



The version you're consulting is not definitive. This programme still may change. The final version will be published on 1th June.

**At Louvain-la-Neuve - 120 credits - 2 years - Day schedule - In English**

Dissertation/Graduation Project : **YES** - Internship : **optional**

Activities in English: **YES** - Activities in other languages : **optional**

Activities on other sites : **optional**

Main study domain : **Sciences de l'ingénieur et technologie**

Organized by: **Louvain School of Engineering (EPL)**

Programme acronym: **MECA2M** - Francophone Certification Framework: 7

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## MECA2M - Introduction

### Introduction

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#### Introduction

This programme provides training in the core areas of mechanics : fluid mechanics and transfer, computational methods in applied mechanics, mechanics of materials and structures, applied dynamics, mechanical production, mechanical design, mechanical manufacturing, thermal machines, thermodynamics and energy.

Through didactic laboratories, case studies, projects and a thesis, you will engage with research laboratories and become familiar with cutting-edge methods in the relevant disciplines.

The numerous integrated projects you undertake will enable you to design, model, create, and experimentally validate systems, prototypes, and devices.

#### Your profile

You

- Have solid skills in the field of mechanics due to your undergraduate studies
- Plan to pursue a career in the industrial sector where you will participate in design and research or in the organisation and supervision of production;
- Wish to use your skills in the following fields: aeronautics, the spatial industry, energy, the metallurgical or plastics industry, the automotive industry, biomechanics, etc.;
- Seek a programme that will allow you to master scientific, technological and human issues linked to the field of mechanics.

#### Your future job

Civil engineers are present in all sectors of the industrial world: chemical, pharmaceutical and food industries, electronics and telecommunications, metallurgy, aeronautics, construction and civil engineering, large-scale distribution, banking or consultancy services, nanotechnologies and technologies adapted to medical needs and more.

They work as researchers and developers, are responsible for production or management and hold jobs in marketing and sales (of advanced technological products).

They can be found in finance, IT, training or quality control departments, in the public sector, higher education and universities, or at the Ministry of Equipment and Transportation. ([www.fabi.com](http://www.fabi.com))

#### Your programme

This master's degree offers you

- comprehensive training in the fundamental areas of mechanics;
- a wide range of options, directly linked to the latest research advances in the field;
- pedagogical approach that integrates theory and practice: labs, projects, case studies, etc.;
- advanced learning of numerical methods and their applications;
- the opportunity to undertake an internship in the industrial sector;
- the possibility of completing a portion of your studies abroad (in Europe or elsewhere in the world)

## MECA2M - Teaching profile

### Learning outcomes

This diploma in civil engineering in mechanics aims to meet the challenges of designing and innovation, according to a polytechnic approach, complex solutions and systems linked to mechanics and its applications. This master's degree aims to train experts in the area of mechanics and its applications – within a constantly evolving European and global context.

The future civil engineer in mechanics will acquire the skills and knowledge to become

- A polytechnician capable of integrating several disciplines in the fields of continuum mechanics, thermodynamics and machine design.
- An individual capable of putting into practice his/her skills as well as the tools used in research and technology.
- A specialist in extremely varied and specialised applied fields such as energetics, aerodynamics, automobiles, rail transport, robotics, numerical simulation, and scientific information.
- A manager who can manage projects alone or in a team.

Polytechnic and multidisciplinary, the education offered by the Louvain School of Engineering (EPL) priorities the acquisition of skills and knowledge that combine theory and practice. This approach covers aspects of analysis, design, manufacturing, production, research and development, and innovation, while also integrating ethical considerations and sustainable development.

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

1. Demonstrate a mastery of a solid body of knowledge in basic and engineering sciences, permitting graduates to understand and solve problems that are raised by mechanics
  - 1.1 Identify and apply concepts, laws, and practical reasoning to a given problem related to:
    - Continuum mechanics
    - Energy, thermodynamics and thermics
    - Mathematical modelling and numerical simulation
    - Project management
    - Robotics, automated systems
  - 1.2 Identify and use adequate modelling and calculation tools to solve these problems.
  - 1.3 Verify the plausibility and confirm the validity of results (orders of magnitude, units).
2. Organise and carry out an applied engineering procedure for the development of a product (and/or a service) that meets a need or solves a problem specific to the field of mechanics
  - 2.1 Analyse the problem or the operational needs that must be met, formulate the product specifications while taking technical and economic constraints into account.
  - 2.2 Model the problem and design one or more technical solutions while integrating the mechanical aspects corresponding to the product specifications.
  - 2.3 Evaluate and classify solutions in light of all the criteria included in the product specifications: efficiency, feasibility, quality, ergonomics, security and environmental and social sustainability.
  - 2.4 Implement and test a solution in the form of a mock-up, a prototype and/or a numerical model.
  - 2.5 Formulate recommendations to improve the proposed solution.
3. Organise and carry out a research project to understand a physical phenomenon or a new problem related to mechanics
  - 3.1 Document and summarise the existing knowledge in the field of mechanics.
  - 3.2 Suggest a model and/or experimental device to simulate the performance of a system, thereby testing relevant hypotheses related to the phenomenon being studied.
  - 3.3 Put together a summary report, which aims to explain the potentialities for theoretical and/or technical innovation resulting from the research project.
  - 3.4. Think disruptively and creatively, open to plurality.
4. Contribute, as a member of a team, to the achievement of a multidisciplinary project while taking into account its objectives, allocated resources and constraints
  - 4.1 Create a project framework and explain the project objectives while taking into account the challenges and constraints that characterise the project's environment.
  - 4.2 Collectively commit to a work schedule
  - 4.3. Operate in a multi/inter/transdisciplinary environment with individuals who hold different points of view, identify the contributions and limits of each discipline, dialogue on the same project.
  - 4.4 Make team decisions when necessary to complete a project whether they pertain to technical solutions or to the division of labour.
5. Demonstrate effective communication skills (speaking and writing skills in French or in a foreign language) with the goal of successfully carrying out assigned projects
  - 5.1 Identify the needs of all parties: ask appropriate questions and listen to the entire request (not simply the technical aspects).
  - 5.2 Present convincing arguments and advice by using the language of your interlocutors (colleagues, technicians, clients, superiors, specialists from other disciplines or general public).

- 5.3 Communicate through graphics and schemes (interpret a scheme, present a project, structure information).
- 5.4 Read, analyse, and use technical documents (standards, outlines, specifications).
- 5.5 Draft written documents that take contextual requirements and social conventions into account.
- 5.6 Give convincing oral presentations using appropriate communication techniques.
6. Rigorously mobilise their scientific and technical skills and their critical sense to analyse complex situations by adopting a systemic and transdisciplinary approach, and to adapt their technical responses to the current and future challenges of the socio-economic-ecological transition, thus actively contributing to the transformation of society
- 6.1 Acquire a knowledge base on the socio-ecological issues and use multi-criteria tools to evaluate the sustainability of a technology, in quantitative and/or qualitative terms.
- 6.2. Define, specify and analyse a problem in all its complexity, taking into account its various dimensions (social, ethical, environmental, etc.), scales (time, place) and uncertainty.
- 6.3 Identify, propose and activate engineering levers that can contribute to sustainable development and transition (eco-design, robustness, circularity, energy efficiency, etc.).
- 6.4 Demonstrate critical thinking vis-à-vis technical solutions, be aware of its limitations, and take a personal stand on ethical, environmental and societal issues.
- 6.5 Evaluate one's own work.

## Programme structure

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In addition to core courses (31 credits) and a professional focus (30 credits), students will enhance their technical education by selecting courses (a minimum of 29 credits) among the following:

- Energy
- Aeronautics
- Dynamics, robotic and biomechanics
- Design, manufacturing and mechanics of materials
- Nuclear engineering

and the module of a multidisciplinary class of your choice.

In the spirit of openness, students can complete their programme through multidisciplinary coursework. This includes an internship, completing a language programme, a choice of general knowledge classes or classes in human sciences. This is possible thanks to the flexibility that characterises this master's programme in civil and mechanical engineering. Based on their course choices, students will eventually complete one or two majors.

The final thesis is typically completed at the end of the programme (second academic year). However, based on their individual study plan, students may schedule their courses in either the first or second academic year, provided the course prerequisites are met. This flexibility is particularly beneficial for students who spend part of their studies outside UCLouvain as part of an exchange programme.

The final programme will be subject to approval by the master's programme committee.

## MECA2M Programme

## Detailed programme by subject

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**CORE COURSES [31.0]**

- Mandatory
- ✘ Optional
- △ Not offered in 2026-2027
- ⊙ Not offered in 2026-2027 but offered the following year
- ⊕ Offered in 2026-2027 but not the following year
- △ ⊕ Not offered in 2026-2027 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
● LMECA2990	<a href="#">GraduationProject/End of Studies Project</a> <i>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.</i>		EN [q1+q2] [] [25 Credits] 🌐 > French-friendly		x
● LMECA2840	<a href="#">Project in Mechanical Design II</a>	Bruno Dehez Christophe Everarts Renaud Ronsse	EN [q1+q2] [30h+30h] [6 Credits] 🌐 > French-friendly	x	

**PROFESSIONAL FOCUS [30.0]**

- Mandatory
- ⊗ Optional
- △ Not offered in 2026-2027
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- △ ⊕ Not offered in 2026-2027 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

**o Content:**

○ LMECA2220	<a href="#">Internal combustion engines</a>	Francesco Contino Hervé Jeanmart	EN [q2] [30h+30h] [5 Credits] ⊕ > French-friendly		X
○ LMECA2322	<a href="#">Fluid mechanics II</a>		EN [q1] [30h+30h] [5 Credits] ⊕ > French-friendly		X
○ LMECA2410	<a href="#">Mechanics of Materials</a>	Laurent Delannay Aude Simar	EN [q2] [30h+30h] [5 Credits] ⊕ > French-friendly		X
○ LMECA2755	<a href="#">Industrial automation</a>		EN [q1] [30h+30h] [5 Credits] ⊕ > French-friendly		X
○ LMECA2854	<a href="#">Heat and mass transfer II</a>	Yann Bartosiewicz Matthieu Duponcheel	EN [q2] [30h+30h] [5 Credits] ⊕ > French-friendly		X
○ LMECA2801	<a href="#">Machine design</a>	Renaud Ronsse Aude Simar	EN [q1] [30h+30h] [5 Credits] ⊕ > French-friendly		X

**OPTIONS**

In the "Options of the Master's degree in Mechanical Engineering" section, students who choose to validate an option must select a minimum of 20 credits from the courses offered. It is possible to validate multiple options.

In the "Options and Elective Courses in Socioeconomic Knowledge" section, students must either validate one of the two options or select a minimum of 6 credits from the elective courses within the "Business Risks & Opportunities" option (maximum one innovation class may be chosen, maximum one course among those offered by the CPs may be taken into account in these 6 credits).

#### Majors for the Master's degree in mechanical engineering

- > [Major in aeronautics](#) [ en-prog-2026-meca2m-lmeca222o ]
- > [Major in dynamics, robotic and biomechanics](#) [ en-prog-2026-meca2m-lmeca223o ]
- > [Major in energy](#) [ en-prog-2026-meca2m-lmeca224o ]
- > [Major in nuclear engineering](#) [ en-prog-2026-meca2m-lmeca231o ]
- > [Major in design, manufacturing and mechanics of materials](#) [ en-prog-2026-meca2m-lmeca226o ]
- > [Cours au choix disciplinaires](#) [ en-prog-2026-meca2m-lmeca237o ]

#### Options and elective courses in socio-economic knowledge

- > [Major in Business risks and opportunities](#) [ en-prog-2026-meca2m-lmeca233o ]
- > [Major in Interdisciplinary Program in Entrepreneurship - INEO](#) [ en-prog-2026-meca2m-lmeca234o ]
- > [Elective course in socio-economic knowledge](#) [ en-prog-2026-meca2m-lepl200o ]
- > [Option in artificial intelligence](#) [ en-prog-2026-meca2m-lmeca240o ]

#### Other elective courses

- > [Other elective courses](#) [ en-prog-2026-meca2m-lmeca232o ]

## MAJORS FOR THE MASTER'S DEGREE IN MECHANICAL ENGINEERING

### MAJOR IN AERONAUTICS

Open to students in mechanical and electromechanical engineering, this option includes courses on the application of aeronautics: aeronautic structures, vibrations, aerodynamics, dynamics of flight, etc. The learning process consists of advanced classes in the mechanics of fluids and solids, with particular attention paid to numerical methods. This option is naturally complemented by the options in Energy, Dynamics, Robotics and Biomechanics, as well as the option in Design, Manufacturing and Materials Mechanics, addressing issues related to energy in aeronautics, engine technology, dynamic aspects, and the importance of materials in the design and maintenance of aircraft.

- Mandatory
- ⊗ Optional
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- △ ⊕ Not offered in 2026-2027 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 wishing to validate this option must select a minimum of 20 credits from the courses offered.

LMECA2322 - MECA2M students cannot earn credits for this course as part of the aeronautics option.

Year

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#### Content:

⊗ LGCIV2041	Numerical analysis of civil engineering structures	Hadrien Rattel João Saraiva Esteves Pacheco De Almeida	🇧🇪 [q2] [20h+15h] [4 Credits] 🌐 > French-friendly		X	X
⊗ LMECA2195	Gasdynamics and reacting flows		🇧🇪 [q2] [30h+30h] [5 Credits] 🌐 > French-friendly		X	X
⊗ LMECA2300	Advanced Numerical Methods	Philippe Chatelain Christophe Craeye Vincent Legat Jean-François Remacle	🇧🇪 [q2] [30h+30h] [5 Credits] 🌐 > French-friendly		X	X
⊗ LMECA2323	Aerodynamics of external flows		🇧🇪 [q2] [30h+30h] [5 Credits] 🌐 > French-friendly		X	X
⊗ LMECA2550	Aircraft propulsion systems.	Philippe Chatelain	🇧🇪 [q1] [30h+30h] [5 Credits] 🌐 > French-friendly		X	X
⊗ LMECA2520	Calculation of planar structures	Issam Doghri	🇧🇪 [q2] [30h+30h] [5 Credits] 🌐 > French-friendly		X	X
⊗ LMECA2660	Numerical methods in fluid mechanics		🇧🇪 [q2] [30h+30h] [5 Credits] 🌐 > French-friendly		X	X
⊗ LMECA2830	Aerospace dynamics.	Philippe Chatelain	🇧🇪 [q1] [30h+30h] [5 Credits] 🌐 > French-friendly		X	X
⊗ LMECA2322	Fluid mechanics II		🇧🇪 [q1] [30h+30h] [5 Credits] 🌐 > French-friendly		X	X

**MAJOR IN DYNAMICS, ROBOTIC AND BIOMECHANICS**

Open to students in mechanical and electromechanical engineering, this option includes courses on dynamics, robotics, and biomechanics. Whether it be an analysis of vibrations, adjustment of a robot or the design and production of components or micro-components in bioengineering (for example, artificial implants, valves and prosthetics), this major allows students to address one or more applications from a mechanics perspective. This option is complemented by the Aeronautics option, the Energy option, as well as the Design, Manufacturing and Materials Mechanics option for students interested in the dynamics and robotics challenges in aeronautics and energy. The design and the selection of materials are, of course, crucial whether for developing a robot or choosing biomaterials in rehabilitation issues.

- Mandatory
- ⊗ Optional
- △ Not offered in 2026-2027
- ⊙ Not offered in 2026-2027 but offered the following year
- ⊕ Offered in 2026-2027 but not the following year
- △ ⊕ Not offered in 2026-2027 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 wishing to validate this option must select a minimum of 20 credits from the courses offered.

Year

1 2

**Content:**

⊗ LGBIO2040	Biomechanics		FR [q2] [30h+30h] [5 Credits] 🌐 > French-friendly	X	X
⊗ LGCIV2042	Dynamics of structures	João Saraiva Esteves Pacheco De Almeida	EN [q1] [30h+15h] [5 Credits] 🌐 > French-friendly	X	X
⊗ LMECA2170	Computational Geometry	Vincent Legat Jean-François Remacle	EN [q1] [30h+30h] [5 Credits] 🌐 > French-friendly	X	X
⊗ LMECA2215	Vehicle System Dynamics	Paul Fissette	EN [q1] [30h+30h] [5 Credits] 🌐 > French-friendly	X	X
⊗ LMECA2355	Design of Medical Devices		FR [q1] [30h+30h] [5 Credits] 🌐 > French-friendly	X	X
⊗ LELME2732	Robot modelling and control		EN [q2] [30h+30h] [5 Credits] 🌐 > French-friendly	X	X
⊗ LMECA2802	Multibody system Dynamics	Paul Fissette	FR [q2] [30h+30h] [5 Credits] 🌐 > French-friendly	X	X
⊗ LINMA2875	System Identification		EN [q2] [30h+30h] [5 Credits] 🌐 > French-friendly	X	X
⊗ LMECA2335	Biorobotics	Renaud Ronsse	FR [q2] [30h+30h] [5 Credits] 🌐	X	X

## MAJOR IN ENERGY

This discipline is approached comprehensively beginning with the study of energy production and conversion techniques (such as thermal machines, nuclear energy, and renewable energy). It then moves on to the analysis of the risks associated with energy production and ways to mitigate them (major risks, pollution). Finally, it explores the challenges and consequences of energy consumption.

This option is complemented by Aeronautics major for those students interested in energy issues and propulsion in aeronautics. It is also relevant to the Dynamics, Robotics, and Biomechanics option, as well as the Design, Manufacturing and Materials Mechanics option for students interested in dynamics, automation, and the importance of materials in the design and maintenance of energy production and conversion system.

- Mandatory
- ⊗ Optional
- △ Not offered in 2026-2027
- ⊖ Not offered in 2026-2027 but offered the following year
- ⊕ Offered in 2026-2027 but not the following year
- △ ⊕ Not offered in 2026-2027 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 wishing to validate this option must select a minimum of 20 credits from the courses offered.

Year

1 2

### Content:

					1	2
⊗ LENVI2007	Renewable energy sources	Emmanuel De Jaeger Patrick Gerin (coord.) Hervé Jeanmart	FR [q1] [45h+15h] [5 Credits] 🌐 > French-friendly		X	X
⊗ LMECA2160	Combustion and fuels		FR [q1] [30h+30h] [5 Credits] 🌐 > French-friendly		X	X
⊗ LELME2240	Energy systems lab.	Francesco Contino Hervé Jeanmart	FR [q2] [30h+30h] [5 Credits] 🌐 > French-friendly		X	X
⊗ LMECA2325	Biomass conversion	Patrick Gerin Hervé Jeanmart	FR [q1] [30h+30h] [5 Credits] 🌐 > French-friendly		X	X
⊗ LELME2420	Energetics.	Francesco Contino Hervé Jeanmart	FR [q2] [30h+15h] [5 Credits] 🌐 > French-friendly		X	X
⊗ LMECA2600	Introduction to nuclear engineering and reactor technology	Hamid Ait Abderrahim	FR [q1] [30h+30h] [5 Credits] 🌐 > French-friendly		X	X
⊗ LMECA2771	Thermodynamics of irreversible phenomena.		FR [q2] [30h+30h] [5 Credits] 🌐 > French-friendly		X	X
⊗ LMECA2780	Introduction to Turbomachinery		FR [q2] [30h+30h] [5 Credits] 🌐 > French-friendly		X	X
⊗ LMECA2675	Robust Optimization of Energy Systems		FR [q1] [30h+30h] [5 Credits] 🌐 > French-friendly		X	X
⊗ LELME2150	Thermal cycles		FR [q1] [30h+30h] [5 Credits] 🌐 > French-friendly		X	X

## MAJOR IN NUCLEAR ENGINEERING

This option, common to the Master's programmes in Electromechanical Engineering with specialisation in Energy and Mechanical Engineering, aims to provide in-depth training in the key aspects of nuclear engineering. Admission to this programme, primarily overseen by the Mol Centre of Nuclear Energy, is conditional on an evaluation of candidates' skills based on the rules used for ERASMUS-SOCRATES exchange students.

Further information about this major may be found on Mol's website SCK-CEN.

- Mandatory
- ✂ Optional
- △ Not offered in 2026-2027
- ⊗ Not offered in 2026-2027 but offered the following year
- ⊕ Offered in 2026-2027 but not the following year
- △ ⊕ Not offered in 2026-2027 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 wishing to validate this option must select a minimum of 16 credits from the courses offered.

Year

1 2

### o Content:

● LMECA2600	<a href="#">Introduction to nuclear engineering and reactor technology</a>	<a href="#">Hamid Ait Abderrahim</a>	EN [q1] [30h+30h] [5 Credits] 🌐 > French-friendly	X	
● LMECA2648	<a href="#">Nuclear thermal-hydraulics (Centre d'étude nucléaire-Mol)</a>	<a href="#">Yann Bartosiewicz</a>	EN [q1] [40h+7.5h] [5 Credits] 🌐 > French-friendly		X
✂ LBEN2002	<a href="#">Introduction to Nuclear Physics &amp; Measurements (Centre d'étude nucléaire-Mol)</a>		EN [q1] [] [3 Credits] 🌐		X
✂ LBEN2003	<a href="#">Safety of Nuclear Powerplants (Centre d'étude nucléaire-Mol)</a>		EN [q2] [] [5 Credits] 🌐		X
✂ LBEN2011	<a href="#">Radiation protection (Centre d'étude nucléaire-Mol)</a>		EN [q1] [] [3 Credits] 🌐	X	

## MAJOR IN DESIGN, MANUFACTURING AND MECHANICS OF MATERIALS

Open to students in mechanical and electromechanical engineering, this option includes courses on design, manufacturing, and the significance of materials in the development of a mechanical system. It covers physical and chemical properties and the behaviour of metals, polymers and composites. It also delves into the main techniques for shaping these materials - such as injection or compression moulding, drawing, rolling, forging, extrusion, and stamping - from a thermomechanical and technological perspective. Numerical modelling of these processes are addressed with particular focus on welding techniques. All phases of the mechanical manufacturing process are studied from the design stage to the setting up of suitable manufacturing techniques to the production schedule and organisation of working groups. This major is complemented by Aeronautics, Energy, and Dynamics, Robotics and Biomechanics options for students interested in the issues of design, manufacturing, and the importance of materials in fields such as aeronautics, energy, transportation or bioengineering.

- Mandatory
- ⊗ Optional
- △ Not offered in 2026-2027
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- ⊕ Offered in 2026-2027 but not the following year
- △ ⊕ Not offered in 2026-2027 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 wishing to validate this option must select a minimum of 20 credits from the courses offered.

Year

1 2

### o Content:

⊗ LMAPR2483	<a href="#">Durability of materials</a>	Laurent Delannay Thomas Pardoën	EN [q2] [30h+22.5h] [5 Credits] 🌐 > French-friendly	X	X	
⊗ LMECA2453	<a href="#">Advanced manufacturing technologies</a>		EN [q1] [30h+30h] [5 Credits] 🌐 > French-friendly	X	X	
⊗ LMECA2520	<a href="#">Calculation of planar structures</a>	Issam Doghri	EN [q2] [30h+30h] [5 Credits] 🌐 > French-friendly	X	X	
⊗ LMECA2640	<a href="#">Mechanics of composite materials</a>		EN [q2] [30h+30h] [5 Credits] 🌐 > French-friendly	X	X	
⊗ LMECA2860	<a href="#">Welding Science and Technology</a>	Pascal Jacques Aude Simar	EN [q1] [30h+30h] [5 Credits] 🌐 > French-friendly	X	X	
⊗ LMECA2711	<a href="#">Quality management and control.</a>		EN [q2] [30h+30h] [5 Credits] 🌐 > French-friendly	X	X	
⊗ LMAPR2020	<a href="#">Materials Selection</a>		EN [q2] [30h+22.5h] [5 Credits] 🌐 > French-friendly	X	X	
⊗ LMAPR2018	<a href="#">Rheology</a>	Evelyne Van Ruymbeke	EN [q2] [30h+30h] [5 Credits] 🌐 > French-friendly	X	X	

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- 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:

### Comprehensive courses

⊗ LELEC1530	<a href="#">Basic analog and digital electronic circuits</a>	Martin Andraud Denis Flandre	[FR] [q1] [30h+30h] [5 Credits] 🌐	X	X
⊗ LELEC1370	<a href="#">Measurements and electrical circuits</a>	Christophe Craeye Bruno Dehez Claude Oestges (coord.)	[FR] [q2] [30h+30h] [5 Credits] 🌐	X	X
⊗ LEPL1111	<a href="#">Linear Control</a> [C] <i>LEPL1111 may be selected as an elective unless this course has already been completed as part of a previous programme.</i>		[FR] [q2] [30h+30h] [5 Credits] 🌐 > French-friendly	X	X
⊗ LMECA1451	<a href="#">Mechanical manufacturing.</a>	Laurent Delannay Aude Simar	[FR] [q2] [30h+30h] [5 Credits] 🌐	X	X
⊗ LMECA2645	<a href="#">Major technological hazards in industrial activity.</a>	Aude Simar	[FR] [q2] [30h] [3 Credits] 🌐	X	X

## OPTIONS AND ELECTIVE COURSES IN SOCIO-ECONOMIC KNOWLEDGE [3.0]

### MAJOR IN BUSINESS RISKS AND OPPORTUNITIES

- Mandatory
- ⊗ Optional
- △ Not offered in 2026-2027
- ⊙ Not offered in 2026-2027 but offered the following year
- ⊕ Offered in 2026-2027 but not the following year
- △ ⊕ Not offered in 2026-2027 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 wishing to validate this option must select a minimum of 15 credits among the courses offered (maximum one course among those offered by the CPs can be taken into account in these 15 credits).

This option cannot be taken simultaneously with the "Interdisciplinary training in entrepreneurship - INEO" option.

Year

1 2

## Content:

### Cours spécifiques aux enjeux de l'entreprise

⊗ LFSA2995	<a href="#">Company Internship</a> <i>This course cannot be chosen by GCE Masters students as part of the business issues option, as part of their compulsory courses.</i>	Dimitri Lederer Jean-Pierre Raskin	[FR] [q1+q2] [30h] [10 Credits] 🌐	X	X
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				Year	
				1	2
⊗ LEPL1805	<b>People management</b> <i>This course cannot be chosen if it has already been validated in the bachelor's degree.</i>		FR [q1] [30h+0h] [3 Credits] 🌐	X	X
⊗ LEPL2020	<b>Professional integration work</b>		EN [q1+q2] [30h+0h] [3 Credits] 🌐 > French-friendly		X
⊗ LEPL2210	<b>Ethics and ICT</b> <i>This course cannot be chosen if the LLSMS2280 course has already been validated.</i>		EN [q2] [30h] [3 Credits] 🌐 > French-friendly	X	X
⊗ LEPL2211	<b>Introduction to new venture management</b>		EN [q2] [30h] [3 Credits] 🌐 > French-friendly	X	X
⊗ LEPL2214A	<b>Law, Regulation and Legal Context - (partim A)</b>		FR [q1] [30h+0h] [3 Credits] 🌐	X	X
⊗ LMECA2645	<b>Major technological hazards in industrial activity.</b>	Aude Simar	FR [q2] [30h] [3 Credits] 🌐	X	X
⊗ LMECA2711	<b>Quality management and control.</b>		EN [q2] [30h+30h] [5 Credits] 🌐 > French-friendly	X	X
⊗ LLSMS2036	<b>Supply Chain Procurement</b>	Per Joakim Agrell	EN [q1] [30h] [5 Credits] 🌐	X	X
⊗ LLSMS2280	<b>Sustainability Transition and social change</b> [M] <i>Ce cours ne peut être choisi si le cours LEPL2210 a déjà été validé.</i>		EN [q1] [30h] [5 Credits] 🌐	X	X

⊗ **Innovation classe**

Maximum one innovation class can be chosen.

⊗ LEPL2021	<b>Innovation classes for transition and sustainable development</b>	Benoît Macq Xavier Marichal	FR [q1] [30h+15h] [5 Credits] 🌐	X	X
⊗ LEPL2022	<b>Health Innovation Classes</b>		FR [q2] [30h+30h] [5 Credits] 🌐 > French-friendly	X	X

## MAJOR IN INTERDISCIPLINARY PROGRAM IN ENTREPRENEURSHIP - INEO

The aim of this option, which is common to most EPL masters' programmes, is to familiarise students with the specifics of entrepreneurship and business creation, equipping them with the skills, knowledge, and tools necessary for starting a business.

The interdisciplinary entrepreneurship training (INEO) is an option that spans two years and is integrated into over 30 Master's programmes across 9 faculties/schools at UCLouvain.

Choosing the INEO option requires completing an interfaculty dissertation (in teams) focused on a business creation project. Access to this option, as well as to each of its courses, is limited to students selected based on their application.

Full details are available at <https://uclouvain.be/fr/etudier/ineo>.

Students who choose this option must select a minimum of 20 credits and a maximum of 25 credits. This option is not available in English and cannot be taken simultaneously with the "Business Risks and Opportunity" option.

- Mandatory
- ⊗ Optional
- △ Not offered in 2026-2027
- ⊖ Not offered in 2026-2027 but offered the following year
- ⊕ Offered in 2026-2027 but not the following year
- △ ⊕ Not offered in 2026-2027 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

### o Content:

#### o Cours obligatoires:

○ 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 création d'entreprise</a>	Yves De Cordt	FR [q1] [30h+15h] [5 Credits] 🌐	X	
○ LINEO2003	<a href="#">Plan d'affaires et étapes-clefs de la création d'entreprise</a> <i>Les séances du cours LINEO2003 sont réparties sur les deux blocs annuels du master. L'étudiant doit les suivre dès le bloc annuel 1, mais ne pourra inscrire le cours que dans son programme de bloc annuel 2.</i>	Frank Janssen	FR [q2] [30h+15h] [5 Credits] 🌐		X
○ LINEO2004	<a href="#">Séminaire d'approfondissement en entrepreneuriat</a>	Frank Janssen	FR [q2] [30h+15h] [5 Credits] 🌐	X	

#### ⊗ Cours préalable:

Student who have not taken management courses during their previous studies must enroll in LINEO2021.

○ LINEO2021	<a href="#">Financer son projet</a>		FR [q2] [30h+15h] [5 Credits] 🌐	X	
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## ELECTIVE COURSE IN SOCIO-ECONOMIC KNOWLEDGE

Within the section "Options and elective courses in socio-economic knowledge", students must either validate one of the two options or are required to select at least 6 ECTS credits from the courses offered within the "Major in Business risks and opportunities" (a maximum of one Innovation Class may be selected, and a maximum of one course offered by the CPs may be counted towards these 6 credits).

## OPTION IN ARTIFICIAL INTELLIGENCE

- Mandatory
- ⊗ Optional
- △ Not offered in 2026-2027
- ⊙ Not offered in 2026-2027 but offered the following year
- ⊕ Offered in 2026-2027 but not the following year
- △ ⊕ Not offered in 2026-2027 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 wishing to validate this option must select 15 credits from the courses offered.

Year

1 2

### ⊗ Content:

#### ⊗ Major in artificial intelligence

⊗ LINFO1361	Artificial intelligence		[FR] [q2] [30h+30h] [5 Credits] 🌐	X	X
⊗ LINFO2262	Machine Learning :classification and evaluation	Pierre Dupont	[FR] [q2] [30h+30h] [5 Credits] 🌐 > French-friendly	X	X
⊗ LINFO2263	Computational Linguistics and Generative AI [M]	Pierre Dupont	[FR] [q1] [30h+15h] [5 Credits] 🌐 > French-friendly	X	X
⊗ LINFO2364	Mining Patterns in Data	Hélène Verhaeghe	[FR] [q2] [30h+15h] [5 Credits] 🌐 > French-friendly	X	X
⊗ LELEC2870	Machine learning : regression, deep networks and dimensionality reduction	John Lee Michel Verleysen	[FR] [q1] [30h+30h] [5 Credits] 🌐 > French-friendly	X	X
⊗ LELEC2885	Image processing and computer vision	Christophe De Vleeschouwer Laurent Jacques	[FR] [q1] [30h+30h] [5 Credits] 🌐 > French-friendly	X	X
⊗ LINFO2275	Data mining & decision making [M]	Marco Saerens	[FR] [q2] [30h+15h] [5 Credits] 🌐 > French-friendly	X	X
⊗ LINMA2222	Stochastic Optimal Control and Reinforcement Learning		[EN] [q1] [30h+22.5h] [5 Credits] 🌐	X	X
⊗ LINMA2474	High-Dimensional Data Analysis and Optimization		[FR] [q2] [30h+30h] [5 Credits] 🌐	X	X
⊗ LGBIO2050	Medical Imaging	Greet Kerckhofs John Lee Benoît Macq	[FR] [q1] [30h+30h] [5 Credits] 🌐 > French-friendly	X	X

**OTHER ELECTIVE COURSES**

Students may also enrol in any course that is part of other EPL master's programmes, subject to the approval of the selection panel.

**OTHER ELECTIVE COURSES**

- Mandatory
- ✘ Optional
- △ Not offered in 2026-2027
- ⊙ Not offered in 2026-2027 but offered the following year
- ⊕ Offered in 2026-2027 but not the following year
- △ ⊕ Not offered in 2026-2027 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

**o Content:**

Les étudiant-e-s peuvent également inscrire à leur programme tout cours faisant partie des programmes d'autres masters de l'EPL moyennant l'approbation du jury restreint.

**✘ Languages**

Students may select from any language course offered at the ILV. Special attention is placed on the following seminars in professional development:

✘ LALLE2500	Professional development seminar German	Caroline Klein	DE [q1+q2] [30h] [3 Credits] 🌐	X	X
✘ LALLE2501	Professional development seminar-German	Caroline Klein	DE [q1+q2] [30h] [5 Credits] 🌐	X	X
✘ LESPA2600	Vocational Induction Seminar - Spanish (B2.2/C1)	Paula Lorente Fernandez (coord.)	ES [q1] [45h] [3 Credits] 🌐	X	X
✘ LESPA2601	Vocational Induction Seminar - Spanish (B2.2/C1)	Paula Lorente Fernandez (coord.)	ES [q1] [45h] [5 Credits] 🌐	X	X
✘ LNEER2500	Seminar of Entry to professional life in Dutch - Intermediate level	Isabelle Demeulenaere (coord.)	NL [q1 or q2] [30h] [3 Credits] 🌐	X	X
✘ LNEER2600	Seminar of entry to professional life in Dutch - Upper-Intermediate level	Isabelle Demeulenaere (coord.) Dag Houdmont	NL [q1 or q2] [30h] [3 Credits] 🌐	X	X

**✘ Group dynamics**

✘ LEPL2351	Become a tutor		FR [q1] [15h+30h] [3 Credits] 🌐	X	X
✘ LEPL2352	Become a tutor		FR [q2] [15h+30h] [3 Credits] 🌐	X	X

**✘ Autres UEs hors-EPL**

Students may choose a maximum of 8 credits from courses outside the EPL, which are considered non-disciplinary by the programme committee.

## 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 outcomes are to be certified and the corresponding credits awarded by the jury before registration in another CU.

## The programme's courses and learning outcomes

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For each UCLouvain training programme, a [reference framework of learning outcomes](#) specifies the skills expected of every graduate on completion of the programme. Course unit descriptions specify targeted learning outcomes, as well as the unit's contribution to reference framework of learning outcomes.

## MECA2M - 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](#)
- > [Holders of a non-University 2nd cycle 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>			
<a href="#">Bachelor in Engineering</a>		Direct access	Students who have neither major nor minor in the field of their civil engineering Master's degree may have an adapted master programme.
Other bachelors		<a href="#">Access based on application</a>	See "Access based on application" section.
<b>Others Bachelors of the French speaking Community of Belgium</b>			
Bachelor in engineering		Direct access	Students with a Bachelor's degree in engineering sciences who have not taken the equivalent of a minor in the field of their civil engineering master degree may have an adapted master programme.
Other bachelors		<a href="#">Access based on application</a>	See "Access based on application" section.
<b>Bachelors of the Dutch speaking Community of Belgium</b>			
Bachelor in engineering		Access with additional training	Students who have no specialisation in the field of their civil engineering master degree may have an adapted master programme with up to 60 additional credits.
Other bachelors		<a href="#">Access based on application</a>	See "Access based on application" section.

Foreign Bachelors			
Bachelor in engineering	Bachelors degree of Cluster Institution	Direct access	Students with a Bachelor's degree in engineering sciences who have not taken the equivalent of a minor in the field of their civil engineering master degree may have an adapted master programme.  See "Access based on application" section.
Bachelor in engineering field	For others institutions	<a href="#">Access based on application</a>	

## Non university Bachelors

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

Belgian non-universitary long-cycle bachelor degrees : access based on application -> see "Access based on application" section.

## Holders of a 2nd cycle University degree

Diploma	Special Requirements	Access	Remarks
<b>"Licenciés"</b>			

Masters			
Master in Engineering of the French speaking Community of Belgium		Direct access	See "Access based on application" section.
Other Belgian masters		<a href="#">Access based on application</a>	

## Holders of a non-University 2nd cycle degree

Belgian non-universitary long-cycle master degrees : access based on application -> see "Access based on application" section.

## 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 of 60 ECTS credits, or refused.

The first step of the admission procedure requires to submit an application online: <https://uclouvain.be/en/study/inscriptions/futurs-etudiants.html>

[Selection criteria](#) are summarized here (contact : [epl-admission@uclouvain.be](mailto:epl-admission@uclouvain.be)). In cases where direct access to the master program is not available or not as described above, an application for admission based on application file may still be submitted to the Enrolment Office.

For any question, please contact [epl-admission@uclouvain.be](mailto:epl-admission@uclouvain.be)

## Admission and Enrolment Procedures for general registration

## Teaching method

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### Methods that promote multidisciplinary studies

The Master's programme in Civil Engineering Mechanics is directly linked to the role played by mechanical civil engineers, central to modern industry: robotics, transportation, energy production, micro medical devices, and space rockets. Mechanical engineers design a wide range of products including instruments, vehicles, machines or larger systems. They are also responsible for designing the manufacturing processes for these products. Finally, they play a leading role in the organisation, control, upkeep and maintenance of production systems. Versatility is necessary for working in sectors such as aeronautics, energy, metallurgy, petrochemistry, automobiles and biomechanics.

Therefore, the curriculum for mechanical civil engineering is inherently **versatile**. On the one hand, the field of mechanics is vast and is linked to the majority of other engineering fields most notably electricity, materials, chemistry, civil engineering, automation and modelling. On the other hand, the non-exclusive nature of the options and the flexibility in structuring each student's programme allows for specialised expertise in one or more areas, while maintaining a solid scientific and technical foundation. Additionally, students have the option of taking courses in non-technical fields.

The research skills of the teaching team are extremely varied and range from advanced numerical simulations to aspects of energy to design techniques, which undeniably enriches the training offered at UCLouvain. The final thesis (graduation project) often represents a final source of interdisciplinarity: students can choose their research supervisor from among all the academics at the École Polytechnique de Louvain (EPL) or undertake their research at another institution such as the Von Karman Institute.

### Various teaching strategies

The didactic approach is continuous with that of the bachelor's degree programme in engineering sciences: active learning, a balanced mix of group and individual work, and a significant emphasis on developing non-technical skills. A notable feature of the mechanical engineering programme is the immersion of students in the research laboratories of their lecturers, which trains them through the inherent questioning of research.

The programme prioritises **projects**, including a large-scale project that puts groups of students in semi-professional situations. These projects promote students' critical thinking skills, which in turn allows them to design, model, realise and validate a prototype. Furthermore, in the Small and Medium Sized Business Creation major, students complete group projects as part of multidisciplinary teams throughout the duration of their master's programme.

The final thesis represents half of the workload in the final year, offering the opportunity to explore a specific topic in depth and serving as a genuine introduction to professional engineering or research work. This work can be conducted on a topic related to one or more fundamental mechanics disciplines, within the École Polytechnique de Louvain, the Faculty of Science, or the Von Karman Institute. It may also be carried out in direct connection with a company on a research or application topic. Finally, for students opting for small and medium-sized enterprise creation, the final thesis is designed to be interdisciplinary, allowing groups of three students—ideally from different faculties—to work on a business creation project.

### Diversity learning options

Students will encounter a variety of pedagogical setups tailored to different disciplines: lectures, projects, exercise sessions, problem solving sessions, case studies, experimental laboratories, internships in industry or research, group as well as individual work, and seminars. In certain subjects, e-learning enables students to learn at their own pace and to carry out virtual experiments.

These diverse learning situations develop interdisciplinary skills as well as those that are non-technical. Thus, students acquire knowledge in a progressive manner all the while developing their independence, organisational and time management skills as well as their ability to communicate.

## Evaluation

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***The evaluation methods comply with the [Academic regulations and procedures](#). More detailed explanation of the modalities specific to each learning unit are available on their description sheets under the heading "Learning outcomes evaluation method".***

Evaluation methods conform to the rules used to evaluate coursework and exams. Further details about the methods specific to each academic department may be found in their respective evaluation descriptions ("Evaluating students' knowledge").

Teaching activities are 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.

These diverse measures of evaluation allow for a complete assessment of the students' acquired skills. Written and oral exams are used to evaluate the knowledge acquired in Axis 1. Multiple choice questions (MCQ) may also be used to test knowledge but are less successful in testing students' ability to adapt to different situations. MCQ are never used alone. Certain written exams begin with a new situation-problem and most of the questions refer to the different steps to solve this situation-problem. The exam isn't a repetition or even a dissertation but an opportunity for students to use their skills to solve a new situation-problem. Students' skills are tested vis-à-vis the main steps in the engineering process (Axis 2). Axis 3 is mainly evaluated through seminars and the graduation project. Axes 4-6 are evaluated through various measures. For example, regarding Axis 5, written communication may be evaluated through written exams or report writing while oral communication may be evaluated by oral exams, a thesis defence, and oral presentations.

Certificate-based evaluation of learning for Axes 1 and 2 is mainly carried out through exams that take place at the end of the semester. The questions mostly have to do with the application of typical exercises. This testing is consistent with the students' acquired skills. The objectives of Axes 3-6 are most often obtained through the disciplinary mini projects carried out in small groups. They are included in the teaching plan. When this is the case, the mini project report is evaluated and the group mark contributes to the student's final mark. In certain instances, teaching is done through the Learning by Problem Solving method (Apprentissage par problèmes or APP); for example, in the required course LMECA2801. In this case the APP group reports contribute to the student's final mark.

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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The EPL has developed over a hundred partnerships in 36 countries (both within and outside EU) to offer exchange programmes to its students. EPL also provides opportunities to obtain double degrees, joint degrees or dual master's degrees in several fields. Currently, EPL participates in two Erasmus Mundus programmes: [FAME](#) and [STRAINS](#)..

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

- [TIME](#) (Top Industrial Managers en Europe).
- [CLUSTER](#)
- [Magalhães](#)
- [Circle U](#)

There are therefore ample opportunities to gain an additional qualification and/or spend part of the year abroad during your two-year master's degree! It's the perfect opportunity to discover or improve your knowledge of a foreign language, tackle subjects from a new angle and gain unique experience in Europe or the rest of the world.

For more information (destinations, testimonials, application procedures), please visit the webpages of the [Cellule internationale de l'EPL](#).

Louvain School of Engineering takes part in the [TFM-ASA Master Program](#). The TFM-ASA Master Program is a two-year Master of Science Program taught in English by 3 Universities in 3 different countries ([Catholic University of Louvain](#) (Belgium) , [Brandenburg University of Technology](#) (Germany) and [University of Bordeaux](#) (France)).

The students will benefit from top quality training in Mechanical and Aerospace Engineering. They will spend an entire semester in each university. Many industrial partners are directly involved through internships for students, conferences and even courses.

Louvain School of Engineering takes part in The Erasmus Mundus Joint Master Degree [STRAINS](#).. STRAINS is a 2-year master programme of excellence in English for students wishing to develop their knowledge and skills in the field of solid mechanics for the modeling of materials and structures.

It was built by a consortium of six acknowledged European Universities and associated partners. The disciplinary opening is given by the student mobility. The programme leads to the award of a recognized joint diploma. The master is aimed to give thorough theoretical, experimental and numerical tools for solving advanced engineering problems, especially emphasizing the dialogue between these three aspects.

The educational aim of the programme is to qualify students to a level of excellence in one of the **4 specialised fields of Mechanics**:

- Computational Mechanics
- Mechanics of Structures
- Mechanics of Materials
- Material Design & Properties

This **2-year study program of excellence, leading to 120 credit** master's diplomas was designed to meet the renewed international demand for qualified graduates with dedicated training and experience in fundamental and advanced mechanics.

The programme offers **mobility across 5 European sites** with the objective for the student to do at least 2 or 3 mobilities within its course.

## Possible trainings at the end of the programme

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Further Master's degree programmes: [Advanced Master in Nuclear Engineering](#)

Further doctoral degree programmes: [GRAMECH](#) (GRAduate School in MECHANics)

UCLouvain master's degrees (about 60) are accessible to UCLouvain master's degree holders

For example:

- Different master's degree programmes in management (automatic admission based on written application)
- The [Master \[60\] in Information and Communication](#) at Louvain-la-Neuve or the [Master \[60\] in Information and Communication](#) at Mons

## Contacts

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### Curriculum Management

#### Entity

Structure entity	SST/EPL/MECA
Denomination	(MECA)
Faculty	Louvain School of Engineering (EPL)
Sector	Sciences and Technology (SST)
Acronym	MECA
Postal address	Place du Levant 2 - bte L5.04.03 1348 Louvain-la-Neuve Tel: +32 (0) 10 47 22 00

Academic supervisor: [Philippe Chatelain](#)

#### Jury

- Président du Jury: [Claude Oestges](#)
- Secrétaire du Jury: [Vincent Legat](#)

#### Useful Contact(s)

- Secrétariat: [Nathalie Sergoigne](#)

