

**SINF1BA**

2014 - 2015

Bachelor in Computer Science

**At Louvain-la-Neuve - 180 credits - 3 years - Day schedule - In french**Dissertation/Graduation Project : **NO** - Internship : **NO**Activities in English: **YES** - Activities in other languages : **NO**Activities on other sites : **NO**Organized by: **Ecole Polytechnique de Louvain (EPL)**Programme code: **sinf1ba** - European Qualifications Framework (EQF): 6**Table of contents**

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## SINF1BA - Introduction

### Introduction

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## SINF1BA - Teaching profile

### Learning outcomes

#### General objectives

This bachelor's programme offers a general approach to computer science in the context of basic university training. The bachelor's programme leads to the title of "Bachelor of Computer Science" and upon completion of this first cycle of studies, the student will be granted access to the master's programme in computer Science.

This university-level training in computer science trains future specialists capable of creating and elaborating complex and efficient computing systems that satisfy the numerous and ever-increasing needs in our society. It thus trains "software creators" rather than pure programmers. More specifically, the bachelor's programme in computer science aims at the acquisition of the following technical competences and skills :

- Gaining an in-depth understanding of the basic essentials needed to design and implement simple software systems;
- Mastering the underlying foundations of computer science;
- Developing the reasoning and abstraction abilities necessary for the creation of such systems;
- Mastering the mathematical skills needed to carry out such reasoning;
- Acquisition of the knowledge and skills necessary for the future " master's in computer science" which will be orientated towards the engineering of more complex software system;
- Acquisition of a lasting 'know-how', readily adaptable to the continuously evolving field of computer science; learning how to learn.

Computer science comprises the theoretical knowledge and practical skills needed to develop and understand complex software systems. In addition to this technical and more applied knowledge, to become a professional computer scientist, the student has to develop some extra skills such as a creative ability and critical mindset. These studies also train students to become responsible young professionals, capable of apprehending the complex socio-economic world into which computing science is embedded, and to take decisions which are both technically sound and humanly responsible. The bachelor's programme in computer science thus aims at the acquisition of other competences, such as :

- Understanding the mechanisms which govern the socio-economic and/or technical environment in which a given computer system has to be deployed;
- Integration of the acquired technical competences and skills in a multidisciplinary context;
- Developing an intellectual curiosity, an analytic mind, a capacity for critical reflection, sound communication skills and the ability to organise and manage one's studies.

#### Objectives of the foundation studies

The objective of the basic studies is to allow the student to acquire essential competences and skills in the areas of computer science, mathematics, science and technology, economics and management, human sciences and English.

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

**de démontrer la maîtrise d'un solide corpus de connaissances en informatique, qui, en étant complétées par une formation solide dans d'autres domaines, lui permettent de résoudre les problèmes qui relèvent de sa discipline**

Le bachelier vise aussi l'acquisition de **connaissances de base en informatique** :

- Structures discrètes;
- Fondements de la programmation;
- Algorithmique et complexité;
- Architecture des ordinateurs et systèmes d'exploitation;
- Méthode de conception de programmes;
- Gestion de l'information.

De plus, le bachelier est **ouvert vers d'autres disciplines**. Une formation de base solide est offerte dans les domaines suivants :

- Mathématiques pour modéliser une situation et prouver l'exactitude d'une affirmation;
- Statistiques pour pouvoir réaliser une analyse quantitative de données;
- Economie, gestion et sciences humaines pour comprendre le monde socio-économique dans lequel les outils informatiques s'insèrent.

**d'organiser et de mener à son terme une démarche de développement d'un système informatique « classique » de complexité moyenne répondant aux besoins d'un client**

- **Analyser** le problème à résoudre ou les besoins fonctionnels à rencontrer et formuler le cahier des charges correspondant.
- **Modéliser** le problème et **concevoir** une ou plusieurs solutions techniques répondant à ce cahier des charges.
- **Evaluer et classer les solutions** au regard de l'ensemble des critères figurant dans le cahier de charges : efficacité, faisabilité.
- **Implémenter et tester** la solution retenue.

**de contribuer en équipe à la réalisation d'un projet en tenant compte des objectifs, des ressources allouées et des contraintes qui le caractérisent**

- Cadrer et **expliciter les objectifs d'un projet** en collaboration avec les clients.
- **S'engager collectivement** sur un plan de travail, un échéancier et des rôles à tenir.
- **Prendre des décisions en équipe** lorsqu'il y a des choix à faire : que ce soit sur les solutions techniques ou sur l'organisation du travail pour faire aboutir le projet

**de communiquer efficacement oralement et par écrit en français en vue de mener à bien les projets qui lui sont confiés, d'exploiter des documents techniques en anglais et de comprendre des informations transmises oralement en anglais**

- Identifier les besoins du « **client** », **utilisateur avisé dans le domaine de l'informatique : questionner, écouter et comprendre le client**, en étant conscient de l'existence de dimensions non techniques.
- (2) **Argumenter** et convaincre en s'adaptant au langage de ses interlocuteurs : collègues, clients, supérieurs hiérarchiques.
- (3) Communiquer sous **forme graphique et schématique** : interpréter un schéma, présenter les résultats d'un travail, structurer des informations.
- (4) Lire, analyser et **exploiter** des **documents techniques** (diagrammes, manuels, cahiers de charge...).
- (5) **Rédiger** des documents écrits en tenant compte des **exigences contextuelles** et des conventions sociales en la matière (manuel d'utilisation, documentation, rapport de projet).
- (6) **Faire un exposé oral convaincant** en utilisant les techniques modernes de communication.

**faire preuve à la fois de rigueur, d'ouverture et d'esprit critique dans son travail**

- Appliquer les **normes** en vigueur dans sa discipline (terminologie, normes de qualité en terme de documentation et de méthodes de programmation, ...).
- Faire preuve d'**esprit critique** vis-à-vis d'une solution technique pour en vérifier la robustesse et la pertinence dans son contexte d'utilisation.
- **Développer de manière autonome les connaissances** nécessaires pour rester compétent dans son domaine.

## Programme structure

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The student who enrolls in the bachelor's programme in Computer Science will follow a programme of 180 credits, usually spread over 3 years. This programme entitles access to the corresponding master's programme in Computer Science, which is a programme of 120 credits, usually spread over 2 years.

The programme includes a major of 150 credits and a minor of 30 credits.

- The major consists of a set of polyvalent courses of 82 credits in total and a set of Computer Science courses of 68 credits. The general polyvalent formation comprises a solid training in Economics, Management and Human Sciences (34 credits) as well as in Mathematics (32 credits).
- Regarding the minor, UCL university proposes a large variety of minors in sciences (statistics, scientific culture,...) as well as in human sciences (philosophy, economy,...). For more details, please consult the following web-page : <https://www.uclouvain.be/programme-mineures.html>. As an alternative to a minor, subject to the approval of the Committee for the Bachelor in Computer Science, the student can choose a coherent set of optional courses offered at UCL. Whereas, some minors are freely accessible by any student, some others are subject to certain accessibility conditions. When a student would like to access a minor but encounters certain problems, he or she is advised to contact his or her student counsellor.

**The principal subjects addressed in this programme are :**

- Computer Science - 68 credits
- Mathematics- 32 credits
- Economics and Management - 25 credits
- Science and Techniques - 10 credits
- Human Sciences - 9 credits
- English - 6 credits
- Minor - 30 credits

The computer-science courses adhere to those of the standard curricula proposed by international standard organisations in the domain (ACM and IEEE).

## SINF1BA Detailed programme

### Programme by subject

Year

1	2	3
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#### o Tronc commun

#### o General and general-purpose formation (82 credits)

##### o Courses of Mathematics (32 credits)

o LMAT1111F	General Mathematics	Pedro Dos Santos Santana Forte Vaz, Emmanuel Hanert, Augusto Ponce	45h +37.5h	7 Credits	1q	x		
o LMAT1111E	General Mathematics	Marino Gran, Jean Van Schaftingen	30h +22.5h	5 Credits	2q	x		
o LBIR1200	General mathematics II	Pierre Bieliavsky	52.5h +37.5h	6 Credits	1q		x	
o LBIR1203	Probabilities and statistics (I)	Patrick Bogaert	30h+15h	4 Credits	1q		x	
o LSINF1250	Mathematics for computer science	Gildas Avoine, Marco Saerens (compensates Gildas Avoine)	30h+15h	7 Credits	2q		x	
o LBIR1304	Probability and statistics (II)	Patrick Bogaert	22.5h +22.5h	3 Credits	1q			x

##### o Scientific and technical Courses (10 credits)

o LSINF1140	Electronic bases of computer science	Jean-Didier Legat	30h+30h	6 Credits	2q	x		
o LELEC1930	Intoduction to telecommunication	Jérôme Louveaux	30h+15h	4 Credits	2q			x

##### o Human Sciences, Economy, and Managment Courses (34 credits)

o LECGE1317	Organisational Theory	Matthieu de Nanteuil	30h	4 Credits	1q			x
o LCOPS1124	Philosophy	Nathalie Frogneux, Danielle Lories, Stéphane Mercier (compensates Danielle Lories), Christophe Perrin	30h	5 Credits	1 ou 2q	x		
o LESPO1113D	Sociology and Anthropology of the Contemporary Worlds - H. DRAELANTS	Hugues Draelants	40h	5 Credits	1q	x		
o LECGE1115	Political Economics	Paul Belleflamme, Pierre Dehez, Jean Hindriks, Mélanie Lefèvre (compensates Paul Belleflamme), Rigas Oikonomou	45h+15h	5 Credits	1q	x		
o LECGE1212	Macroeconomics	Fabio Mariani	45h+15h	5 Credits	1q		x	
o LECGE1222	Microeconomics	François Maniquet, Eve Ramaekers	45h+15h	5 Credits	1q		x	
o LESPO1122	Foundations of Law	Diane Bernard, Nicolas Bonbled, Céline Romainville, Thibaut Slingeneyer	40h	5 Credits	1 ou 2q	x		

##### o Language Courses (6 credits)

o LANGL1370	English: reading comprehension	Dominique François, Céline Gouverneur (coord.)	30h	3 Credits	2q	x		
o LANGL1372	English for Computer Scientists	Albert Verhaegen	30h	3 Credits	2q		x	

### o Formation in Computing (68 credits)

○ LSINF1101	Introduction to programming	Olivier Bonaventure, Sébastien Combéfis (compensates Olivier Bonaventure), Charles Pecheur	30h+30h	6 Credits	1q	x		
○ LSINF1102	Problem solving using computers	Gildas Avoine, Pierre Schaus (compensates Gildas Avoine)	0h+60h	7 Credits	1q	x		
○ LSINF1103	Algorithmics	Pierre Dupont	30h+30h	6 Credits	2q	x		
○ LSINF1121	Algorithmics and data structures	Pierre Dupont, Virginie Van den Schrieck (compensates Pierre Dupont)	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	José Vander Meulen	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: information transfer	Olivier Bonaventure	30h+30h	5 Credits	1q			x
○ LFSAB1402	Informatics 2	Peter Van Roy	30h+30h	5 Credits	1q		x	
○ LFSAB1509	Project 4 (in Computer Science)	Yves Deville, Marc Lainez (compensates Yves Deville)	22.5h +22.5h	4 Credits	2q			x

### o Minors and choice courses (30 credits)

The student completes his formation with the additional module in computer sciences, a minor of opening or by proposing a program of choice courses, in the approval of the committee of program in computing sciences.

⊗	Option in 2nd year	N.		15 Credits			x	
⊗	Option in 3rd year	N.		15 Credits				x

## List of available minors

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Outre la majeure en sciences informatiques, les étudiants choisiront :

- soit la [mineure d'approfondissement en sciences informatiques](#)
- soit une des autres mineures de la liste ci-dessous
- soit, sur base d'un projet à élaborer avec la conseillère aux études, un ensemble cohérent de cours offerts par l'UCL à raison de 30 crédits

- > [Approfondissement en sciences informatiques](https://www.uclouvain.be/en-prog-2014-app-lsinf110p) [ <https://www.uclouvain.be/en-prog-2014-app-lsinf110p> ]
- > [Mineure en droit \(accès\)](https://www.uclouvain.be/en-prog-2014-min-ladrt100i) [ <https://www.uclouvain.be/en-prog-2014-min-ladrt100i> ]
- > [Mineure en droit \(ouverture\)](https://www.uclouvain.be/en-prog-2014-min-lodrt100i) [ <https://www.uclouvain.be/en-prog-2014-min-lodrt100i> ]
- > [Minor in Culture and Creation](https://www.uclouvain.be/en-prog-2014-min-lcucr100i) [ <https://www.uclouvain.be/en-prog-2014-min-lcucr100i> ]
- > [Minor in Development and Environment](https://www.uclouvain.be/en-prog-2014-min-ldenv100i) [ <https://www.uclouvain.be/en-prog-2014-min-ldenv100i> ]
- > [Minor in Economics](https://www.uclouvain.be/en-prog-2014-min-lecon100i) [ <https://www.uclouvain.be/en-prog-2014-min-lecon100i> ]
- > [Minor in Engineering Sciences : biomedical](https://www.uclouvain.be/en-prog-2014-min-lgbio100i) [ <https://www.uclouvain.be/en-prog-2014-min-lgbio100i> ]
- > [Minor in European Studies](https://www.uclouvain.be/en-prog-2014-min-leuro100i) [ <https://www.uclouvain.be/en-prog-2014-min-leuro100i> ]
- > [Minor in Gender Studies](https://www.uclouvain.be/en-prog-2014-min-lgenr100i) [ <https://www.uclouvain.be/en-prog-2014-min-lgenr100i> ]
- > [Minor in Geography](https://www.uclouvain.be/en-prog-2014-min-lgeog100i) [ <https://www.uclouvain.be/en-prog-2014-min-lgeog100i> ]
- > [Minor in Human and Social Sciences](https://www.uclouvain.be/en-prog-2014-min-lhuso100i) [ <https://www.uclouvain.be/en-prog-2014-min-lhuso100i> ]
- > [Minor in Information and Communication \(\\*\)](https://www.uclouvain.be/en-prog-2014-min-lcomu100i) [ <https://www.uclouvain.be/en-prog-2014-min-lcomu100i> ]
- > [Minor in Linguistics](https://www.uclouvain.be/en-prog-2014-min-lling100i) [ <https://www.uclouvain.be/en-prog-2014-min-lling100i> ]
- > [Minor in Literary Studies](https://www.uclouvain.be/en-prog-2014-min-llitt100i) [ <https://www.uclouvain.be/en-prog-2014-min-llitt100i> ]
- > [Minor in Management \(Computer sciences students\)](https://www.uclouvain.be/en-prog-2014-min-lgesc100i) [ <https://www.uclouvain.be/en-prog-2014-min-lgesc100i> ]
- > [Minor in Musicology](https://www.uclouvain.be/en-prog-2014-min-lmusi100i) [ <https://www.uclouvain.be/en-prog-2014-min-lmusi100i> ]
- > [Minor in Philosophy](https://www.uclouvain.be/en-prog-2014-min-lisp100i) [ <https://www.uclouvain.be/en-prog-2014-min-lisp100i> ]
- > [Minor in Scientific Culture](https://www.uclouvain.be/en-prog-2014-min-lcusc100i) [ <https://www.uclouvain.be/en-prog-2014-min-lcusc100i> ]
- > [Minor in Statistics](https://www.uclouvain.be/en-prog-2014-min-lstat100i) [ <https://www.uclouvain.be/en-prog-2014-min-lstat100i> ]
- > [Minor in Urban Architecture](https://www.uclouvain.be/en-prog-2014-min-larch100i) [ <https://www.uclouvain.be/en-prog-2014-min-larch100i> ]
- > [Minor in entrepreneurship](https://www.uclouvain.be/en-prog-2014-min-lmpme100i) [ <https://www.uclouvain.be/en-prog-2014-min-lmpme100i> ]

(\*) *This program is the subject of access criteria*

## Programme type

### SINF1BA - 1ST ANNUAL UNIT

○ Mandatory

△ Courses not taught during 2014-2015

⊕ Periodic courses taught during 2014-2015

⊗ Optional

⊖ Periodic courses not taught during 2014-2015

‡ Two years course

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

#### ○ Tronc commun

#### ○ General and general-purpose formation

##### ○ Courses of Mathematics

○ LMAT1111F	<a href="#">General Mathematics</a>	<a href="#">Pedro Dos Santos Santana Forte Vaz, Emmanuel Hanert, Augusto Ponce</a>	45h +37.5h	7 Credits	1q
○ LMAT1111E	<a href="#">General Mathematics</a>	<a href="#">Marino Gran, Jean Van Schaffingen</a>	30h +22.5h	5 Credits	2q

##### ○ Scientific and technical Courses

○ LSINF1140	<a href="#">Electronic bases of computer science</a>	<a href="#">Jean-Didier Legat</a>	30h+30h	6 Credits	2q
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##### ○ Human Sciences, Economy, and Management Courses

○ LCOPS1124	<a href="#">Philosophy</a>	<a href="#">Nathalie Frogneux, Danielle Lories, Stéphane Mercier (compensates Danielle Lories), Christophe Perrin</a>	30h	5 Credits	1 ou 2q
○ LESPO1113D	<a href="#">Sociology and Anthropology of the Contemporary Worlds - H. DRAELANTS</a>	<a href="#">Hugues Draelants</a>	40h	5 Credits	1q
○ LECGE1115	<a href="#">Political Economics</a>	<a href="#">Paul Belleflamme, Pierre Dehez, Jean Hindriks, Mélanie Lefèvre (compensates Paul Belleflamme), Rigas Oikonomou</a>	45h+15h	5 Credits	1q
○ LESPO1122	<a href="#">Foundations of Law</a>	<a href="#">Diane Bernard, Nicolas Bonbled, Céline Romainville, Thibaut Slingeneyer</a>	40h	5 Credits	1 ou 2q

##### ○ Language Courses

○ LANGL1370	<a href="#">English: reading comprehension</a>	<a href="#">Dominique François, Céline Gouverneur (coord.)</a>	30h	3 Credits	2q
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#### ○ Formation in Computing

○ LSINF1101	<a href="#">Introduction to programming</a>	<a href="#">Olivier Bonaventure, Sébastien Combéfis (compensates Olivier Bonaventure), Charles Pecheur</a>	30h+30h	6 Credits	1q
○ LSINF1102	<a href="#">Problem solving using computers</a>	<a href="#">Gildas Avoine, Pierre Schaus (compensates Gildas Avoine)</a>	0h+60h	7 Credits	1q
○ LSINF1103	<a href="#">Algorithmics</a>	<a href="#">Pierre Dupont</a>	30h+30h	6 Credits	2q



**SINF1BA - 2ND ANNUAL UNIT**

● Mandatory

△ Courses not taught during 2014-2015

⊕ Periodic courses taught during 2014-2015

⊗ Optional

⊖ Periodic courses not taught during 2014-2015

‡ Two years course

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

**o Tronc commun****o General and general-purpose formation****o Courses of Mathematics**

● LBIR1200	<a href="#">General mathematics II</a>	<a href="#">Pierre Bieliavsky</a>	52.5h +37.5h	6 Credits	1q
● LBIR1203	<a href="#">Probabilities and statistics (I)</a>	<a href="#">Patrick Bogaert</a>	30h+15h	4 Credits	1q
● LSINF1250	<a href="#">Mathematics for computer science</a>	<a href="#">Gildas Avoine, Marco Saerens</a> (compensates Gildas Avoine)	30h+15h	7 Credits	2q

**o Human Sciences, Economy, and Management Courses**

● LECGE1212	<a href="#">Macroeconomics</a>	<a href="#">Fabio Mariani</a>	45h+15h	5 Credits	1q
● LECGE1222	<a href="#">Microeconomics</a>	<a href="#">François Maniquet, Eve Ramaekers</a>	45h+15h	5 Credits	1q

**o Language Courses**

● LANGL1372	<a href="#">English for Computer Scientists</a>	<a href="#">Albert Verhaegen</a>	30h	3 Credits	2q
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**o Formation in Computing**

● LSINF1225	<a href="#">Object-oriented design and data management</a>	<a href="#">Kim Mens</a>	30h+30h	5 Credits	2q
● LSINF1252	<a href="#">Computer Systems 1</a>	<a href="#">Olivier Bonaventure</a>	30h+30h	5 Credits	2q
● LFSAB1402	<a href="#">Informatics 2</a>	<a href="#">Peter Van Roy</a>	30h+30h	5 Credits	1q

**o Minors and choice courses**

The student completes his formation with the additional module in computer sciences, a minor of opening or by proposing a program of choice courses, in the approval of the committee of program in computing sciences.

⊗	<a href="#">Option in 2nd year</a>	N.		15 Credits	
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**SINF1BA - 3RD ANNUAL UNIT**

● Mandatory

△ Courses not taught during 2014-2015

⊕ Periodic courses taught during 2014-2015

⊗ Optional

⊖ Periodic courses not taught during 2014-2015

‡ Two years course

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

**○ Tronc commun****○ General and general-purpose formation****○ Courses of Mathematics**

● LBIR1304	<a href="#">Probability and statistics (II)</a>	<a href="#">Patrick Bogaert</a>	22.5h +22.5h	3 Credits	1q
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**○ Scientific and technical Courses**

● LELEC1930	<a href="#">Intoduction to telecommunication</a>	<a href="#">Jérôme Louveaux</a>	30h+15h	4 Credits	2q
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**○ Human Sciences, Economy, and Managment Courses**

● LECGE1317	<a href="#">Organisational Theory</a>	<a href="#">Matthieu de Nanteuil</a>	30h	4 Credits	1q
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**○ Formation in Computing**

● LSINF1121	<a href="#">Algorithmics and data structures</a>	<a href="#">Pierre Dupont, Virginie Van den Schriek</a> (compensates Pierre Dupont)	30h+30h	5 Credits	1q
● LINGI1101	<a href="#">Discrete mathematics: logical foundations of computing science</a>	<a href="#">Peter Van Roy</a>	30h+30h	5 Credits	1q
● LINGI1122	<a href="#">Program conception methods</a>	<a href="#">José Vander Meulen</a>	30h+30h	5 Credits	2q
● LINGI1123	<a href="#">Computability and complexity</a>	<a href="#">Yves Deville</a>	30h+30h	5 Credits	2q
● LINGI1131	<a href="#">Computer language concepts</a>	<a href="#">Peter Van Roy</a>	30h+30h	5 Credits	2q
● LINGI1341	<a href="#">Computer networks: information transfer</a>	<a href="#">Olivier Bonaventure</a>	30h+30h	5 Credits	1q
● LFSAB1509	<a href="#">Project 4 (in Computer Science)</a>	<a href="#">Yves Deville, Marc Lainez</a> (compensates Yves Deville)	22.5h +22.5h	4 Credits	2q

**○ Minors and choice courses**

The student completes his formation with the additional module in computer sciences, a minor of opening or by proposing a program of choice courses, in the approval of the committee of program in computing sciences.

⊗	<a href="#">Option in 3rd year</a>	N.		15 Credits	
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## SINF1BA - Information

### Admission

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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 2014 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 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.

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## Teaching method

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A significant part of the courses in Computer Science will focus on learning techniques through problem solving. Amongst others, two integrated computer science projects will enable the students to integrate the various course topics and expose them to the problem of realizing small-scale projects (via laboratory sessions in the first year), or medium-scale projects (via a project during the second quadrimester of the third year).

## Evaluation

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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 content and activities are evaluated in accordance with the prevailing rules of the University (see the exam regulations). Most of the courses include at least one evaluation during the course of the quadrimester (ongoing evaluation), in addition to a final examination during the exam sessions (in January, June or September). Evaluations are either in written or in oral form. The specific evaluation details and procedures for each course are presented at the start of each study period.

## Mobility and/or Internationalisation outlook

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The computer-science related components of the programme adhere to the standard curricula proposed by international standard organisations such as ACM and IEEE. This fosters student mobility to or from the numerous universities offering similar programmes that conform to these norms.

The programme respects the harmonisation rules established by universities of the CFB; the degree obtained upon completion of the programme therefore entitles direct access, without the need for any complementary prerequisites, to the master's programme in Computer Science at any one of those universities.

In the context of the master studies in Computer Science at UCL, the student also has the right to participate in the Erasmus/Socrates exchange programmes which UCL has subscribed to, together with universities from numerous European and extra-European countries, as well as with the Catholic University of Leuven (Katholieke Universiteit Leuven) in Flanders.

## Possible trainings at the end of the programme

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### Access to the master's in Computer Science

The bachelor's programme in Computer Science grants direct access to the master's programme in Computer Science.

### Access to the master's of Business Science

The master's programme in Business Science is accessible to students having followed a minor in Business Studies, under certain conditions which are described on the web page dedicated to this minor <https://www.uclouvain.be/prog-lmingest3.html>

## Contacts

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## Curriculum Management

Entité de la structure INFO

Acronyme	<b>INFO</b>
Dénomination	Commission de programme - Sciences informatiques et ingénieur civil en informatique
Adresse	Place Sainte Barbe, 2 bte L5.02.01 1348 Louvain-la-Neuve Tél 010 47 31 50 - Fax 010 45 03 45
Secteur	Secteur des sciences et technologies ( <a href="#">SST</a> )
Faculté	Ecole Polytechnique de Louvain ( <a href="#">EPL</a> )
Commission de programme	Commission de programme - Sciences informatiques et ingénieur civil en informatique ( <a href="#">INFO</a> )

**Academic Supervisor :** [Kim MENS](#)

## Jury

Président du Jury : **Jean-Didier LEGAT**

Secrétaire du Jury : **Pierre SCHAUS**

## Usefull Contacts

Conseillère aux études : **Chantal PONCIN**

