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

MICHAELMAS 2003	LENT 2004	EASTER 2004

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

QUANTITATIVE MODELLING

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* | The same continued. | The same continued.

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

PROF. N. J. SHACKLETON AND OTHERS
Quarternary Discussion Group, Alternate F. F. 8.30 p.m. *Clare Hall* | 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 1

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

MICHAELMAS 2003	LENT 2004	EASTER 2004

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 8 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 http://www.hps.cam.ac.uk

Research Methods and Resources. Th. 4 (9 and 16 Oct.) **For all MPhil and PhD Students**.		
History and Philosophy of Science Seminar. Th. 4.30 (from 23 Oct.)	The same continued.	The same continued.
M.Phil. Seminar in History and Philosophy of Science and Medicine. Tu. 2.30	The same continued.	The same continued.
Psy Studies. W. 5 (fortnightly from week 1)	The same continued.	The same continued.
Psychoanalysis and the Humanities. W. 5 (fortnightly from week 2)		
Early Medicine and Natural Philosophy. Tu. 1 (fortnightly from week 2)	The same continued.	
History of Modern Medicine and Biology. Tu. 1 (fortnightly from week 1)	The same continued.	
Cabinet of Natural History. M. 1	The same continued.	The same continued.
History of Science Workshop. W. 1 (fortnightly)	The same continued.	
Epistemology Reading Group. Th. 2	The same continued.	The same continued.
Medieval Sciences and Philosophy Reading Group. Th. 1 [L1, Great Court, Trinity]	The same continued.	The same continued.
Science and Literature Reading Group. W. 7.30 (fortnightly) [Darwin]	The same continued.	The same continued.
Philosophy Workshop. W. 1 (fortnightly)	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. F. 4	The same continued.	The same continued.

MATERIALS SCIENCES AND METALLURGY

COURSE FOR GRADUATES

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

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

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-five lectures, beginning 9 Oct.)

DR Z. H. BARBER
Microfabrication. M. W. F. (Six lectures, beginning 24 Oct.)

DR J. S. BARNARD
Scanning Electron Microscopy. M. W. F. (Eight lectures, beginning 27 Oct.)

DR R. E. CAMERON AND DR J. A. LEAKE
X-Ray and Neutron Diffraction Methods. M. W. F. (Six lectures, beginning 10 Nov.)

DR W. O. SAXTON
Image Processing in Materials Science. Tu. Th (Four lectures, beginning 13 Nov.)

DR P. A. MIDGLEY
Introduction to Transmission Electron Microscopy. Tu. Th. (Eight lectures, beginning 15 Jan.)

PROF. C. J. HUMPHREYS
Advanced Transmission Electron Microscopy. M. W. F. (Seven lectures, details to be announced)

DR R. DUNIN-BORKOUSKI
Microanalysis. Tu. Th. (Eight lectures, beginning 12 Feb.)

PROF. W. BONFIELD
Introduction to Biomaterials. (Four lectures, details to be announced.)

DR G. Z. CHEN
Experimental Techniques in Chemical Metallurgy. (Eight lectures, details to be announced.)

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

MICHAELMAS 2003 **LENT 2004** **EASTER 2004**

M.PHIL. IN MATERIALS MODELLING

Course Co-ordinator: Dr Z. H. Barber

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. ELLIOTT
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. ELLIOTT
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 MICROELECTRONIC ENGINEERING AND SEMICONDUCTOR PHYSICS

Lectures are given either in the *Microelectronics Seminar Room, Cavendish Laboratory*, or at the *Department of Engineering*

DR J. R. A. CLEAVER
Physics of semiconductors (Eight lectures)
DR Z. A. K. DURRANI
Semiconductor device physics (Ten lectures)
PROF. H. AHMED
Semiconductor memory and logic (Four lectures)
DR D. G. HASKO
Semiconductor processing (Six lectures)
DR J. R. A. CLEAVER
Lithography (Six lectures)
DR M. S. M. SAIFULLAH
Materials analysis for semiconductor devices (Three lectures)
DR F. UDREA
Power microelectronics (Four lectures)
DR R. J. COLLIER
Millimetre-wave devices, circuits and measurements (Four lectures)
DR J. R. A. CLEAVER
Vacuum science and technology (Three lectures)
PROF. W. I. MILNE
Amorphous semiconductors and their applications (Four lectures)
A. N. OTHER
Optoelectronics (Six lectures)
DR E. MUNRO
Electron optics for lithography (Six lectures)
A. N. OTHER
Large-area devices and displays (Four lectures)

A detailed teaching programme, with information about laboratory courses, may be obtained from Dr J. R. A. Cleaver at the *Department of Physics*

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

MICHAELMAS 2003	LENT 2004	EASTER 2004

PHYSICS

COURSES FOR GRADUATES

Courses recommended for Research Students in Solid State Physics

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

STAFF OF THE MOTT BUILDING (*M*) Solid State Physics. M. W. F. 9 PROF. A. M. DONALD AND OTHERS (*M*) Principles of Electron Microscopy and Diffraction. Tu. Th. 12 (additional practicals at times to be arranged) PROF. D. E. KHMELNITSKII Theory of Phase Transitions. Tu. Th. 10 DR C. J. PICKARD AND DR P. D. HAYNES Solid State Physics. M. W. 10 PROF. D. E. KHMELNITSKII 'Fairy Tales'. F. 10.30	The same continued. (*M*) The same continued. (*M*) PROF. D. E. KHMELNITSKII Lectures on the Dirac monopole. Tu. Th. 10 (Twelve lectures, beginning 15 Jan.) DR M. J. RUTTER UNIX: An operating environment. M. 10.30 (Six lectures beginning 19 Jan.) The same continued. DR G. CSANYI Molecular Dynamics. W. 10 (Four lectures, beginning 21 Jan.)	

Courses recommended for Research Students in Astrophysics

See Graduate lectures in Astronomy and Astrophysics (p. 218)

Courses recommended for Research Students in High Energy Physics

PROF. J. CARTER AND OTHERS Selected Topics in Elementary Particle Physics Tu. Th. 9.30 *HEP Seminar Room*	The same continued.	The same continued.

REGULAR SEMINARS

All seminars continued in the Lent and Easter Terms

Principal Seminar Cavendish Physical Society. W. 4.30 **Research Group Seminars** DR S. R. JULIAN AND OTHERS 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. 4.30 PROF. A. M. DONALD AND OTHERS Polymers and Colloids/Biological Physics. F. 2.15 PROF. R.H. FRIEND AND OTHERS Optoelectronics. Tu. 2.15 PROF. P. B. LITTLEWOOD AND OTHERS Theory of Condensed Matter. Th. 2.15 MICROELECTRONICS RESEARCH CENTRE Microelectronis. W. 11		

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