Lectures proposed by the Board of the Faculty of Mathematics

For particulars of the University Composition Fee and of the fees payable for attendance at separate courses of lectures see p. 2.

Graduates of the University who are not reading for any University Examination may attend without payment any lectures proposed by the Faculty Board of Mathematics.

MATHEMATICAL TRIPOS, PART IA

Lectures for Part IA of the Mathematical Tripos will be delivered in the Cockcroft Lecture Theatre, unless otherwise stated.

First-year mathematics students are recommended to attend the induction session which will be held from 10 a.m. to 11 a.m. on Wednesday, 7 October 1998, in the *Cockcroft Lecture Theatre*. This will give an introduction to teaching methods in Cambridge, study skills and stress management.

MICHAELMAS 1998	LENT 1999	EASTER 1999
Numbers and Sets DR T. K. CARNE Tu. Th. S. 11	Analysis I DR D. J. H. GARLING M. W. F. 10	*Special Relativity (Eight lectures) PROF. G. W. GIBBONS M. W. F. 9 *Arts School, Room A*
Differential Equations DR R. M. WILLIAMS M. W. F. 11	Vector Calculus DR S. J. COWLEY Tu. Th. S. 10	*Numerical Analysis DR A. ISERLES M. W. F. 10
Algebra and Geometry (Forty-eight lectures) DR J. A. HUDSON AND DR J. SAXL M. Tu. W. Th. F. S. 10	Dynamics DR J. M. STEWART M. W. F. 11	*Geometry DR P. M. H. WILSON Tu. Th. S. 10
	Probability PROF. F. P. KELLY Tu. Th. S. 11	*Optimization DR C. T. SPARROW M. W. F. 11
	*Linear Mathematics PROF. G. B. SEGAL M. W. F. 9 *Arts School, Room A*	*Complex Methods (Sixteen lectures) DR S. T. C. SIKLOS M. Tu. Th. F. 12 *Arts School, Room A*
		**Introduction to Computational Projects (Six lectures) DR R. E. HUNT Tu. Th. 11

Mathematics with Computer Science Option:

Students taking this Option should attend Algebra and Geometry, Analysis I and Vector Calculus, Differential Equations, and Probability, from Part IA of the Mathematical Tripos, together with the courses from the Computer Science Option listed below. Students should note that the programming exercises will be taken into account by the examiners.

Introduction to Computer Science (One lecture) PROF. A. J. R. G. MILNER Th. 12		Operating Systems MR S. M. HAND Tu. Th. S. 12
Foundations of Computer Science (Fifteen lectures, beginning 10 Oct.) DR L. C. PAULSON Tu. Th. S. 12		
Discrete Mathematics (Eight lectures, beginning 14 Nov.) DR P. ROBINSON Tu. Th. S. 12	The same continued (Eight lectures) DR P. ROBINSON Tu. Th. S. 12	
	Programming in Java (Sixteen lectures, beginning 2 Feb.) DR A. C. NORMAN Tu. Th. S. 12	
Practical ML under Windows (Two Thursday classes) DR F. H. KING, MISS C. H. NORTHEAST AND MR R. J. STIBBS Th. 2–4 *or* 4–6 *Hopkinson Lecture Room*	Programming Practical Class (One class, 14 Jan. *or* 21 Jan.) DR F. H. KING Th. 2–4 *Cockcroft Building, Floor 4*	Programming Practical Class (Two fortnightly classes, beginning 22 Apr. *or* 29 Apr.) DR F. H. KING AND DR A. C. NORMAN Th. 1–4 *Cockcroft Building, Floor 4*
Programming Practical Class (Three fortnightly classes, beginning 22 Oct. *or* 29 Oct.) DR L. C. PAULSON AND DR F. H. KING Th. 2–4 *Cockcroft Building, Floor 4*	Unix Registration (One class, 28 Jan. *or* 29 Jan. *or* 4 Feb.) DR F. H. KING, MISS C. H. NORTHEAST AND MR R. J. STIBBS Th. *or* F. 2–4 *Hopkinson Lecture Room*	
How to Study Computer Science (One lecture, 22 Oct.) DR A. C. NORMAN AND OTHERS Th. 5 *Arts School, Room A*	Programming Practical Class (Two fortnightly classes, beginning 11 Feb. *or* 18 Feb.) DR F. H. KING AND DR A. C. NORMAN Th. 2–4 *Cockcroft Building, Floor 4*	
Tick-Four Briefing (One lecture, 29 Oct.) DR F. H. KING Th. 5 *Hopkinson Lecture Room*		
Help Sessions (Four classes, beginning 5 Nov.) DR M. E. VAN INWEGEN Th. 4 *Hopkinson Lecture Room*		

* Not examined in Part IA of the Tripos. These courses will be delivered again in 1999–2000 as part of Part IB.

** Not examined in Part IA of the Tripos. CATAM (Computer–Aided Teaching of All Mathematics) practical sessions will be held during the last two weeks of full Easter Term. Examination credit in Part IB for this course will be gained by the submission of project files, and no questions will be set on it in the examination. The maximum credit available will be approximately equivalent to that for a normal course of sixteen lectures, and will be added directly to the credit obtained in the written papers.

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Faculty of Mathematics (continued)

MATHEMATICAL TRIPOS, PART IA (continued)

MICHAELMAS 1998	LENT 1999	EASTER 1999

Mathematics with Physics Option:

Students taking this Option should attend Algebra and Geometry, Analysis I, Vector Calculus, Differential Equations, and Probability, from Part IA of the Mathematical Tripos, together with the lectures listed below from Part IA of the Natural Sciences Tripos (Course B version). They will be required to do Physics practical work, and are recommended to attend at least the first lecture of Course B of the Computing Course for Physical Scientists (p. 170). Physics lectures are at M. W. F. 9 in the *Chemical Laboratory, Lensfield Road*.

Mechanics and Molecules DR J. R. WALDRAM	Oscillations and Waves (first twelve lectures) DR V. GIBSON Fields, Relativity and Quantum Mechanics (last twelve lectures) DR D. A. GREEN	The same continued

Non-examinable Courses:

*Physics (Twelve lectures, beginning 14 Oct.) PROF. N. TUROK Tu. Th. 12 *Arts School Room C*	Topics in the History of Mathematics DR P. BURSILL-HALL M. W. F. 4 *Mill Lane (6)*	

* This course is intended for mathematics students who have not taken Physics A-level.

MATHEMATICAL TRIPOS, PART IB

Lectures for Part IB of the Mathematical Tripos will be held in the Arts School unless otherwise stated.

Analysis II
DR T. W. KÖRNER M. W. F. 9 *Room A*

*Quadratic Mathematics (Sixteen lectures)
PROF. W. T. GOWERS Tu. Th. 9 *Room A*
*Quantum Mechanics (Sixteen lectures)
DR A-C. DAVIS Tu. Th. 10 *Mill Lane (9)*
*Fluid Dynamics (Sixteen lectures)
DR J. R. LISTER M. F. 10 *Mill Lane (9)*
**Markov Chains
PROF. G. R. GRIMMETT M. W. F. 11 *Mill Lane (9)*
**Electromagnetism
DR J. P. DOUGHERTY Tu. Th. S. 11 *Mill Lane (9)*
Methods
DR E. P. S. SHELLARD M. W. F. 12 *Room A*
Linear Mathematics
DR C. J. B. BROOKES Tu. Th. S. 12 *Room A*

Quantum Mechanics (Sixteen lectures, ending 19 Feb.)
PROF. P. V. LANDSHOFF M. W. F. 9 *Mill Lane (9)*
Special Relativity (Eight lectures, beginning 22 Feb.)
PROF. D. O. GOUGH M. W. F. 9 *Mill Lane (9)*
Quadratic Mathematics (Sixteen lectures)
DR J. E. ROSEBLADE Tu. Th. 9 *Mill Lane (9)*
**Groups, Rings and Fields
DR J. M. E. HYLAND M. W. F. 10 *Mill Lane (9)*
**Dynamics of Differential Equations
PROF. R. S. MACKAY Tu. Th. S. 10 *Mill Lane (9)*
**Principles of Dynamics
DR C. T. WHELAN M. W. F. 11 *Mill Lane (9)*
Fluid Dynamics (Sixteen lectures)
PROF. M. E. MCINTYRE M. W. 11 *Room B*
**Functional Analysis
DR A. J. WASSERMANN Tu. Th. S. 11 *Room B*
Statistics (Sixteen lectures)
PROF. R. R. WEBER M. F. 12 *Room A*
Complex Methods (Sixteen lectures)
DR H. T. CROFT Tu. Th. 12 *Room A*
Further Analysis (Sixteen lectures)
DR C. B. THOMAS W. S. 12 *Room A*

Special Relativity (Eight lectures)
PROF. G. W. GIBBONS M. W. F. 9 *Room A*

Numerical Analysis
DR A. ISERLES M. W. F. 10 *Cockcroft Lecture Theatre*
Geometry
DR P. M. H. WILSON Tu. Th. S. 10 *Cockcroft Lecture Theatre*
Optimization
DR C. T. SPARROW M. W. F. 11 *Cockcroft Lecture Theatre*
Complex Methods (Sixteen lectures)
DR S. T. C. SIKLOS M. Tu. Th. F. 12 *Room A*

* These courses are given again in the Lent Term.
** These courses are examinable only in Part II, not in Part IB.

Faculty of Mathematics (continued)

MATHEMATICAL TRIPOS, PART II

Candidates for Part II may offer either Alternative (A) or Alternative (B).

ALTERNATIVE (A)

Lectures for Alternative (A) are held in the Mill Lane Lecture Rooms unless otherwise stated.

MICHAELMAS 1998

*Numerical Analysis
PROF. M. J. D. POWELL Tu. Th. S. 9 *Arts School Room B*

Algorithms and Networks (Sixteen lectures)
DR C. T. SPARROW M. F. 9 *Room (9)*
Mathematical Methods (Sixteen lectures)
PROF. J. R. WILLIS Tu. Th. 10 *Arts School Room B*
*Foundations of Quantum Mechanics (Sixteen lectures)
DR H. OSBORN M. F. 10 *Arts School Room B*

Number Theory (Sixteen lectures)
DR H. T. CROFT W. S. 10 *Arts School Room B*
Computational Statistics and Statistical Modelling (Sixteen lectures)
DR P. M. E. ALTHAM M. F. 10 *Arts School Room C*
**Markov Chains
PROF. G. R. GRIMMETT M. W. F. 11 *Room (9)*
**Electromagnetism
DR J. P. DOUGHERTY Tu. Th. S. 11 *Room (9)*
*Logic, Computation and Set Theory (first sixteen lectures only)
DR P. T. JOHNSTONE M. W. F. 12 *Room (9)*

Theoretical Geophysics (Sixteen lectures)
PROF. H. E. HUPPERT Tu. Th. 12 *DAMTP Room A*
Graph Theory (Sixteen lectures)
DR A. THOMASON Tu. Th. 12 *Room (9)*
*Computational Projects (Six lectures)
DR R. E. HUNT AND OTHERS M. W. F. 2 *Room (9)*

LENT 1999

Statistical Physics and Cosmology (Sixteen lectures)
PROF. G. W. GIBBONS M. W. 9 *Room (7)*
*Principles of Statistics
DR G. A. YOUNG Tu. Th. S. 9 *Arts School Room A*
**Groups, Rings and Fields
DR J. M. E. HYLAND M. W. F. 10 *Room (9)*
**Dynamics of Differential Equations
PROF. R. S. MACKAY Tu. Th. S. 10 *Room (9)*
Transport Processes (Sixteen lectures)
DR O. E. JENSEN Tu. Th. 11 *Room (9)*
**Functional Analysis
DR A. J. WASSERMANN Tu. Th. S. 11 *Arts School Room B*
**Principles of Dynamics
DR C. T. WHELAN M. W. F. 11 *Room (9)*
*General Relativity (Sixteen lectures)
DR P. D. D'EATH Tu. Th. 12 *Arts School Room B*
Geometry of Surfaces (Sixteen lectures)
DR N. I. SHEPHERD-BARRON M. F. 12 *Arts School Room C*
Quantum Physics (Sixteen lectures)
DR I. T. DRUMMOND M. F. 12 *Room (9)*
*Stochastic Financial Models (Sixteen lectures)
DR D. P. KENNEDY W. S. 12 *Room (9)*

EASTER 1999

Nonlinear Waves
PROF. N. O. WEISS M. Tu. Th. F. 9 *Room (9)*

Symmetries and Groups in Physics
PROF. N. TUROK M. Tu. Th. F. 10 *Room (9)*
Coding and Cryptography
DR T. W. KÖRNER M. Tu. Th. F. 11 *Room (9)*

ALTERNATIVE (B)

Lectures for Alternative (B) are held in the Arts School unless otherwise stated.

*Numerical Analysis
PROF. M. J. D. POWELL Tu. Th. S. 9 *Room B*
Algebraic Topology (Sixteen lectures)
DR A. CORTI Tu. Th. 9 *Room C*
Applied Probability (Sixteen lectures)
DR D. CRISAN M. F. 9 *Room C*
Partial Differential Equations
DR M. JOSHI M. W. F. 9 *Room B*
*Foundations of Quantum Mechanics (Sixteen lectures)
DR H. OSBORN M. F. 10 *Room B*
Number Fields (Sixteen lectures)
DR J. NEKOVAR W. S. 10 *Room C*
Optimization and Control (Sixteen lectures)
DR Y. SUHOV Tu. Th. 10 *Room C*
**Electromagnetism
DR J. P. DOUGHERTY Tu. Th. S. 11 *Mill Lane Room (9)*
Galois Theory (Sixteen lectures)
DR J. E. ROSEBLADE Tu. Th. 11 *Room C*
Hilbert Spaces (Sixteen lectures)
DR G. R. ALLAN W. S. 11 *Room B*
Communication Theory (Sixteen lectures)
DR Y. SUHOV M. F. 11 *Room B*
Electrodynamics (Sixteen lectures)
DR M. J. PERRY M. F. 11 *Room C*
**Markov Chains
PROF. G. R. GRIMMETT M. W. F. 11 *Mill Lane Room (9)*
Methods of Mathematical Physics
DR M. G. WORSTER Tu. Th. S. 12 *Room B*
*Logic, Computation and Set Theory
DR P. T. JOHNSTONE M. W. F. 12 *Mill Lane Room (9)*

*Principles of Statistics
DR G. A. YOUNG Tu. Th. S. 9 *Room A*
Differentiable Manifolds (Sixteen lectures)
DR D. BARDEN Tu. Th. 9 *Room C*
Algebraic Curves (Sixteen lectures)
PROF. J. H. COATES M. W. 9 *Room C*
Applications of Quantum Mechanics
PROF. P. GODDARD M. W. F. 9 *Room B*
**Dynamics of Differential Equations
PROF. R. S. MACKAY Tu. Th. S. 10 *Mill Lane Room (9)*
Representation Theory
DR I. GROJNOWSKI Tu. Th. S. 10 *Room C*
**Groups, Rings and Fields
DR J. M. E. HYLAND M. W. F. 10 *Mill Lane Room (9)*
Statistical Physics
DR A. J. MACFARLANE M. W. 10 *Room B*
Waves in Fluid and Solid Media
PROF. D. G. CRIGHTON M. W. F. 11 *Room C*
**Functional Analysis
DR A. J. WASSERMANN Tu. Th. S. 11 *Room B*
Combinatorics (Sixteen lectures)
DR A. THOMASON Tu. Th. 11 *Room C*
**Principles of Dynamics
DR C. T. WHELAN M. W. F. 11 *Room (9)*
Probability and Measure
DR J. R. NORRIS M. W. F. 11 *Mill Lane Room (6)*
General Relativity (Sixteen lectures)
DR P. D. D'EATH Tu. Th. 12 *Room B*

Courses marked * are examined in both Alternatives.
Courses marked ** are examined in both Alternatives but may be attended in the second year.
Meetings will be held on Friday, 4 June 1999 for finalists who may continue to Part III of the Tripos in 1999–2000. Those intending to take mainly Pure courses should attend at 2.15 p.m. in *DPMMS Seminar Room 1,* and those intending to take mainly Applied courses should attend at 4.30 p.m. in *DAMTP Common Room*.

Faculty of Mathematics (continued)

MATHEMATICAL TRIPOS, PART II, ALTERNATIVE (B) (continued)

MICHAELMAS 1998	LENT 1999	EASTER 1999
Fluid Dynamics PROF. E. J. HINCH M. W. F. 12 *Room B* *Computational Projects (Six lectures) DR R. E. HUNT AND OTHERS M. W. F. 2 *Mill Lane Room (9)*	Riemann Surfaces DR A. BEARDON M. F. 12 *Room B* Dynamical Systems DR C. BAESENS W. S. 12 *Room C* Stochastic Financial Models (Sixteen lectures) DR D. P. KENNEDY W. S. 12 *Mill Lane (9)*	

Courses marked * are examined in both Alternatives.

Courses marked ** are examined in both Alternatives but it is expected that candidates for Alternative B who wish to attend them will normally do so in their second year.

Meetings will be held on Friday, 4 June 1999 for finalists who may continue to Part III of the Tripos in 1999–2000. Those intending to take mainly Pure courses should attend at 2.15 p.m. in *DPMMS Seminar Room 1*, and those intending to take mainly Applied courses should attend at 4.30 p.m. in *DAMTP Common Room*.

MATHEMATICAL TRIPOS, PART III

DEPARTMENT OF APPLIED MATHEMATICS AND THEORETICAL PHYSICS

Lectures are held in the Department unless otherwise stated. "Syndics" means the lecture room in the Old Syndics Building (Old Press Site), now part of DAMTP.

Structure and Evolution of Stars
PROF. D. O. GOUGH AND DR C. A. TOUT M. W. F. 9 *Room A*
Topics in Quantum Theory (Sixteen lectures)
DR A. P. A. KENT M. W. 9 *Syndics*
Astrophysical Fluid Dynamics
PROF. N. O. WEISS Tu. Th. S. 9 *Room A*
Slow Viscous Flow (Sixteen lectures)
DR J. R. LISTER Tu. Th. 9 *Syndics*
Quantum Field Theory
PROF. N. S. MANTON M. W. F. 10 *Room A*
Theory of Elastic Solids (Sixteen lectures)
PROF. J. R. WILLIS W. F. 10 *Syndics*
Nonlinear Patterns (Sixteen lectures)
DR R. B. HOYLE M. F. 10 *Room B*
Introduction to Computational Fluid Dynamics (Non-examinable, eight lectures)
DR N. NIKIFORAKIS M. 10, F. 11 *Syndics*

Cosmology (Sixteen lectures)
DR E. P. S. SHELLARD Tu. Th. 10 *Room A*
Perturbation Methods (Sixteen lectures)
DR P. H. HAYNES Tu. Th. 10 *Syndics*
General Relativity
DR P. D. D'EATH M. W. F. 11 *Room A*
Turbulence and Self-Similarity
DR J. C. VASSILICOS M. W. 11 *Syndics*
Quantum Statistical Field Theory (Sixteen lectures)
DR I. T. DRUMMOND Tu. Th. 11 *Room A*

Bifurcations in Nonlinear Convection (Sixteen lectures)
DR A. M. RUCKLIDGE Tu. Th. 11 *Syndics*
Physiological Fluid Dynamics
PROF. T. J. PEDLEY AND DR O. E. JENSEN M. W. F. 12 *Syndics*

Elementary Particle Physics
DR A. C. DAVIS M. W. F. 12 *Room A*
Computer-aided Geometric Design (Sixteen lectures, beginning 19 Oct.)
DR M. SABIN M. W. F. 12 *Syndics*
Dynamical Systems (Sixteen lectures)
PROF. R. S. MACKAY Tu. Th. 12 *Syndics*
Quantum Theory and Density-Functional Theory (Sixteen lectures)
DR S. COLWELL AND PROF. N. HANDY Tu. Th. 12 *Room B*
Biological Sequence Analysis (Sixteen lectures)
DR R. DURBIN AND DR G. MITCHISON M. W. 2 *Syndics*

Atomic Astrophysics
DR A. BURGESS AND DR H. E. MASON M. W. F. 9 *Room A*
Advanced Cosmology (Sixteen lectures)
PROF. N. G. TUROK M. W. 9 *Syndics*
Seismic Waves
DR J. A. HUDSON M. F. 9 *Room B*
String Theory
PROF. P. GODDARD Tu. Th. S. 9 *Room A*
Acoustics
PROF. D. G. CRIGHTON AND DR N. PEAKE Tu. Th. S. 9 *Syndics*
Observational Cosmology (Sixteen lectures)
PROF. G. EFSTATHIOU Tu. Th. 9 *Room B*
Algorithms for Nonlinear Optimization
PROF. M. J. D. POWELL M. W. F. 10 *Room A*
The Standard Model
DR H. OSBORN M. W. F. 10 *Syndics*

The Mathematics of Population Biology (Sixteen lectures, non-examinable)
DR M. KEELING AND DR J. SWINTON M. F. 10 *Room B*
Galaxies: Content and Evolution
DR G. GILMORE Tu. Th. S. 10 *Room A*
Non-Newtonian Fluids (Sixteen lectures)
PROF. E. J. HINCH Tu. Th. 10 *Syndics*
Supersymmetry (Sixteen lectures)
DR J. EVANS Tu. Th. 10 *Room B*
Dynamo Theory
DR M. R. E. PROCTOR M. W. F. 11 *Room A*
Applications of Differential Geometry to Physics (Sixteen lectures, ending 19 Feb.)
DR G. PAPADOPOULOS M. W. F. 11 *Room B*
Demonstrations in Fluid Mechanics (Eight lectures, not examinable, ending 10 Feb.)
DR S. B. DALZIEL M. W. 11 *Fluid Dynamics Laboratory*
Black Holes
PROF. G. W. GIBBONS Tu. Th. S. 11 *Room A*
Fundamentals of Atmosphere-Ocean Dynamics
PROF. M. E. MCINTYRE Tu. Th. S. 11 *Syndics*

Advanced Quantum Field Theory
PROF. P. V. LANDSHOFF M. W. F. 12 *Room A*
Numerical Analysis of Differential Equations
DR A. ISERLES M. W. F. 12 *Syndics*

Environmental Fluid Dynamics (Sixteen lectures)
DR S. B. DALZIEL, DR J. HOLFORD AND DR G. HUNT Tu. Th. 12 *Syndics*
Hamiltonian Systems
DR M. BIALY W. 10 *Room B;* F. 9 *Syndics*
Phase Transitions and Collective Phenomena
DR B. D. SIMONS Tu. Th. 12 *Cavendish Laboratory*

There will be a meeting in *Room A* of the Arts School at 2.30 p.m. on Wednesday 7 October 1998 for those who intend to offer any D.A.M.T.P. courses in Part III. It is particularly important that those who did not attend the briefing meeting for Cambridge students in June 1998 should come

Faculty of Mathematics (continued)

MATHEMATICAL TRIPOS, PART III (continued)

MICHAELMAS 1998 **LENT 1999** **EASTER 1999**

DEPARTMENT OF PURE MATHEMATICS AND MATHEMATICAL STATISTICS

Courses given by the Statistical Laboratory are lectured there (16 Mill Lane) unless otherwise stated; other courses are lectured in the Mill Lane Lecture Rooms unless otherwise stated.

DPMMS Part III courses are listed under four headings. General courses are intended to be of general mathematical interest. Basic courses are intended to give a broad introduction to specific topics. Additional courses may (but need not) be more advanced, and are likely to be of more specialized interest. Fourthly, a number of courses given by the Statistical Laboratory are available both to candidates for Part III and for the M.Phil. in Mathematical Statistics.

General Courses

Functional Analysis and Spectral Theory
DR G. R. ALLAN M. W. F. 9 *Room (6)*

Riemann Surfaces
DR T. K. CARNE M. W. F. 10 *Room (6)*

Algebraic Topology
DR C. B. THOMAS Tu. Th. S. 10 *Room (7)*

Number Theory
PROF. SIR PETER SWINNERTON-DYER M. W. F. 11 *Room (7)*

Differential Geometry
DR D. BARDEN M. W. F. 11 *Room (6)*

Knot Theory
PROF. W. B. R. LICKORISH M. W. F. 12 *Room (6)*

Commutative Algebra
DR N. I. SHEPHERD-BARRON Tu. Th. S. 12 *Room (6)*

Basic Courses

Finite-dimensional Algebras
DR J. E. ROSEBLADE M. W. F. 9 *DPMMS Seminar Room 1*

Probabilistic Combinatorics
DR A. THOMASON M. W. F. 10 *DPMMS Seminar Room 1*

Category Theory
DR P. T. JOHNSTONE M. W. F. 10 *Room (7)*

Lie Algebras
DR J. M. E. HYLAND Tu. Th. S. 11 *Room (6)*

Kac-Moody and Virasoro Algebras
DR A. WASSERMANN M. W. F. 3 *Room (6)*

Additional Courses

Cyclotomic Fields
PROF. J. H. COATES Tu. Th. S. 9 *Room (6)*

Courses given by the Statistical Laboratory

*Applied Statistics (Sixteen lectures)
DR P. M. E. ALTHAM Tu. Th. 2

*Advanced Financial Models
DR D. P. KENNEDY M. W. F. 9 *Mill Lane Room (7)*

Advanced Probability
DR J. R. NORRIS Tu. Th. S. 9 *Mill Lane Room (7)*

*Statistical Theory
DR G. A. YOUNG M. W. F. 10

*Stochastic Networks
PROF. F. P. KELLY AND DR P. B. KEY M. W. F. 11

*Mathematics for Operational Research
DR R. J. GIBBENS M. W. F. 12

*Survival Data (Ten lectures and two classes, ending 10 Nov.)
DR P. TREASURE Tu. Th. 10

General Courses

Elliptic Curves
DR J. NEKOVAR Tu. Th. S. 11 *Room (7)*

Basic Courses

Geometry of Modular Forms
DR A. CORTI M. W. F. 10 *Room (7)*

Topics in Fourier Analysis
DR T. W. KÖRNER M. W. F. 10 *Room (6)*

Introduction to Pseudodifferential Operators
DR M. JOSHI Tu. Th. S. 11 *Room (6)*

Topics in Group Theory
DR J. SAXL M. W. F. 12 *DPMMS Room 1*

Additional Courses

Additive and Combinatorial Number Theory
PROF. W. T. GOWERS M. W. F. 9 *Room (6)*

Discrete Isoperimetric Inequalities (Sixteen lectures)
DR O. RIORDAN Tu. Th. 9 *Room (6)*

Hyperbolic Manifolds
DR M. LACKENBY Tu. Th. S. 10 *Room (7)*

Bundles on Surfaces
PROF. G. B. SEGAL M. W. F. 11 *Room (7)*

Complex Manifolds
DR P. M. H. WILSON M. W. F. 12 *Room (6)*

Geometry of the Punctured Disc
DR I. GROJNOWSKI Tu. Th. S. 12 *Room (7)*

Combinatorial Set Theory (Sixteen lectures)
DR T. FORSTER Th. 12 *Arts School Room C*; S. 12 *Room (6)*

Courses given by the Statistical Laboratory

Dynamics of One-dimensional Maps
DR C. T. SPARROW M. F. 11 *Syndics Lecture Theatre, DAMTP*

Stochastic Calculus and Applications
DR D. CRISAN M. W. F. 10

Large Deviations with Applications (Sixteen lectures)
DR S. TURNER Tu. Th. 9 *Mill Lane Room (7)*

*Time Series (Eight lectures, ending 10 Feb.)
PROF. R. R. WEBER W. F. 9

*Applied Multivariate Analysis (Fourteen lectures and two classes, ending 15 Feb.)
DR P. M. E. ALTHAM M. W. F. 12 *Mill Lane Room (7)*

*Design of Experiments (Ten lectures and two classes, beginning 17 Feb.)
DR S. PITTS M. W. F. 12 *Mill Lane Room (7)*

Courses given by the Statistical Laboratory

*Applied Statistics (continued) (Eight lectures)
DR S. PITTS M. W. F. 9

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Faculty of Mathematics (continued)

MATHEMATICAL TRIPOS, PART III (continued)

MICHAELMAS 1998 **LENT 1999** **EASTER 1999**

DEPARTMENT OF PURE MATHEMATICS AND MATHEMATICAL STATISTICS (continued)

Courses given by the Statistical Laboratory **(continued)**

*Statistical Genetics (Seven lectures and one class, beginning 12 Nov.)
DR H. JONES AND DR D. CLAYTON Tu. Th. 10

*Monte Carlo Inference (Eight lectures)
DR S. PITTS Tu. Th. 11

*Statistics in Medical Practice (Seven lectures and one class, ending 9 Feb.)
DR S. M. GORE AND DR D. SPIEGELHALTER Tu. Th. 11

*Actuarial Statistics (Sixteen lectures)
DR S. PITTS Tu. Th. 12 *Mill Lane Room (6)*

Courses given by the Statistical Laboratory marked * are given for the M.Phil. in Statistical Science, but may be taken for Part III. The following courses are combined for Part III examination purposes:

Experimental Design and Multivariate Analysis	Applied Multivariate Analysis (Lent) Plus Design of Experiments (Lent)
Biostatistics	Survival Data (Michaelmas) plus Statistical Genetics (Michaelmas) and Statistics in Medical Practice (Lent)
Time Series and Monte Carlo Inference	Monte Carlo Inference (Michaelmas) plus Time Series (Lent)

There will be a meeting in *Room A of the Arts School*, at 10 a.m. on Wednesday 7 October 1998, of those who intend to offer any D.P.M.M.S. courses in Part III. It is particularly important that those who did not attend the briefing meeting for Cambridge students in June 1998 should come to this meeting.

M.PHIL. IN STATISTICAL SCIENCE

In the Statistical Laboratory, 16 Mill Lane, unless otherwise stated.

*Applied Statistics (Sixteen lectures)
DR P. M. E. ALTHAM Tu. Th. 2

Advanced Financial Models
DR D. P. KENNEDY M. W. F. 9 *Mill Lane Room (7)*

*Statistical Theory
DR G. A. YOUNG M. W. F. 10

Stochastic Networks
PROF. F. P. KELLY AND DR P. B. KEY M. W. F. 11

*Mathematics for Operational Research
DR R. J. GIBBENS M. W. F. 12

Survival Data (Ten lectures and two classes, ending 10 Nov.)
DR P. TREASURE Tu. Th. 10

Statistical Genetics (Seven lectures and one class, beginning 12 Nov.)
DR H. JONES AND DR D. CLAYTON Tu. Th. 10

Monte Carlo Inference (Eight lectures)
DR S. PITTS Tu. Th. 11

*Probability
DR A. STACEY Tu. Th. 12

*CS in S-plus (Four classes starting 17 Nov, non-examinable)
DR R. J. GIBBENS Tu. Th. 4

Time Series (Eight lectures, ending 10 Feb.)
PROF. R. R. WEBER W. F. 9

Applied Multivariate Analysis (Fourteen lectures and two classes, ending 15 Feb.)
DR P. M. E. ALTHAM M. W. F. 12 *Mill Lane Room (7)*

Design of Experiments (Ten lectures and two classes, beginning 17 Feb.)
DR S. PITTS M. W. F. 12 *Mill Lane Room (7)*

Statistics in Medical Practice (Seven lectures and one class, ending 9 Feb.)
DR S. M. GORE AND DR D. SPIEGELHALTER Tu. Th. 11

Actuarial Statistics (Sixteen lectures)
DR S. PITTS Tu. Th. 12 *Mill Lane Room (6)*

*Applied Statistics (continued) (Eight lectures)
DR S. PITTS M. W. F. 9

Candidates will be expected to have attended the basic courses (marked *) and an appropriate number of other courses (and all will receive advice individually about this).

COURSES INTENDED FOR GRADUATES

Approximation of Analytic Functions
DR A. F. BEARDON Tu. Th. S. 10 *Mill Lane Room (6)*

Completely Bounded Maps and Similarity Problems
DR D. J. H. GARLING M. W. F. 10 *DPMMS Seminar Room 1*

Immersed Incompressible Surfaces in 3-Manifolds
DR J. PATERSON M. W. F. 11 *DPMMS Seminar Room 1*

Explicit Construction of Symplectic Manifolds
DR C. B. THOMAS M. W. F. 12 *DPMMS Seminar Room 1*

Problems in Intuitive Geometry (Eight lectures)
DR H. T. CROFT M. W. 2 *DPMMS Seminar Room 1*