

At Charleroi - 180 credits - 3 years - Day schedule - In French

Dissertation/Graduation Project : **NO** - Internship : **NO**

Activities in English: **NO**

SINC1BA - Introduction

Introduction

Introduction

Computer science, or more generally information and communications technology (ICT), is everywhere; everyone uses computers/smartphones/... to communicate, work, study, play, travel, and manage. More and more activities are assisted by computers. SMEs, public services, education world, associations, leisure, in two ...

Your profile

You

- have a taste for problem solving;
- are pushed by a great curiosity;
- overflow of creativity and imagination;
- are a head for abstraction, analysis and synthesis;
- have a methodical mind and show rigor in your reasoning;
- are good for human contact, organization of teamwork, leadership, etc.

Following a strong mathematical option during high school and feeling an attraction to science or economics are assets.

Your future job

During his career, the computer scientist will flourish and evolve in one or more of the following profiles:

- The designer identifies the needs of the future user and determines the technical means useful to fulfil these needs. He is able to speak "the language" of the customer, it has a fairly broad culture to interact successfully with non-computer experts. He masters computer technology to identify the best solution. It builds a quality architecture for this solution.
- The achiever is able to translate the indications and guidelines produced by the designer in computer components. He analyses in detail some components of the architecture, he programs, tests, deploys these components into an integrated solution. His technical expertise is very sharp.
- The IT project manager takes care of the smooth running of the project; he is responsible for the completion of the tasks associated with these systems, their safety, planning their development. As the designer, it has qualities in terms of human contacts, a good general education and strong technical skills.

Your programme

The bachelor has a compulsory part covering different disciplines

- computer science ;
-
- life sciences;
- human sciences;
- english.

SINC1BA - Teaching profile

Learning outcomes

Year

				1	2	3
○ LSINC1252	Informatics Systems	Etienne Riviere	PK [q1] [30h+30h] [5 Credits] Δ ⓘ			x
○ LSINC1301	Databases and modeling		PK [q1] [30h+30h] [5 Credits] Δ ⓘ			

List of available minors

- > [Additional module in computer science](#) [en-prog-2024-appsinf]
- > [Additional module in life sciences and health for computer scientists](#) [en-prog-2024-appscvs]

Course prerequisites

The **table** below lists the activities (course units, or CUs) for which there are one or more prerequisites within the programme, i.e. the programme CU for which the learning outcomes must be certified and the corresponding credits awarded by the jury before registering for that CU.

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

Prerequisites and student's annual programme

As the prerequisite is for CU registration purposes only, there are no prerequisites within a programme year. Prerequisites are defined between CUs of different years and therefore influence the order in which the student will be able to register for the programme's CUs.

In addition, when the jury validates a student's individual programme at the beginning of the year, it ensures its coherence, meaning that it may:

- require the student to combine registration in two separate CUs which it considers necessary from a pedagogical point of view.
- transform a prerequisite into a corequisite if the student is in the final year of a degree course.

For more information, please consult the [Academic Regulations and Procedures](#).

Prerequisites list

- LANGL1183** "[English for Computer Scientists II](#)" has prerequisite(s) LANGL1182
- [LANGL1182 - English for Computer Scientists](#)
- LANGL1184** "[English for Computer Scientists III](#)" has prerequisite(s) LANGL1183
- [LANGL1183 - English for Computer Scientists II](#)
- LSINC1104** "[Programming Paradigms and Concurrency](#)" has prerequisite(s) LSINC1101
- [LSINC1101 - Computer Science 1: Introduction to Programming](#)
- LSINC1113** "[Additional Mathematics](#)" has prerequisite(s) LSINC1111
- [LSINC1111 - Analysis](#)
- LSINC1114** "[Analysis of biological data](#)" has prerequisite(s) LSINC1101 AND LSINC1111 AND LSINC1002
- [LSINC1101 - Computer Science 1: Introduction to Programming](#)
 - [LSINC1111 - Analysis](#)
 - [LSINC1002 - Project 2 in Computer Science: Design of an Interactive Website](#)
- LSINC1121** "[Algorithms and data structure](#)" has prerequisite(s) LSINC1402
- [LSINC1402 - Computer Science 2](#)
- LSINC1201** "[Interaction and Visualization Techniques](#)" has prerequisite(s) LSINC1101
- [LSINC1101 - Computer Science 1: Introduction to Programming](#)
- LSINC1211** "[Probability and Statistics](#)" has prerequisite(s) LSINC1111 AND LSINC1112
- [LSINC1111 - Analysis](#)
 - [LSINC1112 - Algebra](#)
- LSINC1231** "[Biochemistry](#)" has prerequisite(s) LSINC1131 AND LSINC1132
- [LSINC1131 - General and Organic Chemistry](#)
 - [LSINC1132 - General biology](#)
- LSINC1232** "[Elements of Human Pathology](#)" has prerequisite(s) LSINC1131 AND LSINC1133
- [LSINC1131 - General and Organic Chemistry](#)
 - [LSINC1133 - Introduction to Human Physiology](#)
- LSINC1233** "[Biodiversity, Biological and Ecological Evolution](#)" has prerequisite(s) LSINC1132
- [LSINC1132 - General biology](#)
- LSINC1313** "[Numerical algorithmic](#)" has prerequisite(s) LSINC1101 AND LSINC1111 AND LSINC1112
- [LSINC1101 - Computer Science 1: Introduction to Programming](#)
 - [LSINC1111 - Analysis](#)
 - [LSINC1112 - Algebra](#)
- LSINC1331** "[Molecular biology](#)" has prerequisite(s) LSINC1231 AND LSINC1211
- [LSINC1231 - Biochemistry](#)
 - [LSINC1211 - Probability and Statistics](#)
- LSINC1332** "[Biotechnology: omics](#)" has prerequisite(s) LSINC1231 AND LSINC1211

- LSINC1231 - [Biochemistry](#)
- LSINC1211 - [Probability and Statistics](#)

o **Formation en mathématiques et science des données**

SINC1BA - 2ND ANNUAL UNIT

- Mandatory
- ⊗ Optional
- △ Not offered in 2024-2025
- ⊖ Not offered in 2024-2025 but offered the following year
- ⊕ Offered in 2024-2025 but not the following year
- △ ⊕ Not offered in 2024-2025 or the following year
- Activity with requisites
- 🌐 Open to incoming exchange students
- 🚫 Not open to incoming exchange students
- (FR) Teaching language (FR, EN, ES, NL, DE, ...)

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

o Content:**o Formation en informatique**

○ LSINC1402	Computer Science 2 ■	Sébastien Jodogne Ramin Sadre	FR [q1] [30h +30h] [5 Credits] 🌐
○ LSINC1201	Interaction and Visualization Techniques ■		FR [q1] [30h +30h] [5 Credits] 🌐
○ LSINC1123	Calculability, Logic and Complexity	Yves Deville	FR [q2] [30h +30h] [5 Credits] 🌐
○ LSINC1104	Programming Paradigms and Concurrency ■	Peter Van Roy	FR [q2] [30h +30h] [5 Credits] 🌐
○ LSINC1503	Project 3 in Computer Science: Improvement of Algorithms Efficiency ■	Olivier Bonaventure	FR [q2] [30h +30h] [5 Credits] 🌐
○ LSINC1313	Numerical algorithmic ■	Sébastien Jodogne Estelle Massart	FR [q1] [30h +30h] [5 Credits] 🌐

o Formation en mathématiques et science des données

○ LSINC1113	Additional Mathematics ■	Benoît Legat	FR [q1] [30h +30h] [5 Credits] 🌐
○ LSINC1211	Probability and Statistics ■		FR [q2] [30h +30h] [5 Credits] 🌐

o Formation en langues et sciences humaines

○ LSINC1241	Law, Ethics and Technology		FR [q2] [30h +30h] [5 Credits] 🌐
○ LANGL1183	English for Computer Scientists II ■	Lucille Meyers (coord.)	FR [q1] [30h] [5 Credits] 🌐

⊗ Minor or additional module

The student completes his training with the additional module in computer science or the additional module in life sciences and health for computer scientists.
Maximum 1 element(s)

SINC1BA - 3RD ANNUAL UNIT

- Mandatory
- ✂ Optional
- △ Not offered in 2024-2025
- ⊖ Not offered in 2024-2025 but offered the following year
- ⊕ Offered in 2024-2025 but not the following year
- △ ⊕ Not offered in 2024-2025 or the following year
- Activity with requisites
- 🌐 Open to incoming exchange students
- 🌐 Not open to incoming exchange students

[FR]

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".

Contacts

Curriculum Management

Entity

Structure entity

Denomination

Faculty

Sector

Acronym

Postal address

SST/EPL/INFO

[\(INFO\)](#)

Louvain School of Engineering [\(EPL\)](#)

Sciences and Technology [\(SST\)](#)

INFO

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Academic supervisor: [Siegfried Nijssen](#)

Jury

- Président du jury: [Claude Oestges](#)
- Secrétaire du jury: [Cristel Pelsser](#)

Useful Contact(s)

- Secrétariat: bac-sinc@uclouvain.be
- Conseillère aux études en sciences informatiques TeeG Tfstiqu5u3295e0(•2.13900757 Tm [(•)] T1Tm Oestges) TJ 0 g /F5 8 Tul Co6 Tm m m TeeG

