**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>
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</table>
| Level 1000 (16 MCs) | Pass  
  – ST1131 Introduction to Statistics  
  or ST1232 Statistics for Life Sciences  
  – MA1101R Linear Algebra I  
  – MA1102R Calculus  
  – CS1010/—E/—S/—X Programming Methodology | 16      |
| Level 2000 (16–17 MCs) | Pass  
  – ST2131/MA2216 Probability  
  – ST2132 Mathematical Statistics  
  – ST2137 Computer Aided Data Analysis  
  – MA2311 Techniques in Advanced Calculus  
  or MA2108 Mathematical Analysis I  
  or MA2108S Mathematical Analysis I (S) | 32–33    |
| Level 3000 (28 MCs) | 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 | 60–61    |
| Level 4000 (32 MCs) | 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 | 92–93    |

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
- MA4268 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
- MA3269 Mathematical Finance I
- ST4245 Statistical Methods for Finance
- MA4269 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

Version: August 2016