

At Louvain-la-Neuve - 120 credits - 2 years - Day schedule - In French

Dissertation/Graduation Project : **YES** - Internship : **optional**

Activities in English: **YES** - Activities in other languages : **NO**

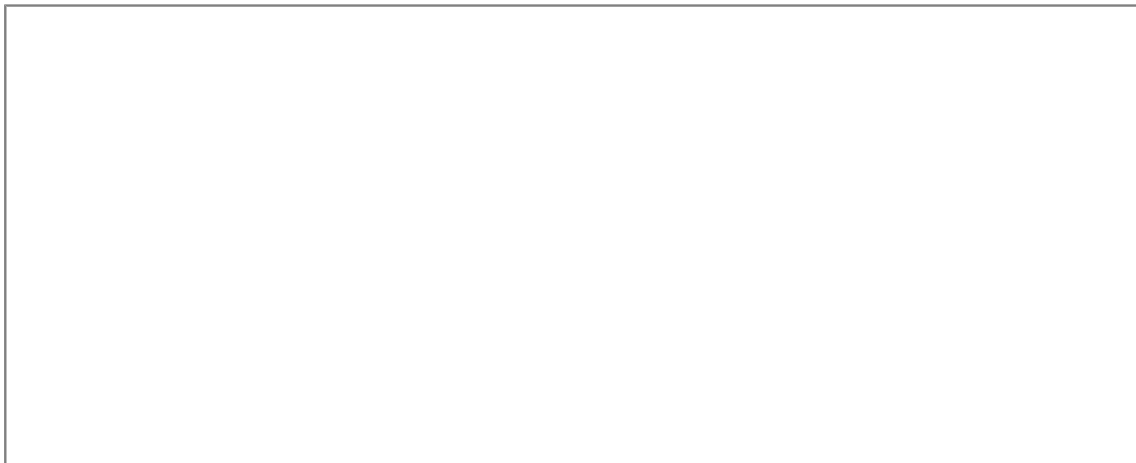
Activities on other sites : **YES**

Main study domain : **Sciences**

Organized by: **Faculty of Science (SC)**

Programme acronym: **BSTA2M** - Francophone Certification Framework: 7

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BSTA2M - Introduction

Introduction

Introduction

Organized by Louvain School of Statistics, Biostatistics and Actuarial Sciences (LSBA), this Master's program offers you

- A training in the fundamental concepts of statistics, using the main technical tools and software for the analysis of statistical data and the specific statistical methods required in the field of statistics in health sciences.
- A training in applied statistics to the medical field, in clinical and pre-clinical research, pharmaceutical research, epidemiology and other life sciences oriented fields.
- Several opportunities to put in practice statistical techniques based on exercises, individual projects, analyses of real data using statistical software and the preparation of a Master's thesis, possibly in collaboration with an external industry partner.

Your profile

You

- Hold an undergraduate diploma and you wish to become a specialist in data analysis methods or to develop new innovative tools in this field;
- Hold an undergraduate diploma or Master's degree from a University or a University college and statistics is an additional competence to your actual training;
- Are looking for a training in statistics applied to the medical fields, and in particular to clinical and pre-clinical research, pharmaceutical research, epidemiology, public health or in another field of life sciences.

Your programme

The program of Master's degree in Statistics with the Biostatistics orientation is composed of a core study program of at least 63 credits of courses (UE) of general statistic and biostatistic, and of 30 credits (five tools in

BSTA2M - Teaching profile

Learning outcomes

On successful completion of this programme, each student is able to :

1. Maîtriser un socle fondamental de la probabilité et de la statistique.

1.1

Maîtriser les calculs mathématiques fondamentaux.

1.2

Résumer un texte de méthodologie statistique et situer les limites de ses connaissances face à un problème donné.

1.3

Utiliser les outils fondamentaux de calcul et de programmation dans des problèmes de probabilité et statistique.

1.4

Reconnaître les concepts fondamentaux et transversaux d'importantes théories de probabilité et statistique actuelles et établir les liens principaux entre ces théories.

1.5

Expliquer des théories de probabilité et statistique en motivant les énoncés et les définitions par des exemples et des contre-exemples

of 5 credits. These extra-curricular courses must be relevant, of a sufficient level and adapted to the profile of the program and of the student.

The student prepares his program in consultation with a study advisor, then submits it to the jury for approval.

For a typical program, this master will count, regardless of the options and / or elective courses selected, a minimum of 120 credits spread over two annual blocks corresponding to a minimum of 60 credits each.

BSTA2M Programme

Detailed programme by subject

CORE COURSES

- 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...)

Year

1 2

○ Cours obligatoires de statistique générale (40 credits)

- LSTAT2020 [Statistical softwares and basic statistical programming](#)

PROFESSIONAL FOCUS [30.0]

La finalité spécialisée comprend le mémoire, l'UE de base en statistique du biostatisticien et une UE en statistique appliquée.

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OPTIONS

The student completes his program by choosing teaching units in the options and respecting the instructions of each option.

If the student chooses 15 or more credits in an option (including compulsory courses), this option will appear on the appendix of his diploma.

- > [Biostatistique clinique et épidémiologie](#) [en-prog-2023-bsta2m-bbsta220o]
 > [Biométrie, technométrie et bioinformatique](#) [en-prog-2023-bsta2m-lbsta210o]

BIostatistique Clinique et Épidémiologie

- 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...)

The student will validate this option if he/she obtains between 15 and 30 credits among the following courses.

Year

1 2

o Content:

o Choisir au moins un cours parmi

⊗ WFSP2218	Longitudinal analysis: linear, logistic and Poisson regression	Annie Robert	FR [q1] [20h+20h] [4 Credits] 🌐	X	X
⊗ WFSP2228	Systematic literature review, realist evaluation and meta-analysis	Annie Robert (coord.) Kiswendsida Clovis Sawadogo	FR [q2] [20h+10h] [3 Credits] 🌐	X	X

⊗ Cours au choix

⊗ WESP2234	Clinical decision making	Andrea Penalzoza-Baeza Annie Robert (coord.) Kiswendsida Clovis Sawadogo	FR [q1] [30h] [3 Credits] 🌐	X	X
⊗ WFSP2201	Advanced methods in public health : seminar	Niko Speybroeck	EN [q2] [15h] [3 Credits] △ 🌐	X	X
⊗ WFSP2202	Health survey methods	Stefaan Demarest Lydia Gisle Vincent Lorant (coord.)	EN [q1] [20h] [5 Credits] 🌐	X	X
⊗ WFARM2196	Rational therapeutic choices (Introduction to evidence-based medicine and pharmacoecconomy)	Noémie Defourmy (compensates) Séverine Henrard Nathalie Dujardin Anne Spinewine (coord.)	FR [q1] [30h+10h] [4 Credits] 🌐	X	X
⊗ WFARM2513	Pharmacocinétique approfondie	Laure Elens	FR [q2] [22.5h] [3 Credits] 🌐 > English-friendly	X	X

WSBIM2243	Digital processing of medical images	
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⌘ WMD1102	Physique expérimentale et introduction mathématique aux sciences expérimentales (1e partie)	Fabio Maltoni Geoffroy Piroux	PK [q1] [60h+21h] [8 Credits] 🌐
⌘ WMDS1113	Epidémiologie, santé publique et soins de santé	Benoît Boland Séverine Henrard Jean Macq (coord.) Andrea Penaloza-Baeza	PK [q2] [30h+20h] [4 Credits] 🌐

⌘ Cours de probabilités et statistique

⌘ LBIR1212	Probabilities and statistics (I)	
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BSTA2M -

		authorisation from the faculty/ school.
Tous les autres bacheliers	<p>if the student did not succeed Minor in Statistics, Actuarial Sciences and Data Sciences and LFSAB1221</p> <p>Supplementary classes: - LBIO1110, LBIO1111 or LIEPR1004A - and/or LSTAT2011, LSTAT2012, LSTAT2013</p>	Access based on application

Others Bachelors of the French speaking Community of Belgium

Access based on application

- [LBIO1110](#), [LBIO1111](#) or [LIEPR1004A](#)
- and/or [LSTAT2011](#), [LSTAT2012](#), [LSTAT2013](#)

Foreign Bachelors

Tous les bacheliers	Supplementary classes: - LBIO1110 , LBIO1111 or LIEPR1004A - and/or LSTAT2011 , LSTAT2012 , LSTAT2013	Access based on application
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Non university Bachelors

> Find out more about [links](#) to the university

Diploma	Access	Remarks
BA - technologue de laboratoire médical - crédits supplémentaires entre 45 et 60 BA en agronomie, orientation agro-industries et biotechnologies - crédits supplémentaires entre 45 et 60 BA en agronomie, orientation agronomie des régions chaudes - crédits supplémentaires entre 45 et 60 BA en agronomie, orientation environnement - crédits supplémentaires entre 45 et 60 BA en agronomie, orientation forêt et nature - crédits supplémentaires entre 45 et 60 BA en agronomie, orientation techniques et gestion agricoles - crédits supplémentaires entre 45 et 60 BA en agronomie, orientation techniques et gestion horticolas - crédits supplémentaires entre 45 et 60 BA en agronomie, orientation technologie animalière - crédits supplémentaires entre 45 et 60 BA en automatisation - crédits supplémentaires entre 45 et 60 BA en domotique - crédits supplémentaires entre 45 et 60 BA en informatique, orientation informatique industrielle - crédits supplémentaires entre 45 et 60 BA en informatique, orientation réseaux et télécommunications - crédits supplémentaires entre 45 et 60 BA en informatique, orientation sécurité des systèmes - crédits supplémentaires entre 45 et 60 BA en informatique, orientation technologies de l'informatique - crédits supplémentaires entre 45 et 60	Les enseignements supplémentaires éventuels peuvent être consultés dans le module complémentaire .	Type court

Holders of a 2nd cycle University degree

Diploma	Special Requirements	Access	Remarks
"Licenciés"			
Licenciés belges de la communauté française: Bioingénieur Ingénieur civil (sauf ingénieur civil architecte) sciences mathématiques	LBIO1110 , LBIO1111 or LIEPR1004A is supplementary classes for students who have not taken an equivalent course.	Direct access	Subject to the acceptance of the jury, a student may be exempted from a maximum of

