

**CAMBRIDGE UNIVERSITY ENGINEERING DEPARTMENT
PART IIB BOOKLIST 2011/12**

The Library Shelfmark indicates where these works can be found in the Library. An additional copy of books marked with a star (*) will be available in a *Special Part II Reference Collection* kept in the Library; the attention of Directors of Studies (for College Librarians) will be drawn to these titles. N.B. Latest editions do not necessarily apply – Lecturers are asked to indicate when older editions remain acceptable.

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Group B: Electrical Engineering

4B5 – Nanotechnology [Dr C Durkan] Michaelmas		
*BLAKEMORE, J. S.	SOLID STATE PHYSICS <u>Cambridge University Press</u> 2nd edition 1985 (1988 reprint)	LG.273
*DURKAN, C.	CURRENT AT THE NANOSCALE: AN INTRODUCTION TO NANO ELECTRONICS <u>Imperial College Press</u> 2007	DM.22
*FERRY, D.K.	QUANTUM MECHANICS <u>Institute of Physics</u> 1995	LG.284
*GREENHOW, R.C.	INTRODUCTORY QUANTUM MECHANICS: A COMPUTER ILLUSTRATED TEXT <u>Institute of Physics Publishing</u> 1990 (1995 reprint)	LG.285
*KITTEL, C.	INTRODUCTION TO SOLID STATE PHYSICS <u>Wiley</u> 8 th edition 2005	LG.315
LANDSHOFF, P. METHERELL, A. & REES, G.	ESSENTIAL QUANTUM PHYSICS <u>Cambridge University Press</u> 1997	LG.292

4B6 - Solid State Devices & Chemical/Biological Sensors [Dr DP Chu, dpc31] Lent		
*SINGH, J.	SEMICONDUCTOR DEVICES: BASIC PRINCIPLES <u>Wiley</u> 2001	NR.344
*SZE, S.M.	PHYSICS OF SEMICONDUCTOR DEVICES <u>Wiley</u> 3 rd edition 2007 Available as an ebook at: http://www.mylibrary.com?id=72149	NR.377

4B7 - VLSI Design, Technology & CAD [Dr DM Holburn] Lent		
*SZE, S. M.	SEMICONDUCTOR DEVICES: PHYSICS AND TECHNOLOGY <u>Wiley</u> 2 nd edition 2002	NR.345
*TAUR, Y. & NING, T.H.	FUNDAMENTALS OF MODERN VLSI DEVICES <u>Cambridge University Press</u> 1998	NQ.73 (2 nd ed. at NQ.95)
*WESTE, N. H. E. & ESHRAGHIAN, K.	PRINCIPLES OF CMOS VLSI DESIGN: A SYSTEMS PERSPECTIVE <u>Addison Wesley</u> 2nd edition, 1992	NQ.62

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BAKER, R.J.	CMOS: CIRCUIT DESIGN, LAYOUT AND SIMULATION <u>IEEE Press/Wiley</u> 2 nd edition 2005	NN.445
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4B11 - Photonic Systems <i>[Dr TD Wilkinson] Michaelmas</i>		
*GOODMAN, J.W	INTRODUCTION TO FOURIER OPTICS <u>McGraw-Hill</u> 2nd edition 1996	LE.178
*OKAMOTO, K.	FUNDAMENTALS OF OPTICAL WAVEGUIDES Academic Press 2000	NV.150
*WILSON, R.G.	FOURIER SERIES AND OPTICAL TRANSFORM TECHNIQUES IN CONTEMPORARY OPTICS <u>Wiley</u> 1995	LE.175
HECHT, E.	OPTICS <u>Addison Wesley</u> 4th edition 2002	LE.188
SNYDER, A.W. & LOVE, J.D.	OPTICAL WAVEGUIDE THEORY <u>Chapman & Hall</u> 1983 (<u>Kluwer Academic</u> 2000 reprint)	NV.110
TOCCI, C. & CAULFIELD, H.J.	OPTICAL INTERCONNECTION, FOUNDATIONS AND APPLICATIONS <u>Artech House</u> 1994	NR.318

4B13 – Electronic Sensors and Instrumentation <i>[Dr PA Robertson] Lent</i>		
GARDNER, J. W.,	MICROSENSORS: PRINCIPLES AND APPLICATIONS <u>Wiley</u> 1994	NR.314
GARDNER, J. W., VARADAN, V.K & AWADELKARIM, O.O.	MICROSENSORS, MEMS AND SMART DEVICES <u>Wiley</u> 2001 (2002 reprint)	DM.10
HAUPTMANN, P.,	SENSORS: PRINCIPLES AND APPLICATIONS <u>Prentice Hall</u> 1993	NT.427 Library Office Reference
HOROWITZ, P. & HILL, W.	THE ART OF ELECTRONICS <u>Cambridge University Press</u> 2nd edition, 1989	NT.415

Extensive use will also be made of manufacturer's data sheets and application notes.

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4B14 – Solar – Electronic Power: Generation & Distribution [Prof GAJ Amaratunga] <i>Michaelmas</i>		
*GREEN, M.A.,	SOLAR CELLS: OPERATING PRINCIPLES, TECHNOLOGY AND SYSTEM APPLICATIONS <u>Prentice Hall</u> 1982, reprinted by University of New South Wales, 1992	NR.323
*WENHAM, S.R., GREEN, M.A & WATT, M.E.	APPLIED PHOTOVOLTAICS <u>University of New South Wales, Centre for Photovoltaic Devices & Systems</u> <i>no date, ca. 1990</i>	NR.324
BOYLE, G.	RENEWABLE ENERGY: POWER FOR A SUSTAINABLE FUTURE <u>Oxford University Press</u> 2 nd edition 2004	DE.158
GREEN, M.A.	SILICON SOLAR CELLS: ADVANCED PRINCIPLES AND PRACTICE <u>University of New South Wales, Centre for Photovoltaic Devices & Systems</u> <i>no date, ca. 1995</i>	NR.328
TREBLE, F.C.	GENERATING ELECTRICITY FROM THE SUN <u>Pergamon Press</u> 1991	DE.145

4B18 – Advanced Electronic Devices [Prof MJ Kelly] <i>Lent</i>		
*KELLY, M.J.	LOW-DIMENSIONAL SEMICONDUCTORS <u>Clarendon Press</u> 1995	NR.353
DAVIES, J.H.	THE PHYSICS OF LOW-DIMENSIONAL SEMICONDUCTORS: AN INTRODUCTION <u>Cambridge University Press</u>	NR.363
SZE, S.M.	PHYSICS OF SEMICONDUCTOR DEVICES <u>Wiley</u> 3 rd edition 2007 Available as an ebook at: http://www.mylibrary.com?id=72149	NR.377
SZE, S.M. (ed.)	HIGH-SPEED SEMICONDUCTOR DEVICES <u>Wiley</u> 1990	NR 292
SZE, S.M. (ed.)	MODERN SEMICONDUCTOR DEVICE PHYSICS <u>Wiley</u> , 1998	NR.357
SZE, S.M.	SEMICONDUCTOR DEVICES: PHYSICS AND TECHNOLOGY <u>Wiley</u> 2 nd edition 2002	NR.345
WEISBUCH, C. & VINTER, B.	QUANTUM SEMICONDUCTOR STRUCTURES: FUNDAMENTALS AND APPLICATIONS <u>Academic Press</u> 1991	NR.379

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4B19 – Renewable Electrical Power [Dr TJ Flack] Michaelmas		
*BOYLE, G.	RENEWABLE ENERGY Oxford University Press 2 nd edition 2004	DE.158
WEEDY, B.M. & CORY, B.J.	ELECTRIC POWER SYSTEMS Wiley 1998 (2001 printing)	NG.142

4B20 – Display Technology [Dr TD Wilkinson] Lent		
CHEN, JANGLIN; CRANTON, WAYNE; FIHN, MARK (EDS.)	HANDBOOK OF VISUAL DISPLAY TECHNOLOGY Springer 2011	Not yet published