

KIMA2M - Introduction Introduction Introduction

KIMA2M - Teaching profile

Learning outcomes

Building on fundamental scientific and technical knowledge (physics, chemistry, mechanics, mathematics) acquired during the Bachelor's program, the master's program in chemistry and materials science enables the student to develop polytechnic as well as specialized competences relating to materials, nanotechnology, as well as chemical and environmental engineering, which will allow

CORE COURSES [27.0]

- 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
<p>● LKIMA2990</p>	<p>Graduation project/End of studies project <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></p>		<p>EN [q1+q2] [] [25 Credits] 🌐 > <i>French-friendly</i></p>		x

MAJOR IN CHEMICAL ENGINEERING [15.0]

- 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
 - △ ⊕
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Year

1 2

o Cours au choix disciplinaires

o Cours au choix disciplinaires en génie des matériaux

⊗ LMAPR2016	Project in Polymer Science	Charles-André Fustin Alain Jonas	EN [q2] [30h+15h] [5 Credits] 🌐 > French-friendly	X	X
⊗ LCHM2261	Polymer Chemistry and Physical Chemistry	Charles-André Fustin Jean-François Gohy Alain Jonas	EN [q1] [45h+15h] [5 Credits] 🌐 > French-friendly	X	X
⊗ LMAPR2018	Rheology	Evelyne Van Ruymbeke	EN [q2] [30h+30h] [5 Credits] 🌐 > French-friendly	X	X
⊗ LMAPR2420	Sustainable metallurgy	Pascal Jacques	EN [q2] [30h+30h] [5 Credits] ⊖ 🌐 > French-friendly	X	X
⊗ LMSER2670	Materials for Extreme Environments	Jean-Pierre Erauw Pascal Jacques	EN [q2] [30h+30h] [5 Credits] ⊕ 🌐 > French-friendly	X	X
	Welding Science and Technology				



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 ».

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Year

1 2

o Content:

o Required courses

○ LINEO2001	Théorie de l'entrepreneuriat	Frank Janssen	(FR) [q1] [30h+20h] [5 Credits] 🌐	X	
○ LINEO2002	Aspects juridiques, économiques et managériaux de la création d'entreprise	Yves De Cordt Marine Falize	(FR) [q1] [30h+15h] [5 Credits] 🌐	X	
○ LINEO2003	Plan d'affaires et étapes-clefs de la création d'entreprise <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	Séminaire d'approfondissement en entrepreneuriat	Frank Janssen	(FR) [q2] [30h+15h] [5 Credits] 🌐	X	

⊗ Prerequisite courses

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

○ LINEO2021	Financer son projet	Philippe Grégoire Olivier Vercruysse	(FR) [q2] [30h+15h] [5 Credits] 🌐	X	
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COURS AU CHOIX EN CONNAISSANCES SOCIO-ÉCONOMIQUES

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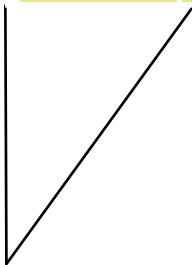
o Content:

⊗ LFSA2995	Company Internship	Dimitri Lederer Jean-Pierre Raskin	
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				Year	
				1	2
⌘ LESP2600	Vocational Induction Seminar - Spanish (B2.2/C1)	Paula Lorente Fernandez (coord.)	ES [q1] [30h] [3 Credits] 🌐	x	x
⌘ LESP2601	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.)	NI [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	NI [q1 or q2] [30h] [3 Credits] 🌐	x	x

⌘ Group dynamics

⌘ LEPL2351	Become a tutor	Jean-Charles Delvenne (coord.) Delphine Ducarme Thomas Pardoën Benoît Raucent	ES [q1] [15h+30h] [3 Credits] 🌐	x	x
⌘ LEPL2352	Become a tutor	Jean-Charles Delvenne (coord.) Delphine Ducarme Thomas Pardoën Benoît Raucent	ES [q2] [15h+30h] [3 Credits] 🌐	x	x



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KIMA2M - 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 a-6 82.319 cm 0 0 m 493.890991 0 | 492.890991 1 | 1 1 | h W6 0.9176 rg /F1 898ns, th /F5 8 T: W 2u176 rg /F1 8 Tf 1 0 0 -1 12.80000019](#)

		degree may have an adapted master programme.
	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

Master in engineering	Direct access
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Holders of a non-University 2nd cycle degree

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).

Admission and Enrolment Procedures for general registration

Teaching method

A variety of teaching methods

The teaching methods used in the Master's degree programme in chemical and materials engineering are in keeping with those used in 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. An important characteristic of the programme is the immersion of students in the research laboratories of the professors who teach in the programme (lab work, case studies, projects and theses), which allows students to learn cutting edge methods used in their field and to learn from the questioning process inherent in research. In addition, there is an optional 10 credit internship carried out over at least 9 months in a research centre or company that allows motivated students to get experience in the professional world.

Diverse learning situations

Students are exposed to a variety of pedagogies: lectures, projects, exercise and problem-solving sessions, case studies, experimental laboratories, computer simulations, educational software, internships in industry or research, factory visits, graduation trips, individual or group work, seminars given by visiting scientists. This variety of pedagogies helps students to build their knowledge in an iterative and progressive manner all the while developing their independence, organisational and time management skills as well as their ability to communicate.

Interdisciplinary Methods

The Master's degree in chemical and materials engineering is by its very nature interdisciplinary because it serves as an interface between chemistry and physics. It has an interdisciplinary foundation, which provides students with an introduction to the large array of applications used in applied physics and chemistry and training through practical work and cutting edge research as well as major courses in chemistry and material technologies: polymers and macromolecules, inorganic materials and processes, materials mechanics, chemical engineering, nanotechnologies and environmentalism and sustainable development. The programme is open to biotechnology with majors in biomaterials and bioprocesses as well as to business management with majors in management and small and medium sized business creation. The programme is composed of a significant number of classes such as PHYS (or PHY), CHIM (or CHM), BIOL, INMA, MECA, ELEC, BRNA and BIR, which shows that the programme is open and interdisciplinary. Finally, the programme allows students to select up to 40 credits of elective courses from the medical and science programmes and up to 6 credits of classes in the humanities and social sciences, which allow students to create a personalised programme of study.

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".

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. Details about evaluation methods for each teaching unit are explained by the professors at the beginning of the semester.

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

Mobility and/or Internationalisation outlook

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

So, there's no shortage of 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.

If you would like more information, please visit the dedicated pages of the [EPL International Office](#)

All classes are taught, in English. The second year of the master is then followed in one of the remaining seven partner Universities. In this context, the University of Louvain offers a second year focused on the Engineering of Materials and Nanostructures. At the end of the master program, the students will obtain a dual degree from the two Universities where they have studied.

Prof. B. Hackens is the FAMEais local coordinator at UCLouvain.

Possible trainings at the end of the programme

Accessible specialised Master's degrees

The [Advanced Master in Nanotechnologies](#) and the [Advanced Master in Nuclear Engineering](#) are natural extensions of the programme.

Accessible doctoral degrees

The Master's degree programme in chemistry and materials engineering also prepares students for doctoral programmes. Programme professors are members of doctoral programmes such as CHIM (molecular, supramolecular and functional chemistry), MAIN (materials, interfaces and nanotechnologies) and GEPROC (process engineering). These programmes are suitable for students who would like to continue their studies at the doctoral level.

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

Curriculum Management

Entity

Structure entity

Denomination

Faculty

Sector

Acronym

Postal address

SST/EPL/FYKI

(FYKI)

Louvain School of Engineering (EPL)

Sciences and Technology (SST)

FYKI

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Academic supervisor: [Pascal Jacques](#)

Jury

- Président du Jury: [Claude Oestges](#)
- Secrétaire du Jury: [Pascal Jacques](#)

Useful Contact(s) 7 c63 edatrétaire du Jury:

