







- 3.1. Confronted with a new computer problem, graduates will **explore** the area in question and obtain the necessary information to **complete a situational analysis** using the various resources at their disposal (library, Internet, researchers, industry experts)
- 3.2. In the graduation project (possibly paired with a company internship) on a new problem, graduates **construct a model** of the underlying phenomenon from a computer science perspective. On the basis of this model, **graduates formulate and test different computer devices capable of solving the problem in question** (for example, computerised processing of an image by a scanner to facilitate medical diagnosis)
- 3.3. Once in possession of the experimental results, graduates summarise their conclusions in a report, where they also discuss **how key variables influenced the behaviour of the phenomenon being studied**. Based on their results, graduates will make recommendations about how to **develop and implement innovative technical solutions** for the problems in question.
4. Participate in a group project
- 4.1. As a member of a team project, graduates will collaborate to study a problem and its context with the goal of itemising its different parts, issues and constraints. They will then collaborate **to draft a specifications note reiterating the key elements of the project framework**: problem and solution, objectives and performance indicators, risks, deadlines, resource limits, etc.
- 4.2. Once the project framework is defined, graduates **collaborate on a plan of action**. The team agrees to work collectively on a work schedule, the intermediary steps, the division of labour and project deadlines.
- 4.3. Team members share their knowledge and skills **to solve problems collectively** that are raised over the course of the project whether they are technical or not. Graduates are able to step back when necessary to overcome team difficulties or conflicts:
- 4.4. Mindful of the commitments made during the course of the project, graduates alert their teammates about decisions that need to be made in the event of a problem. Through steering committee meetings, graduates **make the necessary decisions** to organise or reorganise project objectives.
5. Communicate effectively orally and in writing with the goal of carrying out projects (in particular in English)
- 5.1. Faced with a computer development project, graduates are able to identify and question the relevant actors. **Through their exchanges with those involved in the project, graduates assess the project environment and relevant issues**, which requires them to specify their needs, expectations and limits in a specifications note while keeping in mind system functionalities as well as the conditions for use (interfaces with other applications, maintenance, progress, etc.)
- 5.2. By communicating, **graduates take into account the fact that their interlocutors have not necessarily mastered the language of computers** and do not have the same idea of the issues and solutions envisaged by computer science.
- 5.3. In certain critical phases of a project, there are collective choices to be made. To facilitate decision making, the graduate must **be capable of providing his/her interlocutors with a summary of the situation and its issues**. To this end, he/she is capable of communicating necessary information by using schemas or graphs of the computer system.
- 5.4. Graduates know how to use reference materials or computer language or software manuals in both English and French. They **understand technical reports written in English**.
- 5.5. During the development of a computer application, graduates **can ensure the tracking and documentation in a concise and precise language**: specifications note, software structures and their related data, operating modes. Graduates are also capable of drafting summary reports that describe their design and technology choices.
6. Demonstrate autonomy, rigor, openness, critical thinking as well as a sense of ethics when doing your job
- 6.1. In their fields of study, students **master the technical vocabulary and usage standards** that allow them to easily understand a scientific article or technical document or to communicate with specialists in their field.
- 6.2. Graduates will take into account the socio-economic aspects of a project in the specifications note, in particular the compatibility between technological progress and ethical standards
- 6.3. Regarding the development of an application that meets an industrial challenge or provides an important service (for example ambulance management), **graduates will ensure the robustness and feasibility** of the application for its users.
- 6.4. Confronted with a new problem, **graduates autonomously acquire and use information and computer tools that they need to solve the problem** even if they have not explicitly learned about them during their coursework.

## Programme structure

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The Master's degree programme consists of four parts:

- Core curriculum, focused on the graduation project (35 credits)
- Required final specialisation, mandatory training (30 credits)
- One or more majors allowing you to specialize in a field of computer science (20 to 55 credits)
- Elective courses (0 to 55 credits)

The graduation project is normally completed in the last annual block. Regarding required and elective courses, students may (depending on their major) take these courses in the 1st or 2nd year as long as they have completed the course prerequisites. This is particularly the case for students who completed part of their education abroad. The yearly distribution of activities as outlined in the detailed programme is subject to change.

Furthermore, students have the opportunity to broaden their education by enrolling in non-technical elective courses if they have a clear objective in mind.

x

## O2M Programme

### Detailed programme by subject

#### CORE COURSES [35.0]

- 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...)

				Year	
				1	2
○ LINFO2990	<a href="#">Graduation project/End of studies project</a> The graduation project can be written and presented in French or English, in consultation with the supervisor. It may be accessible to exchange students by prior agreement between the supervisors and/or the two universities.		EN [q1+q2] [] [25 Credits] 🌐		x
○ LELEC2531	<a href="#">Digital electronic systems</a>	Martin Andraud	EN [q1] [30h+30h] [5 Credits] 🌐 > French-friendly	x	x
○ LEPL2020	<a href="#">Professional integration work</a> The modules of LEPL2020 course are organized over the two years of the master's degree. It is strongly recommended that students take them from year 1, but they will only be able to register for the course at the earliest the year in which they present their final graduation project.  Students who have other professional integration activities in their personal programme, or who can demonstrate an equivalent activity could be exempted from this course. This equivalence is at the discretion of the student.				

**PROFESSIONAL FOCUS [30.0]**

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- 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, ...)

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

Year

**1 2****o Content:**

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**o Computer science courses**

○ LINFO2132	Languages and translators	Ramin Sadre	33 [q2] [30h+30h] [6 Cred 0Ls]
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## MAJORS FOR THE MASTER'S DEGREE IN COMPUTER SCIENCE AND ENGINEERING

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Students have to choose one or several options among:

### MAJOR IN ARTIFICIAL INTELLIGENCE: BIG DATA, OPTIMIZATION AND ALGORITHMS

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Students completing the major in artificial intelligence: big data, optimization and algorithms will be able to: Identify and use methods and techniques that create software-based solutions to complex problems, Understand and put to good use the methods and techniques pertaining to artificial intelligence such as automated reasoning, heuristic research, knowledge acquisition, automated learning, problems related to constraint satisfaction, Identify a category of applications and how to use its methods and tools; understand specific categories of applications and their specific techniques-for example computer vision, scheduling, data mining, natural language processing, bioinformatics, big data processing; Formalise and structure a body of complex knowledge by using a systematic and rigorous approach to develop quality "intelligent" systems.

- 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...)

Students shall select 20 to 30 credits among

Year

1 2

#### o Content:

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#### o Required courses in Artificial Intelligence: big data, optimization and algorithms

○ LINFO2263	Computational Linguistics	Pierre Dupont	FR [q1] [30h+15h] [5 Credits] 🌐 > French-friendly	x	x
○ LINFO2266	Advanced Algorithms for Optimization	Pierre Schaus	FR [q1] [30h+15h] [5 Credits] 🌐 > French-friendly		





**MAJOR IN SOFTWARE ENGINEERING AND PROGRAMMING SYSTEMS**

Student completing the major in Software Engineering and Programming Systems will be able to: Understand and explain problems pertaining to large scale software projects as well as the critical impact of their solutions throughout the duration of the project (construction scope, validation, documentation, communication and large scale project management as well as expense limits and deadlines), Choose and apply engineering methods and tools related to complex software systems to meet strict quality control criteria: reliability, adaptability, upgradeability, performance, security, usability), Model products and processes necessary to obtain such systems and analyse the models in question, Design and create programmes to analyse, convert and optimise computer performance, Put to good use different programming language paradigms, in particular those that deal with competing functional and object oriented programmes, Understand the issues associated with different competing programming models and use the appropriate model, Define a new language (syntax and semantics) appropriate to a specific context.

- 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...)

Students shall select 20 to 30 credits among

Year

1 2

**o Content:****o Required courses in software engineering and programming systems**

○ LINFO2143	Concurrent systems : models and analysis	Charles Pecheur	○ [q1] [30h+15h] [5 Credits] 🌐 > French-friendly	X	X
○ LINFO2251	Software Quality Assurance	Charles Pecheur	○ [q2] [30h+15h] [5 Credits] 🌐 > French-friendly	X	X
○ LINFO2252	Software Maintenance and Evolution	Kim Mens	○ [q1] [30h+15h] [5 Credits] 🌐 > French-friendly	X	X
○ LINFO2345	Languages and algorithms for distributed Applications	Peter Van Roy	○ [q1] [30h+15h] [5 Credits] 🌐 > French-friendly	X	X

**⊗ Elective courses in Software Engineering and Programming Systems**

Students can select 10 credits among

⊗ LINFO2145	Cloud Computing	Etienne Riviere	○ [q1] [30h+15h] [5 Credits] 🌐 > French-friendly	X	X
⊗ LINFO2347	Computer system security	Ramin Sadre	○ [q2] [30h+15h] [5 Credits] 🌐 > French-friendly	X	X
⊗ LINFO2355	Multicore programming	Etienne Riviere	○ [q2] [30h+15h] [5 Credits] 🌐 > French-friendly	X	X
⊗ LINFO2364	Mining Patterns in Data	Siegfried Nijssen	○ [q2] [30h+15h] [5 Credits] 🌐 > French-friendly	X	X
⊗ LINFO2365	Constraint programming	Pierre Schaus	○ [q2] [30h+15h] [5 Credits] 🌐 > French-friendly	X	X
⊗ LINFO2335	Programming paradigms	Kim Mens	○ [q2] [30h+15h] [5 Credits] 🌐 > French-friendly	X	X
⊗ LINFO2381	Health Informatics	Sébastien Jodogne	○ [q2] [30h+30h] [5 Credits] 🌐 > French-friendly	X	X
⊗ LINFO2382	Computer supported collaborative work	Jean Vanderdonck	○ [q1] [30h+15h] [5 Credits] 🌐 > French-friendly	X	X

## MAJOR IN DATA SCIENCE AND APPLIED MATHEMATICS

This major is available only to students who majored or minored in Applied Mathematics during their bachelor's degree programme. Students completing the major Computing and Applied Mathematics will be able to: Understand both applied mathematics and computing including algorithms, scientific calculations, computer system modelling, optimisation, automated learning or data mining, Understand and use the methods and techniques related to advanced algorithms such as optimisation methods, constraint programming, algorithms of graphs, numerical algorithms or analysis and design of algorithms, Identify and use models and techniques relating to statistics, automated learning and data mining; understand categories of applications used for the processing of raw data as well as automatic forms used to mine information out of large data sets.

- 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...)

The student shall select 20 to 30 credits among

Year

1 2

### Content:

#### Required courses in Data Science and Applied Mathematics (20 credits)

○ LINMA2472	Algorithms in data science	Jean-Charles Delvenne (coord.) Benoit Legat (compensates Vincent Blondel)	EN [q1] [30h+22.5h] [5 Credits] 🌐 > French-friendly	X	X
○ LINMA2710	Scientific computing	Pierre-Antoine Absil Benoit Legat	EN [q2] [30h+22.5h] [5 Credits] 🌐 > French-friendly	X	X
○ LINFO2275	Data mining & decision making	Marco Saerens	EN [q2] [30h+15h] [5 Credits] 🌐 > French-friendly	X	X
○ LINFO2364	Mining Patterns in Data	Siegfried Nijssen	EN [q2] [30h+15h] [5 Credits] 🌐 > French-friendly	X	X

#### Elective courses in Data Science and applied mathematics

Student shall select max. 10 credits among

⊗ LELEC2870	Machine learning : regression, deep networks and dimensionality reduction	John Lee John Lee (compensates Michel Verleysen)	EN [q1] [30h+30h] [5 Credits] 🌐 > French-friendly	X	X
⊗ LINFO2266	Advanced Algorithms for Optimization	Pierre Schaus	EN [q1] [30h+15h] [5 Credits] 🌐 > French-friendly		





## MAJOR IN BIOMEDICAL ENGINEERING

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This major is available only to students who minored in biomedical engineering during their Bachelor's degree programme. The objective of the biomedical engineering major is to train engineers who are capable of meeting future technological challenges in the scientific and technical fields related to biomedical engineering. This major provides students with basic knowledge about bioinformatics as well as other biomedical engineering fields such as bioinstrumentation, biomaterials, medical imaging, mathematical modelling, artificial organs and rehabilitation and biomechanics. The collaboration between the Louvain School of Management and the School of Medicine provides an interdisciplinary curriculum where engineering is applied to the complex and varied biomedical field.

- 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, ...)

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Click on the course title to see detailed informations (objectives, methods, ev4ailed informations (obje27.93 6.955 cm /Im7 Do Q 7(objectives, meTm (( Teac



**OPTION NETWORKS AND SYSTEMS**

Peter Van Roy

Students who have completed the "Networks and Systems" track should be able to:

- Understand and explain different devices and protocols used in computer and cellular networks;
- Design, configure and manage computer networks while taking into account application needs;
- Understand the operation of IoT and cellular networks;
- Explain the problems that affect cellular and IoT networks and develop solutions to cope with them;
- Understand how to optimise applications to efficiently use parallel cores;
- Understand, implement and use lock-free data structures;
- Understand the interactions between real-time operating systems and hardware;
- Design and implement applications running on embedded systems

- 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...)

Students shall select 20 to 30 credits among:

Year  
1 2

o **Content:**

o **Required courses in Networks and systems**

○ LINFO2142	Computer networks: configuration and management	Olivier Bonaventure	FR [q1] [30h+30h] [5 Credits] 🌐 > French-friendly	X	X
○ LINFO2146	Mobile and Embedded Computing	Ramin Sadre	FR [q2] [30h+15h] [5 Credits] 🌐 > French-friendly	X	X
○ LINFO2315	Design of Embedded and real-time systems	Cristel Pelsser	FR [q2] [30h+30h] [5 Credits] 🌐 > French-friendly	X	X
○ LINFO2355	Multicore programming	Etienne Riviere	FR [q2] [30h+15h] [5 Credits] 🌐 > French-friendly	X	X

o **Elective courses in Networks and Systems**

⊗ LINFO2347	Computer system security	Ramin Sadre	FR [q2] [30h+15h] [5 Credits] 🌐 > French-friendly	X	X
⊗ LINFO2145	Cloud Computing	Etienne Riviere	FR [q1] [30h+15h] [5 Credits] 🌐 > French-friendly	X	X
⊗ LINFO2144	Secured systems engineering		FR [q2] [30h+15h] [5 Credits] 🌐 > French-friendly	X	X
⊗ LINFO2143	Concurrent systems : models and analysis	Charles Pecheur	FR [q1] [30h+15h] [5 Credits] 🌐 > French-friendly	X	X
⊗ LINFO2345	Languages and algorithms for distributed Applications	Peter Van Roy	FR [q1] [30h+15h] [5 Credits] 🌐 > French-friendly	X	X
⊗ LINFO2381	Health Informatics	Sébeisc0 cm 0 0 m 70.865997 0 1 59.528 1 1 1 1 h W n 1 G [] 0 d 2 w 0 0 m 70.865			

## OPTION EN INFORMATIQUE MÉDICALE

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Students completing the major in "Health informatics" will be able to:

- Identify and use methods and techniques that provide software-based solutions to complex problems encountered in hospitals, in bio-pharmaceutical environments, in life sciences, or in digital health.
- Take part in multidisciplinary projects bringing together medical, biological and engineering expertise to the benefit of patient health.
- Understand and put to good use the methods and techniques pertaining to medical informatics and bioinformatics, such as artificial intelligence, health interoperability, clinical knowledge structuring, applied statistics, information security, software quality, as well as the effective management and processing of large volumes of data.
- Understand specific categories of applications where these methods and techniques can be applied, such as diagnostic support, therapeutic assistance, hospital information systems, medical and biomedical imaging, smart devices, clinical trials, health data mining, as well as automated processing of the medical language.
- Formalize and structure a body of complex knowledge by using a systematic and rigorous approach to the development of high-quality medical and biomedical information systems.

○ 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, ...)

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

Students shall select 20 to 30 credits among:

Year

1 2

### ○ Content:

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- 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...)

Year

1 2

### Content:

⊗ LINFO2401	<a href="#">Open Source strategy for software development</a>	Lionel Dricot	EN [q1] [30h+15h] [5 Credits] 🌐 > French-friendly	x	x
⊗ LINFO2402	<a href="#">Open Source Project</a>		EN [q1+q2] [0h] [5 Credits] 🌐 > French-friendly	x	x

## OPTIONS ET COURS AU CHOIX EN CONNAISSANCES SOCIO-ÉCONOMIQUES

### BUSINESS RISKS AND OPPORTUNITIES

- 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...)

Les étudiant-es doivent réussir au moins 15 crédits pour valider l'option. Cette option ne peut être prise simultanément avec l'option « Formation interdisciplinaire en création d'entreprise - CPME ».




Year

1 2

### Content:

○ LEPL2211	<a href="#">Business issues introduction</a>	Benoît Gailly	EN [q2] [30h] [3 Credits] 🌐 > French-friendly	x	x
○ LEPL2212					

## ⌘ Cours en Sourcing and Procurement

⌘ LLSMS2036	Supply Chain Procurement	Per Joakim Agrell Antony Paulraj	EN [q1] [30h] [5 Credits] 	X	X
⌘ LLSMS2038	Procurement Organisation and Scope	Constantin Blome Canan Kocabasoglu Hillmer (compensates Constantin Blome)	EN [q1] [30h] [5 Credits] 	X	X
⌘ LLSMS2037	Sourcing Strategy	Constantin Blome Michael Henke	EN [q1] [30h] [5 Credits] 		

## MAJOR IN INTERDISCIPLINARY PROGRAM IN ENTREPRENEURSHIP - INEO

Commune à la plupart des masters de l'EPL, cette option a pour objectif de familiariser l'étudiant-e avec les spécificités de l'entrepreneuriat et de la création d'entreprise afin de développer chez lui les aptitudes, connaissances et outils nécessaires à la création d'entreprise.

Cette option rassemble des étudiants de différentes facultés en équipes interdisciplinaires afin de créer un projet entrepreneurial. La formation interdisciplinaire en entrepreneuriat (INEO) est une option qui s'étend sur 2 ans et s'intègre dans plus de 30 Masters de 9 facultés/écoles de l'UCLouvain. Le choix de l'option INEO implique la réalisation d'un mémoire interfacultaire (en équipe) portant sur un projet de création d'entreprise. L'accès à cette option, ainsi qu'à chacun des cours, est limité aux étudiant-es sélectionnés sur dossier. Toutes les informations sur <https://uclouvain.be/fr/etudier/ineo>.

L'étudiant.e qui choisit de valider cette option doit sélectionner au minimum 20 crédits et au maximum 25 crédits. Cette option n'est pas accessible en anglais et ne peut être prise simultanément avec l'option « Enjeux de l'entreprise ».

- 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...)

Year

1 2

### Content:

#### Required courses

○ LINEO2001	<a href="#">Théorie de l'entrepreneuriat</a>	Frank Janssen	(FR) [q1] [30h+20h] [5 Credits] ⊗	x
○ LINEO2002	<a href="#">Aspects juridiques, économiques et managériaux de la</a>			





## Course prerequisites

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There are no prerequisites between course units (CUs) for this programme, i.e. the programme activity (course unit, CU) whose learning

## INFO2M - Information

### Access Requirements

Master course admission requirements are defined by the French Community of Belgium Decree of 7 November 2013 defining the higher education landscape and the academic organisation of courses.

General and specific admission requirements for this programme must be satisfied at the time of enrolling at the university.

Unless explicitly mentioned, the bachelor's, master's and licentiate degrees listed in this table or on this page are to be understood as those issued by an institution of the French, Flemish or German-speaking Community, or by the Royal Military Academy.

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

#### SUMMARY

- > [General access requirements](#)
- > [Specific access requirements](#)
- > [University Bachelors](#)
- > [Non university Bachelors](#)
- > [Holders of a 2nd cycle University degree](#)
- > [Access based on validation of professional experience](#)
- > [Access based on application](#)
- > [Admission and Enrolment Procedures for general registration](#)

### Specific access requirements

This programme is taught in English with no prerequisite in French. A certificate is required for the holders of a non-Belgian degree, see selection criteria of the "access on the file".

#### University Bachelors

Diploma	Special Requirements	Access	Remarks
<b>UCLouvain Bachelors</b>			



- For others institutions [Access based on application](#) See Personalized Access

## Non university Bachelors

> Find out more about [links](#) to the university

## Holders of a 2nd cycle University degree

Diploma	Special Requirements	Access	Remarks
"Licenciés"			
Masters			
		Direct access	

## Access based on validation of professional experience

> It is possible, under certain conditions, to use one's personal and professional experience to enter a university course without having the required qualifications. However, validation of prior experience does not automatically apply to all courses. Find out more about [Validation of priori experience](#).

## Access based on application

Access based on application : access may be granted either directly or on the condition of completing additional courses of a maximum-1 0 224.2350006

## Teaching method

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### Active teaching strategies and non-technical skills

The teaching methods used in the Master's degree programme in civil engineering are consistent with those of the Bachelor's degree programme in engineering sciences: active learning, an equal mix of group work and individual work, and emphasis on the development of non-technical skills. In particular, our pedagogy prioritises projects (including a large scale project that puts student groups in a semi-professional situation).

Students will be exposed to various teaching methods: lectures, exercise sessions, problem solving sessions, case studies, industry or research internships, group work, individual work, seminars and conferences offered by the industrial sector. This variety of teaching techniques helps students to build their knowledge in an iterative and progressive manner while at the same time develop their autonomy as well as their organisation, time management and communication skills.

### Use of Foreign Languages

Globalisation demands that all societies open up to foreign markets. In addition, the main language used in computer science is English. The use of English throughout the programme allows students to develop their mastery of this language, which will facilitate their integration into universities and foreign companies. Course materials as well as educational support are in English. However, students may express themselves in French during class or evaluations. Specifically, the Master's thesis or graduation project may be written and defended in English or French.

Furthermore, the programme foresees the possibility of taking language classes at the ILV and participating in study abroad programs.

Overall, the programme is taught in English with the exception of the biomedical engineering major and the majors in management and small and medium sized business creation.

### Open to other disciplines

Students are encouraged to enlarge their training to include other engineering sciences and techniques, management as well as the humanities and social sciences. In fact, over the course of their careers, computer scientists must manage (team) projects and show an interest in the complex socio-economic context in which computer science takes place. They must dialogue with colleagues from different educational backgrounds who prioritise other aspects of a project. Thus it is imperative that students enlarge their field of vision beyond computer science.

## 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".***

Student work is evaluated according to University rules (see the rules for evaluating coursework and exams) namely written and oral exams, laboratory exams, individual or group work, public presentations of projects and theses defences. For classes taught in English, questions are in English. Students may respond in French. For classes taught in French, questions are in French. Students may ask for help translating the questions into English and respond to them in English.

Certain activities completed during the semester and supervised by a teaching team in collaboration with students do not take place outside of the class session. Thus they are not re-evaluated in a future course session.

At the beginning of the semester, professors will explain their marking scheme, which is based on the learning outcomes of the course (that it frequently shares with those of the Master's degree programme).

For more information on evaluation methods, students may consult the relevant evaluation descriptions.

To obtain a passing grade, the marks received for the teaching units are offset by their respective credits.

## Mobility and/or Internationalisation outlook

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Over the years, EPL has developed over a hundred partnerships with partners in more than 36 countries (EU and non-EU) to offer exchange programmes to its students. We also offer the possibility of obtaining Double degrees, Joint Degrees or Dual Masters in several fields. The EPL is currently participating in two Erasmus Mundus programmes: [FAME](#) and [STRAINS](#).

In addition to exchange programmes under the Erasmus+ programme, numerous agreements have been established with a wide range of universities through various partner networks such as:

- [TIME](#) network (Top Industrial Managers in Europe).
- [CLUSTER](#) network
- [Magalhães](#) network
- [Circle U](#). network through several networks and European University Alliance



