

## SYSC 3303: Reference Material

- *Real-Time Systems and Programming Languages: Ada, Real-Time Java and C/Real-Time POSIX*, Fourth Edition, Alan Burns and Andy Wellings, Addison-Wesley, 2009, ISBN 978-0-321-41745-9

This book contains a comprehensive survey of fundamental real-time systems principles. Its approach is somewhat more theoretical than the approach used in this course, with less emphasis on design and implementation, so we recommend it for a different perspective on the same subject. Of particular interest is their treatment of programming language support for real-time systems.

- *Effective Java Programming Language Guide*, Joshua Bloch, Addison-Wesley, Second Edition 2008. ISBN 0-321-35668-3.

This book is not an introduction to Java or the Java class libraries; instead, it addresses customary and effective ways to structure Java code. Although this book isn't about real-time or embedded systems, many of the chapters are relevant to this course; in particular, Chapter 9, *Threads*, explains how to write clear, correct, well-documented multi-threaded programs.

- *The Real-Time Specification for Java*, Greg Bollella, Ben Brosgol, Peter Dibble, Steve Furr, James Gosling, David Hardin, Mark Turnbull, Addison-Wesley, 2000. ISBN 0-201-70323-8.

This book contains the Real-Time for Java Expert Group's preliminary specification for extensions to the Java platform to support real-time programming. This book is also available over the Internet as an Adobe PDF file; see the course Web site for more details.

- *Real-Time Java Platform Programming*, Peter C Dibble, Sun Microsystems Press (Prentice Hall PTR), 2002. ISBN 0-13-028261-8. The first third of the book provides a reasonable overview of the theory of real-time, concurrent systems and explains the issues that had to be considered during the development of the real-time extensions to Java. The remainder of the book describes the classes that are part of the Real-Time Specification for Java.

The following books treat real-time and concurrent systems at an advanced level that is more appropriate for a second-level course, but they are recommended for students in SYSC 3303 who are particularly interested in this field.

- *Real-Time Systems*, Jane W.S. Liu, Prentice-Hall, 2000. ISBN 0-13-099651-3.
- *Designing Concurrent, Distributed, and Real-Time Applications with UML*, Hassan Gomaa, Addison-Wesley, 2000. ISBN 0-201-65793-7.
- *Concurrent Programming in Java: Design Principles and Patterns, Second Edition*, Doug Lea, Addison-Wesley, 2000. ISBN 0-201-31009-0.
- *Real-Time Design Patterns: Robust Scalable Architecture for Real-Time Systems*, Bruce Powel Douglass, Addison-Wesley, 2003. ISBN 0-201-69956-7.