1510	Project 4 (in Civil Engineering)	Pierre Latteur, Sandra Soares Frazao	22.5h +22.5h	4 Credits	2q			x

○ Language Courses (6 credits)

A test of English is organized at the beginning of 11 and 12. The student who misses it follows the corresponding English course. The one who makes a success of it can, either to follow the English course, or to replace it by another language course. In 180 credits of the bachelor program, there are inevitably 6 credits of language among which 2 of the LANGL1873. Other language courses can be added, beyond 180 credits. A year academic, a course can be valued for no more than 2 credits.

○ Cours d'anglais (6 credits)

L'étudiant qui rate le test de placement en début de première ou de deuxième années suit les cours ANGL1871 ou ANGL1872 respectivement. L'étudiant ayant réussi le test peut, soit suivre ces cours d'anglais, soit les remplacer par des cours d'autres langues. Il n'y a pas de test en troisième année où le cours ANGL1873 est obligatoire.

○ LANGL1871	English for civil engineers	Marielle Henriet, Marc Piwnik, Nevin Serbest (coord.), Anne-Julie Toubeau	20h	2 Credits	1 ou 2q	x		
○ LANGL1872	English: Listening Comprehension	Nicholas Gibbs, Katherine Opello, Charlotte Peters, Marc Piwnik (coord.), Nevin Serbest	20h	2 Credits	2q		x	
○ LANGL1873	English communication skills for Engineers	Ahmed Adrioueche (coord.), Timothy Byrne, Dominique François, Katherine Opello, Charlotte Peters (coord.), Nevin Serbest, Françoise Stas	20h	2 Credits	1q			x

⊠ Cours de néerlandais

Les étudiants autorisés à ne pas prendre certains des cours d'anglais peuvent proposer de remplacer chacun de ceux-ci par des cours de néerlandais en fonction de leur niveau. Ils contacteront Mme Isabelle Demeulenaere à l'ILV par mail à l'adresse isabelle.demeulenaere@uclouvain.be

⊠ LNEER1300	General and academic Dutch - intermediate level	Hilde Bufkens	30h	2 Credits	1q	x		
⊠ LNEER1500	Interfaculty course - General and academic Dutch - upper-intermediate level	Valérie Dachy	30h	2 Credits	1q		x	
⊠ LNEER2500	Professional development seminar: Dutch - intermediate level	Isabelle Demeulenaere (coord.), Mariken Smit	30h	2 Credits	1 ou 2q			x

⊠ Cours d'allemand

Les étudiants autorisés à ne pas prendre certains des cours d'anglais peuvent proposer de remplacer chacun de ceux-ci par des cours d'allemand en fonction de leur niveau. Ils contacteront Mme Caroline Klein à l'ILV par mail à l'adresse caroline.klein@uclouvain.be

⊠ LALLE1100	German - Elementary level	Virginie Godin (compensates Caroline Klein), Caroline Klein, Ann Rinder (coord.)	80h	2 Credits	1 + 2q	x		
⊠ LALLE1300	General German - Upper-intermediate	Eléonore de broux (compensates Virginie Godin), Virginie Godin	90h	2 Credits	1 + 2q		x	
⊠ LALLE1500	General German - Advanced	Virginie Godin	90h	2 Credits	1 + 2q			x

⊠ Spanish Courses

Les étudiants autorisés à ne pas prendre certains des cours d'anglais peuvent proposer de remplacer chacun de ceux-ci par des cours d'espagnol en fonction de leur niveau. Ils contacteront Mme Baeza Varela à l'ILV par mail à l'adresse isabel.baezavarela@uclouvain.be

⊠ LESPA1100	Spanish Elementary level	Natalia Jeronimo Alonso, Carmen Vallejo Villamor	90h	2 Credits	1 + 2q	x		
⊠ LESPA1300	spanish middle level	Natalia Jeronimo Alonso, Carmen Vallejo Villamor	90h	2 Credits	1 + 2q		x	
⊠ LESPA1500	Spanish - Advanced level	Begona Garcia Migura	90h	2 Credits	1 + 2q			x
⊠ LESPA1101	Spanish - Elementary level "accelerated"	Begona Garcia Migura	45h	2 Credits				x

Year
1 2 3

⊠ Autres cours de langues.
Les étudiants autorisés à ne pas prendre certains des cours d'anglais peuvent proposer de remplacer chacun de ceux-ci par d'autres cours que ceux de néerlandais, d'allemand ou d'espagnol . Ils doivent obtenir l'approbation du conseiller aux études.

Formation spécialisée : les majeures (40 credits)

L'étudiant complète sa formation générale et polyvalente par une formation spécialisée dans un des 7 domaines des sciences de l'ingénieur proposés (dénommées "Majeures").

	Majeure - partie 1	N.		10 Credits			x	
	Majeure - partie 2	N.		30 Credits				x

Formation complémentaire : les mineures (30 credits)

L'étudiant finalise sa formation de bachelier par un programme complémentaire de 30 crédits. Il a le choix entre des mineures spécifiques en sciences de l'ingénieur et des mineures d'ouverture. Le conseiller aux études de l'EPL se tient à leur disposition pour discuter, s'il le souhaite, de l'intégration d'un tel choix dans son projet personnel de formation.

	Mineure - partie 1	N.		10 Credits			x	
	Mineure - partie 2	N.		20 Credits				x

List of majors

Majeure en génie biomédical [FSA1BA-LMAJ107J]

						Year 2	Year 3
LBIR1220A	Biochimie I (partim EPL)	Michel Ghislain, Yvan Larondelle	30h+15h	5 Credits	2q		x
LGBIO1111	Biologie et physiologie cellulaire	Charles De Smet, Christophe De Vleeschouwer, Pascal Kienlen-Campard	30h+15h	5 Credits	2q	x	
LGBIO1112	Introduction to biomedical engineering	Philippe Lefèvre	45h	5 Credits	2q	x	
LGBIO1113	Anatomie et physiologie des systèmes	Catherine Behets Wydemans, Olivier Cornu, Renaud Ronsse	30h+15h	5 Credits	1q		x
LGBIO1114	Artificial organs and rehabilitation	Luc-Marie Jacquet, Philippe Lefèvre, Renaud Ronsse	30h+30h	5 Credits	2q		x
LIEPR1024	Fundementals of neurophysiology and neuropsychology in motor control and motor learning	Julie Duque, Marcus Missal (coord.)	45h	5 Credits	1q		x
LINMA1510	Linear Control	Denis Dochain	30h+30h	5 Credits	2q		x
LMECA1901	Continuum mechanics.	Philippe Chatelain, Philippe Chatelain (compensates Emilie Marchandise), Emilie Marchandise	30h+30h	5 Credits	1q		x

Majeure en chimie et physique appliquées [FSA1BA-LMAJ101J]

						Year 2	3
LMAPR1230	Organic chemistry	Sophie Demoustier, Benjamin Elias, Denis Mignon	45h+15h	5 Credits	2q	x	
LMAPR1231	Process in inorganic chemistry	Pascal Jacques, Joris Proost	30h+30h	5 Credits	2q		x
LMAPR1400	Physical & Chemical Kinetics	Christian Bailly, Juray De Wilde (coord.)	30h+30h	5 Credits	1q		x
LMAPR1491	Statistical & quantic physics	Jean-Christophe Charlier, Xavier Gonze, Luc Piraux, Gian-Marco Rignanese (coord.)	30h+30h	5 Credits	1q		x
LMAPR1492	Materials physics	Jean-Christophe Charlier, Xavier Gonze, Luc Piraux, Gian-Marco Rignanese (coord.)	37.5h +22.5h	5 Credits	2q		x
LMAPR1805	Introduction to materials science	Jean-Christophe Charlier, Pascal Jacques, Bernard Nysten, Thomas Pardoen (coord.)	45h+15h	5 Credits	2q	x	
LMECA1321	Fluid mechanics and transfer phenomena.	Vincent Legat, Grégoire Winckelmans	30h+30h	5 Credits	2q		x
LMECA1901	Continuum mechanics.	Philippe Chatelain, Philippe Chatelain (compensates Emilie Marchandise), Emilie Marchandise	30h+30h	5 Credits	1q		x

Majeure en construction [FSA1BA-LMAJ102J]

						Year 2	3
LAUCE1031	STRUCTURAL MATERIALS	Jean-François Cap, Denis Zastavni	30h+25h	5 Credits	2q	x	
LAUCE1152	Hydraulic	Sandra Soares Frazao	30h+30h	5 Credits	2q		x
LAUCE1171	Geomaterials	Pierre-Yves Bolly, Ramiro Daniel Verástegui Flores	30h+30h	5 Credits	2q	x	
LAUCE1172	Soil mechanics	Alain Holeyman, Ramiro Daniel Verástegui Flores	30h+30h	5 Credits	2q		x
LAUCE1181	Mechanics of structures	Pierre Latteur	30h+30h	5 Credits	1q		x
LICAR1821	Edification soutenable 1 : construction et performances	Marcelo Blasco Enbrie, Magali Bodart, Benoît Vandenbulcke	60h	5 Credits	1q		x
LMECA1120	Introduction to finite element methods.	Vincent Legat	30h+30h	5 Credits	2q		x
LMECA1901	Continuum mechanics.	Philippe Chatelain, Philippe Chatelain (compensates Emilie Marchandise), Emilie Marchandise	30h+30h	5 Credits	1q		x

Majeure en électricité [FSA1BA-LMAJ103J]

						Year 2	3
LELEC1101	Project in Electricity 1 : Electrical circuits	Christophe Craeye, Bruno Dehez, Claude Oestges	30h+30h	5 Credits	2q	x	
LELEC1370	Measurements and electrical circuits	Christophe Craeye, Bruno Dehez, Claude Oestges (coord.)	30h+30h	5 Credits	2q	x	
LELEC1350	APPLIED ELECTROMAGNETISM	Christophe Craeye, Danielle Janvier	30h+30h	5 Credits	1q		x
LELEC1530	Basic analog and digital electronic circuits	Denis Flandre, Jean-Didier Legat	30h+30h	5 Credits	1q		x
LELEC1330	Physics of electronics	Vincent Bayot (coord.), Denis Flandre, Laurent Francis, Jean-Pierre Raskin	30h+30h	5 Credits	1q		x
LELEC1360	TELECOMMUNICATIONS	Luc Vandendorpe	30h+30h	5 Credits	2q		x
LELEC1310	ELECTROMECHANICAL CONVERTERS	Bruno Dehez	30h+30h	5 Credits	2q		x
LINMA1510	Linear Control	Denis Dochain	30h+30h	5 Credits	2q		x

Majeure en informatique [FSA1BA-LMAJ104J]

						Year 2	3
LSINF1121	Algorithmics and data structures	Pierre Schaus	30h+30h	5 Credits	1q		x
LSINF1225	Object-oriented design and data management	Kim Mens	30h+30h	5 Credits	2q	x	
LSINF1252	Computer Systems 1	Olivier Bonaventure	30h+30h	5 Credits	2q	x	
LINGI1101	Discrete mathematics: logical foundations of computing science	Peter Van Roy	30h+30h	5 Credits	1q		x
LINGI1122	Program conception methods	Charles Pecheur	30h+30h	5 Credits	2q		x
LINGI1123	Computability and complexity	Yves Deville	30h+30h	5 Credits	2q		x
LINGI1131	Computer language concepts	Peter Van Roy	30h+30h	5 Credits	2q		x
LINGI1341	Computer networks	Olivier Bonaventure	30h+30h	5 Credits	1q		x

Majeure en mathématiques appliquées [FSA1BA-LMAJ105J]

						Year 2	3
LMAT1223	Differential equations	Jean Van Schaftingen	30h+15h	5 Credits	2q	x	
LINMA1315	Mathematical analysis : complements	Michel Willem	30h +22.5h	5 Credits	2q		x
LINMA1702	Applied mathematics : Optimization I	François Glineur	30h +22.5h	5 Credits	2q	x	
LINMA1170	Numerical analysis	Paul Van Dooren	30h +22.5h	5 Credits	1q		x
LINMA1691	Discrete mathematics - Graph theory and algorithms	Vincent Blondel, Jean-Charles Delvenne (compensates Vincent Blondel)	30h +22.5h	5 Credits	1q		x
LMECA1901	Continuum mechanics.	Philippe Chatelain, Philippe Chatelain (compensates Emilie Marchandise), Emilie Marchandise	30h+30h	5 Credits	1q		x

Premier cours au choix de la majeure en mathématiques appliquées (5 credits)

Les étudiants choisissent un des deux cours de cette liste. Le cours choisi ne peut pas faire partie de la mineure suivie par l'étudiant.

LINMA1510	Linear Control	Denis Dochain	30h+30h	5 Credits	2q		x
LINMA1731	Stochastic processes : Estimation and prediction	Pierre-Antoine Absil, Luc Vandendorpe (coord.)	30h+30h	5 Credits	2q		x

Second cours au choix de la majeure en mathématiques appliquées

L'étudiant sélectionne au minimum 5 crédits parmi cette liste de cours au choix. Il peut également proposer d'autres cours à l'approbation de la commission de programme en mathématiques appliquées.Les cours choisis ne peuvent pas faire partie de la mineure suivie par l'étudiant.
Les étudiants qui n'ont pas pris le cours LFSAB 1507 Projet 4 en mathématiques appliquées, dans le cadre du tronc commun, peuvent le prendre dans le cadre de la majeure

LELEC1350	APPLIED ELECTROMAGNETISM	Christophe Craeye, Danielle Janvier	30h+30h	5 Credits	1q		x
LELEC1360	TELECOMMUNICATIONS	Luc Vandendorpe	30h+30h	5 Credits	2q		x
LIEPR1024	Fundementals of neurophysiology and neuropsychology in motor control and motor learning	Julie Duque, Marcus Missal (coord.)	45h	5 Credits	1q		x
LMAT1222	Complex analysis	Luc Haine	30h+15h	5 Credits	2q		x
LMAT1371	Probability	Johan Segers	30h +22.5h	5 Credits	2q		x
LSINF1121	Algorithmics and data structures	Pierre Schaus	30h+30h	5 Credits	1q		x
LGBIO1112	Introduction to biomedical engineering	Philippe Lefèvre	45h	5 Credits	2q		x
LINGI1101	Discrete mathematics: logical foundations of computing science	Peter Van Roy	30h+30h	5 Credits	1q		x
LINGI1123	Computability and complexity	Yves Deville	30h+30h	5 Credits	2q		x
LMECA1100	Deformable solid mechanics.	Issam Doghri	30h+30h	5 Credits	2q		x
LMECA1321	Fluid mechanics and transfer phenomena.	Vincent Legat, Grégoire Winckelmans	30h+30h	5 Credits	2q		x
LINMA1510	Linear Control	Denis Dochain	30h+30h	5 Credits	2q		x
LINMA1731	Stochastic processes : Estimation and prediction	Pierre-Antoine Absil, Luc Vandendorpe (coord.)	30h+30h	5 Credits	2q		x

Majeure en mécanique [FSA1BA-LMAJ106J]

						Year 2	3
LMECA1100	Deformable solid mechanics.	Issam Doghri	30h+30h	5 Credits	2q		x
LMECA1120	Introduction to finite element methods.	Vincent Legat	30h+30h	5 Credits	2q	x	
LMECA1210	Description et analyse des mécanismes	Paul Fisette, Benoît Herman (compensates Benoît Raucent), Hervé Jeanmart, Benoît Raucent	30h+30h	5 Credits	2q	x	
LMECA1321	Fluid mechanics and transfer phenomena.	Vincent Legat, Grégoire Winckelmans	30h+30h	5 Credits	2q		x
LMECA1451	Mechanical manufacturing.	Laurent Delannay, Aude Simar	30h+30h	5 Credits	1q		x
LMECA1855	Thermodynamics and energetics.	Yann Bartosiewicz, Miltiadis Papalexandris	30h+30h	5 Credits	1q		x
LMECA1901	Continuum mechanics.	Philippe Chatelain, Philippe Chatelain (compensates Emilie Marchandise), Emilie Marchandise	30h+30h	5 Credits	1q		x
LINMA1510	Linear Control	Denis Dochain	30h+30h	5 Credits	2q		x

List of available minors

Six majors and seven minors are offered in the following domains : Applied Chemistry and Physics, Construction, Electricity, Computing Science, Applied Mathematics, Mechanics and Biomedical Engineering (only offered as a minor). The choice of the major and the minor is made at the end of the Ist quadrimester of the 2nd year of the bachelor's programme. This major/minor system enables the student who so wishes to get a basic grounding in two specialities and thus optimise his preparation for a master's situated somewhere in between his current specialisations (eg. in the domain of Nanotechnologies which are situated between Applied Chemistry and Physics and Electricity). The student may also choose a minor organised outside the FSA or a coherent ensemble of options.

> Majeure en génie biomédical *[https://www.uclouvain.be/en-prog-2015-min-lmaj107j]*
> Majeure en chimie et physique appliquées *[https://www.uclouvain.be/en-prog-2015-min-lmaj101j]*
> Majeure en construction *[https://www.uclouvain.be/en-prog-2015-min-lmaj102j]*
> Majeure en électricité *[https://www.uclouvain.be/en-prog-2015-min-lmaj103j]*
> Majeure en informatique *[https://www.uclouvain.be/en-prog-2015-min-lmaj104j]*
> Majeure en mathématiques appliquées *[https://www.uclouvain.be/en-prog-2015-min-lmaj105j]*
> Majeure en mécanique *[https://www.uclouvain.be/en-prog-2015-min-lmaj106j]*
> Mineure en droit (accès) *[https://www.uclouvain.be/en-prog-2015-min-ladrt100i]*
> Mineure en droit (ouverture) *[https://www.uclouvain.be/en-prog-2015-min-lodrt100i]*
> Minor in Culture and Creation *[https://www.uclouvain.be/en-prog-2015-min-lcucr100i]*
> Minor in Development and Environment *[https://www.uclouvain.be/en-prog-2015-min-ldenv100i]*
> Minor in Economics *[https://www.uclouvain.be/en-prog-2015-min-lecon100i]*
> Minor in Engineering Sciences : Applied Chemistry and Physics *[https://www.uclouvain.be/en-prog-2015-min-lfyki100i]*
> Minor in Engineering Sciences : biomedical *[https://www.uclouvain.be/en-prog-2015-min-lgbio100i]*
> Minor in Engineering Sciences: Applied Mathematics *[https://www.uclouvain.be/en-prog-2015-min-lmap100i]*
> Minor in Engineering Sciences: Computer Sciences *[https://www.uclouvain.be/en-prog-2015-min-lsinf100i]*
> Minor in Engineering Sciences: Construction *[https://www.uclouvain.be/en-prog-2015-min-lgce100i]*
> Minor in Engineering Sciences: Electricity *[https://www.uclouvain.be/en-prog-2015-min-lelec100i]*
> Minor in Engineering Sciences: Mechanics *[https://www.uclouvain.be/en-prog-2015-min-lmeca100i]*
> Minor in European Studies *[https://www.uclouvain.be/en-prog-2015-min-leuro100i]*
> Minor in Gender Studies *[https://www.uclouvain.be/en-prog-2015-min-lgenr100i]*
> Minor in Geography *[https://www.uclouvain.be/en-prog-2015-min-lgeog100i]*
> Minor in Human and Social Sciences *[https://www.uclouvain.be/en-prog-2015-min-lhuso100i]*
> Minor in Information and Communication (*) *[https://www.uclouvain.be/en-prog-2015-min-lcomu100i]*
> Minor in Literary Studies *[https://www.uclouvain.be/en-prog-2015-min-llitt100i]*
> Minor in Mangement (basic knowledge) *[https://www.uclouvain.be/en-prog-2015-min-lgesa100i]*
> Minor in Mathematics *[https://www.uclouvain.be/en-prog-2015-min-lmath100i]*
> Minor in Musicology *[https://www.uclouvain.be/en-prog-2015-min-lmusi100i]*
> Minor in Philosophy *[https://www.uclouvain.be/en-prog-2015-min-lisp100i]*
> Minor in Physics *[https://www.uclouvain.be/en-prog-2015-min-lphys100i]*
> Minor in Scientific Culture *[https://www.uclouvain.be/en-prog-2015-min-lcusc100i]*
> Minor in Statistics *[https://www.uclouvain.be/en-prog-2015-min-lstat100i]*
> Minor in Urban Architecture *[https://www.uclouvain.be/en-prog-2015-min-larch100i]*
> Minor in entrepreneurship *[https://www.uclouvain.be/en-prog-2015-min-lmpme100i]*

(*) This program is the subject of access criteria

Course prerequisites

A document entitled en-prerequis-2015-fsa1ba.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

FSA1BA - 1ST ANNUAL UNIT

O Mandatory	⊠ Optional
△ Courses not taught during 2015-2016	⊘ Periodic courses not taught during 2015-2016
⊕ Periodic courses taught during 2015-2016	■ Activity with requisites

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

O *Cours de formation générale et polyvalente*

All the students attend all these courses which divide up over three years of the program of bachelor.

O LFSAB1101	Mathematics 1	Abdou Kouider Ben-Naoum (coord.), Olivier Pereira, Michel Verleysen, Vincent Wertz	40h+40h	8 Credits	1q
O LFSAB1102	Mathematics 2	François Glineur, Roland Keunings, Enrico Vitale (coord.)	45h+45h	9 Credits	2q
O LFSAB1201	Physics 1	Roland Keunings, Jean-Didier Legat (coord.)	30h+30h	6 Credits	1q
O LFSAB1202	Physics 2	Paul Fisette, Laurent Francis, Claude Oestges	30h+30h	6 Credits	2q
O LFSAB1301	Chemistry and Physical Chemistry 1	Sophie Demoustier, Alain Jonas, Bernard Nysten	30h+30h	6 Credits	2q
O LFSAB1401	Informatic 1	Olivier Bonaventure, Charles Pecheur	30h+30h	6 Credits	1q

LFSAB1501	project 1	Abdou Kouider Ben-Naoum, Xavier Bollen (compensates Benoît Raucent), Christine Jacqmot (compensates Benoît Raucent), Roland Keunings, Jean-Didier Legat, Charles Pecheur, Benoît Raucent (coord.)	40h+40h	8 Credits	1q
LFSAB1502	Project 2	Laurent Francis (coord.), François Glineur, Jérôme Louveaux, Bernard Nysten, Claude Oestges	30h+30h	6 Credits	2q

Huamn sciences Courses

The students choose a course of human sciences among the following ones.

LFSAB1801	Critical History of Science and Technology	Patricia De Grave, Jacques Riche, David Vanderburgh	30h	3 Credits	2q
LFSAB1802	Philosophy. Introductory Course	Stéphane Mercier	15h+15h	3 Credits	2q

Language Courses

A test of English is organized at the beginning of 11 and 12. The student who misses it follows the corresponding English course. The one who makes a success of it can, either to follow the English course, or to replace it by another language course. In 180 credits of the bachelor program, there are inevitably 6 credits of language among which 2 of the LANGL1873. Other language courses can be added, beyond 180 credits. A year academic, a course can be valued for no more than 2 credits.

Cours d'anglais

L'étudiant qui rate le test de placement en début de première ou de deuxième années suit les cours ANGL1871 ou ANGL1872 respectivement. L'étudiant ayant réussi le test peut, soit suivre ces cours d'anglais, soit les remplacer par des cours d'autres langues. Il n'y a pas de test en troisième année où le cours ANGL1873 est obligatoire.

LANGL1871	English for civil engineers	Marielle Henriet, Marc Piwnik, Nevin Serbest (coord.), Anne-Julie Toubeau	20h	2 Credits	1 ou 2q

Cours de néerlandais

Les étudiants autorisés à ne pas prendre certains des cours d'anglais peuvent proposer de remplacer chacun de ceux-ci par des cours de néerlandais en fonction de leur niveau. Ils contacteront Mme Isabelle Demeulenaere à l'ILV par mail à l'adresse isabelle.demeulenaere@uclouvain.be

LNEER1300	General and academic Dutch - intermediate level	Hilde Bufkens	30h	2 Credits	1q

Cours d'allemand

Les étudiants autorisés à ne pas prendre certains des cours d'anglais peuvent proposer de remplacer chacun de ceux-ci par des cours d'allemand en fonction de leur niveau. Ils contacteront Mme Caroline Klein à l'ILV par mail à l'adresse caroline.klein@uclouvain.be

LALLE1100	German - Elementary level	Virginie Godin (compensates Caroline Klein), Caroline Klein, Ann Rinder (coord.)	80h	2 Credits	1 + 2q

Spanish Courses

Les étudiants autorisés à ne pas prendre certains des cours d'anglais peuvent proposer de remplacer chacun de ceux-ci par des cours d'espagnol en fonction de leur niveau. Ils contacteront Mme Baeza Varela à l'ILV par mail à l'adresse isabel.baezavarela@uclouvain.be

LESPA1100	Spanish Elementary level	Natalia Jeronimo Alonso, Carmen Vallejo Villamor	90h	2 Credits	1 + 2q

FSA1BA - 2ND ANNUAL UNIT

O Mandatory	⊠ Optional
△ Courses not taught during 2015-2016	⊘ Periodic courses not taught during 2015-2016
⊕ Periodic courses taught during 2015-2016	Activity with requisites

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

O Cours de formation générale et polyvalente

All the students attend all these courses which divide up over three years of the program of bachelor.

O LFSAB1103	Mathematics 3	Jean-François Remacle (coord.), Grégoire Winckelmans	30h+30h	5 Credits	1q
O LFSAB1104	Numerical methods	Vincent Legat	30h+30h	5 Credits	1q
O LFSAB1106	Applied mathematics : Signals and systems	Luc Vandendorpe, Vincent Wertz	30h+30h	5 Credits	2q
O LFSAB1203	PHYSICS 3	Jean-Christophe Charlier, Jérôme Louveaux, Claude Oestges	30h+30h	5 Credits	1q
O LFSAB1302	Chemistry and Physical Chemistry 2	Hervé Jeanmart, Joris Proost	30h+30h	5 Credits	1q
O LFSAB1402	Informatics 2	Peter Van Roy	30h+30h	5 Credits	1q
O LFSAB1503	Project 3	Juray De Wilde, Patricia Luis Alconero, Denis Mignon	30h+30h	5 Credits	1q
O LFSAB1803	Economy of the firm	Jean-Pierre Hansen, Julien Hendrickx	30h	3 Credits	2q

O Language Courses

A test of English is organized at the beginning of 11 and 12. The student who misses it follows the corresponding English course. The one who makes a success of it can, either to follow the English course, or to replace it by another language course. In 180 credits of the bachelor program, there are inevitably 6 credits of language among which 2 of the LANGL1873. Other language courses can be added, beyond 180 credits. A year academic, a course can be valued for no more than 2 credits.

O Cours d'anglais

L'étudiant qui rate le test de placement en début de première ou de deuxième années suit les cours ANGL1871 ou ANGL1872 respectivement. L'étudiant ayant réussi le test peut, soit suivre ces cours d'anglais, soit les remplacer par des cours d'autres langues. Il n'y a pas de test en troisième année où le cours ANGL1873 est obligatoire.

O LANGL1872	English: Listening Comprehension	Nicholas Gibbs, Katherine Opello, Charlotte Peters, Marc Piwnik (coord.), Nevin Serbest	20h	2 Credits	2q

⊠ Cours de néerlandais

Les étudiants autorisés à ne pas prendre certains des cours d'anglais peuvent proposer de remplacer chacun de ceux-ci par des cours de néerlandais en fonction de leur niveau. Ils contacteront Mme Isabelle Demeulenaere à l'ILV par mail à l'adresse isabelle.demeulenaere@uclouvain.be

⊠ LNEER1500	Interfaculty course - General and academic Dutch - upper-intermediate level	Valérie Dachy	30h	2 Credits	1q

⊠ Cours d'allemand

Les étudiants autorisés à ne pas prendre certains des cours d'anglais peuvent proposer de remplacer chacun de ceux-ci par des cours d'allemand en fonction de leur niveau. Ils contacteront Mme Caroline Klein à l'ILV par mail à l'adresse caroline.klein@uclouvain.be

⊠ LALLE1300	General German - Upper-intermediate	Eléonore de broux (compensates Virginie Godin), Virginie Godin	90h	2 Credits	1 + 2q

⊠ Spanish Courses

Les étudiants autorisés à ne pas prendre certains des cours d'anglais peuvent proposer de remplacer chacun de ceux-ci par des cours d'espagnol en fonction de leur niveau. Ils contacteront Mme Baeza Varela à l'ILV par mail à l'adresse isabel.baezavarela@uclouvain.be

⊠ LESPA1300	spanish middle level	Natalia Jeronimo Alonso, Carmen Vallejo Villamor	90h	2 Credits	1 + 2q

Formation spécialisée : les majeures

L'étudiant complète sa formation générale et polyvalente par une formation spécialisée dans un des 7 domaines des sciences de l'ingénieur proposés (dénommées "Majeures").

	Majeure - partie 1	N.		10 Credits	

Formation complémentaire : les mineures

L'étudiant finalise sa formation de bachelier par un programme complémentaire de 30 crédits. Il a le choix entre des mineures spécifiques en sciences de l'ingénieur et des mineures d'ouverture. Le conseiller aux études de l'EPL se tient à leur disposition pour discuter, s'il le souhaite, de l'intégration d'un tel choix dans son projet personnel de formation.

	Mineure - partie 1	N.		10 Credits	

FSA1BA - 3RD ANNUAL UNIT

O Mandatory	⊠ Optional
△ Courses not taught during 2015-2016	⊘ Periodic courses not taught during 2015-2016
⊕ Periodic courses taught during 2015-2016	Activity with requisites

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

O Cours de formation générale et polyvalente

All the students attend all these courses which divide up over three years of the program of bachelor.

O LFSAB1105	Probability and statistics	Anouar El Ghouch, Rainer von Sachs	30h+30h	4 Credits	1q

O Projet de troisième année de bachelier

Les étudiants choisissent en 3ème année un projet parmi les suivants. Ce projet doit être celui qui correspond à leur majeure ou à leur mineure si celle-ci est interne à l'EPL.

⊠ LFSAB1504	Project 4 (Mechanical engineering)	Nicolas Docquier, Paul Fisette	22.5h +22.5h	4 Credits	2q
⊠ LFSAB1505	Project 4 (in Chemical & Physical Engineering)	Bernard Nysten, Thomas Pardoen	22.5h +22.5h	4 Credits	2q
⊠ LFSAB1506	Project 4 (in Biomedical Engineering)	Philippe Lefèvre, Jean-Louis Thonnard	22.5h +22.5h	4 Credits	2q
⊠ LFSAB1507	Project 4 (in Mathematical Engineering)	Pierre-Antoine Absil, François Glineur, Julien Hendrickx (coord.), Yurii Nesterov	22.5h +22.5h	4 Credits	2q
⊠ LFSAB1508	Project 4 (in Electrical Engineering)	Christophe Craeye, Danielle Janvier, Luc Vandendorpe	22.5h +22.5h	4 Credits	2q
⊠ LFSAB1509	Project 4 (in Computer Science)	Yves Deville, Marc Lainez (compensates Yves Deville)	22.5h +22.5h	4 Credits	2q
⊠ LFSAB1510	Project 4 (in Civil Engineering)	Pierre Latteur, Sandra Soares Frazao	22.5h +22.5h	4 Credits	2q

O Language Courses

A test of English is organized at the beginning of 11 and 12. The student who misses it follows the corresponding English course. The one who makes a success of it can, either to follow the English course, or to replace it by another language course. In 180 credits of the bachelor program, there are inevitably 6 credits of language among which 2 of the LANGL1873. Other language courses can be added, beyond 180 credits. A year academic, a course can be valued for no more than 2 credits.

O Cours d'anglais

L'étudiant qui rate le test de placement en début de première ou de deuxième années suit les cours ANGL1871 ou ANGL1872 respectivement. L'étudiant ayant réussi le test peut, soit suivre ces cours d'anglais, soit les remplacer par des cours d'autres langues. Il n'y a pas de test en troisième année où le cours ANGL1873 est obligatoire.

O LANGL1873	English communication skills for Engineers	Ahmed Adrioueche (coord.), Timothy Byrne, Dominique François, Katherine Opello, Charlotte Peters (coord.), Nevin Serbest, Françoise Stas	20h	2 Credits	1q

⊠ Cours de néerlandais

Les étudiants autorisés à ne pas prendre certains des cours d'anglais peuvent proposer de remplacer chacun de ceux-ci par des cours de néerlandais en fonction de leur niveau. Ils contacteront Mme Isabelle Demeulenaere à l'ILV par mail à l'adresse isabelle.demeulenaere@uclouvain.be

⊠ LNEER2500	Professional development seminar: Dutch - intermediate level	Isabelle Demeulenaere (coord.), Mariken Smit	30h	2 Credits	1 ou 2q

⊠ Cours d'allemand

Les étudiants autorisés à ne pas prendre certains des cours d'anglais peuvent proposer de remplacer chacun de ceux-ci par des cours d'allemand en fonction de leur niveau. Ils contacteront Mme Caroline Klein à l'ILV par mail à l'adresse caroline.klein@uclouvain.be

⊠ LALLE1500	General German - Advanced	Virginie Godin	90h	2 Credits	1 + 2q

⊠ Spanish Courses

Les étudiants autorisés à ne pas prendre certains des cours d'anglais peuvent proposer de remplacer chacun de ceux-ci par des cours d'espagnol en fonction de leur niveau. Ils contacteront Mme Baeza Varela à l'ILV par mail à l'adresse isabel.baezavarela@uclouvain.be

⊠ LESPA1500	Spanish - Advanced level	Begona Garcia Migura	90h	2 Credits	1 + 2q
⊠ LESPA1101	Spanish - Elementary level "accelerated"	Begona Garcia Migura	45h	2 Credits	

⚬ *Formation spécialisée : les majeures*

L'étudiant complète sa formation générale et polyvalente par une formation spécialisée dans un des 7 domaines des sciences de l'ingénieur proposés (dénommées "Majeures").

⚬	Majeure - partie 2	N.		30 Credits	

⚬ *Formation complémentaire : les mineures*

L'étudiant finalise sa formation de bachelier par un programme complémentaire de 30 crédits. Il a le choix entre des mineures spécifiques en sciences de l'ingénieur et des mineures d'ouverture. Le conseiller aux études de l'EPL se tient à leur disposition pour discuter, s'il le souhaite, de l'intégration d'un tel choix dans son projet personnel de formation.

⚬	Mineure - partie 2	N.		20 Credits	

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

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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.

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Exam of knowledge of the French language

Anyone not demonstrating sufficient French language proficiency will not be admitted to the first-year undergraduate examinations.

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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 medecine 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.

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Teaching method

Erreur de transformation xhtml vers fo pour 'encadrement' erreur=org.xml.sax.SAXParseException; lineNumber: 294; columnNumber: 438; Le préfixe "v" de l'élément "v:shapetype" n'est pas lié.

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".

The course activities are evaluated in accordance with the prevailing rules of the University (c.f. exam regulations).

In the context of the projects and certain other subject activities, the student will be closely followed in his studies throughout the whole process, in an effort to situate himself appropriately with respect to his individual work and group work and make any necessary readjustments. On the other hand, he will be evaluated during the course of the quadrimester (ongoing evaluation) and again at the end of the quadrimester for each of the subjects taken, to ascertain whether he fulfils the demands of the programme and has completed the modules concerned successfully. These evaluations are both written and oral. The specific details and procedures for the ongoing evaluation are explained at the beginning of each period of the study programme.

Mobility and/or Internationalisation outlook

International Mobility

Mobility in the Faculty of Applied Sciences is equally a major attraction in the context of these studies. This usually takes place during the 4th or 5th year, i.e. during the master's studies. The students are therefore strongly encouraged to do everything possible to widen their communication skills and their knowledge of languages.

In fact, after being awarded the degree title " Bachelor in Engineering Sciences : Engineering " by UCL, the student will also have access to the existing master's (i.e. from the 4th and 5th years on) within the CLUSTER network - Consortium Linking Universities of Science and Technology for Education and Research, of which the Faculty is a member. Furthermore, UCL students benefit from the same access conditions as the bachelor students from these institutions. This European network groups together : UPC - Barcelona / TU-Darmstadt / TU-Eindhoven / INPG-Grenoble / Uni-Karlsruhe / EPFL-Lausanne / Imperial College London / KTH-Stockholm / Politecnico di Torino / UCL-FSA-Louvain-la-Neuve.

In the context of the master's studies in Engineering Sciences at UCL, the student is also entitled access to the ensemble of the Erasmus/Socrates exchange programmes which UCL has subscribed to together with universities from numerous European or extra-European countries, as well as the Catholic University of Leuven (KUL).

Possible trainings at the end of the programme

Access to the master's of Engineering Sciences - Engineering

The bachelor's programme in Engineering entitles direct access to the master's programme in Engineering, in the orientation corresponding to the major followed. In most cases, access to the master's of Engineering, in the orientation corresponding to the minor in Polytechnics, is also direct and without the need for any prerequisites.

After having accumulated 120 credits spread over 2 years, the student will obtain the title of Master of Engineering Sciences, which is conferred jointly with the professional title of Engineer.

UCL offers eight different orientations for theses studies : - Engineer in Chemistry and Material Sciences - Engineer in Physics - Engineer in Electricity - Engineer in Electro-mechanics - Engineer in Mechanics - Engineer in Computing - Engineer in Applied Mathematics - Civil Engineer.

Contacts

Curriculum Managment

Entite de la structure BTCI

Acronyme	**BTCI**
Dénomination	Commission de programme - Tronc commun bachelier ingénieur civil
Adresse	Croix du Sud 1 bte L6.11.01 1348 Louvain-la-Neuve
Secteur	Secteur des sciences et technologies (SST)
Faculté	Ecole Polytechnique de Louvain (EPL)
Commission de programme	Commission de programme - Tronc commun bachelier ingénieur civil (BTCI)

Academic Supervisor : Bernard NYSTEN

Jury:
Président du Jury : Jean-Didier LEGAT
Secrétaire du Jury : Paul FISETTE

Usefull Contacts

Secrétariat : Catherine PEETERS