Curriculum MSc in Statistics / MSc en statistique (90 ECTS)

<table>
<thead>
<tr>
<th>GENERAL STRUCTURE</th>
<th>ECTS</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Courses</td>
<td>60</td>
<td>compulsory</td>
</tr>
<tr>
<td>Module 1</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>Module 2</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>Module 3 - Elective courses</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>b) Master thesis or internship with report</td>
<td>30</td>
<td>compulsory</td>
</tr>
<tr>
<td>Total ECTS MSc in Statistics</td>
<td>90</td>
<td></td>
</tr>
</tbody>
</table>

a) Courses (60 ECTS)

<table>
<thead>
<tr>
<th>Modules / courses</th>
<th>Hours per week</th>
<th>Semester</th>
<th>ECTS per module/course</th>
<th>Teacher(s)</th>
<th>Participant / contributor</th>
<th>Evaluation mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>Probability theory</td>
<td>2+2</td>
<td>A</td>
<td>6</td>
<td>Prof. A. Valette</td>
<td>Assist.</td>
<td>Oral, 30 minutes</td>
</tr>
<tr>
<td>Inferential statistics and test theory</td>
<td>4</td>
<td>A</td>
<td>6</td>
<td>Prof. J.-Y. Dauxois</td>
<td>Written</td>
<td></td>
</tr>
<tr>
<td>Advanced regression methods</td>
<td>2+2</td>
<td>A</td>
<td>6</td>
<td>Prof. Y. Tillé</td>
<td>Assist.</td>
<td>Written, 2 hours</td>
</tr>
<tr>
<td>Multivariate analysis</td>
<td>2</td>
<td>A</td>
<td>3</td>
<td>Prof. Y. Tillé</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seminar of statistical software</td>
<td>2</td>
<td>A</td>
<td>3</td>
<td>Prof. A. Matei</td>
<td></td>
<td>CA (graded)</td>
</tr>
<tr>
<td>Survey sampling 1</td>
<td>2</td>
<td>A</td>
<td>3</td>
<td>Prof. Y. Tillé</td>
<td></td>
<td>Written, 2 hours</td>
</tr>
<tr>
<td>Bayesian statistics</td>
<td>2</td>
<td>S</td>
<td>3</td>
<td>Dr P.-Y. Deléamont</td>
<td></td>
<td>Written, 2 hours</td>
</tr>
<tr>
<td>Generalized linear model</td>
<td>2</td>
<td>S</td>
<td>3</td>
<td>Dr P.-Y. Deléamont</td>
<td></td>
<td>CA (graded)</td>
</tr>
<tr>
<td>Seminar of applied statistics</td>
<td>2</td>
<td>S</td>
<td>3</td>
<td>Prof. J. Zuber</td>
<td></td>
<td>CA (graded)</td>
</tr>
<tr>
<td>Time series analysis</td>
<td>2+2</td>
<td>S</td>
<td>6</td>
<td>Dr C. Chevalier</td>
<td>Assist.</td>
<td>CA (graded)</td>
</tr>
</tbody>
</table>

b) Master thesis or internship (30 ECTS)

<table>
<thead>
<tr>
<th>Master thesis or internship with report</th>
<th>30 ECTS</th>
<th></th>
<th></th>
</tr>
</thead>
</table>

Version of May 2021 - YT / CD / CL

Approuved by the Rectorate, May 12th 2021
### Elective courses list (max. 6 ECTS)

<table>
<thead>
<tr>
<th>Elective courses</th>
<th>Hours per week</th>
<th>Semester</th>
<th>ECTS per module/course</th>
<th>Teacher(s)</th>
<th>Evaluation mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>Informatique générale: Programmation I (in French)</td>
<td>2+2</td>
<td>A</td>
<td>6</td>
<td>Dr. L. Leonini (prof. P. Felber)</td>
<td>Assist.</td>
</tr>
<tr>
<td>Structure de données et algorithmique (in French)</td>
<td>2+2</td>
<td>A</td>
<td>6</td>
<td>Dr. A. Sandoz</td>
<td>Assist.</td>
</tr>
</tbody>
</table>

### Courses at the Faculty of Economics and Business

- **Business Analytics**
  - Hours: 4
  - Semester: S
  - ECTS: 6
  - Teacher: Dr. P. Cotofrei
- **Data Management**
  - Hours: 4
  - Semester: A
  - ECTS: 6
  - Teacher: Dr. E. Simon
- **Economic Statistics**
  - Hours: 2
  - Semester: A
  - ECTS: 3
  - Teacher: Prof. M. Zarin
- **Asset Pricing**
  - Hours: 4
  - Semester: A
  - ECTS: 6
  - Teacher: Prof. Kroencke
- **Derivatives**
  - Hours: 4
  - Semester: A
  - ECTS: 6
  - Teacher: Dr. F. Weigert
- **Portfolio Optimization**
  - Hours: 2
  - Semester: A
  - ECTS: 3
  - Teacher: Prof. F. Sonne
- **Programming**
  - Hours: 2
  - Semester: S
  - ECTS: 3
  - Teacher: Dr. E. Simon
- **Applied Econometrics**
  - Hours: 2+2
  - Semester: S
  - ECTS: 6
  - Teacher: Prof. M. Zarin
- **Corporate Finance**
  - Hours: 4
  - Semester: S
  - ECTS: 6
  - Teacher: Prof. C. Salva
- **Global Supply Chain Management**
  - Hours: 4
  - Semester: A
  - ECTS: 6
  - Teacher: Dr. Y. Nieto

### Course at the Faculty of Arts

- **Linguistique du français moderne: Linguistique de corpus: méthodes et analyse (in French)**
  - Hours: 2
  - Semester: S
  - ECTS: 5
  - Teacher: Prof. C. Rossari

### Total of Master in Statistics

- **90 ECTS**

**Abbreviations**

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

1 Report (graded)

* Check on course descriptive of the Faculty of Economics and Business of of the Faculty of Arts

A = autumn semester / S = spring semester

**Information**

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

**Exams and regulation**

Candidates must be registered 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.
Examination modalities in the case of online exam sessions
If an exam session has to be held online, the examination modalities mentioned in this study plan are maintained and will be following:
For a written exam to be held during the exam session (1h, 2h or 3h), the online exam will be of the duration mentioned by the study plan. An exception is made when the same exam evaluates two or more different courses simultaneously (indicated as a common or grouped exam in the study plan). In this case, the courses will be examined separately when the exam takes place online. The duration of each part of the on-line exam will be defined by the number of ECTS each examined course. A single mark will be notified for any such split up exam, as specified by the study plan.
For oral exams to be held during the exam session, the online duration of the exam is maintained as specified in the study plan.
Continuous assessments (graded or ungraded) remain unchanged even if the exam session is taking place online. If required, the evaluation modality will be adapted to the situation. The course description will be updated accordingly by the teacher in charge.
All exams and assessments that take place in other Faculties or Universities remain under their responsibility and the FS cannot be held liable for specific rules and regulations regarding those evaluations.