

School of Computer Science, University of Nottingham

First Year Reading List 2012

Note that all modules have supporting websites, and many module convenors supply enough material on the module website for the module to be self-contained, without the need for a text book. Entries marked as 'OPTIONAL' below, are strictly optional; they are NOT required in order to pass (or even to do well in) the module. They are provided as guides for those who wish to read additional material, either before commencing the module, or as additional supporting material while taking the module. There are three books indicated as 'RECOMMENDED' reading, but of course students may obtain these through the library and do not have to purchase the books individually.

Current at the time of going to press, see Week One website for any late changes; to be confirmed by Module Convenors during lectures.

Core First Year Modules

Semester 1

G51APS Algorithmic Problem Solving (Roland Backhouse)

Algorithmic Problem Solving; Roland Backhouse; Wiley, 2011; ISBN: 978-0-470-68453-5

RECOMMENDED: The module is based on this book; the book may also be useful for other modules.

G51CSA Computer Systems Architecture (Dave Brailsford)

The Hidden Language of Computer Hardware and Software (2nd ed); Charles Petzold; Microsoft Press; ISBN: 0-7356-1131-9

OPTIONAL: Contains much material which is not necessary for the module.

G51MCS Mathematics for Computer Scientists (Venzio Capretta)

Discrete Mathematics DeMYSTiFied; Steven G. Krantz; McGraw-Hill, 2008; ISBN: 007154948X

OPTIONAL: This covers more advanced material, only for those interested. "Algorithmic Problem Solving" (Roland Backhouse) is also suggested reading, see also G51APS above.

G51PRG Introduction to Programming (Steve Bagley)

The C Programming Language (2nd ed); Kernighan and Ritchie; Prentice Hall, 1988; ISBN: 0-13-110362-8

OPTIONAL: Only recommended for those struggling with the module; there is plenty of generic supporting material available online.

G51REQ Introduction to Requirements Engineering (Andy Crabtree)

Software Engineering (9th ed); Ian Sommerville; Pearson, 2011; ISBN: 0137035152

OPTIONAL: For this module (Chapter 4), but RECOMMENDED for G51FSE, see below.

Semester 2

G51DBS Database Systems (Jason Atkin)

Database Systems, A Practical Approach to Design, Implementation and Management (5th ed); Thomas Connolly and Carolyn Begg; Addison Wesley; ISBN: 0321523067

OPTIONAL: This is a very detailed book, beyond what is needed for the module; only parts 1-3 are covered by the module.

G51FSE Introduction to Software Engineering (Julie Greensmith)

Software Engineering (9th ed); Ian Sommerville; Pearson, 2011; ISBN: 0137035152

RECOMMENDED: The book is required reading for this module; also useful for G51REQ.

G51FUN Introduction to Functional Programming (Graham Hutton)

Programming in Haskell; Graham Hutton; Cambridge University Press, 2007; ISBN: 0521692695

RECOMMENDED: The module is based on this book (see <http://www.cs.nott.ac.uk/~gmh/book.html>).

G51IAI Introduction to Artificial Intelligence (Rong Qu)

Artificial Intelligence: A Modern Approach (3rd ed); Stuart Russell and Peter Norvig; Prentice Hall, 2009; ISBN: 0136042597

OPTIONAL: There is much material available online, including for this book (<http://aima.cs.berkeley.edu/instructors.html>).

G51OOP Introduction to Object-Oriented Programming (Colin Higgins)

Java Gently; Judy Bishop; Pearson Education, 2001; ISBN: 0201710501

OPTIONAL: Only recommended for those struggling with the module; there is plenty of generic supporting material available online.