

General**Algorithms in C****Robert Sedgewick****Addison-Wesley, ISBN 0-201-51425-7**

Sedgewick has a number of books in the same vein, but this is the original. Has a reputation for being difficult to read.

The C Programming Language, Second Edition**Brian W. Kernighan and Denis M. Richie****Prentice Hall, ISBN 0-13-110362-8**

The language as viewed by the authors. Unarguable, as in “K&R says that...”.

The Standard C Library**P. J. Plauger****Prentice-Hall**

The complete ANSI C Library, including an implementation. Plauger also co-wrote *Software Tools*, Addison-Wesley, 1976, with Brian W. Kernighan.

The Art of Computer Programming Vol. 1: Fundamental Algorithms**The Art of Computer Programming Vol. 2: Seminumerical Algorithms****The Art of Computer Programming Vol. 3: Sorting and Searching****D.E. Knuth, 1968****Addison-Wesley, boxed set ISBN 0-201-48541-9**

The definitive computer science set, required reading for any serious programmer – but expensive! As recommended by Bill Gates (don't let that put you off). Can be heavy reading.

Data Structures using Pascal**Aaron M. Tenenbaum and Moshe J. Augenstein****Prentice-Hall ISBN 0-13-196436-4**

Pascal? Not difficult to read for a C programmer. Long out of print (1981), this is the standard work many programmers were brought-up on. The algorithms still hold true, and probably always will. Contains algorithms for sorting, list and tree structures, and more.

Can be found in second-hand book shops for a few pounds (particularly in University towns). This pair wrote other books on similar themes, all are good finds. Want another justification for this book? The publisher's advisor was a certain Brian W. Kernighan!

Operating System Concepts, Fourth Edition**Abraham Silberschatz and Peter B. Galvin****Addison-Wesley ISBN 0-201-59292-4**

A readable introduction to modern operating system workings and design. Some of the examples are a little out of date, but generally a good description of the principles.

Windows Programming

Inside Windows 2000, 3rd Edition

**David A. Solomon, Mark E. Russinovich,
Microsoft Press 2000, ISBN 0-7356-1021-5**

A standard work, previous editions (*Inside Windows NT*) were best sellers. Good background to NT/2000 design and innards.

Programming Applications for Microsoft Windows, Fourth Edition

**Jeffrey Richter
Microsoft Press, ISBN 1-57231-996-8**

Previous editions were called *Advanced Windows*. This edition brings the story up-to-date, and includes Windows 2000 interfaces. That can be confusing if you still have to support NT 4.0. *Advanced Windows* became a standard work, this will probably follow.

Programming Windows, Fifth Edition

**Charles Petzold
Microsoft Press, ISBN 1-57231-995-X**

Probably the most widely read Windows programming book. Notoriously difficult to read, but still the standard work for GUI programmers.

Network Programming in Windows NT

**Alok K. Sinha
Addison-Wesley, ISBN 0-201-59056-5**

A good introduction to Windows without the GUI. Covers much more than just communications. A good companion to Richter.

Unix Programming

Advanced Programming in the UNIX Environment

W. Richard Stevens

Addison-Wesley ISBN 0-201-56317-7

The standard reference for Unix programmers. Published in 1993, some parts are a little out-of-date, but the majority still applies. Stevens died in November 1999, and is sorely missed by the Unix community.

Programming with POSIX Threads

David R. Butenhof

Addison-Wesley ISBN 0-201-63392-2

The book of pthreads. Not the most readable, but probably the most authoritative - Butenhof was involved with the pthreads POSIX standard.

Unix Network Programming, Vol. 1: Networking APIs, Second Edition

W. Richard Stevens

Prentice-Hall ISBN 0-13-490012-X

The standard reference on Sockets, though with some redundant chapters. Also contains an introduction to threads (though Stevens recommends Butenhof).

Unix Network Programming, Vol 2: Interprocess Communications, Second Edition

W. Richard Stevens

Prentice-Hall ISBN 0-13-081081-9

Of more general interest than Volume 1, this covers both System V and POSIX IPC, including a slice of threads for good measure. Authoritative as ever. The RPC chapter is a little dated, and does not discuss DCE.

The Unix Programming Environment

B. W. Kerningham and R. Pike

Prentice-Hall

A general reference for details on Unix Programming. A little long in the tooth, but a standard reference. (Its-that-man again, the K in K&R and awk)

Using C on the UNIX System

David A. Curry

O'Reilly & Associates ISBN 0-937175-23-4

Not to be compared with the likes of Stevens' or Kerningham & Pike, this is a good alternative for getting started with Unix. More readable (and cheaper) than the heavier tomes, but you will probably need those eventually.