

Faculty of Sciences

Master of Science in Statistical Data Analysis

Language of instruction: English

Programme version 13

## 1 General Courses

9 credits

Nr	Course	CRDT	Ref	MT1	Session	Study
1	C004076 Principles of Statistical Data Analysis <i>Els Goetghebeur -- Department of Mathematics, Computer Science and Statistics</i>	6		1	A:1	180
2	C004617 R for Data Analysis <i>Koen Plevoets -- Department of Mathematics, Computer Science and Statistics</i>	3		1	A:1	90

## 2 Majors

36 credits

Subscribe to 36 credit units from 1 major from the following list. Subject to approval by the faculty.

### 2.1 Major Statistical Science

36 credits

Nr	Course	CRDT	Ref	MT1	Session	Study
1	C004618 Python for Data Analysis <i>Koen Plevoets -- Department of Mathematics, Computer Science and Statistics</i>	3		1	A:1	90
2	C004078 Analysis of Continuous Data <i>Els Goetghebeur -- Department of Mathematics, Computer Science and Statistics</i>	6		1	A:1	180
3	C004079 Categorical Data Analysis <i>Beatrijs Moerkerke -- Department of Data-analysis</i>	6		1	A:1	180
4	C004080 Statistical Inference <i>Oliver Dukes -- Department of Mathematics, Computer Science and Statistics</i>	6		1	A:2	180

#### 2.1.1 Elective Course List

15 credits

Subscribe to no more than 15 credit units from the following list.

Subscribe to at most 5 credit units from 1 module from the following list.

Nr	Course	CRDT	Ref	MT1	Session	Study
1	I002454 Geostatistics	5		1		150
2	C003243 Econometrics: Time Series Analysis <i>Gerdie Everaert -- Department of Economics</i>	5		1	A:1	150
3	C002884 Epidemiology and Clinical Trials <i>Brecht Devleesschauwer -- Department of Translational Physiology, Infectiology and Public Health</i>	5		1	A:1	150
4	C003401 Statistical Genomics <i>Lieven Clement -- Department of Mathematics, Computer Science and Statistics</i>	5		1	A:1	150
5	C002950 Survival Analysis <i>Els Goetghebeur -- Department of Mathematics, Computer Science and Statistics</i>	5		1	A:2	150
6	C004413 Causal Machine Learning <i>Stijn Vansteelandt -- Department of Mathematics, Computer Science and Statistics</i>	5		1	A:2	150
7	I001280 Experimental Design <i>Stijn Luca -- Department of Data Analysis and Mathematical Modelling</i>	5		1	B:2	150
8	C003398 Analysis of Clustered and Longitudinal Data <i>Johan Steen -- Department of Mathematics, Computer Science and Statistics</i>	5		1	A:2	150
9	C003549 Analysis of High Dimensional Data <i>Lieven Clement -- Department of Mathematics, Computer Science and Statistics</i>	5		1	A:1	150
10	C004414 Statistical Consulting <i>Els Goetghebeur -- Department of Mathematics, Computer Science and Statistics</i>	5		1		150

11	F000687	Advanced Econometrics: Non-Linear Methods <i>Gerdie Everaert -- Department of Economics</i>	6	1	A:2	180
12	C004545	Bayesian Statistics <i>Koen De Turck -- Department of Telecommunications and Information Processing</i>	5	1	A:2	150
13	E016350	Artificial Intelligence <i>Aleksandra Pizurica -- Department of Telecommunications and Information Processing</i>	3	1	B:2	90

#### 2.1.1.1 Elective Courses Flemish Community

[Subscribe to at most 5 credit units from the study programmes of the universities of the Flemish Community.](#)

### 2.2 Major Computational Statistics

36 credits

Nr	Course	CRDT	Ref	MT1	Session	Study
1	C003805 Statistical Modelling <i>Tom Loeys -- Department of Data-analysis</i>	8		1	A:1	240
2	C003802 Big Data Science <i>Jefrey Lijffijt -- Department of Electronics and Information Systems</i>	5		1	A:J	150
3	E016350 Artificial Intelligence <i>Aleksandra Pizurica -- Department of Telecommunications and Information Processing</i>	3		1	B:2	90
4	C003080 Programming <i>Peter Dawyndt -- Department of Mathematics, Computer Science and Statistics</i>	5	UKV	1	C:1	150
5	C003803 Databases <i>Antoon Bronselaer -- Department of Telecommunications and Information Processing</i>	5		1	A:2	150

#### 2.2.1 Elective Course List

10 credits

[Subscribe to no more than 10 credit units from the following list.](#)

[Subscribe to at most 5 credit units from 1 module from the following list.](#)

Nr	Course	CRDT	Ref	MT1	Session	Study
1	C004545 Bayesian Statistics <i>Koen De Turck -- Department of Telecommunications and Information Processing</i>	5		1	A:2	150
2	C003549 Analysis of High Dimensional Data <i>Lieven Clement -- Department of Mathematics, Computer Science and Statistics</i>	5		1	A:1	150
3	C004413 Causal Machine Learning <i>Stijn Vansteelandt -- Department of Mathematics, Computer Science and Statistics</i>	5		1	A:2	150
4	C004414 Statistical Consulting <i>Els Goetghebeur -- Department of Mathematics, Computer Science and Statistics</i>	5		1		150
5	F000918 Deep Learning <i>Seppe vanden Broucke -- Department of Business Informatics and Operations Management</i>	6		1	A:2	180
6	E061341 Natural Language Processing <i>Thomas Demeester -- Department of Information Technology</i>	6		1	A:2	180

#### 2.2.1.1 Elective Courses Flemish Community

[Subscribe to at most 5 credit units from the study programmes of the universities of the Flemish Community.](#)

### 3 Master's Dissertation

15 credits

Nr	Course	CRDT	Ref	MT1	Session	Study
1	C002887 Master's Dissertation	15		1	A:J	450

## Teaching

When a course is not taught (solely) in the programme's language of instruction, the effectively used languages are indicated in square brackets following the course name, using the following ISO codes:

bg: Bulgarian	de: German	es: Spanish	ja: Japanese	pl: Polish	sh: Croatian/Serbian	zh: Chinese
cs: Czech	el: Greek	fr: French	nl: Dutch	pt: Portuguese	sl: Slovene	
da: Danish	en: English	it: Italian	no: Norwegian	ru: Russian	sv: Swedish	

## Semester

Semesters are indicated by their number (1 or 2); semester 3 represents the summer period and J indicates a course spanning semesters 1 and 2. When a capital letter precedes a semester number, the course has multiple offerings. The letter indicates the offering concerned.

When a semester is shown in brackets, the course is not offered this year in the specific offering.

The offering frequency and first year of offering are indicated by the following codes:

a: bi-annually	c: annually, from 2027-2028	f: annually, from 2028-2029	i: annually, from 2029-2030
b: tri-annually	d: bi-annually, from 2027-2028	g: bi-annually, from 2028-2029	j: bi-annually, from 2029-2030
	e: tri-annually, from 2027-2028	h: tri-annually, from 2028-2029	k: tri-annually, from 2029-2030