

Table of contents

Introduction	2
Teaching profile	3
Learning outcomes	3
Programme	3
Detailed programme by subject	3
The programme's courses and learning outcomes	4
Information	5
Access Requirements	5
Evaluation	5
Possible trainings at the end of the programme	5
Contacts	5

MINMAP - Introduction

Introduction

MINMAP - Teaching profile

Learning outcomes

The primary objective of the "polytechnic" minors organized by the Faculté des Sciences Appliquées is to allow students taking a baccalaureate in engineering science, if they so wish, to acquire, through a polytechnic major/minor, basic training in two specialist areas of engineering science, and thus to broaden their technical range of skills, or prepare for a master's in engineering science in a domain which spans the various basic courses offered at baccalaureate level.

The disciplinary objectives of the minor in applied mathematics are to allow the student to acquire training in the basic concepts of the discipline, and, more specifically, to:

- Acquire basic skills in and knowledge of the fundamental disciplines in applied mathematics (optimization and operational research, algorithm and discrete mathematics, differential equations and dynamic systems, numerical analysis, statistics and probability)
- Gain an introduction into how mathematical models for engineering are designed, analyzed implemented in industry and organizations as well as drawing up effective strategies to improve the way such models work

Programme

DETAILED PROGRAMME BY SUBJECT

- Mandatory
- ⊗ Optional
- △ Not offered in 2021-2022
- ⊖ Not offered in 2021-2022 but offered the following year
- ⊕ Offered in 2021-2022 but not the following year
- △ ⊕ Not offered in 2021-2022 or the following year
- Activity with requisites
- (FR) Teaching language (FR, EN, ES, NL, DE, ...)

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

30 crédits

Year

2 3

○ Content:

○ Cours obligatoires de la mineure en mathématiques appliquées. (30 crédits)

Les étudiants ayant le cours LMECA1120 dans leur majeure MECA le remplacent par LMAT1223. Les étudiants ayant le cours LINMA1510 dans leur majeure (ELEC, GBIO, MECA) le remplacent par LINMA1315. Les étudiants suivant la majeure GC prennent le cours LMECA1120 au sein de leur majeure lors du bloc annuel 2, et complètent ensuite leur programme de mineure en prenant LINMA1315 lors du bloc annuel 3.

○ LINMA1170	Numerical analysis	François Henrotte (compensates Jean-François Remacle) Jean-François Remacle	FR [q2] [30h+22.5h] [5 Credits]		X
○ LINMA1691	Discrete mathematics - Graph theory and algorithms	Vincent Blondel Jean-Charles Delvenne	FR [q1] [30h+22.5h] [5 Credits]		X
○ LINMA1702	Optimization models and methods I	François Glineur	FR [q2] [30h+22.5h] [5 Credits]	X	
○ LINMA1510	Linear Control	Denis Dochain	FR [q1] [30h+30h] [5 Credits]		X
○ LINMA1731	Stochastic processes : Estimation and prediction	Pierre-Antoine Absil Luc Vandendorpe	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.

MINMAP - Information

Access Requirements

Evaluation

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".

Possible trainings at the end of the programme

Majors-minors leading directly to a master's course(s) :

For students who have performed well and obtained a bachelor's qualification in engineering science - civil engineering, the polytechnic minors guarantee them, as part of a program which includes one of these minors, unconditional access, without additional training, to the civil engineering master's which corresponds to this minor.

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

Contacts

Curriculum Management

Entity	
Structure entity	SST/EPL/MAP
Denomination	(MAP)
Faculty	Louvain School of Engineering (EPL)
Sector	Sciences and Technology (SST)
Acronym	MAP
Postal address	Avenue Georges Lemaître 4-6 - bte L4.05.01 1348 Louvain-la-Neuve Tel: +32 (0) 10 47 25 97 - Fax: +32 (0) 10 47 21 80

Academic supervisor: Pierre-Antoine Absil (<https://uclouvain.be/repertoires/pa.absil>)

Useful Contact(s)

- Secrétariat: Nathalie Ponet (<https://uclouvain.be/repertoires/nathalie.ponet>)

