# Studies Plan

## Statistique 2023-24

### Block 1

<table>
<thead>
<tr>
<th>Courses</th>
<th>Language Code</th>
<th>Session</th>
<th>Teacher Specialization</th>
<th>Master 1</th>
<th>Master 2</th>
<th>Exam Session</th>
<th>Exam Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied statistics</td>
<td>E</td>
<td>MA</td>
<td>Mhalla Ep Marchand</td>
<td>p</td>
<td>e</td>
<td>p</td>
<td>Sum</td>
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<tr>
<td>Multivariate statistics</td>
<td>E</td>
<td>MA</td>
<td>Panarelos</td>
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<td>Sum</td>
<td>Written</td>
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<tr>
<td>Randomization and causation</td>
<td>E</td>
<td>MA</td>
<td>Stensrud</td>
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<td>Sum</td>
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<td>Regression methods</td>
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<td>MA</td>
<td>Davison</td>
<td>2h</td>
<td>2h</td>
<td>Win</td>
<td>Written</td>
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<tr>
<td>Statistical computation and visualisation</td>
<td>E</td>
<td>MA</td>
<td>Mhalla Ep Marchand</td>
<td>2h</td>
<td>2h</td>
<td>Win</td>
<td>During the semester</td>
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<tr>
<td>Statistical inference</td>
<td>E</td>
<td>MA</td>
<td>Davison</td>
<td>2h</td>
<td>2h</td>
<td>Win</td>
<td>Written</td>
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### Block 2

<table>
<thead>
<tr>
<th>Courses</th>
<th>Language Code</th>
<th>Session</th>
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<tbody>
<tr>
<td>HSS : Introduction to project</td>
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<td>SHS</td>
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<td>HSS : Project</td>
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<thead>
<tr>
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<th>Teacher Specialization</th>
<th>Master 1</th>
<th>Master 2</th>
<th>Exam Session</th>
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<tbody>
<tr>
<td>Algorithms II</td>
<td>E</td>
<td>IN</td>
<td>Svensson</td>
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<td>Applied biostatistics</td>
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<td>Applied data analysis</td>
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<td>Artificial neural networks/reinforcement learning</td>
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<td>MTE</td>
<td>Kuhn</td>
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<td>2h</td>
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<td>Challet</td>
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<td>Win</td>
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Foundations of Data Science

Gaussian processes
MATH-426 MA 2h 2h Sum Oral 5

Genetics and genomics
BIO-373 SV 2h 1h 1h Win Written 4

Genomics and bioinformatics
BIO-463 SV 2h 2h Sum During the semester 4

Information security and privacy
COM-402 IN 3h 1h 2h Win Written 8

Learning theory
CS-526 IN 2h 2h Sum Written 6

Low-rank approximation techniques
MATH-403 MA 2h 2h Sum Oral 5

Martingales in financial mathematics
MATH-470 MA 2h 2h Sum Oral 5

Mathematical foundations of signal processing
COM-514 SC 3h 2h Win Written 6

Mathematical modelling of behavior
MATH-463 MA 2h 2h Win Written 5

Mathematics of data: from theory to computation
EE-556 EL 3h 3h Win Written 6

Measure and integration
MATH-303 MA 2h 2h Win Written 5

Nutrition: from molecules to health
BIO-441 SV 2h 2h Win During the semester 4

Optimization for machine learning
CS-439 IN 2h 2h 1h Sum Written 8

Probability and stochastic calculus
FIN-415 IF 3h 2h Win Written 6

Probability theory
MATH-432 MA 2h 2h Win Written 5

Risk, rare events and extremes
MATH-447 MA 2h 2h Sum Written 5

Statistical analysis of network data
MATH-448 MA 2h 2h Win Written 5

Statistical genetics
MATH-438 MA 2h 2h Sum During the semester 5

Statistical machine learning
MATH-412 MA 2h 2h Win Written 5

Statistical theory
MATH-442 MA 2h 2h Win Written 5

Statistics for genomic data analysis
MATH-474 MA 2h 2h Sum During the semester 5

Stochastic processes
MATH-332 MA 2h 2h Sum Written 5

Stochastic simulation
MATH-414 MA 2h 2h Win Oral 5

Time series
MATH-342 MA 2h 2h Sum Written 5

Group 2

Courses | Master 1 | Master 2 | Exam Session | Exam | Credit
---|---|---|---|---|---
Language Code | Section | Teacher | Specialization | p | e | p | p | p | p
Specialisation semester
MATH-580 MA | Prof | divers | 680h | 680h | Sum | Win | During the semester | 30