Majors: Statistics

Statistics (specialisation in Data Science)
Statistics (specialisation in Finance and Business Statistics)

<table>
<thead>
<tr>
<th>Levels</th>
<th>Major Requirements</th>
<th>Cum MCs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 1000 (16 MCs)</td>
<td>Pass – ST1311 Introduction to Statistics or ST1322 Statistics for Life Sciences or MA1101R Linear Algebra I or MA1102R Calculus or CS1010/—E/—S/—X Programming Methodology</td>
<td>16</td>
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<tr>
<td>Level 3000 (28 MCs)</td>
<td>Pass – ST3131 Regression Analysis – ST3236/MA3238 Stochastic Processes I – Three other modules from ST32xx (except ST328x) or ST4xxx modules – Two additional modules from ST32xx (except ST328x), ST4xxx, List A or List B modules</td>
<td>60–61</td>
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<tr>
<td>Level 4000 (32 MCs)</td>
<td>Pass – ST4199 Honours Project in Statistics – ST4231 Computer Intensive Statistical Methods – ST4233 Linear Models – Two other modules from ST4xxx modules – One additional module from ST4xxx, ST5xxx or List B modules</td>
<td>92–93</td>
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</table>

Honours students majoring in Statistics have the option to qualify for specialisation in (A) Data Science or (B) Finance and Business Statistics.

(A) To be awarded a specialisation in Data Science, at least 24 MCs of the required 92–93 MCs given in the above Major Requirements table must belong to the following two lists, with at least 8 MCs from list DS 1:

**DS 1**
- ST3240 Multivariate Statistical Analysis
- CS3244 Machine Learning †
- ST4240 Data Mining

**DS 2**
- ST3247 Simulation
- CS3210 Parallel Computing †
- MA3252 Linear and Network Optimisation
- ST4234 Bayesian Statistics
- CS4231 Parallel and Distributed Algorithms †
- DSA4211 High-Dimensional Statistical Analysis
- DSA4212 Optimisation for Large-Scale Data-Driven Inference
- MAA4268 Mathematics for Visual Data Processing †

† Students who wish to read these modules would have to read additional pre-requisite modules and should consult the Faculty/Department for academic advice on their study plans.

(B) To be awarded a specialisation in Finance and Business Statistics, at least 24 MCs of the required 92–93 MCs given in the above Major Requirements table must belong to the following two lists, with at least 8 MCs from each of the lists:

**FBS 1**
- ST3233 Applied Times Series Analysis
- ST3234 Actuarial Statistics
- ST3246 Statistical Models for Actuarial Science
- MAA3269 Mathematical Finance I
- ST4245 Statistical Methods for Finance
- MAA4269 Mathematical Finance II

**FBS 2**
- ST3232 Design and Analysis of Experiments
- ST3239 Survey Methodology
- ST3242 Introduction to Survival Analysis
- ST3244 Demographic Methods
- ST4238 Stochastic Processes II

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