

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

MICHAELMAS 2002

LENT 2003

EASTER 2003

**M.PHIL. IN MATERIALS MODELLING**

Course Co-ordinator: Dr Z. H. Barber

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

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

Introduction to Materials Science and General  
Methodology (Twelve lectures)

DR P. J. HASNIP AND DR C. J. PICKARD

Ab initio Methods and Approximations (Thirteen  
lectures)

DR J. A. ELLIOTT

Monte Carlo and Molecular Dynamics Methods (Twelve  
lectures)

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

Thermodynamics and Phase Diagrams (Twelve lectures)

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

Kinetics and Microstructure Modelling (Fifteen lectures)

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

DR H. R. SHERCLIFF

Finite Element Modelling (Six lectures)

DR H. R. SHERCLIFF

Selection of Materials and Processes (Three  
lectures)

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

Information Theory (Four lectures)

DR J. A. ELLIOTT

Mesoscale and Multiscale Modelling (Eight  
lectures)

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

Process Modelling (Seven 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*