UCL Study programme 2026 - 2027

Minor in Statistics, Actuarial Sciences and Data Sciences

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Introduction

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 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 crédits

Content:

Module 1 (cours de base en mathématique)

Bloc 1

				Year	
LMAT1101	Mathematics 1	Pedro Dos Santos Santana Forte Vaz	FR [q1] [30h+20h] [4 Credits]	2	3
LMAT1102	Mathematics 2	Augusto Ponce	FR [q2] [30h+30h] [4 Credits]	2	3

Bloc 2

LECGE1112	Mathematics in economy and management	Pascal Lambrechts	FR [q1] [45h+30h] [6 Credits]	2	3
LECGE1230	Mathematics (2) and operations research		FR [q1] [45h+30h] [6 Credits]	2	3

Bloc 3

LINGE1114	Introduction to mathematical modelling : analysis	Heiner Olbermann	EN [q1] [30h+30h] [5 Credits]	2	3
LINGE1121	Introduction to mathematical modelling : algebra	Tom Claeys	EN [q2] [30h+30h] [5 Credits]	2	3

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]	2	3
LSTAT2014	Elements of probability and mathematical statistics	Eugen Pircalabelu	FR [q1] [22.5h+22.5h] [5 Credits] *> English-friendly*	2	3

Bloc 2

LBIR1212	Probabilities and statistics (I)	Patrick Bogaert	FR [q1] [30h+15h] [4 Credits]	2	3
LBIR1315	Probability and statistics II	Patrick Bogaert	FR [q1] [22.5h+22.5h] [3 Credits]	2	3

Bloc 3

				Year 2	3
LINGE1113	Data analysis : Probability	Johan Segers	FR [q2] [30h+15h] [4 Credits]	x	x
LINGE1214	Data analysis : Statistics and Econometrics		FR [q1] [45h+15h] [4 Credits]	x	x

Module 3 (cours de base en informatique)

L'étudiant·e qui suit plusieurs unités d'enseignement dans ce module les suit obligatoirement selon la séquence suivante : LSC1301 puis LINFO1103 puis finalement LEPL1402.

LSC1301	Introduction to programming and data processing	Hélène Verhaeghe	FR [q2] [22.5h+30h] [5 Credits]	x	x
LINFO1103	Introduction to algorithms	Pierre Dupont	FR [q2] [30h+30h] [5 Credits]	x	x
LEPL1402	Informatics 2	Sébastien Jodogne Ramin Sadre Pierre Schaus	FR [q1] [30h+30h] [5 Credits]	x	x

Module 4 (Statistique)

au choix

maximum un cours parmi

LSTAT2120	Linear models	Christian Hafner	EN [q1] [30h+15h] [5 Credits] *> French-friendly*	x	x
LBIRA2110A	Statistical analysis of multivariate data - Biometrics 1		FR [q1] [22.5h+15h] [3 Credits] *> English-friendly*	x	x

au choix

maximum un cours parmi

LMAFY1101	Data exploration and introduction to statiscal inference *L'étudiant qui choisit le cours LMAFY1101 le suit impérativement en début de mineure.*	Anouar El Ghouch	FR [q2] [30h+30h] [5 Credits]	x	
LDATS2350	Hands-on data science with Python	Olivier Caelen Cédric Heuchenne	EN [q2] [30h+15h] [5 Credits]	x	x

au choix

LSTAT2110	Data Analysis	Olivier Caelen	FR [q1] [30h+7.5h] [5 Credits]	x	x
LDATS2030	Programming and data reporting in R	Céline Bugli Anouar El Ghouch	FR [q1] [22.5h+15h] [5 Credits]	x	x
LSTAT2320	Design of experiment.	Laura Symul	FR [q2] [30h+9.5h] [5 Credits] *> English-friendly*	x	x
LSTAT2330	Statistics in clinical trials.	Catherine Legrand	FR [q2] [30h+7.5h] [5 Credits]	x	x

Module 5 (Cours de biologie)

L'étudiant choisit maximum un cours parmi

LBIO1110	Life : diversity and evolution	Patrick Dumont François Renoz	FR [q1] [30h+10h] [4 Credits]	x	x
LBIO1111	Cell and molecular biology	Patrick Dumont Charles Hachez	FR [q1] [30h+20h] [5 Credits]	x	x
LFSM1104A	Biologie cellulaire et éléments d'histologie (partim A FSA)		FR [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 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".

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	SST/SC/LSBA
Denomination	(LSBA)
Faculty	Faculty of Science (SC)
Sector	Sciences and Technology (SST)
Acronym	LSBA
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Academic supervisor: Laura Symul

Useful Contact(s)

- Secretary of The Louvain School of Statistics, Biostatistics and Actuarial Sciences: Sophie Malali