Requirements for Major in Statistics

Applicable to cohorts AY2021/2022 and after

Levels	Major Requirements	Cumulative Major Units
Level 1000 (4 Units)	Pass • ST1131 Introduction to Statistics and Statistical Computing[1]	4
Level 2000 (24 Units)	Pass • ST2131/MA2116/MA2216 Probability • ST2132 Mathematical Statistics • ST2137 Computer Aided Data Analysis/Statistical Computing and Programming • MA2001 Linear Algebra I • MA2002 Calculus • MA2311 Techniques in Advanced Calculus ***or*** MA2104 Multivariable Calculus	28
Level 3000 (16 Units)	Pass • ST3131 Regression Analysis • Three courses from ST32xx (except ST328*) ***or*** ST42xx (except ST4288) courses	44
Level 4000 (16 Units)	Choose either Option A or Option B Option A • Four courses from ST42xx (except ST4288) Option B • Two courses from ST42xx • ST4288 Honours Project in Statistics	60

To graduate with a Major in Statistics, a student must have read and passed at least one of the following:

(1) **ST2288 / ST2288R**
(2) **ST3288 / ST3288R**
(3) **ST4288**
(4) **Any UPIP course***
(5) **Any NOC Internship course**

*Students who have passed a FASSIP course before switching to this primary major in Statistics would be deemed to have fulfilled this requirement.

[1] ST1131 will be read in fulfilment of the Data Literacy requirement under the College of Humanities and Sciences.

* UROPS courses ST3288 and ST3289 do not count towards the Major and fulfill as Unrestricted Elective courses.

Students majoring in Statistics have the option to pursue specialisations in
(A) **Data Science** or/and (B) **Finance and Business Statistics**.

(A) To be awarded a specialisation in **Data Science**, pass (at least) 20 Units from the following two lists, with at least 8 Units from list DS 1.

DS 1
ST3248 Statistical Learning I
CS3243 Introduction to Artificial Intelligence^
CS3244 Machine Learning^
DSA4213 Natural Language Processing for Data Science
ST4248 Statistical Learning II
ST4250 Multivariate Statistical Analysis
DS 2
ST3247 Simulation
CS3210 Parallel Computing^
MA3252 Linear Network Optimisation
ST4234 Bayesian Statistics
CS4231 Parallel and Distributed Algorithms^
DSA4211 High-Dimensional Statistical Analysis
DSA4212 Optimisation for Large-Scale Data-Drive Inference
MA4268 Mathematics for Visual Data Processing^
DSE4211 / QF4211 Digital Currencies^
DSE4212 / QF4212 Data Science in FinTech^

(B) To be awarded a specialisation in **Finance and Business Statistics**, pass (at least) 20 Units from the following two lists, with at least 8 Units from each list (FBS 1, FBS 2):

FBS 1
ST3234 Actuarial Statistic
ST3246 Statistical Models for Actuarial Science
ST4245 Statistical Methods for Finance
ST4253 Applied Time Series Analysis
QF4103 Mathematical Models of Financial Derivatives^
DSE4211 / QF4211 Digital Currencies^
DSE4212 / QF4212 Data Science in FinTech^
FBS 2
ST3232 Design and Analysis of Experiments
ST3236 Stochastic Processes I
ST3239 Survey Methodology
ST3244 Demographic Methods
ST4238 Stochastic Processes II
ST4252 Applied Survival Analysis

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

updated 19-Sep-2024

Sample Study Plan — Statistics

Year 1		Year 2		Year 3		Year 4	
Sem 1	**Sem 2**	**Sem 1**	**Sem 2**	**Sem 1**	**Sem 2**	**Sem 1**	**Sem 2**
Pair 1: Humanities Pair 2: Social Sciences	Pair 1: Social Sciences Pair 2: Humanities	Writing	Communities and Engagement	Interdisciplinary I	Interdisciplinary II	Major 13	Major 15
Pair 1: Scientific Inquiry I Pair 2: Asian Studies	Pair 1: Asian Studies Pair 2: Scientific Inquiry I	Scientific Inquiry II	Artificial Intelligence	Major 9	Major 11	Major 14	UE 10
Pair 2: Design Thinking	Pair 1: Design Thinking	MA2311 Techniques in Advanced Calculus/ MA2104 Multivariable Calculus	ST2137 Statistical Computing and Programming	Major 10	Major 12	UE 7	UE 11
ST1131* Introduction to Statistics and Statistical Computing	MA2001 Linear Algebra I	ST2132 Mathematical Statistics or ST3131	ST3131 Regression Analysis or ST2132	UE 3	UE 5	UE 8	UE 12
MA2002 Calculus	ST2131 Probability	UE 1	UE 2	UE 4	UE 6	UE 9	UE 13

* ST1131 fulfils the Data Literacy requirement.

Note on CHS Common Curriculum courses:

1) Students are strongly encouraged to complete all CHS Common Curriculum courses in their first two years **except** for the following 3 courses:
   - Communities and Engagement course – can be taken from Years 2 to 4
   - Two Interdisciplinary courses – can be taken in Years 3 and 4

2) The actual pre-allocation may differ from the sample study plan. For the actual pre-allocation pairings, please click here.