Master of Science in Statistics 2015 - 2016

Curriculum M Sc in Statistics (90 ECTS)

| GENERAL STRUCTURE | ECTS | Status |
|--|------|------------|
| | | |
| a) Courses | 60 | compulsory |
| Module 1 | 21 | |
| Module 2 | 18 | |
| Module 3 | 21 | |
| b) Master thesis or internship with report | 30 | compulsory |
| | | |
| Total ECTS MSc in Statistics | 90 | |

| Modules / courses Hours | I Semester | ECTS per module/ course | Teacher(s) | Evaluation mode |
|-------------------------|------------|----------------------------|------------|-----------------|
|-------------------------|------------|----------------------------|------------|-----------------|

a) Courses (60 ECTS)

| Module 1 | | | 21 ECTS | | |
|---|-----|-----|---------|--------------------|------------------|
| Probability and stochastich processes | 2+2 | А | 6 | Prof. M. Benaim | CA (graded) |
| Inferential statistics and test theory | 4 | А | 6 | Prof. J-Y. Dauxois | Written, 2 hours |
| Advanced regression methods | 2+2 | А | 6 | Prof. Y. Tillé | Written, 2 hours |
| Multivariate analysis | 2 | А | 3 | Prof. Y. Tillé | Written, 2 hours |
| Module 2 | | | 18 ECTS | | |
| Time series analysis | 2+2 | S | 6 | Dr C. Chevalier | CA (graded) |
| Survey sampling | 4 | S | 6 | Prof. Y. Tillé | Written, 2 hours |
| Nonparametric statistics | 2 | S | 3 | Dr C. Chevalier | CA (graded) |
| Generalized linear model | 2 | S | 3 | Dr Alina Matei | CA (graded) |
| Module 3 | | | 21 ECTS | | |
| Seminar of statistical softwares | 2 | Α | 3 | Dr Alina Matei | CA (graded) |
| Computational statistics | 4 | S | 6 | Dr Alina Matei | CA (graded) |
| Seminar of applied statistics | 2 | S | 3 | Prof. J. Zuber | CA (graded) |
| Statistical modelling and design of experiments | 2 | S | 3 | Prof. Y-L. Grize | Written, 2 hours |
| Elective courses | 4 | A/S | 6 | | |

b) Master thesis or internship (30 ECTS)

| Master thesis or internship with report | | 30 ECTS | CA (graded) ¹ |
|---|--|---------|--------------------------|

Detailed curriculum and examinations

Master of Science in Statistics 2015 - 2016

| Modules / courses Hours per week | Semester | ECTS per module/ course | Teacher(s) | Evaluation mode |
|----------------------------------|----------|----------------------------|------------|-----------------|
|----------------------------------|----------|----------------------------|------------|-----------------|

Elective courses list (6 ECTS)

| Elective courses (choose 6 ECTS) ² | | | 6 ECTS | | |
|--|--------|---|--------|------------------|------------------|
| Structure de données et algorithmique | 2+2 | Α | 6 | Dr A. Sandoz | CA (graded) |
| nformatique générale: Programmation I | 2+2 | Α | 6 | Prof. P. Felber | CA (graded) |
| Statistical learning methods | 2+2 | S | 5 | Prof. J. Savoy | Written, 2 hours |
| Courses at the Faculty of Economics and Business | | | | | |
| Probabilistic Algorithms | 2 ou 4 | Α | 3 ou 6 | Dr P. Cotofrei | * |
| Data Warehousing | 4 | S | 6 | Prof. K. Stoffel | * |
| Economic Statistics | 2 | Α | 3 | Prof. M. Zarin | * |
| Asset Pricing | 4 | Α | 6 | Prof. M. Dubois | * |
| Derivatives | 4 | Α | 6 | Prof. P. Roger | * |
| Portfolio Optimization | 2 | Α | 3 | Prof. F. Sonney | * |
| Programming | 2 | S | 3 | Dr P. Cotofrei | * |
| Applied Econometrics | 2+2 | S | 6 | Prof. M. Zarin | * |
| Corporate Finance | 4 | S | 6 | Prof. C. Salva | * |
| International Operations and Logistics | 4 | Α | 6 | Dr Y. Nieto | * |

Other courses at the University of Neuchâtel can be chosen with the approval of the person in charge of the curriculum.

| Total of Master in Statistics | | | 90 ECTS |
|-------------------------------|--|--|---------|
|-------------------------------|--|--|---------|

¹ Report (graded)

Abbreviations

CA (graded)= continuous assesment that is graded, modalities fixed in course descriptives

A = Autumn semester

S = Spring semester

Information

Master coordinator: Prof. Y. Tillé (yves.tille@unine.ch)

Exams and regulation

Candidates must be registerd in IS-Academia for both courses and exams

For regulation, please consult the homepage of the Faculty of Sciences, www.unine.ch/sciences (règlement d'études et d'examens" and existing directives) or the administrative staff of the Faculty.

² Timetable compatibility with other courses is not guaranteed.

^{*} Check on course descriptive of the Faculty of Economics and Business