

M. PHILS. (one-year courses), DIPLOMAS AND SPECIAL COURSES

MICHAELMAS 2004

LENT 2005

EASTER 2005

CHEMISTRY

Advanced courses (mainly for Research Students and others interested)

STAFF OF THE CHEMICAL LABORATORY
 Research Techniques in Organic Chemistry W. 9
 STAFF OF IRC IN SUPERCONDUCTIVITY
 Classical and High Temperature Superconductivity.
 Th. 11 (Eight lectures) *IRC Seminar Room*
 A short course on workshop practice is also offered to
 new Physical Chemistry graduate students early in
 the Michaelmas Term.

M. PHIL. IN FLUID FLOW IN INDUSTRY AND THE ENVIRONMENT

Industrial Processes in the Natural Resource Sector to be held at the B.P. Institute

PROF. A. WOODS
 Modelling Industrial and Environmental Flows. Tu.
 Th. 9–11 *Seminar Room*
 DR S. FITZGERALD AND OTHERS
 Essential Business Skills for Scientists and Engineers.
 Lectures. Th. F. 11 *Lecture Room*
 Seminars. Th. 4.30 *Lecture Room*

The same continued.

The same continued.

EARTH SCIENCES

REGULAR SEMINARS

PROF. E. SALJE AND OTHERS
 Topics in Geological Sciences. Tu. 5 *Harker Room*
 PROF. D. P. MCKENZIE AND OTHERS
 Colloquium in Geophysics. W. 4.30 *Bullard
 Laboratories*
 PROF. H. E. HUPPERT AND OTHERS
 Seminars in Theoretical Geophysics. Th. 2 *DAMTP
 Room A*
 PROF. N. SHACKLETON AND OTHERS
 Quaternary Discussion Group. alternate. F. 8.30 p.m.
Clare Hall

The same continued.

The same continued.

The same continued. *Earth Sciences, Harker II
 Room*

The same continued.

The same continued.

GRADUATE COURSES

THE STAFF OF THE ELECTRON PROBE LABORATORIES
 Physical Techniques. (by arrangement)
 DR J. A. HUDSON [MATH]
 Waves in Solid Media. M. W. F. 12

OTHER COURSES

PROF. D. P. MCKENZIE AND DR K. PRIESTLEY
 Physics of the Earth as a Planet. M. W. F. 10 *Cavendish
 Laboratory*
 STAFF OF THE IRC IN SUPERCONDUCTIVITY
 Classical and High Temperature Superconductivity.
 Th. 11 (Eight lectures) *IRC Seminar Room*
 DR J. HAINES
 Field Course in Geophysics I

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HISTORY AND PHILOSOPHY OF SCIENCE*Seminars and Reading Groups for Research Students in History and Philosophy of Science*

Prof. Lipton and Prof. Forrester will meet all postgraduate students at 10 a.m. on Tuesday 5 October in *Seminar Room 2* to discuss the course and arrange supervision.

Unless otherwise stated, all meetings will be held in the *History and Philosophy of Science Seminar Rooms, Free School Lane*.

Seminar Programmes can be obtained at the start of each term from the Departmental Office or from the website www.hps.cam.ac.uk/seminars

Research Methods and Resources Seminar. Th. 4 (7 and 14 Oct.) For all M.Phil. and Ph.D. students.	The same continued.	The same continued.
History and Philosophy of Science Seminar. Th. 4 (from 21 Oct.)	The same continued.	The same continued.
MPhil Seminar in History and Philosophy of Science and Medicine. Tu. 2.30	The same continued.	The same continued.
Psychoanalysis and the Humanities. W. 5 (fortnightly from week 1)	The same continued.	The same continued.
Psy Studies. W. 5 (fortnightly from week 2)	The same continued.	The same continued.
History of Medicine Seminar. Tu. 5	The same continued.	The same continued.
Cabinet of Natural History. M. 1	The same continued.	The same continued.
Philosophy Workshop. W. 1 (fortnightly)	The same continued.	The same continued.
History of Science Workshop. W. 1 (fortnightly)	The same continued.	The same continued.
Epistemology Reading Group. Th. 2	The same continued.	The same continued.
Wittgenstein Reading Group. Tu. 2 (fortnightly)	The same continued.	The same continued.
Kant Reading Group. W. 3 (fortnightly)	The same continued.	The same continued.
Philosophy of Language Reading Group. M. 1	The same continued.	The same continued.
Medieval Science and Philosophy Reading Group. W. 1 [Trinity]	The same continued.	The same continued.
Science and Literature Reading Group. W. 8 (fortnightly) [Darwin]	The same continued.	The same continued.
Early Physics, Astronomy, Cosmology and Technology Reading Group. W. 6 [Trinity]	The same continued.	The same continued.
Latin Therapy Group. F. 4	The same continued.	The same continued.

MATERIALS SCIENCES AND METALLURGY**COURSE FOR GRADUATES**

Course Organiser: Dr R. E. M. Ward E-mail: remw2@msm.cam.ac.uk

Lectures will be given in the *Department of Materials Science and Metallurg*, unless otherwise stated

A detailed timetable is available in the Department. Further information on the Research School is at <http://www.msm.cam.ac.uk/Department/Internal/graduate/index.html>

STAFF OF THE DEPARTMENT

Techniques of Materials Research. M. Tu. W. Th. F. (Twenty-six lectures)
 DR J. S. BARNARD
 Scanning Electron Microscopy. (Eight lectures)
 DR S. FRIEDRICHS
 Introduction to Transmission Electron Microscopy. (Eight lectures) *Nanosciences Centre*
 DR S. FRIEDRICHS
 Scanning Probe Microscopy. (Eight lectures) *Nanosciences Centre*
 DR W. O. SAXTON
 Image Processing in Materials Science. (Four lectures)
 DR D. ROY AND DR I. A. KINLOCH
 Raman Spectroscopy for Materials Characterisation. (Six lectures)

TO BE CONFIRMED

X-Ray and Neutron Diffraction Methods. (Six lectures)
 PROF. C. J. HUMPHREYS
 Advanced Transmission Electron Microscopy. (Seven lectures)
 DR J. S. BARNARD
 Microanalysis. (Eight lectures)
 PROF. W. BONFIELD AND DR S. M. BEST
 Introduction to Biomaterials. (Four lectures)
 DR Z. H. BARBER
 Microfabrication. (Six lectures)

M. PHILS. (one-year courses), DIPLOMAS AND SPECIAL COURSES

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M. PHIL. IN MATERIALS MODELLING

Course Organiser: Dr Z. H. Barber. Email: zb10@cam.ac.uk

Lectures will be delivered in the *Department of Materials Science and Metallurgy*

PROF. H. K. D. H. BHADESHIA AND OTHERS

MP1a. Introduction to Materials Science. (Five lectures)

DR P. D. BRISTOWE AND DR M. R. MANNING

MP1b. General Methodology of Modelling. (Seven lectures)

DR P. D. BRISTOWE AND DR C. J. PICKARD

MP2. Ab Initio Methods and Approximations. (Thirteen lectures)

DR J. A. ELLIOT

MP3. Montecarlo and Molecular Dynamics Methods. (Twelve lectures)

PROF. D. J. FRAY AND PROF. H. K. D. H. BHADESHIA

MP4. Thermodynamics and Phase Diagrams. (Ten lectures)

PROF. A. L. GREER AND PROF. H. K. D. H. BHADESHIA

MP6. Kinetics and Microstructure Modelling. (Fifteen lectures)

DR S. TIN, DR H. R. SHERCLIFFE AND PROF. H. K. D. H. BHADESHIA

MP7. Finite Element Modelling. (Six lectures)

PROF. A. H. WINDLE AND PROF. H. K. D. H. BHADESHIA

MP5. Mesoscale and Multiscale Modelling. (Seven lectures)

PROF. H. K. D. H. BHADESHIA AND DR T. SOURMAIL

MP9. Information Theory. (Four lectures)

PROF. H. K. D. H. BHADESHIA AND DR J. A. ELLIOT

MP10. Process Modelling. (Six lectures)

DR H. R. SHERCLIFFE AND DR E. R. WALLACH

MP11. Integrated Selection of Materials and Processes. (Four lectures)**M. PHIL. IN MICRO- AND NANOTECHNOLOGY ENTERPRISE**

Course Director: Dr M. Blamire; Course Organiser: Dr S. Friedrichs, e-mail: sf334@cam.ac.uk

Lectures will be delivered in the *IRC in Superconductivity Seminar Room* (except those marked ‘*’)

PROF. M. E. WELLAND, DR S. FRIEDRICHS AND DR D. ROY

NE.01 Characterisation Techniques (Sixteen lectures)

DR A. A. SESHIA

NE.02 MEMS Design (Sixteen lectures) *

DR A. FLEWITT

NE.03 Materials and Processes for MEMS (Sixteen lectures) *

DR D.-J. KANG AND DR M. BLAMIRE

NE.04 Nanofabrication Techniques (Sixteen lectures)

DR S. FRIEDRICHS, DR D. G. HASKO AND DR I. A. KINLOCH

NE.05 Nanomaterials (Sixteen lectures)

DR W. T. S. HUCK, DR T. RAYMENT AND DR STUART CLARK

NE.06 Nanochemistry (Sixteen lectures)

DR C. DURKAN, DR M. BLAMIRE AND DR J. A. ELLIOT

NE.07 Physical Properties at the Nanometre-scale (Sixteen lectures)

DR C. MACPHEE, DR P. D. BARKER AND PROF. C. M. DOBSON

NE.08 Bionanotechnology (Sixteen lectures)

Additional lecture courses:

MR W. BAINS

BE.03 Building and Financing a new Enterprise (Thirty-two lectures) to be arranged by the Institute of Biotechnology *

VARIOUS LECTURERS

MoTI Management of Technology and Innovation (Forty eight lectures) to be arranged by the Judge Institute of Management *

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DEPARTMENT OF PHYSICS

Lectures take place on M. Tu. W. F. in the *Ryle Seminar Room, Rutherford Building, Cavendish Laboratory*.
A detailed timetable will be announced at the first lecture of each term.

Cavendish Astrophysics Group

DR D. F. BUSCHER
Astronomical Techniques (Eight lectures)
DR K. J. B. GRAINGE
Radiation and Radiative Transfer (Eight lectures)
DR P. ALEXANDER
Fluids, Stellar Dynamics, Magnetic Fields (Eight lectures)
DR G. G. POOLEY
Statistics and Probability (Four lectures)
PROF. R. E. HILLS
Theory and Practice of Observing (Four lectures)
DR J. S. YOUNG
Interferometry (Four lectures)
DR D. A. GREEN AND DR J. S. RICHER
Star Formation and Evolution (Eight lectures)
DR M. P. HOBSON
Inverse Problems (Four lectures)
DR M. E. JONES AND DR R. KNEISSL
Observational Cosmology (Eight lectures)

A. N. OTHER
AGN, Galaxies and Clusters (Eight lectures)
DR G. YASSIN
Applied Electromagnetics (Four lectures)
DR S. WITHINGTON
Partial Coherence and Quantum Optics in Astronomy (Four lectures)
DR A. D. CHALLINOR AND PROF. A. N. LASENBY
Theoretical cosmology (Eight lectures)

Cavendish Astrophysics Seminar. Tu. 4.30

The same continued

The same continued

Lectures are given in the *TCM Seminar Room, Mott Building* or the *Mott Seminar Room (M), Mott Building*, unless otherwise stated

Regular Seminars

Principal Seminar

Cavendish Physical Society. W. 4.30

The same continued.

The same continued.

Research Group Seminars

LOW TEMPERATURE PHYSICS GROUP

Low Temperature Physics. W. 11.15

PROF. A. N. LASENBY AND OTHERS

Astrophysics. Tu. 4.30

PROF. J. R. CARTER AND OTHERS

High Energy Physics. Tu. 3

PROF. M. PEPPER AND OTHERS

Semiconductor Physics. M. 2.15

DR W. G. PROUD AND OTHERS

PCS (Materials). Th. 4

PROF. A. M. DONALD AND OTHERS

Polymers and Colloids/Biological Physics. F. 2.15

PROF. SIR RICHARD FRIEND AND OTHERS

Optoelectronics. Tu. 2.15

PROF. M. C. PAYNE AND OTHERS

Theory of Condensed Matter. Th. 2.15

PROF. H. SIRRINGHAUS AND OTHERS

Microelectronics. W. 11

The same continued.

Courses recommended for Research Students in Astrophysics
See Graduate Lectures in Astronomy and Astrophysics (p. 213)

Courses recommended for Research Students in High Energy Physics

PROF. J. R. CARTER AND OTHERS

Selected Topics in Elementary Particle Physics. W. F. 2

HEP Seminar Room

The same continued.

Courses recommended for Research Students in Solid State Physics

STAFF OF THE MOTT BUILDING

Solid State Physics. M. W. F. 9 (M)

PROF. A. M. DONALD AND OTHERS

Principles of Electron Microscopy and Diffraction. Tu.

Th. 12 (M) (additional practicals at times to be

arranged)

PROF. B. D. SIMONS, DR. F. M. MARCHETTI, DR. V. TRIPATHI

Correlated Quantum Systems. Tu. Th. 10 (14 lectures

beginning 12 Oct.)

DR M. J. RUTTER

An Introduction to Computational Physics. M. 10

(8 lectures beginning 11 Oct.)

PROF. D. E. KHMELNITSKII

'Fairy Tales'. F. 10.30

The same continued (M)

The same continued (M)

The same continued (14 lectures beginning 25 Jan.)