

Programme Regulations: 2022/23**Programme Titles:****Degree of Bachelor of Science with Honours in Mathematics and Economics - UCAS Code: GL11****Degree of Bachelor of Science with Honours in Mathematics and Economics with Placement Year - Code: 1138U****Degree of Bachelor of Science with Honours in Mathematics and Accounting - UCAS Code: NG41****Degree of Bachelor of Science with Honours in Mathematics and Accounting with Placement Year - Code: 1139U****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 not be 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 are not recruited to 1138/1139U. Rather a GL11/NG41 candidate may transfer to 1138/1139U by the end of week 5 of Semester 2 of Stage 2, subject to the agreement of the Degree Programme Director.*
- (viii) *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

(a) 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	

(b) GL11 candidates shall take the following compulsory modules:

Code	Descriptive Title	Total Credits	Credits Sem 1	Credits Sem 2	Level	Type	Subject
ECO1100	Economic Analysis	30	15	15	4	Core	
ECO1118	Economic Applications	10	5	5	4		

(c) NG41 candidates shall take the following compulsory modules:

Code	Descriptive Title	Total Credits	Credits Sem 1	Credits Sem 2	Level	Type	Subject
ACC1010	Introduction to Financial Accounting	20	10	10	4	Core	
ACC1011	Introduction to Management Accounting & Finance	20	10	10	4	Core	

2. Stage 2

(a) All candidates shall select optional modules to a total credit value of 60. This must include all 40 credits from either block (i) (the Pure Mathematics Pathway), block (ii) (the Applied Mathematics Pathway) or block (iii) (the Statistics Pathway).

(i) Candidates may select 0, 20 or 40 credits from the following list. If only 20 credits are chosen, it must be MAS2707.

Code	Descriptive Title	Total Credits	Credits Sem 1	Credits Sem 2	Level	Type	Subject
MAS2702	Complex Analysis	10	10	0	5		
MAS2703	Algebra	10	0	10	5		
MAS2707	Vector Spaces, Groups & Algorithms	20	10	10	5		

(ii) Candidates may select 0, 20 or 40 credits from the following list. If only 20 credits are chosen, it must be MAS2804.

Code	Descriptive Title	Total Credits	Credits Sem 1	Credits Sem 2	Level	Type	Subject
MAS2803	Fluid Dynamics	10	0	10	5		
MAS2804	Vector Calculus, Differential Equations & Transforms	20	10	10	5		
MAS2806	Scientific Computation with Python	10	10	0	5		

(iii) Candidates may select 0, 20 or 40 credits from the following list. If only 20 credits are chosen, it must be MAS2904.

Code	Descriptive Title	Total Credits	Credits Sem 1	Credits Sem 2	Level	Type	Subject
MAS2903	Introduction to Bayesian Methods	10	0	10	5		
MAS2904	Statistical Inference & Stochastic Modelling	20	10	10	5		
MAS2906	Computational Probability & Statistics with R	10	10	0	5		

(b) GL11 candidates shall take the following compulsory modules:

Code	Descriptive Title	Total Credits	Credits Sem 1	Credits Sem 2	Level	Type	Subject
ECO2101	Microeconomic Analysis	30	15	15	5	Core	
ECO2102	Macroeconomic Analysis	30	15	15	5	Core	

(c) NG41 candidates shall taking the following compulsory modules:

Code	Descriptive Title	Total Credits	Credits Sem 1	Credits Sem 2	Level	Type	Subject
ACC2003	Financial Control	20	10	10	5	Core	
ACC2005	Intermediate Financial Accounting	20	10	10	5	Core	

(d) NG41 candidates shall take one further module (20 credits) from the following list:

Code	Descriptive Title	Total Credits	Credits Sem 1	Credits Sem 2	Level	Type	Subject
ACC2000	Interpreting Company Accounts	20	10	10	5		
ACC2007	Corporate Finance	20	10	10	5		

Note: ACC2007 is a pre-requisite for ACC3006 in Stage 3.

3. Year 3 (Placement 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 year 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) (i) Candidate studying the Pure Mathematics Pathway shall take the following compulsory module:

Code	Descriptive Title	Total Credits	Credits Sem 1	Credits Sem 2	Level	Type	Subject
MAS3707	Number Theory and Cryptography	20	10	10	6		

(a) (ii) Candidates studying the Pure Mathematics Pathway shall select 40 additional credits from the following list:

Code	Descriptive Title	Total Credits	Credits Sem 1	Credits Sem 2	Level	Type	Subject
MAS3701	Foundations of Group Theory	10	10	0	6		

MAS3702	Linear Analysis	10	10	0	6		
MAS3705	Matrix Analysis	10	10	0	6		
MAS3706	Topology	10	0	10	6		
MAS3708	Graphs and Symmetry	10	0	10	6		
MAS3709	Representation Theory	10	0	10	6		
MAS3713	Curves and Surfaces	10	0	10	6		

Note: With the permission of the Degree Programme Director, candidates may replace up to 20 credits of the optional modules above with alternative optional Stage 3 MAS modules in September, if the timetable allows (and if they have taken the relevant pre-requisites).

(b) (i) Candidates studying the Applied Mathematics Pathway shall take the following compulsory module:

Code	Descriptive Title	Total Credits	Credits Sem 1	Credits Sem 2	Level	Type	Subject
MAS3810	Methods for Differential Equations & Partial Differential Equations	20	10	10	6		

(b) (ii) Candidates studying the Applied Mathematics Pathway shall select 40 additional credits from the following list:

Code	Descriptive Title	Total Credits	Credits Sem 1	Credits Sem 2	Level	Type	Subject
MAS3802	Quantum Mechanics	10	0	10	6		
MAS3803	Advanced Fluid Dynamics	10	10	0	6		
MAS3804	Relativity	10	10	0	6		
MAS3808	Instabilities	10	10	0	6		
MAS3809	Variational Methods & Lagrangian Dynamics	10	0	10	6		
MAS3815	Mathematical Biology	10	0	10	6		

Note: With the permission of the Degree Programme Director, candidates may replace up to 20 credits of the optional modules above with alternative optional Stage 3 MAS modules in September, if the timetable allows (and if they have taken the relevant pre-requisites).

(c) (i) Candidates studying the Statistics Pathway shall take the following compulsory module:

Code	Descriptive Title	Total Credits	Credits Sem 1	Credits Sem 2	Level	Type	Subject
MAS3913	Linear & Generalised Linear Models	20	10	10	6		

(c) (ii) Candidates studying the Statistics Pathway shall select 40 additional credits from the following list:

Code	Descriptive Title	Total Credits	Credits Sem 1	Credits Sem 2	Level	Type	Subject
MAS3902	Bayesian Inference	10	0	10	6		
MAS3904	Stochastic Financial Modelling	10	10	0	6		
MAS3905	Statistical Inference	10	10	0	6		
MAS3907	Big Data Analytics	10	0	10	6		

MAS3910	Discrete Stochastic Modelling	10	10	0	6		
MAS3912	Survival Analysis	10	0	10	6		

Note: With the permission of the Degree Programme Director, candidates may replace up to 20 credits of the optional modules above with alternative optional Stage 3 MAS modules in September, if the timetable allows (and if they have taken the relevant pre-requisites).

(c) (i) GL11 candidates shall take the following compulsory module:

Code	Descriptive Title	Total Credits	Credits Sem 1	Credits Sem 2	Level	Type	Subject
ECO3001	Advanced Microeconomics	20	10	10	6		

(c) (ii) GL11 candidates shall select 40 credits of optional modules from the following list:

Code	Descriptive Title	Total Credits	Credits Sem 1	Credits Sem 2	Level	Type	Subject
ECO3002	Advanced Macroeconomics	20	10	10	6		
ECO3004	Labour Economics	20	10	10	6		
ECO3010	Monetary Economics	10	10	0	6		
ECO3018	Financial Economics	10	0	10	6		
ECO3032	Game Theory	10	0	10	6		

(d) (i) NG41 candidates shall take the following compulsory modules:

Code	Descriptive Title	Total Credits	Credits Sem 1	Credits Sem 2	Level	Type	Subject
ACC3001	Financial Accounting	20	10	10	6		
ACC3002	Management Accounting	20	10	10	6		

(d) (ii) NG41 candidates shall take one further module (20 credits) from the following list:

Code	Descriptive Title	Total Credits	Credits Sem 1	Credits Sem 2	Level	Type	Subject
ACC3000	Case Studies in Accounting, Finance & Business	20	10	10	6		
ACC3006	International Financial Management	20	10	10	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 1138/1139U candidates.