Programme Regulations: 2025-26

Programme Titles:

BSc (Hons) Computing and Mathematics – UCAS code: GG40
BSc (Hons) Computing and Mathematics with Placement Year – code: 1985U
BSc (Hons) Computing and Mathematics with International Study Year – code: 1986U

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 MSP3044

(vii) or distance learning.

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*	*Mode*
CSC1034	Programming Portfolio 1	30	30		4		
MAS1606	Introductory Algebra	20	20		4		
MAS1614	Real Analysis	10		10	4		
MAS1615	Introductory Calculus	10	10		4		
MAS1616	Introduction to Probability and Statistics	20		20	4		
MAS1702	Number Systems	10		10	4		
MSP1613	Multivariable Calculus	10		10	4		
MSP1804	Dynamics	10		10	4		

On successful completion of stage 1, and with the approval of the Degree Programme Director, students would normally be permitted to transfer to stage 2 of the BSc Mathematics programme.

2. Stage 2

(a) All candidates shall take the following compulsory modules:

Code	*Descriptive title*	*Total Credits*	*Credits Sem 1*	*Credits Sem 2*	*Level*	*Type*	*Mode*
CSC1033	Foundations of Data Science	20	10	10	4		
CSC2031	Security Programming	20	20		5		
CSC2032	Algorithm Design and Analysis	10	10		5		
CSC2033	Software Engineering Team Project	30		30	5		
MAS2701	Linear Algebra	10	10		5		
MAS2703	Groups and Rings	10		10	5		
MSP2020	Principles of Quantum Mechanics	10		10	5		
MSP2802	Differential Equations, Transforms and Waves	10	10		5		

On successful completion of stage 2, and with the approval of the Degree Programme Director, students would normally be permitted to transfer to stage 3 of the BSc Computer Science programme.

3. Year 3 (Intercalating Year)

(i) Career Placement

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*	*Mode*
ICM0043	Intercalating Module for Computing Science Programmes	120	60	60	6		
OR							
NCL3000	Career Service Placement Year Module	120	60	60	6		

(ii) International Study Year

On completion of Stage 2 and before entering Stage 3, candidates may as part of their studies for the degree spend a year abroad at an appropriate exchange partner institution. Permission to undertake a year abroad 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 year abroad.

Code	*Descriptive title*	*Total Credits*	*Credits Sem 1*	*Credits Sem 2*	*Level*	*Type*	*Mode*
ISY3000	International Study Year	120	60	60	6		

4. Stage 3

(a) All candidates shall take the following compulsory module:

Code	*Descriptive title*	*Total Credits*	*Credits Sem 1*	*Credits Sem 2*	*Level*	*Type*	*Mode*
CSC3033	Inter-disciplinary Group Project	20		20	6		

(b) All candidates shall take 100 credits of optional modules, including either one of the curated pathways, or selected from the list below:

Artificial Intelligence (AI) pathway below and 30 credits from the general list of options:

Code	*Descriptive title*	*Total Credits*	*Credits Sem 1*	*Credits Sem 2*	*Level*	*Type*	*Mode*
CSC3432	Biomedical Data Analytics and AI	20	20		6		
CSC3831	Computer Vision and AI	20	20		6		
CSC3834	Introduction to AI	20	20		6		
MAS3705	Matrix Analysis	10	10		6		

OR

Quantum pathway below, and 70 credits from the general list of options:

Code	*Descriptive title*	*Total Credits*	*Credits Sem 1*	*Credits Sem 2*	*Level*	*Type*	*Mode*
CSC3133	Quantum Algorithms	10		10	6		
MSP3020	Advanced Quantum Mechanics	10	10		6		
MSP3044	Quantum Information	10	10		*5*		

OR 100 credits of modules from the following list:

Code	*Descriptive title*	*Total Credits*	*Credits Sem 1*	*Credits Sem 2*	*Level*	*Type*	*Mode*
CSC3133	Quantum Algorithms	10		10	6		
CSC3232	Gaming Technologies and Simulations	20	20		6		
CSC3432	Biomedical Data Analytics and AI	20	20		6		
CSC3634	Fault Tolerant and Cyber-Physical Systems	20	20		6		
CSC3733	Computing and Mathematics Education	20	10	10	6		
CSC3831	Computer Vision and AI	20	20		6		
CSC3834	Introduction to AI	20	20		6		
MAS2714	Coding Theory	10		10	6		

MSP2815	Mathematical Biology		10		5		
MAS3701	Group Theory	10	10		6		
MAS3702	Linear Analysis	10		10	6		
MAS3705	Matrix Analysis	10	10		6		
MAS3707	Number Theory and Cryptography	20	10	10	6		
MSP3020	Advanced Quantum Mechanics	10	10		6		
MSP3044	Quantum Information	10	10		6		
MSP3809	Variational Methods and Lagrangian Dynamics	10		10	6		

With the approval of the Degree Programme Director alternative optional modules to those listed above may be selected.

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.