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.

Master of Mathematics (G103)

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:

		Credit value
Calculus and Probability I #	MATH1061	20
Linear Algebra I #	MATH1071	20
Analysis I #	MATH1051	20
Programming and Dynamics I	MATH1041	20

3. Candidates shall also study and be assessed in modules to the value of 40 credits from any Board of Studies (including appropriate credit-bearing 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:

		Credit value
Complex Analysis II	MATH2011	20
Analysis in Many Variables II	MATH2031	20

5. Candidates shall also study and be assessed in modules to the value of 20 or 40 credits from List A1:

List A1:		**Credit value**
Statistical Concepts II	MATH2041	20
Numerical Analysis II	MATH2051	20

6. Candidates shall also study and be assessed in modules to the value of 40 or 60 credits from List A2:

List A2:		**Credit value**
Algebra II	MATH2581	20
Monte Carlo II	MATH2667	10
Elementary Number Theory II	MATH2617	10
Geometric Topology II	MATH2627	10
Mathematical Physics II	MATH2071	20
Mathematical Modelling II	MATH2637	10
Probability II	MATH2647	10
Special Relativity and Electromagnetism II	MATH2657	10

Level 3 (Degree)

7. Candidates shall study and be assessed in EITHER modules to the value of 120 credits from list B OR modules to the value of 100 credits from list B 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):

List B2 (2018-2019):		**Credit value**
Numerical Differential Equations III	MATH3081	20
Geometry III	MATH3201	20
Number Theory III	MATH3031	20
Probability III	MATH3211	20
Statistical Mechanics III	MATH3351	20
Topics in Statistics III	MATH3361	20

List B1 (2017-2018):		**Credit value**
Analysis III	MATH3011	20
Bayesian Statistics III	MATH3341	20
Continuum Mechanics III	MATH3101	20
Representation Theory III	MATH3371	20
Solitons III	MATH3231	20
Stochastic Processes III	MATH3251	20

List B3:		**Credit value**
Cryptography and Codes III	MATH3401	20
Decision Theory III	MATH3071	20
Differential Geometry III	MATH3021	20
Dynamical Systems III	MATH3091	20
Galois Theory III	MATH3041	20
Mathematical Biology III	MATH3171	20
Mathematical Finance III	MATH3301	20
Mathematics Teaching III	MATH3121	20
Operations Research III	MATH3141	20
Partial Differential Equations III	MATH3291	20
Quantum Information III	MATH3391	20
Quantum Mechanics III	MATH3111	20
Statistical Methods III	MATH3051	20
Topology III	MATH3281	20

Lists B1 and B2 will be offered in alternate years. List B3 will run in both years.

Level 4 (Degree)

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

		Credit value
Mathematical Project IV	MATH4072	40

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

List C2 (2018-2019):		**Credit value**
Numerical Differential Equations IV	MATH4221	20
Geometry IV	MATH4141	20
Number Theory IV	MATH4211	20
Probability IV	MATH4131	20
Statistical Mechanics IV	MATH4231	20
Topics in Statistics IV	MATH4071	20

List C1 (2017-2018):		**Credit value**
Analysis IV	MATH4201	20
Bayesian Statistics IV	MATH4031	20
Continuum Mechanics IV	MATH4081	20
Representation Theory IV	MATH4241	20
Solitons IV	MATH4121	20
Stochastic Processes IV	MATH4091	20

List C3:		**Credit value**
Advanced Quantum Theory IV	MATH4061	20
Algebraic Topology IV	MATH4161	20
Topics in Algebra and Geometry IV	MATH4151	20
General Relativity IV	MATH4051	20
Mathematical Finance IV	MATH4181	20
Partial Differential Equations IV	MATH4041	20
Riemannian Geometry IV	MATH4171	20
Modules up to the value of 20 credits from another board of studies, subject to the agreement of the Mathematics Board of Studies		20

Lists C1 and C2 will be offered in alternate years. List C3 will run in both years.

Assessment, progression and award

10. Modules marked with a # must be passed at 40% or above in order to progress to the Ordinary degree at the next Level.
11. Students who fail to achieve the standard required under the Core Regulations for progression to Level 3 of the MMath but who achieve the standard required for progression to Level 3 of a Bachelors programme may progress to Level 3 of the BSc in Mathematical Sciences at either Honours or Ordinary level in accordance with the Core Regulations.
12. A student who is qualified to progress from Level 2 to Level 3 of the MMath but wishes to transfer to Level 3 of the BSc Mathematics shall be permitted to do so.
13. Students whose achievement at the end of Level 3 does not qualify them to proceed to Level 4 may be awarded the degree of BSc in Mathematical Sciences at either Honours or Ordinary level in accordance with the Core Regulations for the award of a Bachelors degree.
14. Students whose achievement at the end of Level 4 does not qualify them to be awarded the degree of MMath may be awarded the degree of BSc in Mathematical Sciences with Honours in accordance with the Core Regulations for the award of a Bachelors degree.