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## MINSTAT - Introduction

### Introduction

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## MINSTAT - Teaching profile

### Learning outcomes

Aims of the course in terms of skills: the minor aims to allow the student to acquire basic skills in applied statistics which are of use in his/her specialist subject or help him/her prepare for a Master's in Statistics.

### Programme

#### DETAILED PROGRAMME BY SUBJECT

- Mandatory
- ⊗ Optional
- △ Not offered in 2023-2024
- ⊖ Not offered in 2023-2024 but offered the following year
- ⊕ Offered in 2023-2024 but not the following year
- △ ⊕ Not offered in 2023-2024 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 crédits

Year

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#### Content:

#### Module 1 (cours de base en mathématique)

##### ⊗ Bloc 1

○ LMAT1101	Mathematics 1	Pedro Dos Santos Santana Forte Vaz	FR [q1] [30h+20h] [4 Credits] 🌐	X	X
○ LMAT1102	Mathematics 2	Augusto Ponce	FR [q2] [30h+30h] [4 Credits] 🌐	X	X

##### ⊗ Bloc 2

○ LECGE1112	Mathematics in economy and management	Julien Federinov (compensates Pascal Lambrechts) Mathieu Van Vyve	FR [q1] [45h+30h] [6 Credits] 🌐	X	X
○ LECGE1230	Mathematics in Economics and Management II	Pieter Klaessens	FR [q1] [45h+30h] [6 Credits] 🌐	X	X

##### ⊗ Bloc 3

○ LINGE1114	Mathematics I: analysis	Heiner Obermann	FR [q1] [30h+30h] [5 Credits] 🌐	X	X
○ LINGE1121	Mathematics II: algebra and matrix calculus	Tom Claeys	FR [q2] [30h+30h] [5 Credits] 🌐	X	X

#### Module 2 (cours de base en statistique/probabilité)

Au sein de chaque bloc, les cours doivent être suivis dans l'ordre indiqué.

##### ⊗ Choix 2

○ LSTAT2011	Éléments de mathématiques pour la statistique	Catherine Legrand	FR [q1] [15h+15h] [3 Credits] 🌐	X	X
○ LSTAT2014	Elements of probability and mathematical statistics	Eugen Pircalabelu	FR [q1] [22.5h+22.5h] [5 Credits] 🌐	X	X

##### ⊗ Bloc 2

○ LBIR1212	Probabilities and statistics (I)	Patrick Bogaert	FR [q1] [30h+15h] [4 Credits] 🌐	X	X
○ LBIR1315	Probability and statistics II	Patrick Bogaert	FR [q1] [22.5h+22.5h] [3 Credits] 🌐	X	X

Year

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## ❗ Bloc 3

○ LINGE1113	Probability	Johan Segers	FB [q2] [30h+15h] [4 Credits] 🌐	X	X
○ LINGE1214	Further Statistics	Christian Hafner	FB [q1] [30h+15h] [4 Credits] 🌐	X	X

## ❗ Module 3 (cours de base en informatique)

Parmi les cours qu'il choisit, l'étudiant sélectionne maximum un cours parmi LINFO1101 et LINGE1225. L'étudiant qui suit plusieurs cours dans ce module suit obligatoirement les cours selon la séquence suivante : (LINFO1101 ou LINGE1225) puis LEPL1402 puis finalement LEPL1509.

❗ LINFO1101	Introduction to programming	Kim Mens Siegfried Nijssen Charles Pecheur	FB [q1] [30h+30h] [5 Credits] 🌐	X	X
❗ LINGE1225	Programming in Economics and Management	Marco Saerens	FB [q1] [22.5h+22.5h] [4 Credits] 🌐	X	X
❗ LEPL1402	Informatics 2	Sébastien Jodogne Ramin Sadre Pierre Schaus	FB [q1] [30h+30h] [5 Credits] 🌐	X	X
❗ LEPL1509	Project 4 (in informatics) LEPL1402 doit être suivi au plus tard la même année que LEPL1509.	Marc Lainez (compensates Yves Deville)	FB [q2] [30h+22.5h] [5 Credits] 🌐	X	X

## ❗ Module 4 (Statistique)

## ❗ au choix

maximum un cours parmi

❗ LSTAT2120	Linear models	Christian Hafner	FB [q1] [30h+7.5h] [5 Credits] 🌐 > French-friendly	X	X
❗ LBIRA2110A	Statistical analysis of multivariate data	Xavier Draye Frédéric Gaspard Laura Symul	FB [q1] [22.5h+15h] [3 Credits] 🌐 > English-friendly	X	X

## ❗ au choix

maximum un cours parmi

❗ LSTAT2110	Data Analysis	Johan Segers	FB [q1] [30h+7.5h] [5 Credits] 🌐	X	X
❗ LINGE1222	Multivariate Statistical Analysis	Johan Segers	FB [q2] [30h+15h] [4 Credits] 🌐	X	X

## ❗ au choix

maximum un cours parmi

❗ LMAFY1101	Data exploration and introduction to statistical inference L'étudiant qui choisit le cours LMAFY1101 le suit impérativement en début de mineure.	Anouar El Ghouch	FB [q2] [30h+30h] [5 Credits] 🌐	X	
❗ LSTAT2020	Statistical softwares and basic statistical programming	Céline Bugli	FB [q1] [15h+15h] [4 Credits] 🌐	X	X

## ❗ au choix

❗ LDATS2030	Statistique et data sciences avec R: Programmation avancée	Anouar El Ghouch	FB [q2] [15h+15h] [4 Credits] 🌐	X	X
❗ LSTAT2200	Survey and Sampling	Séverine Guisset Christian Ritter	FB [q2] [15h+5h] [4 Credits] 🌐	X	X
❗ LSTAT2310	Statistical quality control.	Bernard Francq	FB [q1] [15h+5h] [4 Credits] 🌐 > English-friendly	X	X
❗ LSTAT2320	Design of experiment.	Patrick Bogaert	FB [q2] [22.5h+7.5h] [5 Credits] 🌐 > English-friendly	X	X
❗ LSTAT2330	Statistics in clinical trials.	Catherine Legrand Annie Robert	FB [q2] [22.5h+7.5h] [5 Credits] 🌐	X	X

## ❗ Module 5 (Cours de biologie)

L'étudiant choisit maximum un cours parmi

❗ LBIO1110	Life : diversity and evolution	Michel Baguette (compensates Caroline Nieberding Patrick Dumont)	FB [q1] [30h+10h] [4 Credits] 🌐	X	X
❗ LBIO1111	Cell and molecular biology	Patrick Dumont Charles Hachez	FB [q1] [30h+20h] [5 Credits] 🌐	X	X

				Year	
				2	3
⌘ LIEPR1004A	Biologie cellulaire et éléments d'histologie (partim A FSA)	Catherine Behets Wydemans Patrick Henriët	PK [q2] [45h] [4 Credits] 🌐	x	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.

## MINSTAT - Information

### Access Requirements

The minor in statistics is open to students from UCLouvain baccalaureate for whom statistics appears to be an attractive additional tool, and who already have sufficient basic training in mathematics and statistics. The real content of his/her program will depend on his/her goals and basic skills in statistics, mathematics and IT.

Students with little or no training in mathematics and statistics in their bachelor's program have access to the Minor in Statistics and Data Science (MINDATA), which offers an introduction to the practice of statistics.

Students who have direct access to the master in Statistics and master in Data Science are encouraged to choose the advanced minor (APPSTAT).

An adviser from the Institut de statistique will be available to help the student decide in which group s/he belongs and to help him/her choose his/her electives to match his/her aims.

### 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 giving direct access to a master's course(s) :

Students who pass the minor in statistics have fulfilled the necessary conditions to enroll on a specialized master's in statistics.

#### Majors-minors giving access to the master's subject to the student meeting an additional requirement(s):

### Contacts

#### Curriculum Management

Entity

Structure entity

Denomination

Faculty

Sector

Acronym

Postal address

SST/SC/LSBA

(LSBA)

Faculty of Science (SC)

Sciences and Technology (SST)

LSBA

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<https://uclouvain.be/fr/facultes/sc/lsba>

Website

Academic supervisor: Johan Segers

Useful Contact(s)

- Pierre Devolder
- Donatien Hainaut
- Catherine Legrand
- Eugen Pircalabelu
- Sophie Malali

