

<b>*Scheme of Lectures</b>		
<b>Michaelmas Term</b>	<b>Hilary Term</b>	<b>Trinity Term</b>
<b>MATHEMATICS</b>		
<b>Moderations</b>		
A: Introduction to Pure Mathematics (5)	A: Linear Algebra II (8)	A: Some Theory of Sets and Groups (8)
A: Linear Algebra I (14)	A: Some Theory of Sets and Groups (8)	B: Analysis III (8)
A: Geometry I (7)	B: Analysis II (16)	B: Geometry II (8)
B: Analysis I (14)	C: Probability II (8)	D: Calculus in Three Dimensions and Applications (16)
C: Calculus of One Variable (6)	C: Statistics (8)	
C: Dynamics (16)	D: Fourier Series and Two Variable Calculus (16)	
C: Probability I (8)	D: Partial Differential Equations in Two Dimensions and Applications (16)	
D: Calculus of Two or more Variables (10)		
<b>Part A</b>		
Algebra (24)	Groups in action (8)	Number Theory (8)
Analysis (24)	Introduction to Fields (8)	Multivariable Calculus (8)
Differential Equations (24)	Integration (16)	Electromagnetism (8)
	Topology (16)	
	Calculus of Variations (8)	
	Classical Mechanics (8)	
	Fluid Dynamics and Waves (16)	
	Probability (16)	
	Statistics (16)	
	Numerical Analysis (16)	
<b>Part B</b>		
B1a Logic	B1b Set Theory	
B2a Algebras	B2b Finite Groups and Characters	
B3a Geometry of Surfaces	B3a Algebraic Curves	
B4a Analysis I	B4b Analysis II	
B568 Introduction to Applied Mathematics (6)		

B5a Techniques of Applied Mathematics (14)	B5b Applied Partial Differential Equations	
B6a Viscous Flow (14)	B6b Waves and Compressible Flow	
B7.1a Quantum Mechanics		
B7.2a Special Relativity and Electromagnetism		
B8a Mathematical Ecology and Biology (14)	B8b Nonlinear Systems	
B9a Polynomial Rings and Galois Theory	B9b Algebraic Number Theory	
B10a Martingales Through Measure Theory	B10b Mathematical Models of Financial Derivatives	
B11 Communication Theory		
O1 History of Mathematics		
B21 Numerical Solution of Differential Equations I	B21 Numerical Solution of Differential Equations II	
B22 Integer Programming		
OCS1a Functional Programming	OCS1b Data Structures and Algorithms	
OCS2a Logic of Multi-Agent Information Flow		
OCS3a Lambda Calculus and Types		
OBS1a Applied Statistics I	OBS1b Applied Statistics II (10)	
OBS2a Statistical Inference		
OBS3a Applied Probability	OBS3b Statistical Lifetime Models	
OBS4a Actuarial Science	OBS4b Actuarial Science II	
	N1 Undergraduate Ambassadors' Scheme	
<b>Part C</b>		
C1.1a Gödel's Incompleteness Theorems	C1.1b Model Theory	
C1.2a Analytic Topology	C1.2b Axiomatic Set Theory	
C2.1a Lie Algebras	C2.1b Representation Theory of Symmetric Groups	
C3.1a Topology and Groups	C3.1b Algebraic Topology	
C4.1a Functional Analysis	C4.1b Banach and C* Algebras	
C4.2a Real and Harmonic Analysis		
C5.1a Partial Differential Equations for Pure and Applied Mathematicians	C5.1b Calculus of Variations	
C6.1 Solid Mechanics	C6.2 Elasticity and Plasticity	
C6.3a Perturbation Methods	C6.3b Applied Complex Variables	

C7.3 Advanced Quantum Mechanics	C7.1b Quantum Theory and Quantum Computers	
	C7.2b General Relativity	
C8.1a Mathematics and the Environment	C8.1b Mathematical Physiology	
C9.1a Analytic Number Theory	C9.1b Elliptic Curves	
C10.1a Stochastic Differential Equations	C10.1b Brownian Motion in Complex Analysis	
C11.1a Graph Theory	C11.1b Probabilistic Combinatorics	
C12.1a Numerical Linear Algebra	C12.1b Continuous Optimisation	
C12.2a Approximation of Functions	C12.2b Finite Element Methods	
CCS1 Categories, Proofs and Programs	CCS2 Domain Theory	
	CCS3 Quantum Computer Science	
MS1a Graphical Models and Inference	MS1b Statistical Data Mining (12)	
MS2a Bioinformatics and Computational Biology	MS2b Stochastic Models in Mathematical Genetics	
	MS3 Levy Processes and Finance	
Rise of Modern Logic		

## COMPUTER SCIENCE

### Moderations

CS1 Functional Programming	CS1 Data Structures and Algorithms	CS2 Digital Hardware
CS3 Discrete Mathematics	CS2 Procedural Programming	
Introduction to Pure Mathematics (5)	CS3 Models of Computation	
M1: Linear Algebra I (14)	CS3 Logic and Proof	
M1: Calculus of One Variable (6)	M1: Linear Algebra II (8)	
M1: Calculus of Two or more Variables (10)		

### Part A

CS4 Object Oriented Programming I	CS4 Object Oriented Programming II	Computer Architecture
CS5 Concurrency	CS5 Networks and Operating Systems	
Formal Program Design I	Formal Program Design II	
Compilers	Programming Languages	
Computer Graphics	Numerical Analysis	

	Advanced Data Structures & Algorithms	
<b>Part B</b>		
<b>Schedule B1</b>		
Formal Program Design I	Formal Program Design II	Computer Architecture
Compilers	Programming Languages	
Computer Graphics	Numerical Analysis	
	Advanced Data Structures & Algorithms	
<b>Schedule B2</b>		
Intelligent Systems I	Intelligent Systems II	
Numerical Solution of Differential Equations I	Numerical Solution of Differential Equations II	
Databases	Computer Security	
The Logic of Multi-Agent Information Flow	Object Oriented Design	
Computational Complexity		
Integer Programming		
Lambda Calculus and Types		
Bioinformatics and Computational Biology		
<b>Schedule B4</b>		
Categories, Proofs & Programs	Automata, Logic & Games	
	Domain Theory	
<b>MATHEMATICS AND COMPUTER SCIENCE</b>		
<b>Moderations</b>		
CS1 Functional Programming	CS1 Data Structures and Algorithms	CS2 Digital Hardware
Introduction to Pure Mathematics (5)	CS2 Procedural Programming	M1: Group Theory (8)
M1: Linear Algebra I (14)	M1: Linear Algebra II (8)	M2: Analysis III (8)
M1: Calculus of One Variable (6)	M1: Some Theory of Sets and Groups (8)	M2: Geometry II (8)
M1: Calculus of Two or more Variables (10)	M2: Analysis II	
M2: Analysis I (14)		

<b>Part A</b>		
CS4 Object Oriented Programming I	CS4 Object Oriented Programming II	Computer Architecture
CS5 Concurrency	CS5 Networks and Operating Systems	
Formal Program Design I	Formal Program Design II	
Compilers	Programming Languages	
Computer Graphics	Numerical Analysis	
Algebra (24)	Advanced Data Structures & Algorithms	
Analysis (24)		
Differential Equations (24)		
In addition, the other lectures under Mathematics Part A are applicable.		
<b>Part B</b>		
<i>Schedule B1</i>		
Formal Program Design I	Formal Program Design II	Computer Architecture
Compilers	Programming Languages	
Computer Graphics	Numerical Analysis	
	Advanced Data Structures & Algorithms	
<i>Schedule B2</i>		
Intelligent Systems I	Intelligent Systems II	
Numerical Solution of Differential Equations I	Numerical Solution of Differential Equations II	
Databases	Computer Security	
The Logic of Multi-Agent Information Flow	Object Oriented Design	
Computational Complexity		
Integer Programming		
Lambda Calculus and Types		
Bioinformatics and Computational Biology		
<i>Schedule B3</i>		
B1 Set Theory	B1 Logic	
B2 Algebras	B2 Finite Groups and their representations	
B4 Banach Spaces	B4 Hilbert Spaces	

B5 Techniques of Mathematical Modelling	B5 Methods of Applied Analysis	
B9 Polynomial Rings and Galois Theory	B9 Algebraic Number Theory	
<b>Schedule B4</b>		
Categories, Proofs & Programs	Automata, Logic & Games	
	Domain Theory	
	Quantum Computer Science	
<b>MATHEMATICS AND STATISTICS</b>		
<b>Part A</b>		
Algebra (24)	Probability (16)	
Analysis (24)	Statistics (16)	Linear Programming (8)
Differential Equations (24)	Graph Theory (8)	
	Combinatorial Optimisation (16)	
In addition, the other optional lectures under Mathematics Part A, in Hilary and Trinity Terms, are also applicable.		
<b>Part B</b>		
BS1 Applied Statistics I	BS1 Applied Statistics II (10)	
BS2a Statistical Inference		
BS3a Applied Probability	BS3b Statistical Lifetime-Models	
BS4 Actuarial Science I	BS4 Actuarial Science II	
In addition, B1-11 and N1 under Mathematics Part B and C3.1, C5.1a and C9.1a under Mathematics Part C are applicable.		
<b>Part C</b>		
MS1a Graphical Models and Inference	MS1b Statistical Data Mining (12)	
MS2a Bioinformatics and Computational Biology	MS2b Stochastic Models in Mathematical Genetics	
	MS3b Levy Processes and Finance	
	MS4b Probabilistic Combinatorics	
In addition, the C1.1-C12.2 under Mathematics Part C are applicable.		

\* Each course has sixteen lectures unless indicated otherwise.