

These programme regulations should be read in conjunction with the University's [core regulations for undergraduate programmes](#), and the [marking and classification conventions for undergraduate programmes](#).

### **BSc Mathematics (G100), BSc Mathematics with Placement (G108), BSc Mathematics with Year Abroad (G109)**

1. This programme is available at Durham City, in a full-time mode of study.

#### **Level 1 (Certificate)**

2. Candidates shall study and be assessed in the following modules:

		<b>Credit value</b>
Calculus I (Maths Hons) #	<a href="#">MATH1081</a>	20
Linear Algebra I (Maths Hons) #	<a href="#">MATH1091</a>	20
Analysis I #	<a href="#">MATH1051</a>	20
Programming I	<a href="#">MATH1587</a>	10
Dynamics I	<a href="#">MATH1607</a>	10
Probability I	<a href="#">MATH1597</a>	10
Statistics I	<a href="#">MATH1617</a>	10

3. Candidates shall also study and be assessed in EITHER the module

		<b>Credit value</b>
Discrete Mathematics	<a href="#">MATH1031</a>	20

OR module(s) to the value of 20 credits offered by any other Boards of Studies (including up to 20 credits of appropriate language modules offered by the University's Centre for Foreign Language Study).

#### **Level 2 (Diploma)**

4. Candidates shall study and be assessed in the following modules:

		<b>Credit value</b>
Complex Analysis II	<a href="#">MATH2011</a>	20
Analysis in Many Variables II	<a href="#">MATH2031</a>	20

5. Candidates shall also study and be assessed in modules to the value of 80 credits from List A:

<b>List A:</b>		<b>Credit value</b>
Algebra II	<a href="#">MATH2581</a>	20
Data Science and Statistical Computing II	<a href="#">MATH2687</a>	10
Elementary Number Theory II	<a href="#">MATH2617</a>	10
Markov Chains II	<a href="#">MATH2707</a>	10
Mathematical Physics II	<a href="#">MATH2071</a>	20
Mathematical Modelling II	<a href="#">MATH2637</a>	10
Numerical Analysis II	<a href="#">MATH2051</a>	20
Probability II	<a href="#">MATH2647</a>	10
Special Relativity and Electromagnetism II	<a href="#">MATH2657</a>	10
Statistical Inference II	<a href="#">MATH2711</a>	20
Statistical Modelling II	<a href="#">MATH2697</a>	10
Topology II	<a href="#">MATH2727</a>	10

#### **Year 3 (Placement Year)**

6. During the third year candidates shall undertake an approved placement in industry, or in an institution or organisation undertaking research, for 40 weeks.
7. This programme is only available to students admitted initially to the BSc Mathematics (G100) programme (or equivalent). Candidates wishing to transfer to BSc Mathematics with placement (G108) must:

- a. successfully complete Level 1 of the BSc Mathematics (G100) programme (or equivalent) with an average mark of 55%, and be eligible to progress to Level 2 of the programme;
- b. during Level 2 study, have applied to the Board of Studies in Mathematical Sciences to be admitted to the BSc Mathematics with placement (G108) and have had their application approved by that Board;
- c. secure a placement opportunity with an approved employer or institution;
- d. successfully complete Level 2 of their existing programme (G100 or equivalent) so as to be eligible to progress to Level 3.

### Year Abroad (Year 3)

8. This programme is only available to students admitted initially to the BSc Mathematics (G100) programme (or equivalent). Candidates wishing to transfer to BSc Mathematics with year abroad (G109) must:
  - a. successfully complete Level 1 of the BSc Mathematics (G100) programme (or equivalent) with an average mark of 55%, and be eligible to progress to Level 2 of the programme;
  - b. during Level 2 study, have applied to the Board of Studies in Mathematical Sciences to be admitted to the BSc Mathematics with year abroad (G109) and have had their application approved by that Board;
  - c. secure an exchange opportunity with an approved international partner institution of the University;
  - d. successfully complete Level 2 of their existing programme (G100 or equivalent) so as to be eligible to progress to Level 3;
  - e. where tuition at the Overseas Partner Institution is in a foreign language, candidates must have taken at least 20 credits in an appropriate language module at level 1.

### Level 3 (Degree)

9. Candidates shall study and be assessed in the following module to the value of 40 credits:

		<b>Credit value</b>
Project III	<a href="#">MATH3382</a>	40

10. Candidates shall study and be assessed in **EITHER** modules to the value of 80 credits from one or more of Lists 3A, 3B, 3C, subject to timetable compatibility (note that modules within each list are guaranteed to be timetable compatible) **OR** (again, subject to timetable compatibility) modules to the value of 60 credits from one or more of Lists 3A, 3B, 3C and one open 20 credit module chosen from those offered by any other Board of Studies (including appropriate credit-bearing language modules offered by the University's Centre for Foreign Language Study):

<b>List 3A:</b>		<b>Credit value</b>
Analysis III	<a href="#">MATH3011</a>	20
Cryptography and Codes III	<a href="#">MATH3401</a>	20
Decision Theory III	<a href="#">MATH3071</a>	20
Mathematical Biology III	<a href="#">MATH3171</a>	20
Mathematics into Schools	<a href="#">MATH3481</a>	20
Number Theory III	<a href="#">MATH3031</a>	20
Partial Differential Equations III	<a href="#">MATH3291</a>	20
Differential Geometry III	<a href="#">MATH3021</a>	20
Solitons III	<a href="#">MATH3231</a>	20
Operations Research III	<a href="#">MATH3141</a>	20
Geometric Topology III	<a href="#">MATH3491</a>	20
Galois Theory III	<a href="#">MATH3041</a>	20
Geometry III	<a href="#">MATH3201</a>	20
Dynamical Systems III	<a href="#">MATH3091</a>	20

<b>List 3B:</b>		
Analysis III	<a href="#">MATH3011</a>	20
Cryptography and Codes III	<a href="#">MATH3401</a>	20

Decision Theory III	<a href="#">MATH3071</a>	20
Mathematical Biology III	<a href="#">MATH3171</a>	20
Mathematics into Schools	<a href="#">MATH3481</a>	20
Number Theory III	<a href="#">MATH3031</a>	20
Partial Differential Equations III	<a href="#">MATH3291</a>	20
Differential Geometry III	<a href="#">MATH3021</a>	20
Solitons III	<a href="#">MATH3231</a>	20
Geometry of Mathematical Physics III	<a href="#">MATH3471</a>	20
Fluid Mechanics III	<a href="#">MATH3101</a>	20
Quantum Computing III	<a href="#">MATH3391</a>	20
Quantum Mechanics III	<a href="#">MATH3111</a>	20
Dynamical Systems III	<a href="#">MATH3091</a>	20

**List 3C:**

Analysis III	<a href="#">MATH3011</a>	20
Cryptography and Codes III	<a href="#">MATH3401</a>	20
Decision Theory III	<a href="#">MATH3071</a>	20
Mathematical Biology III	<a href="#">MATH3171</a>	20
Mathematics into Schools	<a href="#">MATH3481</a>	20
Number Theory III	<a href="#">MATH3031</a>	20
Partial Differential Equations III	<a href="#">MATH3291</a>	20
Advanced Statistical Modelling III	<a href="#">MATH3411</a>	20
Bayesian Computation and Modelling III	<a href="#">MATH3421</a>	20
Operations Research III	<a href="#">MATH3141</a>	20
Fluid Mechanics III	<a href="#">MATH3101</a>	20
Machine Learning and Neural Networks III	<a href="#">MATH3431</a>	20
Stochastic Processes III	<a href="#">MATH3251</a>	20
Mathematical Finance III	<a href="#">MATH3301</a>	20

11. Modules marked with the # symbol must be passed at 40% or above in order to progress to the next level of study.

**Year Abroad/Placement**

12. Students admitted to the BSc Mathematics (G100) are able to apply to transfer to the BSc Mathematics (with Year Abroad/Placement) programme (G109/G108). Students undertaking the BSc Mathematics (with Year Abroad) programme (G109) will undertake an approved exchange in an overseas university taking a course of study chosen in consultation with the programme director and the host institution. Students undertaking the BSc Mathematics (Placement) programme (G108) will undertake an approved work or training placement in consultation with the programme director and placement provider.
13. Students who the Board of Examiners for Mathematics deem to have made satisfactory progress on the year abroad/placement will continue to Level 3 of the BSc Mathematics (with Year Abroad/Placement) (G109/G108). Students who have not made satisfactory progress on the year abroad/placement will not be permitted to continue on the BSc Mathematics (with Year Abroad/Placement) (G109/G108) programme, but must instead proceed to Level 3 of the BSc Mathematics (G100) programme.