KIMA2M - Introduction Itroduction Itroduction

5.5 Draft documents that take into account demands and conventions of the field.

5.6 Make a convincing oral presentation possibly using modern communication techniques.

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
Mandatory LKIMA2990	Graduation project/End of studies project *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] *> French-friendly*		x
Mandatory LEPL2020	Professional integration work *The modules of LEPL2020 course are organized over the two annual blocks 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*				

PROFESSIONAL FOCUS [30.0]

- Mandatory
- Optional
- Not offered in 2024-2025
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- Activity with requisites
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- [FR] Teaching language (FR, EN, ES, NL, DE, ...)

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

Content:

				Year 1	Year 2
LMAPR2001	Project "chemical & materials engineering for a sustainable future"	Juray De Wilde Pascal Jacques Alain Jonas Patricia Luis Alconero Samuel Poncé	EN [q2] [45h+60h] [10 Credits] > French-friendly	x	x
LMAPR2013	Science and engineering of metals and ceramics	Pascal Jacques	EN [q1] [30h+30h] [5 Credits] > French-friendly	x	x
LMAPR2019	Polymer Science and Engineering	Sophie Demoustier Alain Jonas Evelyne Van Ruymbeke	EN [q1] [45h+15h] [5 Credits] > French-friendly	x	x
LMAPR2231	Metallurgical and electrochemical processes	Joris Proost	EN [q2] [30h+22.5h] [5 Credits] > French-friendly	x	x
LMAPR2430	Industrial processes for the production of base chemicals	Juray De Wilde	EN [q1] [30h+22.5h] [5 Credits] > French-friendly	x	x

OPTIONS

Dans la rubrique "Options du master ingénieur civil en chimie et science des matériaux", l'étudiant·e doit valider au moins une des options proposées.
Dans la rubrique "Options et cours au choix en connaissances socioéconomiques", l'étudiant·e valide une des deux options ou choisit obligatoirement au minimum 3 crédits parmi les cours au choix ou les cours de l'option en enjeux de l'entreprise.

Major in chemical and materials

> Major in chemical engineering *[en-prog-2024-kima2m-lkima221o]*
> Major in materials science and engineering *[en-prog-2024-kima2m-lkima222o]*
> Cours au choix disciplinaires *[en-prog-2024-kima2m-lkima237o]*

Options et cours au choix en connaissances socio-économiques

> Business risks and opportunities *[en-prog-2024-kima2m-lkima235o]*
> Major in Interdisciplinary Program in Entrepreneurship - INEO *[en-prog-2024-kima2m-lkima236o]*
> Cours au choix en connaissances socio-économiques *[en-prog-2024-kima2m-lkima200o]*

Others elective courses

> Other elective courses *[en-prog-2024-kima2m-lkima952o]*

MAJOR IN CHEMICAL AND MATERIALS

MAJOR IN CHEMICAL ENGINEERING [15.0]

O Mandatory
⊠ Optional
△

- Mandatory
- Optional
- Not offered in 2024-2025
- Not offered in 2024-2025 but offered the following year
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- Not offered in 2024-2025 or the following year
- Activity with requisites
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- [FR] Teaching language (FR, EN, ES, NL, DE, ...)

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

Cours au choix disciplinaires

Cours au choix disciplinaires en génie des matériaux

				Year 1	Year 2
Optional LMAPR2016	Project in Polymer Science	Charles-André Fustin Alain Jonas	EN [q2] [30h+15h] [5 Credits] > *French-friendly*	x	x
Optional LCHM2261	Polymer Chemistry and Physical Chemistry	Charles-André Fustin Jean-François Gohy Alain Jonas	EN [q1] [45h+15h] [5 Credits] > *French-friendly*	x	x
Optional LMAPR2018	Rheology	Evelyne Van Ruymbeke	EN [q2] [30h+30h] [5 Credits] > *French-friendly*	x	x
Optional LMAPR2420	Sustainable metallurgy	Pascal Jacques	EN [q2] [30h+30h] [5 Credits] ⊘ > *French-friendly*	x	x
Optional LMAPR2672	Materials for Extreme Environments	Jean-Pierre Erauw Pascal Jacques	EN [q2] [30h+30h] [5 Credits] ⊕ > *French-friendly*	x	x
Optional LMECA2860	Welding Science and Technology	Pascal Jacques Aude Simar	EN [q1] [30h+30h] [5 Credits] > *French-friendly*	x	x
Optional LMAPR2141	Metals Processing and Recycling	Philippe Henry Joris Proost	EN [q2] [30h+30h] [5 Credits] ⊕ > *French-friendly*	x	x
Optional LMECA2640	Mechanics of composite materials	Issam Doghri	EN [q2] [30h+30h] [5 Credits] > *French-friendly*	x	x
Optional LMECA2520	Calculation of planar structures	Issam Doghri	EN [q2] [30h+30h] [5 Credits] > *French-friendly*	x	x
Optional LGCIV1022	Mechanics of structures	Pierre Latteur	EN [q2] [30h+30h] [5 Credits]		

Year
1 2

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

Content:

Required courses

				Year 1	Year 2
LINEO2001	Théorie de l'entrepreneuriat	Frank Janssen	[FR] [q1] [30h+20h] [5 Credits]	x	
LINEO2002	Aspects juridiques, économiques et managériaux de la				

COURS AU CHOIX EN CONNAISSANCES SOCIO-ÉCONOMIQUES

- 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
-

Year

Course prerequisites

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

For each UCLouvain training programme, a reference framework of learning outcomes specifies the 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.

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

			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

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 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 to discover all the destinations, testimonials from former students and all the procedures to follow to make these opportunities a success.

Louvain School of Engineering takes part in Erasmus Mundus Joint Master degree program: FAME

The Erasmus Mundus joint master "Functional Advanced Materials & Engineering"- FAME, is an international program spread over Belgium, Germany, France and Portugal. Within the mobility scheme of FAME, students spend a first year either at the Technical University of Darmstadt or at the Institute National Polytechnique de Grenoble.

All classes are taught, in English. The second year of the master is then followed in one of the remaining seven partner Universities. In