Programme Regulations: 2021/22

Programme Titles:

BSc (Hons) Mathematics - UCAS Code: G100

BSc (Hons) Statistics – UCAS Code: G300

BSc (Hons) Mathematics and Statistics – UCAS Code: GG13

BSc (Hons) Mathematics with Placement Year – Code: G10X

BSc (Hons) Statistics with Placement Year – Code: G30X

BSc (Hons) Mathematics and Statistics with Placement Year – Code: GG1X

Notes

(i) These programme regulations should be read in conjunction with the University's Taught Programme Regulations.

(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 as Block, eLearning or distance learning.

(vii) Students who have completed Stage 0 of the BSc Honours in Mathematical Sciences (with Foundation Year) - UCAS code: G101, will normally be permitted to progress to Stage 1 of one of G100, GG13, G300.

(viii) Where a module is subject specific, code M refers to modules in Mathematics and code S refers to modules in Statistics.

(ix) Students are not recruited to G10X/G30X/GG1X. Rather a G100/G300/GG13 candidate may transfer to G10X/G30X/GG1X by the end of week 5 of Semester 2 of Stage 2, subject to the agreement of the Degree Programme Director.

(x) If a candidate meets the requirements for one of the four year degrees, MMath (G103) or MMathStat (GGC3) they may transfer to that programme at any time between the end of Stage 1 and the start of the Semester 2 examination period in Stage 3, provided they attained an average of at least 60 in the previous Stage.

(xi) 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	Subject
MAS1605	Introduction to Calculus	20	20	0	4	Core	
MAS1606	Introductory Algebra	20	20	0	4	Core	
MAS1607	Multivariable Calculus & Differential Equations	20	0	20	4	Core	
MAS1608	Introduction to Probability & R	20	0	20	4	Core	
MAS1701	Logic, Sets & Counting	10	10	0	4		
MAS1702	Number Systems	10	0	10	4		
MAS1803	Problem Solving with Python	10	10	0	4		
MAS1902	Dynamics	10	0	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	Subject
MAS2702	Complex Analysis	10	10	0	5		M
MAS2703	Algebra	10	0	10	5		M
MAS2707	Vector Spaces, Groups & Algorithms	20	10	10	5		M
MAS2803	Fluid Dynamics	10	0	10	5		M
MAS2804	Vector Calculus, Differential Equations & Transforms and Waves	20	10	10	5		M
MAS2806	Scientific Computation with Python	10	10	0	5		M
MAS2903	Introduction to Bayesian Methods	10	0	10	5		S
MAS2904	Statistical Inference & Stochastic Modelling	20	10	10	5		S
MAS2906	Computational Probability & Statistics with R	10	10	0	5		S

3. Year 3 (Placement Year – G10X/G30X only)

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	Subject
NCL3000	Careers Service Placement Year Module	120	60	60	6		

4. Stage 3

(a) All candidates shall take 120 credits of optional modules, normally selected from the following list:

(Note: G100 students must select at least 60 credits of M modules; G300 students must select at least 60 credits of S modules; GG13 students must select at least 40 credits of M modules and at least 40 credits of S modules)

Code	Descriptive Title	Total Credits	Credits Sem 1	Credits Sem 2	Level	Type	Subject
MAS3701	Foundations of Group Theory	10	10	0	6		M
MAS3702	Linear Analysis	10	10	0	6		M
MAS3705	Matrix Analysis	10	10	0	6		M
MAS3706	Topology	10	0	10	6		M
MAS3707	Number Theory & Cryptography	20	10	10	6		M
MAS3708	Graphs & Symmetry	10	0	10	6		M
MAS3709	Representation Theory	10	0	10	6		M
MAS3713	Curves & Surfaces	10	0	10	6		M
MAS3802	Quantum Mechanics	10	0	10	6		M
MAS3803	Advanced Fluid Dynamics	10	10	0	6		M
MAS3804	Relativity	10	10	0	6		M
MAS3805	Classical Fields	10	0	10	6		M
MAS3808	Instabilities	10	10	0	6		M
MAS3809	Variational Methods & Lagrangian Dynamics	10	0	10	6		M
MAS3810	Methods for Differential Equations & Partial Differential Equations	20	10	10	6		M
MAS3815	Mathematical Biology	10	0	10	6		M
MAS3902	Bayesian Inference	10	0	10	6		S
MAS3904	Stochastic Financial Modelling	10	10	0	6		S
MAS3905	Statistical Inference	10	10	0	6		S
MAS3907	Big Data Analytics	10	0	10	6		S
MAS3909	Markov Processes	10	10	0	6		S
MAS3911	Time Series	10	0	10	6		S
MAS3913	Linear & Generalised Linear Models	20	10	10	6		S

Notes

(i) Optional modules will not necessarily be available in all combinations. In particular, we anticipate that only one module can be chosen from each of the following triples of modules: MAS3701, MAS3804 & MAS3905; MAS3706, MAS3802 & MAS3907; MAS3709, MAS3805 & MAS3911.

(b) With the approval of the Degree Programme Director, alternative optional modules to those listed above may be selected with a total value of not more than 20 credits. In particular, modules may be selected from the following.

Code	Descriptive Title	Total Credits	Credits Sem 1	Credits Sem 2	Level	Type	Subject
NCL2100	Developing Enterprise, Entrepreneurship and Employability	20	10	10	5		
NCL3007	Career Development for Final Year Students	20	10	10	6		
PHY3042	Cosmology	10	0	10	6		
PHY3043	Interstellar Medium & High Energy Physics	10	0	10	6		
SUG3500	Creativity, Innovation and Market Research in Science and Engineering UG	10	10	0	6		

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 of G10X/G30X candidates.