UCL Study programme 2026 - 2027

Specialization track in Applied Chemistry and Physics

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

Table of contents

FILFYKI - Introduction

Introduction

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 swell 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.).

FILFYKI - Teaching profile

Learning outcomes

Programme

DETAILED PROGRAMME BY SUBJECT

- 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...)

30 ECTS

Content:

				Year 2	Year 3
LFYKI1101	Applied Chemistry and Physics - Technological Aspects	Flavio Abreu Araujo Benoît Hackens Pascal Jacques Patricia Luis Alconero	FR [q2] [22.5h+30h] [5 Credits]	x	
LFYKI1102	Statistical physics and solid state physics I	Jean-Christophe Charlier Gian-Marco Rignanese	FR [q2] [30h+30h] [5 Credits]	x	
LFYKI1201	Materials science [C]		FR [q1] [30h+30h] [5 Credits]		x
LFYKI1301	Fluid and solid mechanics [C]		FR [q2] [30h+22.5h] [5 Credits]		x

Cours au choix

Les étudiants choisissent un cours parmi

LFYKI1202	Quantum physics and solid state physics II [C]		FR [q1] [37.5h+22.5h] [5 Credits]		x
LFYKI1203	Organic Chemistry for (Bio-)Materials [C]		FR [q1] [30h+30h] [5 Credits]		x

Cours au choix

Les étudiants choisissent un cours parmi

LFYKI1302	Nuclear physics and special relativity [C]		FR [q2] [30h+22.5h] [5 Credits]		x
LFYKI1303	Chemical Engineering : Thermodynamics and Kinetics [C]		FR [q2] [30h+30h] [5 Credits]		x

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.

FILFYKI - Information

Evaluation

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".