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## MINOFYKI - Introduction

### Introduction

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#### Introduction

The aim of this track is to enable the students to build a broad knowledge skills base in applied chemistry and physics (including thermodynamics and kinetics) opening avenues to the main fields of chemical and environmental engineering, advanced materials engineering, as well as physical engineering. The acquired skills cover a wide range of physical scales, from atomic to macroscopic and industrial dimensions, and prepare to the professions of the engineering master in chemistry and materials science as well as the master in physical engineering (chemical and environmental engineering, sustainable chemistry and energy, nanotechnology, (nano)electronics, optics, advanced materials including biomaterials, sensors and transducers, etc.).

## MINOFYKI - Teaching profile

### Learning outcomes

### Detailed programme

#### PROGRAMME BY SUBJECT

● Mandatory

△ Courses not taught during 2020-2021

⊕ Periodic courses taught during 2020-2021

⊗ Optional

⊖ Periodic courses not taught during 2020-2021

■ Activity with requisites

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

Year

2 3

#### ○ Content:

● LMAPR1805	Introduction to materials science	Jean-Christophe Charlier Pascal Jacques Bernard Nysten Thomas Pardoen (coord.)	30h+30h	5 Credits	q2	x	
● LMECA1901	Continuum mechanics.	Philippe Chatelain Issam Doghri	30h+30h	5 Credits	q2	x	
● LMAPR1491	Statistical & quantum physics	Jean-Christophe Charlier Xavier Gonze (coord.) Luc Piraux Gian-Marco Rignanese	30h+30h	5 Credits	q1		x
● LMAPR1230	Organic chemistry	Sophie Demoustier Charles-André Fustin	30h+30h	5 Credits	q1		x
● LMAPR1400	Cinétique et thermodynamique	Juray De Wilde Denis Mignon	30h+30h	5 Credits	q2		x
● LMAPR1492	Materials physics	Jean-Christophe Charlier Xavier Gonze (coord.) Luc Piraux Gian-Marco Rignanese	37.5h +22.5h	5 Credits	q2		x

#### 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 competences expected of every graduate on completion of the programme. You can see the contribution of each teaching unit to the programme's reference framework of learning outcomes in the document "*In which teaching units are the competences and learning outcomes in the programme's reference framework developed and mastered by the student?*"

## MINOFYKI - Information

### Access Requirements

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### Evaluation

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***The evaluation methods comply with the regulations concerning studies and exams (<https://uclouvain.be/fr/decouvrir/rgee.html>). More detailed explanation of the modalities specific to each learning unit are available on their description sheets under the heading "Learning outcomes evaluation method".***

The evaluation methods comply with the [regulations concerning studies and exams](https://uclouvain.be/fr/decouvrir/rgee.html) (<https://uclouvain.be/fr/decouvrir/rgee.html>). More detailed explanation of the modalities specific to each learning unit are available on their description sheets under the heading "Learning outcomes evaluation method".

### Possible trainings at the end of the programme

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Polytechnic minors provide students who have performed well and acquired a bachelor's qualification in engineering science-civil engineering, as part of a program which includes one of these minors, with unconditional access without further training to the master's in civil engineering which corresponds to this minor.

- For the minor in applied chemistry and physics: the master's in civil engineering in chemistry and material science and the master's in physicist-civil engineering.
- For the minor in construction: the master's in civil engineering in construction
- For the minor in electricity: the master's in electrician civil engineer
- For the minor in IT: the master's in IT civil engineer
- For the minor in mechanics: the master's in mechanic-civil engineer
- For the minor in applied mathematics: the master's in civil engineer in applied mathematics
- For a program which combines a major in electricity/minor in mechanics or major in mechanics/minor in electricity: the master's in electromechanical/civil engineering.

### Contacts

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#### 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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