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

MICHAELMAS 2005	LENT 2006	EASTER 2006

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*	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. SHACKLETON AND OTHERS Quaternary Discussion Group. alternate F. 8.30 p.m. *Clare Hall*	The same continued.	The same continued.

OTHER COURSES

PROF. D. P. MCKENZIE, DR K. PRIESTLEY AND DR A. DEUSS Physics of the Earth as a Planet. M. W. F. 10		

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

MICHAELMAS 2005	LENT 2006	EASTER 2006

HISTORY AND PHILOSOPHY OF SCIENCE

Seminars and Reading Groups for Research Students in History and Philosophy of Science

Dr Robson and Prof. Liptan will meet all postgraduate students at 2.30 p.m. on Wenesday 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 MPhil and PhD students.		
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. W. 3	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 (weeks 5–8) Generation to Reproduction Seminar (weeks 1–4)	
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.
STS workshop, Th. 12–1.30	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 Metallurgy*, 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 A. C. TWITCHETT
Introduction to Transmission Electron Microscopy. (Eight lectures)

TO BE ADVISED
Scanning Probe Microscopy. (Eight lectures)

DR W. O. SAXTON
Image Processing in Materials Science. (Four lectures)

DR Z. H. BARBER
Microfabrication. (Six lectures)

MS M. E. VICKERS AND DR R. E. CAMERON
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)

DR S. M. BEST
Introduction to Biomaterials. (Four lectures)

DR I. A. KINLOCH
Raman Spectroscopy for Materials Characterisation. (Six lectures)

continued >

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

MICHAELMAS 2005 **LENT 2006** **EASTER 2006**

M.PHIL. IN MATERIALS MODELLING

Course Organiser: Dr P. D. Bristowe. (email: pdb1000@cus.cam.ac.uk)

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

PROF. A. H. WINDLE AND DR K. M. KNOWLES
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
MP2. Ab Initio Methods and Approximations. (Twelve lectures)
DR J. A. ELLIOT
MP3. Montecarlo and Molecular Dynamics Methods. (Twelve lectures)
PROF. D. J. FRAY AND DR J. A. LITTLE
MP4. Thermodynamics and Phase Diagrams. (Ten lectures)
PROF. A. L. GREER AND DR R. V. KUMAR
MP6. Kinetics and Microstructure Modelling. (Fifteen lectures)
DR H. R. SHERCLIFF
MP7. Finite Element Modelling. (Six lectures)
DR J. A. ELLIOTT
MP5. Mesoscale and Multiscale Modelling. (Seven lectures)
DR T. SOURMAIL
MP9. Information Theory. (Four lectures)
DR K. M. KNOWLES
MP10. Plasticity and Deformation Processing. (Nine lectures)
DR E. R. WALLACH
MP11. Integrated Selection of Materials and Processes. (Three lectures)

M.PHIL. IN MICRO- AND NANOTECHNOLOGY ENTERPRISE

Course Director: Prof. M. G. Blamire, (e-mail: mb52@cam.ac.uk)

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

DR A. C. TWITCHETT AND DR A. ILIE
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)
PROF. M. G. BLAMIRE AND DR Z. BARBER
NE.04 Nanofabrication Techniques (Sixteen lectures)
PROF. A. L. GREER AND DR I. A. KINLOCH
NE.05 Nanomaterials (Sixteen lectures)
DR W. T. S. HUCK AND DR S. CLARKE
NE.06 Nanochemistry (Sixteen lectures)
DR C. DURKAN, DR D. G. HASKO AND DR J. A. ELLIOT
NE.07 Physical Properties at the Nanometre-scale (Sixteen lectures)
DR P. D. BARKER
NE.08 Bionanotechnology (Sixteen lectures)

Additional lecture courses
MR W. BAINS
T14BBE Building and Financing: a High Tech Business (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
DR R. DOUBLEDAY
Societal and Ethical Dimensions of Technology

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

MICHAELMAS 2005	LENT 2006	EASTER 2006

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 G. G. POOLEY
Radiation and Radiative Transfer (Eight lectures)
DR P. ALEXANDER
Fluids, Stellar Dynamics, Magnetic Fields (Eight lectures)
DR J. S. YOUNG
Statistics and Probability (Four lectures)
PROF. R. E. HILLS
Theory and Practice of Observing (Four lectures)
DR K. J. B. GRAINGE
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 A. N. OTHER
Observational Cosmology (Eight lectures)

DR M. KRAUSE
AGN, Galaxies and Clusters (Eight lectures)
DR A. D. CHALLINOR
Theoretical Cosmology (Eight lectures)

Regular Seminars

Principal Seminars

Cavendish Physical Society. W. 4.15 (Four seminars, 12, 26 Oct., 9, 23 Nov.) — The same continued. (Four seminars, 25 Jan., 8,22 Feb., 8 Mar.) — The same continued. (Two seminars, 10, 24 May)
Mott Colloquium. W. 4.15 (Four seminars, 19 Oct., 2, 16, 30 Nov.) — The same continued. (Four seminars, 1, 15 Feb., 1, 15 Mar.) — The same continued. (Two seminars, 17, 31 May)

Research Group Seminars

PROF. Y. LIANG AND OTHERS
Quantum Matter. W. 11.15 — The same continued. — The same continued.
PROF. A. N. LASENBY AND OTHERS
Astrophysics. Tu. 4.30 — The same continued. — The same continued.
PROF. J. CARTER AND OTHERS
High Energy Physics. Tu. 3 — The same continued. — The same continued.
PROF. M. PEPPER AND OTHERS
Semiconductor Physics. M. 2.15 — The same continued. — The same continued.
DR W. G. PROUD AND OTHERS
PCS (Materials). Th. 4.30 — The same continued. — The same continued.
PROF. A. M. DONALD AND OTHERS
Biological and Soft Systems. F. 2.15 — The same continued. — The same continued.
PROF. R. H. FRIEND AND OTHERS
Optoelectronics. Tu. 2.15 — The same continued. — The same continued.
PROF. M. C. PAYNE AND OTHERS
Theory of Condensed Matter. Th. 2.15 — The same continued. — The same continued.
PROF. H. SIRRINGHAUS AND OTHERS
Microelectronics. F. 11 — The same continued. — The same continued.

Courses recommended for Research Students in Solid State Physics

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

STAFF OF THE MOTT BUILDING
Solid State Physics. M. W. F. 9 *(M)* — The same continued. *(M)*
PROF. A. M. DONALD AND OTHERS
Principles of Electron Microscopy and Diffraction. Tu. Th. 12 *(M)* (additional practicals at times to be arranged) — The same continued. *(M)*
PROF. D. E. KHMELNITSKII
Fairy Tales in Physics. F. 10.30 *(TCM)* — The same continued. *(TCM)*
PROF. D. E. KHMELNITSKII
Solid State Theory. Tu. Th. 10 *(TCM)*

PROF. D. E. KHMELNITSKII
Physical Kinetics. Tu. Th. 10 *(TCM)* (Twelve lectures, beginning 19 Jan.)
DR M. J. RUTTER
Miscellaneous Topics in Computing. W. 10 *(TCM)* (Six lectures, beginning 8 Feb.)
DR G. CSANYI
Molecular Dynamics. M. 10 *(TCM)* (Six lectures, beginning 6 Feb.)
S. AHNERT
Topics in Quantum Information Theory. M. W. 10 *(TCM)* (Four lectures, beginning 23 Jan.)

Courses recommended for Research Students in Astrophysics

See Graduate lectures in Astronomy and Astrophysics (p. 210)

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.