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## Introduction

### Introduction

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## 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.

### Detailed programme

#### PROGRAMME BY SUBJECT

- Mandatory
- △ Courses not taught during 2015-2016
- ⊕ Periodic courses taught during 2015-2016
- ⊗ Optional
- ⊖ Periodic courses not taught during 2015-2016
- Activity with requisites

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

Year

2 3

#### ○ Cours de mathématique de base

L'étudiant du groupe 1 choisit un module parmi:

##### ⊗ Module 1

○ LECGE1112	Mathematics in economy and management	Pieter Klaessens, Pascal Lambrechts	45h+30h	6 Credits	1q	X	X
○ LECGE1230	Mathematics in Economics and Management II	Julio Davila Muro	45h+30h	6 Credits	1q	X	X

##### ⊗ Module 2

○ LMAT1111A	General Mathematics	Pedro Dos Santos Santana Forte Vaz, Marino Gran, Augusto Ponce	45h+30h	11 Credits	1q	X	X
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##### ⊗ Module 3

○ LINGE1114	Mathematics I: analysis	Abdou Kouider Ben- Naoum, Vincent Wertz	30h+30h	5 Credits	1q	X	X
○ LINGE1121	Mathematics II: algebra and matrix calculus	Tom Claeys	30h+30h	5 Credits	2q	X	X

#### ○ Cours en probabilités et statistique de base

L'étudiant des groupes 1 et 2 choisit un module parmi:

##### ⊗ Module 1

○ LECGE1114	Statistics in Economics and Management I	Marie-Paule Kestemont	30h+30h	5 Credits	2q	X	X
○ LECGE1224	Economics and Management Statistics	Catherine Timmermans	30h+15h	5 Credits	2q	X	X

##### ⊗ Module 2

○ LINGE1113	Probability	Johan Segers	30h+15h	4 Credits	2q	X	X
○ LINGE1214	Further Statistics	Christian Hafner	30h+15h	4 Credits	1q	X	X

### ⊗ Module 3

○ LBIR1203	Probabilities and statistics (I)	Patrick Bogaert	30h+15h	4 Credits	1q	x	x
○ LBIR1304	Probability and statistics (II)	Patrick Bogaert	22.5h +22.5h	3 Credits	1q	x	x

### ⊗ Cours de base en informatique

⊗ LBIR1204	Informatique et mathématiques appliquées	Patrick Bogaert, Emmanuel Hanert (coord.), Marnik Vanclooster	22.5h +22.5h	4 Credits	2q	x	x
⊗ LECGE1215	Information Technology in Economics and Management	Manuel Kolp (coord.), Marco Saerens, Yves Wautelet (compensates Manuel Kolp)	30h+20h	4 Credits	1q	x	x

### ○ Cours spécialisés en statistique

L'étudiant du groupe 1 complète pour 30C. L'étudiant du groupe 2 choisit 10C et celui du groupe 3, 15C.

⊗ LINGE1221	Econometrics	Sébastien Van Belleghem	30h+15h	5 Credits	2q	x	x
⊗ LINGE1222	Multivariate Statistical Analysis	Johan Segers	30h+15h	4 Credits	2q	x	x
⊗ LMAT1371	Probability	Johan Segers	30h +22.5h	5 Credits	2q	x	x
⊗ LSTAT2020A	Calcul statistique sur ordinateur	Céline Bugli	6h+6h	2 Credits	1q	x	x
⊗ LSTAT2020B	Calcul statistique sur ordinateur II	Céline Bugli	14h+14h	4 Credits	1q	x	x
⊗ LSTAT2040	Statistical analysis	Anouar El Ghouch, Ingrid Van Keilegom	30h+15h	5 Credits	2q	x	x
⊗ LSTAT2130	Introduction to Bayesian statistics.	Philippe Lambert	15h+5h	4 Credits	2q	x	x
⊗ LSTAT2140	Non parametric statistics	Cédric Heuchenne (compensates Ingrid Van Keilegom), Ingrid Van Keilegom	15h+5h	4 Credits	1q	x	x

### ⊗ Cours utiles dans le domaine de la statistique

L'étudiant des groupes 2 et 3 complète pour avoir 30 crédits.

⊗ LFSAB1104	Numerical methods	Vincent Legat	30h+30h	5 Credits	1q	x	x
⊗ LINMA1702	Applied mathematics : Optimization I	François Glineur	30h +22.5h	5 Credits	2q	x	x
⊗ LINMA1731	Stochastic processes : Estimation and prediction	Pierre-Antoine Absil, Luc Vandendorpe (coord.)	30h+30h	5 Credits	2q	x	x
⊗ LMAT1322	Measure theory	Paolo Roselli	22.5h +15h	3 Credits	1q	x	x

## COURSE PREREQUISITES

A document entitled [en-prerequis-2015-min-Istat100i.pdf](#) specifies the activities (course units - CU) with one or more pre-requisite(s) within the study programme, that is the CU whose learning outcomes must have been certified and for which the credits must have been granted by the jury before the student is authorised to sign up for that activity.

These activities are identified in the study programme: their title is followed by a yellow square.

As the prerequisites are a requirement of enrolment, there are none within a year of a course.

The prerequisites are defined for the CUs for different years and therefore influence the order in which the student can enrol in the programme's CUs.

In addition, when the panel validates a student's individual programme at the beginning of the year, it ensures the consistency of the individual programme:

- It can change a prerequisite into a corequisite within a single year (to allow studies to be continued with an adequate annual load);
- It can require the student to combine enrolment in two separate CUs it considers necessary for educational purposes.

For more information, please consult [regulation of studies and exams](#).

## **THE PROGRAMME'S COURSES AND LEARNING OUTCOMES**

For each UCL 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?"

The document is available by clicking [this link](#) after being authenticated with UCL account.

## Information

### Liste des bacheliers proposant cette mineure

- > Bachelor in Engineering [en-prog-2015-fsa1ba]
- > Bachelor in Philosophy [en-prog-2015-filo1ba]
- > Bachelor in Sociology and Anthropology [en-prog-2015-soca1ba]
- > Bachelor in Information and Communication [en-prog-2015-comu1ba]
- > Bachelor in religious studies [en-prog-2015-reli1ba]
- > Bachelor in Motor skills : General [en-prog-2015-edph1ba]
- > Bachelor in Biomedicine [en-prog-2015-sbim1ba]
- > Bachelor in Pharmacy [en-prog-2015-farm1ba]
- > Bachelor in Computer Science [en-prog-2015-sinf1ba]
- > Bachelor in Economics and Management [en-prog-2015-ecge1ba]
- > Bachelor in Human and Social Sciences [en-prog-2015-huso1ba]
- > Bachelor in Mathematics [en-prog-2015-math1ba]
- > Bachelor in Political Sciences: General [en-prog-2015-spol1ba]

### Admission

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

We divide the students into three groups based on the role mathematics and statistics play in their university course:

- Group 1 : students whose baccalaureate program does not feature any mathematics training and who are not taking a sufficiently methodological statistics course.
- Group 2 : students with sound mathematics training but who have not covered much statistics in their baccalaureate program.
- Group 3 : students who already have a solid basic training in mathematics and statistics in their baccalaureate.

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.

### 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 Managment

Entite de la structure LSBA

Acronyme **LSBA**  
Dénomination Louvain School of Statistics, Biostatistics and Actuarial Sciences  
Adresse Voie du Roman Pays 20 bte L1.04.01  
1348 Louvain-la-Neuve

Tél 010/474314 - Fax 010/473032

Site web <https://www.uclouvain.be/lbsa>

Secteur Secteur des sciences et technologies (SST)

Faculté Faculté des sciences (SC)

Commission de programme Louvain School of Statistics, Biostatistics and Actuarial Sciences (LSBA)

**Academic Supervisor :** [Christian Hafner](#)

**Jury:**

## Usefull Contacts

Secrétaire de l'Ecole de statistique, biostatistique et sciences actuarielles : [Sophie Malali](#)

## Infos

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