

## Lectures Proposed by the Board of the Faculty of Mathematics

For particulars of the University Composition Fee and 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

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

First year mathematics students are recommended to attend the induction session which will be held from 9.30 a.m. to 10.45 a.m. on Wednesday 4 October 2000, in the *Cockcroft Lecture Theatre*.

MICHAELMAS 2000

LENT 2001

EASTER 2001

### PART IA

#### Algebra and Geometry

DR A. F. BEARDON AND DR P. H. HAYNES  
M. Tu. W. Th. F. S. 11

#### Differential Equations

PROF. D. O. GOUGH Tu. Th. S. 10

#### Numbers and Sets

DR I. B. LEADER M. W. F. 10

#### Analysis I

DR H. T. CROFT Tu. Th. S. 11

#### Probability

PROF. F. P. KELLY M. W. F. 10

#### Vector Calculus

DR S. T. C. SIKLOS M. W. F. 11

#### Dynamics

DR J. M. STEWART Tu. Th. S. 10

#### Linear Mathematics\*

PROF. A. M. W. GLASS Tu. Th. S. 9 *Mill Lane Room 9*

#### Complex Methods\*

DR T. W. KORNER M. Tu. Th. S. 10  
(Sixteen lectures)

#### Special Relativity\*

DR A. C. DAVIS W. F. 10 (Eight lectures)

#### Geometry\*

DR T. K. CARNE Tu. Th. S. 9 (Twelve lectures)  
*Mill Lane Room 3*

#### Optimization\*

DR Y. SUHOV M. W. F. 11 (Twelve lectures)

#### Numerical Analysis\*

DR A. SHADRIN M. W. F. 12 (Twelve lectures)  
*Mill Lane Room 9*

#### Computational Projects\*\*

DR Y. GIT Tu. Th. 11 (Six lectures)

#### Non-Examinable Courses

##### Introduction to Physics\*\*\*

PROF. G. W. GIBBONS M. W. 9 (Twelve lectures) *Mill Lane Room 9*

##### Topics in the History of Mathematics

DR P. BURSILL-HALL M. W. F. 4 *Mill Lane Room 9*

#### Mathematics with Computer Science 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 courses from the Computer Science Tripos listed below. Students should note that the programming exercises will be taken into account by the Examiners.

#### Introduction to Computer Science

PROF. I. M. LESLIE Th. 12 (One lecture)

#### Foundations of Computer Science

DR L. C. PAULSON Tu. Th. S. 12 (Fifteen lectures, beginning 7 Oct.)

#### Discrete Mathematics

DR P. ROBINSON Tu. Th. S. 12 (Eight lectures, beginning 11 Nov.)

#### Practical ML under Windows

DR F. H. KING, MISS C. H. NORTHEAST AND MR R. J. STIBBS Th. 2-4 or 4-6 (Two classes)  
*Hopkinson Lecture Room*

#### Programming Practical Class

DR L. C. PAULSON AND DR F. H. KING Th. 2-4 (Three fortnightly classes, beginning 19 Oct. or 26 Oct.)  
*Cockcroft Building, Floor 4*

#### How to Study Computer Science

DR A. C. NORMAN AND OTHERS Th. 5 (One lecture, 19 Oct.) *Arts School, Room A*

#### Tick-Four Briefing

DR F. H. KING Th. 5 (One lecture, 26 Oct.) *Hopkinson Lecture Room*

#### Help Sessions

A. N. OTHER Th. 4 (Four classes, beginning 2 Nov.)  
*Hopkinson Lecture Room*

#### The same continued

DR P. ROBINSON Tu. Th. S. 12 (Eight lectures)

#### Programming in Java

DR A. C. NORMAN Tu. Th. S. 12 (Sixteen lectures, beginning 6 Feb.)

#### Programming Practical Class

DR F. H. KING Th. 2-4 (One class, 18 Jan or 25 Jan.) *Cockcroft Building Floor 4*

#### UNIX Registration

DR F. H. KING, MISS C. H. NORTHEAST AND MR R. J. STIBBS Th. or F. 1.30-4 (One class, 1 Feb. or 2 Feb. or 8 Feb) *Hopkinson Lecture Room*

#### Programming Practical Class

DR F. H. KING AND DR A. C. NORMAN Th. 2-4 (Two fortnightly classes, beginning 15 Feb. or 22 Feb.) *Cockcroft Building, Floor 4*

#### Operating Systems

DR S. M. HAND Tu. Th. S. 12

#### Programming Practical Class

DR F. H. KING AND DR A. C. NORMAN Th. 1-4 (Two fortnightly classes, beginning 26 Apr. or 3 May) *Cockcroft Building, Floor 4*

\* Not examined in Part IA of the Tripos.

\*\* 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 16 lectures, and will be added directly to the credit obtained in the written papers.

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

## Faculty of Mathematics (continued)

### MATHEMATICAL TRIPOS, PART IA (continued) AND PART IB

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#### 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. 169.

Foundations of Classical and Statistical Physics  
DR J. R. WALDRAM M. W. F. 9 *Chemical Laboratory,  
Lensfield Road*

Oscillations and Waves  
DR J. R. BATLEY M. W. F. 9 (first twelve  
lectures) *Chemical Laboratory, Lensfield  
Road*  
Fields, Relativity and Quantum Physics  
DR J. R. CARTER M. W. F. 9 (last twelve  
lectures) *Chemical Laboratory, Lensfield  
Road*

The same continued

A meeting will be held for all Part IA students on Friday 4 May at 2 p.m. in *Mill Lane Room 3* to discuss examinations and examination techniques.

### PART IB

Lectures for Part IB of the Mathematical Tripos will be held in *Mill Lane Lecture Rooms* unless otherwise stated.

*Note some lectures start at 10.15 a.m., 11.15 a.m., 12.15 p.m.*

Analysis II  
DR P. T. JOHNSTONE Tu. Th. S. 9 *Room 3*  
Methods  
DR E. P. S. SHELLARD M. W. F. 9 *Room 3*  
Quadratic Mathematics  
PROF. J. H. COATES Tu. Th. 11 *Room 9*  
Fluid Dynamics  
PROF. H. E. HUPPERT Tu. Th. 12 *Room 9*  
Quantum Mechanics  
PROF. P. K. TOWNSEND Tu. Th. 10 *Room 9*  
Linear Mathematics  
DR C. J. B. BROOKES M. W. F. 10 *Room 9*  
Electromagnetism\*  
PROF. N. O. WEISS M. W. 1 *Room 9*  
Markov Chains\*  
PROF. G. R. GRIMMETT M. W. F. 12.15 *Room 9*

Complex Methods  
DR P. D. D'EATH W. S. 9 *Room 3*  
Special Relativity  
PROF. G. W. GIBBONS Tu. Th. S. 10 (last eight  
lectures, beginning 24 Feb.) *Room 9*  
Quantum Mechanics  
PROF. M. B. GREEN Tu. Th. S. 10 (first sixteen  
lectures, ending 22 Feb.) *Room 9*  
Fluid Dynamics  
PROF. M. E. MCINTYRE M. F. 10 *Room 6*  
Statistics  
DR S. M. PITTS Tu. Th. 9 *Room 3*  
Quadratic Mathematics  
DR C. B. THOMAS Tu. Th. 11 *Room 9*  
Further Analysis  
DR H. T. CROFT M. F. 9 *Room 3*  
Groups, Rings and Fields\*  
DR N. I. SHEPHERD-BARRON M. W. F. 11.15  
*Room 9*  
Dynamics of Differential Equations\*  
DR C. T. SPARROW M. W. F. 12.15 *Room 9*  
Principles of Dynamics\*  
PROF. N. TUROK M. W. F. 10.15 *Room 9*  
Functional Analysis\*  
DR D. J. H. GARLING Tu. Th. 12 *Room 9*

Numerical Analysis  
DR A. SHADRIN M. W. F. 12 (Twelve lectures)  
*Room 9*  
Geometry  
DR T. K. CARNE Tu. Th. S. 9 (Twelve lectures)  
*Room 3*  
Special Relativity  
DR A. C. DAVIS W. F. 10 (Eight lectures)  
*Cockcroft Lecture Theatre*  
Complex Methods  
DR T. W. KÖRNER M. Tu. Th. S. 10 (Sixteen  
lectures) *Cockcroft Lecture Theatre*  
Optimization  
DR Y. SUHOV M. W. F. 11 (Twelve lectures)  
*Cockcroft Lecture Theatre*

\* Examined in the 20001 Part II (B) examination.

## Faculty of Mathematics (continued)

## MATHEMATICAL TRIPOS, PART II

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

All lectures will be held in the *Centre for Mathematical Sciences* rooms (*MR*), *Clarkson Road* unless otherwise stated.

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## ALTERNATIVE A

## Number Theory

PROF. A. BAKER Tu. Th. 12 *MR* 2

## Electromagnetism

DR J. P. DOUGHERTY M. W. F. 9 *MR* 2

## Mathematical Methods

DR J. A. HUDSON W. S. 10 *MR* 2

## Functional Analysis

DR A. ZSAK M. W. F. 11 *MR* 2

## Algorithms and Networks

DR C. T. SPARROW Tu. F. 10 *MR* 2

## Statistical Physics and Cosmology

PROF. P. K. TOWNSEND M. W. 11 *MR* 4

## Logic, Computation and Set Theory

DR T. FORSTER Tu. Th. S. 9 (first sixteen lectures) *MR* 2

## Foundations of Quantum Mechanics

DR H. OSBORN M. Th. 10 *MR* 2

## Principles of Statistics

DR G. A. YOUNG Tu. Th. S. 11 *MR* 2

## Markov Chains

PROF. G. R. GRIMMETT M. W. F. 12.15 *Mill Lane Room 9*

## Computational Projects

DR Y. GIT M. W. F. 2 (Six lectures) *Mill Lane Room 9*

## Computational Statistics and Statistical Modelling

DR P. M. E. ALTHAM Tu. Th. 12 *MR* 2

## Graph Theory

DR T. K. CARNE M. Th. 9 *MR* 2

## Geometry of Surfaces

DR A. CORTI Tu. F. 9 *MR* 4

## Quantum Physics

DR I. T. DRUMMOND Tu. Th. 12 *MR* 4

## Transport Processes

PROF. T. J. PEDLEY Tu. F. 9 *MR* 2

## Numerical Analysis

PROF. A. ISERLES Tu. Th. S. 10 *MR* 2

## Stochastic Financial Models

DR D. P. KENNEDY W. S. 9 *MR* 2

## General Relativity

DR P. D. D'EATH Tu. S. 11 *MR* 2

## Theoretical Geophysics

DR J. LISTER M. Th. 9 *MR* 4

## Principles of Dynamics

PROF. N. TUROK M. W. F. 10.15 *Mill Lane Room 9*

## Groups, Rings and Fields

DR N. I. SHEPHERD-BARRON M. W. F. 11. 15 *Mill Lane Room 9*

## Dynamics of Differential Equations

DR C. T. SPARROW M. W. F. 12.15 *Mill Lane Room 9*

## Symmetries and Groups in Physics

DR M. DOERRZAPF M. Tu. Th. F. 11 (Twelve lectures) *MR* 4

## Nonlinear Waves

PROF. N. MANTON M. Tu. Th. F. 9 (Twelve lectures) *MR* 4

## Coding and Cryptography

DR J. SAXL M. Tu. Th. F. 10 (Twelve lectures) *MR* 4

## ALTERNATIVE B

## Hilbert Spaces

DR G. R. ALLAN Tu. Th. 12 *MR* 3

## Applied Probability

PROF. F. P. KELLY Tu. F. 10 *MR* 4

## Number Fields

DR J. NEKOVAR M. W. 9 *MR* 4

## Electrodynamics

DR M. J. PERRY Tu. F. 10 *MR* 3

## Fluid Dynamics II

DR J. M. RALLISON M. W. F. 9 *MR* 3

## Methods of Mathematical Physics

DR S. T. C. SIKLOS M. W. F. 11 *MR* 3

## Partial Differential Equations

DR D. M. A. STUART M. W. F. 12 *MR* 2

## Information Theory

DR Y. SUHOV W. F. 12 *MR* 3

## Algebraic Topology

PROF. B. TOTARO Tu. Th. 11 *MR* 3

## Galois Theory

DR P. M. H. WILSON W. S. 10 *MR* 3

## Logic, Computation and Set Theory

DR T. FORSTER Tu. Th. S. 9 *MR* 2

## Foundations of Quantum Mechanics

DR H. OSBORN M. Th. 10 *MR* 2

## Principles of Statistics

DR G. A. YOUNG Tu. Th. S. 11 *MR* 2

## Computational Projects

DR Y. GIT M. W. F. 2 (Six lectures) *Mill Lane Room 9*

## Differentiable Manifolds

DR D. BARDEN M. Th. 9 *MR* 3

## Representation Theory

DR I. GROJNOWSKI M. W. F. 12 *MR* 2

## Waves in Fluid and Solid Media

PROF. E. J. HINCH M. W. F. 12 *MR* 3

## Statistical Physics

DR R. R. HORGAN W. F. 11 *MR* 2

## Applications of Quantum Mechanics

PROF. P. V. LANDSHOFF M. W. F. 10 *MR* 2

## Algebraic Curves

DR J. NEKOVAR Tu. Th. 10 *MR* 3

## Probability and Measure

DR A. M. STACEY Tu. Th. S. 12 *MR* 3

## Dynamical Systems

PROF. SIR PETER SWINNERTON-DYER M. Th. 11 *MR* 2

## Combinatorics

DR A. THOMASON Tu. F. 9 *MR* 3

## Optimization and Control

PROF. R. R. WEBER W. F. 10 *MR* 3

## Riemann Surfaces

DR C. TELEMAN W. F. 11 *MR* 3

## Numerical Analysis

PROF. A. ISERLES Tu. Th. S. 10 *MR* 2

## Stochastic Financial Models

DR D. P. KENNEDY W. S. 9 *MR* 2

## General Relativity

DR P. D. D'EATH Tu. S. 11 *MR* 2

A general introductory meeting will be held on Thursday 22 February 2001 for students interested in continuing to Part III of the Tripos in 2001–02. The meeting will be held in *MR* 2 at the *Centre for Mathematical Sciences* at 4 p.m.

A meeting will be held on Friday 8 June 2001 for finalists who may continue to Part III of the Tripos in 2001–02. The meeting will be held in *MR* 2 at the *Centre for Mathematical Sciences* at 2.15 p.m.

**Faculty of Mathematics (continued)****MATHEMATICAL TRIPOS, PART III**

All lectures are held at the *Centre for Mathematical Sciences, Clarkson Road* unless otherwise stated.  
There will be a meeting in *MR 2* on Wednesday 4 October 2000 at 9.30 a.m. for all those who intend to offer courses in Part III.

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**DEPARTMENT OF APPLIED MATHEMATICS AND THEORETICAL PHYSICS**

## Renormalisation in Dynamical Systems

DR A. D. BURBANKS Tu. Th. 12 *MR 9*

## Environmental Fluid Dynamics

DR S. B. DALZIEL, DR J. M. HOLFORD AND

DR D. M. LEPPINEN M. W. F. 11 *MR 11*

## Computational Methods for Fluid Mechanics

DR P. DELLAR AND PROF. E. J. HINCH (Non-examinable) Tu. Th. 11 *MR 9*; F. 10 *MR 12*

## Quantum Field Theory

DR I. T. DRUMMOND Tu. Th. S. 9 *MR 3*

## Astrophysical Fluid Dynamics

PROF. D. O'GOUGH M. W. F. 10 *MR 11*

## Numerical Solution of Differential Equations

PROF. A. ISERLES Tu. Th. S. 9 *MR 9*

## Population Dynamics

DR M. KEELING AND DR J. SWINTON M. W. 10 *MR 4*

## Slow Viscous Flow

DR J. R. LISTER Tu. Th. S. 10 *MR 9*

## Elementary Particle Physics

DR A. J. MACFARLANE M. W. F. 11 *MR 9*

## The Fluid Dynamics of Swimming Organisms

PROF. T. J. PEDLEY M. W. F. 12 (Sixteen lectures, finishing 10 Nov.) *MR 9*

## Formation, Structure and Evolution of Stars

PROF. J. E. PRINGLE AND DR C. A. TOUT M. W. F. 12 *MR 11*

## Local and Global Bifurcations

MR J. H. P. DAWES Tu. Th. 11 *MR 11*

## Computer-Aided Geometric Design

DR M. SABIN Tu. Th. 12 *MR 4*

## Cosmology

DR E. P. S. SHELLARD Tu. Th. 10 *MR 11*

## General Relativity

DR J. M. STEWART M. W. F. 9 *MR 9*

## Magnetohydrodynamics

PROF. H. K. MOFFATT Tu. Th. 9 *MR 5*

## Quantum Information Physics

DR A. P. A. KENT Details to be announced

## Early Universe Cosmology

DR R. A. BATTYE AND DR R. CRITTENDEN

Tu. Th. 12 *MR 9*

## Atomic Astrophysics

DR A. BURGESS AND DR H. E. MASON

M. W. F. 12 *MR 9*

## Demonstrations in Fluid Mechanics

DR S. B. DALZIEL Th. 2 (Non-examinable) *Fluid Dynamics Laboratory, DAMTP, Silver Street*

## Advanced Quantum Field Theory

DR J. M. EVANS Tu. Th. S. 11 *MR 3*

## String Theory

PROF. P. GODDARD Tu. Th. S. 9 *MR 9*

## Mechanics of Elastic Solids

DR J. A. HUDSON M. W. F. 9 *MR 11*

## Dynamical Systems and Thermodynamic Formalism

PROF. K. KHANIN Tu. Th. 12 *MR 5*

## Physical Cosmology

DR O. LAHAV M. W. F. 10 *MR 11*

## Galaxies

PROF. D. LYNDEN-BELL M. W. F. 9 *MR 9*

## Large-Scale Atmosphere-Ocean Dynamics

PROF. M. E. MCINTYRE Tu. Th. 10 *MR 11*

## Standard Model

DR H. OSBORN M. W. F. 10 *MR 9*

## Black Holes

DR M. J. PERRY M. W. F. 11 *MR 9*

## Symmetries and Patterns

DR M. R. E. PROCTOR M. W. F. 12 *MR 4*

## Supersymmetry

DR F. QUEVEDO Tu. Th. 10 *MR 9*

## Non-Newtonian Fluid Mechanics

DR J. M. RALLISON W. F. 11 *MR 11*

## Approximation Theory

DR A. SHADRIN M. W. F. 11 *MR 4*

## Magnetic Fields in Stars

PROF. N. O. WEISS Tu. Th. 11 *MR 9*

## Acoustics and Stability

DR N. PEAKE AND DR R. E. HUNT Tu. Th. 9

*MR 11*

## Mixing and Transport

DR P. H. HAYNES Tu. Th. S. 12 *MR 11*

## Applications of Differential Geometry to physics

PROF. G. W. GIBBONS M. Tu. Th. F. 10 *MR 5*  
(Sixteen lectures)

## Advanced String Theory

PROF. M. B. GREEN M. Tu. Th. F. 11 *MR 5*  
(Sixteen lectures)

## Accretion Discs

DR G. I. OGILVIE M. Tu. Th. F. 12 *MR 11*  
(Sixteen lectures)**DEPARTMENT OF PURE MATHEMATICS AND MATHEMATICAL STATISTICS**

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 specialised 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 Statistical Science.

**Courses**

## Banach Algebras

DR G. R. ALLAN M. W. F. 12 *MR 12*

## Differential Geometry

DR D. BARDEN Tu. Th. S. 11 *MR 5*

## Linear Analysis

DR D. J. H. GARLING Tu. Th. S. 10 *MR 5*

## Algebraic Topology

PROF. B. TOTARO M. W. F. 11 *MR 5*

*There is a series of meetings for Part III students in MR 2, Centre for Mathematical Sciences, at 4.15 p.m. on the following topics:*

5 October 2000: PhD applications to Cambridge and other universities

12 October 2000: Exams and lectures

19 October 2000: How to write a Part III essay

16 November 2000: Research opportunities in Cambridge

## Faculty of Mathematics (continued)

## MATHEMATICAL TRIPOS, PART III (continued)

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## DEPARTMENT OF PURE MATHEMATICS AND MATHEMATICAL STATISTICS (continued)

*Basic Courses*

Elliptic Curves  
 PROF. J. H. COATES M. W. F. 10 *MR 9*  
 Basic Algebraic Geometry  
 DR A. CORTI M. W. F. 12 *MR 4*  
 Lie Groups  
 DR C. B. THOMAS Tu. Th. S. 12 *MR 5*  
 Category Theory  
 DR T. LEINSTER M. W. F. 9 *MR 12*  
 Ramsey Theory  
 DR I. B. LEADER Tu. Th. 9 *MR 4*

*Courses given by the Statistical Laboratory**General*

Advanced Probability  
 DR J. R. NORRIS M. W. F. 10 *MR 5*  
 Mathematics for Operational Research  
 DR R. J. GIBBENS M. W. F. 12 *MR 5*

*Basic*

Quantum Information Theory  
 DR Y. SUHOV AND DR O. JOHNSON M. W. F. 11 *MR 12*  
 Applied Statistics  
 DR P. M. E. ALTHAM Tu. Th. 9 *MR 12*  
 Advanced Financial Models  
 DR D. P. KENNEDY M. W. F. 9 *MR 5*  
 Actuarial Statistics  
 DR S. M. PITTS Tu. Th. 12 *MR 12*  
 Survival Data  
 DR P. TREASURE Tu. Th. 10 *MR 12* (Ten lectures and two classes)  
 Case Studies in S-plus  
 DR R. J. GIBBENS Tu. Th. 4 (Four classes, starting 21 Nov.) *DL07* (Non-examinable)

*Basic Courses*

Noetherian Algebras  
 DR C. J. B. BROOKES M. W. F. 10 *MR 5*  
 Discrepancy Theory  
 DR M. WALTERS Tu. Th. 11 *MR 12*  
 Logic and Combinatorics  
 DR T. FORSTER Th. S. 9 *MR 5*  
 Probabilistic Combinatorics  
 DR A. THOMASON M. W. F. 10 *MR 4*  
 Topics in Group Theory  
 DR N. F. J. INGLIS Tu. Th. S. 10 *MR 5*  
 Three-dimensional manifolds  
 PROF. W. B. R. LICKORISH M. W. F. 11 *MR 12*

*Additional Courses*

Diophantine Analysis and Transcendence Theory  
 PROF. A. BAKER Tu. Th. 12 *MR 12*  
 Elliptic Functions and Elliptic Integrals  
 DR A. F. BEARDON M. W. F. 11 *MR 5*  
 Value Distribution of Analytic Functions  
 DR T. K. CARNE M. W. F. 12 *MR 5*  
 Topics in Representation Theory  
 DR I. GROJNOWSKI Tu. Th. S. 11 *MR 4*  
 Advanced Topics in Commutative Algebra  
 DR N. I. SHEPHERD-BARRON M. W. F. 9 *MR 5*  
 Complex Manifolds  
 DR P. M. H. WILSON Tu. Th. S. 10 *MR 4*

*Courses given by the Statistical Laboratory**General*

Statistical Theory  
 DR G. A. YOUNG M. W. F. 10 *MR 12*

*Basic*

Mathematical Models for Financial Management  
 PROF. M. A. H. DEMPSTER Th. 4-6 *Judge*  
*Institute*  
 Stochastic Calculus and Applications  
 DR J. R. NORRIS Tu. Th. S. 10 *MR 12*  
 Large Deviations and Queueing Theory  
 DR D. J. WISCHIK Tu. Th. 9 *MR 12*  
 Applied Multivariate Analysis  
 DR P. M. E. ALTHAM M. W. F. 9 *MR 12*  
 (Fourteen lectures and two classes, ending 19 Feb.)  
 Statistics in Medical Practice  
 DR S. M. BIRD AND DR D. SPIEGELHALTER M. 4-6  
 (Four lectures, ending 12 Feb.) *MR 12*  
 Monte Carlo Inference  
 DR S. P. BROOKS Tu. Th. 11 (Eight lectures)  
*MR 5*  
 Statistical Genetics  
 DR D. CLAYTON AND DR H. CORDELL W. 2-4  
 (Four lectures, starting 24 Jan.) *MR 12*  
 Design of Experiments  
 DR S. M. PITTS M. W. F. 9 (Ten lectures and two classes, starting 21 Feb.) *MR 12*  
 Time Series  
 PROF. R. R. WEBER W. 12 (Eight lectures)  
*MR 12*

*Basic*

Applied Statistics  
 DR B. D. TOM Tu. Th. 9 (Eight lectures)  
*MR 12*

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 (Lent) and Statistics in Medical Practice (Lent)  
 Time Series and Monte Carlo Inference: Monte Carlo Inference (Lent) plus Time Series (Lent)

**Faculty of Mathematics (continued)****M. PHIL. IN STATISTICAL SCIENCE**Lectures are held in *the Centre for Mathematical Sciences*, unless otherwise stated**MICHAELMAS 2000****LENT 2001****EASTER 2001**

Mathematics for Operational Research* DR R. J. GIBBENS M. W. F. 12 <i>MR 5</i> Applied Statistics* DR P. M. E. ALTHAM Tu. Th. 9 <i>MR 12</i> Case Studies in S-plus* DR R. J. GIBBENS Tu. Th. 4 (Four classes, starting 21 Nov.) <i>DL 07</i> (Non-examinable) Probability* DR Y. GIT M. W. 10 <i>MR 12</i> Advanced Financial Models DR D. P. KENNEDY M. W. F. 9 <i>MR 5</i> Actuarial Statistics DR S. M. PITTS Tu. Th. 12 <i>MR 12</i> Survival Data DR P. TREASURE Tu. Th. 10 <i>MR 12</i> (Ten lectures and two classes)	Statistical Theory* DR G. A. YOUNG M. W. F. 10 <i>MR 12</i> Applied Multivariate Analysis DR P. M. E. ALTHAM M. W. F. 9 (Fourteen lectures and two classes, ending 19 Feb.) <i>MR 12</i> Statistics in Medical Practice DR S. M. BIRD AND DR D. SEPIEGELHALTER M. 4–6 (Four lectures ending 12 Feb.) <i>MR 12</i> Monte Carlo Inference DR S. P. BROOKS Tu. Th. 11 (Eight lectures) <i>MR 5</i> Statistical Genetics DR D. CLAYTON AND DR H. CORDELL W. 2–4 (Four lectures starting 24 Jan.) <i>MR 12</i> Design of Experiments DR S. M. PITTS M. W. F. 9 (Ten lectures and two classes, starting 21 Feb.) <i>MR 12</i> Time Series PROF. R. R. WEBER W. 12 (Eight lectures) <i>MR 12</i>	Applied Statistics* DR B. D. M. TOM Tu. Th. 9 (Eight lectures) <i>MR 12</i>
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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). Subject to the approval of the M.Phil. examiners, they may also offer for examination any Part III course given by the Statistical Laboratory.

**COURSES INTENDED FOR GRADUATES**

p-adic Methods in Number Theory  
 DR J. NEKOVAR M. F. 12 *MR 12*

Clifford Algebras  
 DR D. J. H. GARLING Tu. Th. 11 *MR 9*  
 Problems in Intuitive Geometry  
 DR H. T. CROFT Tu. Th. 2 (Eight lectures)  
*MR 4*

**OTHER MEETINGS**

A meeting will be held on 5 October 2000 at 2 p.m. in *MR 2* for new supervisors (primarily those new to Cambridge).  
 A seminar will be held on 26 October 2000 at 5 p.m. in *MR 2* for all supervisors.