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*