Programme Regulations: 2024/25
Programme Title:
BSc (Hons) Data Science – G200
BSc (Hons) Data Science with Study Abroad – 1908U

Notes

(i) *These programme regulations should be read in conjunction with the University's Undergraduate Progress Regulations and Examination Conventions.*

(ii) *All optional modules are offered subject to the constraints of the timetable and to any restrictions on the number of students who may be taught on a particular module. Not all modules may be offered in all years and they are listed subject to availability.*

(iii) *Unless otherwise stated under 'Type', modules are not core.*

(iv) *A compulsory module is a module which a student is required to study.*

(v) *A core module is a module which a student must pass, and in which a fail mark may neither be carried nor compensated; such modules are designated by the Board of Studies as essential for progression to a further stage of the programme or for study in a further module.*

(vi) *All modules are delivered in Linear mode unless stated otherwise.*

(vii) Programme transfers for Tier 4 students may be restricted by current Tier 4 rules. Please refer to the Visa Team for advice.

1. Stage 1

All candidates shall take the following compulsory modules:

Code	Descriptive Title	Total Credits	Credits Sem 1	Credits Sem 2	Level	Type
CSC1033	Foundations of Data Science	20	10	10	4	
CSC1034	Programming Portfolio I	30	30		4	
MAS1610	Introductory Algebra	10	10		4	Core
MAS1613	Multivariable Calculus	10		10	4	Core
MAS1614	Real Analysis	10		10	4	
MAS1615	Introductory Calculus	10	10		4	Core
MAS1616	Introduction to Probability & Statistics	20		20	4	Core
MAS1702	Number Systems	10		10	4	

2. Stage 2

All candidates shall take the following compulsory modules:

Code	Descriptive Title	Total Credits	Credits Sem 1	Credits Sem 2	Level	Type
CSC2031	Security Programming	20	20		5	
CSC2032	Algorithm Design & Analysis	10	10		5	
DSC2001	Frontiers in Data Science A	10		10	5	
MAS2701	Linear Algebra	10	10		5	
MAS2901	Introduction to Statistical Inference	10	10		5	
MAS2902	Introduction to Regression and Stochastic Modelling	10		10	5	
MAS2906	Computational Probability and Statistics with R	10	10		5	
MAS2907	Stochastic Processes	10	10		5	
MAS2908	Data Visualisation	10		10	5	

(a) Candidates wanting to select a Pure Mathematics pathway can select 20 credits from the following:

Code	Descriptive Title	Total Credits	Credits Sem 1	Credits Sem 2	Level	Type
MAS2703	Algebra	10		10	5	
MAS2708	Groups & Discrete Mathematics	10		10	5	
MAS2709	Coding Theory	10		10	5	

(b) Candidates wanting to select an Applied Mathematics Pathway can select the 20 credits below:

Code	Descriptive Title	Total Credits	Credits Sem 1	Credits Sem 2	Level	Type
MAS2806	Scientific Computation with Python	10		10	5	
MAS2807	Mathematical Biology	10		10	5	

3. Intercalating Year

On completion of Stage 2 and before entering Stage 3, candidates may as part of their studies for the degree spend a year in a placement with an approved organisation. Permission to undertake a placement is subject to the approval of the Degree Programme Director. Students who are required to re-sit their Stage 2 assessment must delay the start of their placement until they have done so. Students who fail Stage 2 may not complete a placement year.

Code	Descriptive Title	Total Credits	Credits Sem 1	Credits Sem 2	Level	Type
NCL3000	Careers Service Placement Year Module	120	60	60	6	

4. Stage 3

(a) Candidates shall take the following compulsory modules:

Code	Descriptive Title	Total Credits	Credits Sem 1	Credits Sem 2	Level	Type
CSC3831	Computer Vision and AI	20	20		6	
DSC3001	Data Innovation Bootcamp	10	10		6	
DSC3002	Frontiers in Data Science B	10		10	6	
MAS3093	Data Science Group Project	10		10	6	
MAS3903	Linear Models	10	10		6	
MAS3907	Big Data Analytics	10		10	6	

(b) Candidates shall choose 50 credits from the following list of modules:

Code	Descriptive Title	Total Credits	Credits Sem 1	Credits Sem 2	Level	Type
CSC3432	Biomedical Data Analytics and AI	20	20		6	
CSC3731	Human Computer Interaction: Interaction Design	20	20		6	
CSC3833	Data Visualisation & Visual Analytics	10	10		6	
MAS3701	Foundations of Group Theory	10	10		6	
MAS3702	Linear Analysis	10		10	6	
MAS3704	Coding Theory	10		10	6	
MAS3705	Matrix Analysis	10	10		6	

MAS3706	Metric Spaces & Topology	10	10		6	
MAS3707	Number Theory & Cryptography	20	10	10	6	
MAS3709	Representation Theory	10		10	6	
MAS3713	Curves & Surfaces	10		10	6	
MAS3714	Mathematical Foundations of Machine Learning	10	10		6	
MAS3809	Variational Methods & Lagrangian Dynamics	10		10	6	
MAS3816	Epidemiology	10		10	6	
MAS3904	Stochastic Financial Modelling	10	10		6	
MAS3905	Statistical Inference	10	10		6	
MAS3906	Generalised Linear Models	10		10	6	
MAS3918	Topics in Statistical Modelling A	20		20	6	
MAS3908	Experimental Design	10		10	6	
MAS3916	Discrete Stochastic Modelling & Survival Analysis	10	10	10	6	
MAS3901	Applied Probability	10	10		6	

Candidates should look to select modules with a credit weighting of 60/60 per semester. A 70/50 or 50/70 split is allowable, but candidates should speak to their personal tutor in the first instance

5. Assessment methods
Details of the assessment pattern for each module are explained in the module outline.

6. Degree classification
Candidates will be assessed for degree classification on the basis of all the modules taken at Stages 2 and 3 with the weighting of the Stages being 1:2 for Stage 2 and Stage 3 respectively. The Placement Year will not be used in the classification.