UNIVERSITY OF LONDON INTERNATIONAL PROGRAMMES

Goldsmiths
UNIVERSITY OF LONDON

BSc and Diploma in Computing and Related Subjects

Introductory booklist

2012

Introduction

We have produced this booklet in response to student requests for advance information about books that could be used to help prepare them for their studies. It is being sent out with all offers of registration and will also be sent on request to potential applicants who ask for details of preliminary reading.

The books listed here provide an introduction to the subjects you are likely to be studying in your first year. They will also be referred to as you progress through those subjects. We advise you, therefore, to buy or borrow these texts if you want to make an early start to your studies.

Remember – this is just the starting point. We will expect you to read widely in order to benefit fully from your studies. The subject guides we send you when you register will give details of other books and journals you will need to consult. Please remember to check the VLE regularly for updates.

The introductory booklist includes some general background reading, a list of useful publications, and some Level 1 books which constitute Essential reading for the following five full units:

1102 Mathematics for computing

1108 Information systems: foundations of e-business

1109 Introduction to Java and object-oriented programming

1110 Introduction to computing and the Internet

1112 Creative computing

1. General books

The following is a list of general books that are not related directly to any particular course. However, reading any of them will give you a broader knowledge and understanding of computers. Some editions of these books are no longer in print; however, they may be available from good libraries, and students may wish to borrow a copy if it is easily obtainable. Students should not otherwise spend time trying to source out-of-print books, as there is plenty of useful and more widely-available material listed in the following sections.

The books starred (*) are particularly useful.

Blissmer, R.H. *Introducing computers: concepts, systems and applications.* (John Wiley & Sons, 1996). Updated every year [ISBN 0471113603 (pbk)].

Chen, S. *The IBM programmer's challenge: challenging problems to test your programming skills – with solutions in BASIC, PASCAL and C.* (Tab Books, 1987) [ISBN 083062807X: out of print].

* Dewdney, A.K. *A Turing omnibus: 61 excursions in computer science.* (Computer Science Press, 1989) [ISBN 0716781549: out of print].

* Dewdney, A.K. *The new Turing omnibus: 66 excursions in computer science.* (Palgrave Macmillan, 2003) [ISBN 0805071660 (pbk)].

* Dromey, R.G. *How to solve it by computer.* (Prentice Hall International, 1982) [ISBN 0134340019 (pbk): out of print; 0134339959 (hbk): out of print].

* Harel, D. and Feldman, Yishai A. *Algorithmics: the spirit of computing.* (Addison Wesley, 2004) third edition [ISBN 0321117840 (pbk)].

Hodges, A. *Alan Turing: the enigma.* (Simon and Schuster, 1983) [ISBN 0671492071 (hbk): out of print] or (Simon and Schuster, 1984) [ISBN 0671528092 (pbk): out of print] or (Vintage, 1992) reissue [ISBN 9780099116417 (pbk)] or (Walker, 2000) [ISBN 0802775802 (pbk): out of print].

Long, L. *Introduction to computers and information systems.* (Pearson US Imports, 1997) fifth edition [ISBN 0132732289 (pbk): out of print] or *Introduction to computers and information systems: Internet edition.* (Pearson US Imports, 1996) fifth edition [ISBN 0132556391 (pbk): out of print].

Penrose, R. *The emperor's new mind: concerning computers, minds and the laws of physics.* (Oxford University Press, 1999) [ISBN 0192861980 (pbk)] or (Vintage, 2009) [ISBN 0099803704 (pbk): out of print].

Pratt, V. *Thinking machines.* (Blackwell NCC, 1987) [ISBN 0631149538 (hbk): out of print].

Stein, D. *Ada: a life and a legacy.* (MIT, 1987) [ISBN 0262691167 (pbk)].

* Turk, C. and Kirkman, J. *Effective writing: improving scientific, technical and business communication.* (Spon Press, 1988) second edition [ISBN 0419146601 (pbk)].

2. Other useful publications

The following suggested journals are a good introduction to the world of computing and also cover developments in the field. Students will find it useful, therefore, to refer to these journals, or others like them, wherever possible.

Communications of the ACM

ACM computing surveys

SIGCSE bulletin (not for students; for staff at institutions)

All of the above can be obtained from: Association for Computing Machinery, 1515 Broadway, New York, NY10036, USA.
Tel: (212) 869 7440. www.acm.org

Byte

From: Subscriptions Department, PO Box 555, Hightstown, NJ 08520, USA. Tel: 609 426 7070. http://drdobbs.com

Any easily available general interest weekly or monthly computing magazines would also be useful. Examples of the type of magazine (these are not the only suitable ones) are:

Personal computer world

From: VNU House, 32–34 Broadwick Street, London W1A 2HG, UK.
www.computeractive.co.uk/personal-computer-world

Asia computer weekly (of use in Asia)
www.mondotimes.com/2/topics/business/18/12007

3. Level 1 books for CIS and CC

1102: Mathematics for computing

The subject guide for this course gives a complete set of lecture notes, but you may want to supplement this by reading an alternative account of some topics, and by working through additional examples and exercises. References are given in the subject guide to the following two books, which are particularly suitable as regards coverage, level and clarity of presentation.

Epp, Susanna S. *Discrete mathematics with applications.* (Pacific Grove, Calif: Andover: Brooks/Cole c2011) fourth edition [ISBN 0495391328 (hbk); 9780495826163 (pbk)]. As the material in the fourth edition has been reorganised, the subject guide's references to this book are being mapped to the fourth edition and details will be uploaded to the VLE.

Molluzzo, John C. and Buckley, F. *A first course in discrete mathematics.* (Illinois, Ill.: Waveland, 1997) [ISBN 0881339407; 9780881339406 (hbk)].

1108: Information systems: foundations of e-business

Laudon, J.P and Laudon, K.C. *Management informations systems: managing the digital firm.* (Boston, [Mass]; London: Pearson Education, 2011) twelfth global edition [ISBN 9780273754534 (pbk)]. www.pearsoned.co.uk/www.pearson.com
The above book is **Essential** reading for the course.

Alter, S. *Information systems: foundations of e-business.* (Upper Saddle River, NJ: Prentice Hall, 2002) fourth edition [ISBN 0130617733 (hbk): out of print] or (Prentice Hall, 2001) fourth edition [ISBN 0130432423 (pbk)]. This book may be useful.

1109: Introduction to Java and object-oriented programming

Web address for installing Java: www.oracle.com/technetwork/java/index.html

The subject guide gives a complete account of the course and the tutor does not recommend a particular textbook but suggests that students wishing to buy a book do so after learning a little Java so that they can choose, from the many books available, one that particularly suits them.

Some possible book choices are listed below.

Bailey, Duane A. and Bailey, Duane W. *Java elements.* (McGraw-Hill International Editions, 2000) [ISBN 9780071163538 (pbk)]. The following website may also be useful: www.cs.williams.edu/

Charatan, Q. and Kans, A. *Java – in two semesters.* (McGraw-Hill, 2009) third edition [ISBN 0077122674 (pbk)].

Deitel, H. and Deitel, P. *Java – how to program.* (Boston; London: Prentice Hall, 2012) ninth edition [ISBN 97802737597 (pbk)].

Downey, Allen B. *How to think like a computer scientist – Java version.* (Green Tea Press, 2003). Available at http://greenteapress.com/thinkapjava/

Felleisen, M. and Freidman, Daniel P. *A little Java, a few patterns.* (The MIT Press, 1998) [ISBN 0262561158].

The following Sun Microsystems, Inc website may be useful as you will be able to look up information about Java classes and methods: www.oracle.com/technetwork/java/javase/documentation/index.html

1110: Introduction to computing and the Internet

1110 Part A

Williams, S. *Computer organization and architecture: designing for performance.* (Prentice Hall, 2009) eighth edition [ISBN 0136073735 (hbk)].

The above book is **Essential** reading for the first half of the course.

1110 Part B

Casad, J. *Sams teach yourself TCP/IP in 24 hours.* (Indianapolis, Ind.: Sams Publishing, c2012) fifth edition [ISBN 9780672335716 (pbk)]. This covers most of the subject matter of the second part of the course at an appropriate level of detail and is not difficult to read, being designed as a self-study text.

Legal and professional issues are not particularly well covered in introductory computing textbooks, and when computer science texts do address these issues they tend to do so from a US perspective, which is not appropriate for this course. On the other hand, legal textbooks covering computer law have tended to be rather expensive and difficult for the non-specialist to follow. A notable exception is:

Wild, C. and Weinstein, S. *Internet law.* (Old Bailey Press, 2005) [ISBN 1858365732: out of print]. Despite being aimed at law students this book is quite accessible to the non-lawyer and seems fairly sound on the technicalities of 'e-crime'.

For information about the 1998 UK Data Protection Act which was based on a 1995 EU directive you should refer to documents available at the website of the UK Information Commissioner:
www.ico.gov.uk/for_organisations/guidance_index.aspx
The web page is entitled 'Document Library – A comprehensive resource for individuals and organisations'.

There is also a useful leaflet entitled *Data Protection (European Union)* which is freely available from the European Commission:
http://ec.europa.eu/public_opinion/flash/fl147_data_protect.pdf

There are vast numbers of books available on web page coding (HTML, XHTML, CSS, Javascript, etc.). If you decide to purchase a textbook, make sure it covers both XHTML and CSS. The following book provides detailed coverage of XHTML, CSS and Javascript and has a companion website:
www.elizabethcastro.com/html/

Castro, E. *HTML, XHTML and CSS.* (Peachpit Press, 2006) sixth edition [ISBN 0321430840 (pbk)].

Comer, D. *The internet book.* (Pearson Prentice Hall, 2006) fourth edition [ISBN 0132335530 (pbk)].

Specialist magazines such as .net have regular tutorial features on all aspects of web design and authoring (www.netmagazine.com/).

1112: Creative computing

Recommended textbook:

Reas, C. and Fry, B. *Processing: a programming handbook for visual designers and artists.* (MIT Press, May 2007) [ISBN 0262182629 (hbk)].

Other texts:

Glassner, A. *Processing for visual artists: how to create expressive images and interactive art.* (Natick, Mass.: A.K. Peters, c2010) [ISBN 9781568817163 (pbk)].

Greenberg, I. *Processing: creative coding and computational art.* (APress, 2006) [ISBN 159059617X (hbk)].

Maeda, J. *Creative code: aesthetics + computation.* (Thames & Hudson, 2004) [ISBN 0500285179 (pbk)].

Reas, C. and B.Fry. *Getting started with processing.* (Beijing; [Cambridge, Mass.] O'Reilly, 2010) [ISBN 9781449379803 (pbk)].

Wong, W. and Wong, B. *Visual design on the computer.* (Norton, 2001) second edition [ISBN 0393730611 (pbk)].