

## MASTER OF MATHEMATICS (G103)

Programme offered at: Durham.

Mode of study: this programme is available full-time.

### LEVEL 1 (Certificate)

1-2	Core Mathematics A	MATH1012	40
3	Core Mathematics B1	MATH1051	20
4	Core Mathematics B2	MATH1041	20
5-6	Level 1 open modules to the value of 40 credits chosen from those offered by any Board of Studies		

### LEVEL 2 (Diploma)

1	EITHER	Complex Analysis II	MATH2011	20
	OR	Contours and Actuarial Mathematics II	MATH2171	20
2	Linear Algebra II		MATH2021	20
3	Analysis in Many Variables II		MATH2031	20
4-6	Modules to the value of 60 credits chosen from:			
	Statistical Concepts II		MATH2041	20
	Numerical Analysis II		MATH2051	20
	Algebra and Number Theory II		MATH2061	20
	Mathematical Physics II		MATH2071	20
	Codes and Actuarial Mathematics II		MATH2131	20
	Codes and Geometric Topology II		MATH2141	20
	Probability and Actuarial Mathematics II		MATH2161	20
	Probability and Geometric Topology II		MATH2151	20

Notes:

Students who fail to achieve the standard required under the Core Regulations for progression to Level 3 of the MMath but who achieve the standards required for progression to Level 3 of a Bachelors programme may progress to Level 3 of the BSc in Mathematics in the Honours or Ordinary stream in accordance with the Core Regulations;

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 in Mathematics shall be permitted to do so.

### LEVEL 3 (Degree)

1-6	Modules to the value of 120 credits chosen from List A and Mathematics Teaching III (MATH3121)		
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Notes:

Mathematics Teaching III (MATH3121) is a capped module and preference will be given to students on BSc programmes.

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.

### LEVEL 4 (Degree)

1-2	Mathematics Project IV	MATH4072	40
3-6	Modules to the value of 80 credits chosen from List B		

Notes:

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.

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## MODULE LISTS : MATHEMATICAL SCIENCES

### LIST A

(Lists A1 and A2 will be offered in alternate years, List A3 will run in both years)

#### List A1 (2007-2008)

Analysis III	MATH3011	20
Continuum Mechanics III	MATH3101	20

Representation Theory and Modules III	MATH3191	20
Stochastic Processes III	MATH3251	20
Bayesian Methods III	MATH3311	20
General Relativity III	MATH3331	20
Mathematical Finance III	MATH3301	20

**List A2 (2006-2007)**

Number Theory III	MATH3031	20
Approximation Theory and Solutions to ODEs III	MATH3081	20
Geometry III	MATH3201	20
Probability III	MATH3211	20
Elliptic Functions III	MATH3221	20
Solitons III	MATH3231	20
Bayesian Statistics III	MATH3341	20
Statistical Mechanics III	MATH3351	20

**List A3**

Differential Geometry III	MATH3021	20
Galois Theory III	MATH3041	20
Statistical Methods III	MATH3051	20
Operations Research III	MATH3141	20
Decision Theory III	MATH3071	20
Dynamical Systems III	MATH3091	20
Quantum Mechanics III	MATH3111	20
Independent Study III	MATH3161	20
Mathematical Biology III	MATH3171	20
Electromagnetism III	MATH3181	20
Topology III	MATH3281	20
Partial Differential Equations III	MATH3291	20

**LIST B**

*(Lists B1 and B2 will be offered in alternate years, List B3 will run in both years)*

**List B1 (2007-2008)**

Continuum Mechanics IV	MATH4081	20
General Relativity IV	MATH4051	20
Stochastic Processes IV	MATH4091	20
Representation Theory and Modules IV	MATH4101	20
Analysis IV	MATH4201	20
Bayesian Methods IV	MATH4191	20
Mathematical Finance IV	MATH4181	20

**List B2 (2006-2007)**

Bayesian Statistics IV	MATH4031	20
Elliptic Functions IV	MATH4151	20
Probability IV	MATH4131	20
Solitons IV	MATH4121	20
Geometry IV	MATH4141	20
Statistical Mechanics IV	MATH4231	20
Approximation Theory and Solutions to ODEs IV	MATH4221	20
Number Theory IV	MATH4211	20

**List B3**

Advanced Quantum Theory IV	MATH4061	20
Algebraic Topology IV	MATH4161	20
Riemannian Geometry IV	MATH4171	20
Partial Differential Equations IV	MATH4041	20

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