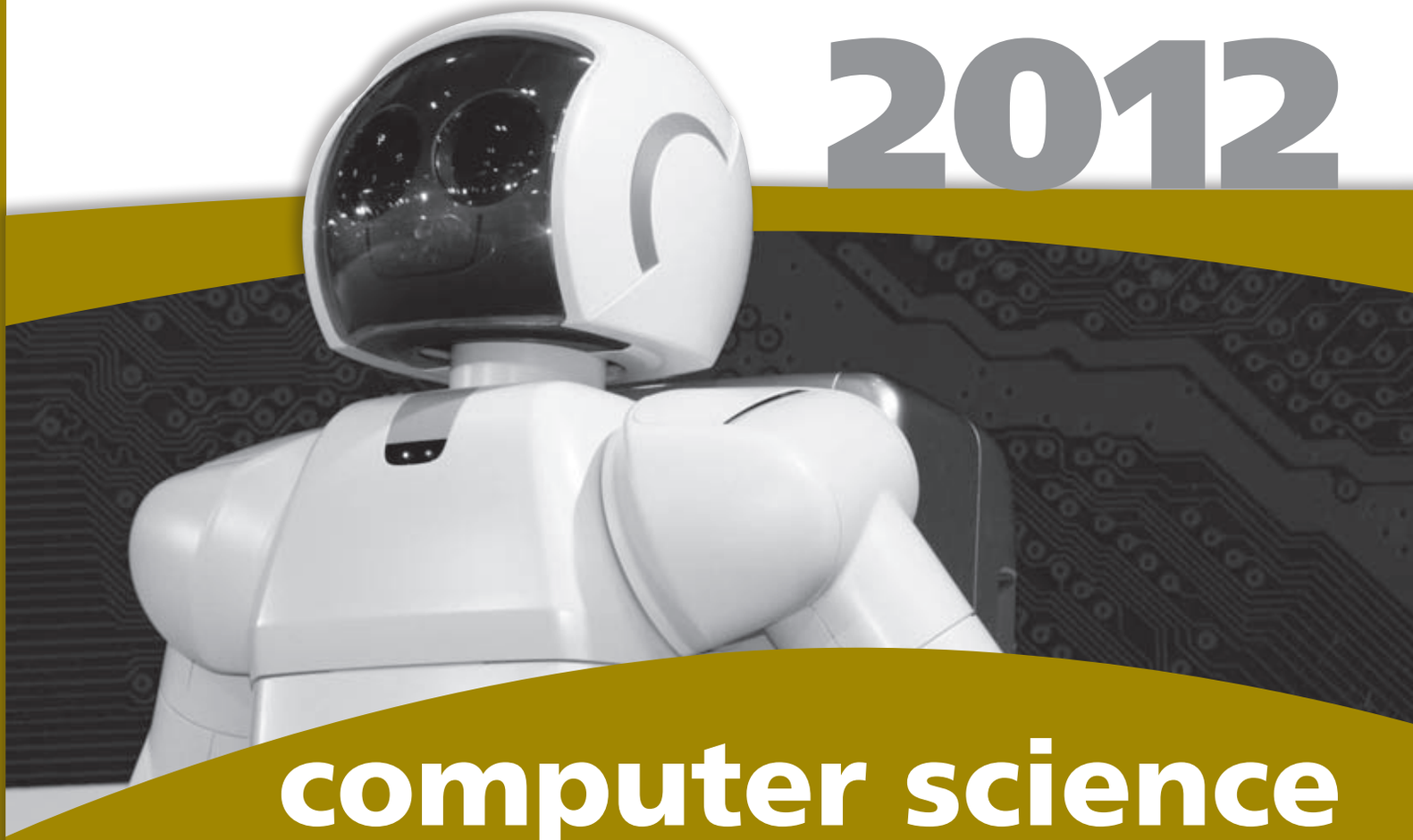
Computer Science & Electrical Engineering 2012

2012



computer science & electrical engineering

Mc Graw Hill Education

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Welcome to McGraw-Hill's **2012 Computer Science & Electrical Engineering** Catalog. Inside this catalog, you will find a wide selection of McGraw-Hill latest academic publications. Apart from those published from the US, we have also included publications from Asia as well as from our subsidiaries in Australia, India and United Kingdom. For the benefit of students, widely adopted textbooks are made available as low-priced McGraw-Hill International Editions (see titles in this catalog tagged with "International Edition").

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Live and available for use in your course **TODAY!**

Do More

The **Best** of **Both Worlds**

Productivity | Efficiency | Simplicity

An unrivaled, total course solution—McGraw-Hill and Blackboard have partnered to deliver content and tools directly inside your learning management system.*

Manage your course content, assignments, and assessments...all from within your existing Blackboard® environment.

IT'S AS EASY AS 1-2-3!

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Just pair your Connect course with your Blackboard course to create a seamless experience for you and your students.

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* Compatible with Blackboard Learn™, Releases 9.1, 9.0 and 8.0

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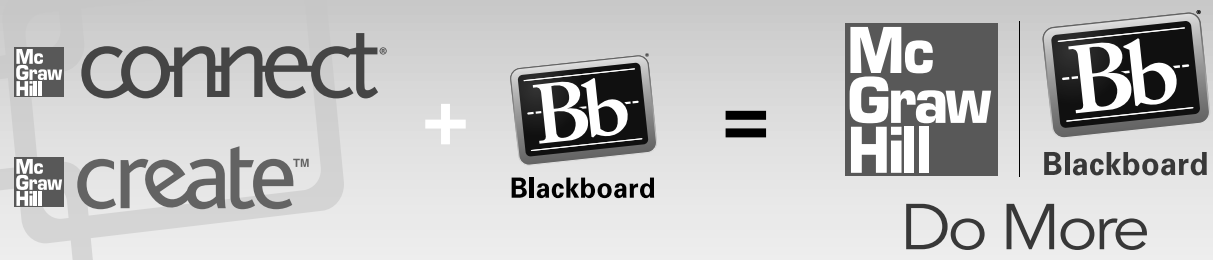


McGraw-Hill Connect® and McGraw-Hill Create™ are now fully integrated into the Blackboard Learn platform.

Enjoy simplified access to the highest quality, media-rich content and adaptive learning and assessment engines for faculty, students and institutions.

A Total Course Solution

This unprecedented integration of publisher-provided content and tools into a learning management system offers the enhanced experience of all course resources in a single online environment.

Locally Hosted

All hosted within your institution's Blackboard instance, students now have the means to better connect with their coursework, instructors, and the important concepts that they will need to master for success now and in the future.

Key Features

- **Single Sign-On**

A single login and single environment provide seamless access to all course resources – all McGraw-Hill's resources are available within the Blackboard Learn platform.

- **One Gradebook**

Automatic grade synchronization with Blackboard gradebook. All grades for McGraw-Hill assignments are recorded in the Blackboard gradebook automatically.

- **100% FERPA compliant solution protects student privacy.**

- **Deep Integration**

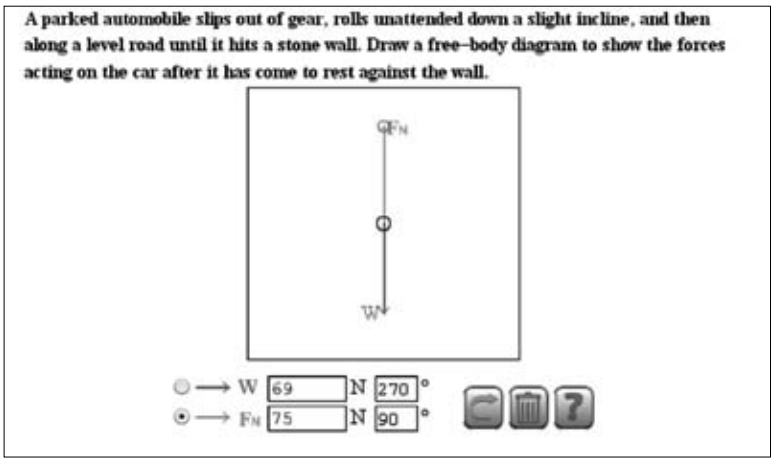
One click access to a wealth of McGraw-Hill content and tools – all from within Blackboard Learn™.

Visit DoMoreNow.com

Mc Graw Hill connect™ PHYSICS

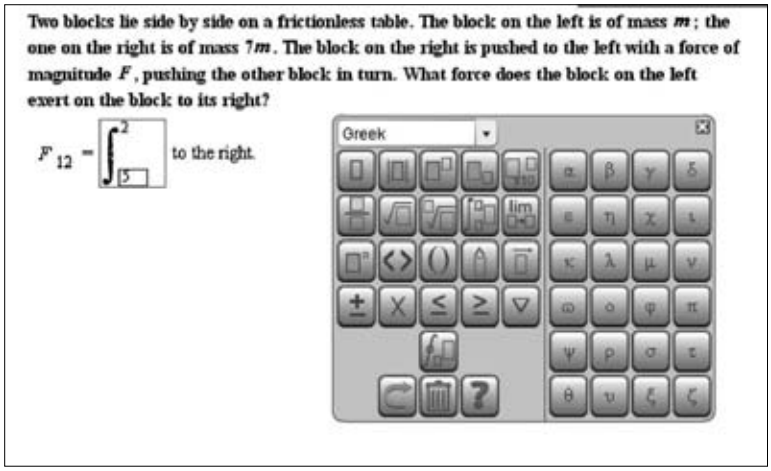
Drawing Tool Problems

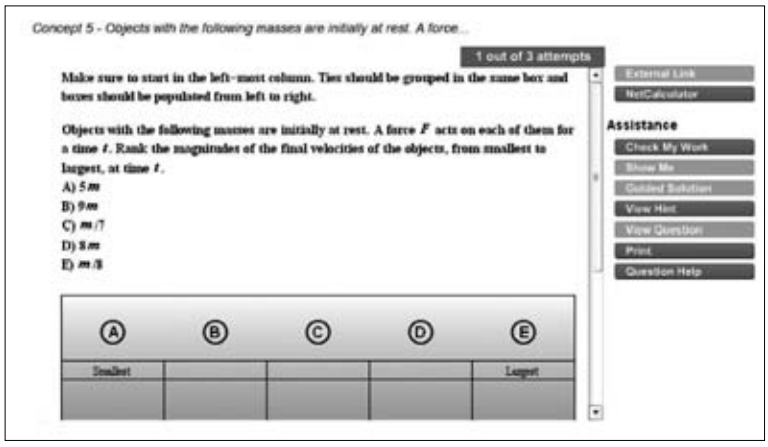
- The power to electronically assign conceptual drawing problems.
- Students are able to interactively draw free body diagrams onscreen teaching them core concepts of understanding forces.



Answer Palette Problems

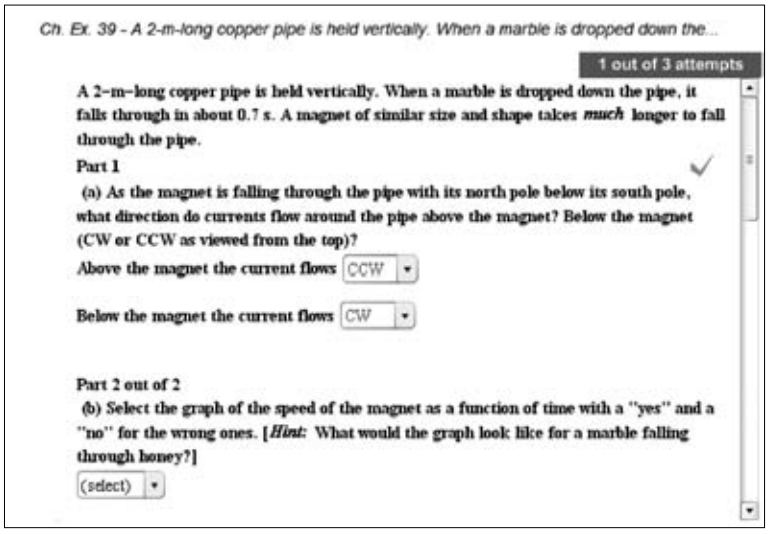
- Students symbolically solve-and-show an entire solution with an easy-to-use palette of control buttons.
- No special syntax or programming is necessary for the student to learn, allowing them to focus on problem solving.
- Students solve problems symbolically without numbers, building an understanding of various physics interactions occurring in the equations.





Ranking Problems

- Challenge student thinking on an entirely new level.
- Various choices or situations are presented, and the student must rank by simply clicking and dragging them into the proper order.
- Analyze critical-thinking skills undercover further potential learning opportunities.



Dependent Multipart Problems

- Allow students conceptual learning opportunities to work through problems step-by-step, and the reward of partial credit for all parts that they understand.
- Assign multiple learning concepts with various learning tools.

Mc Graw Hill connect™
BIOLOGY

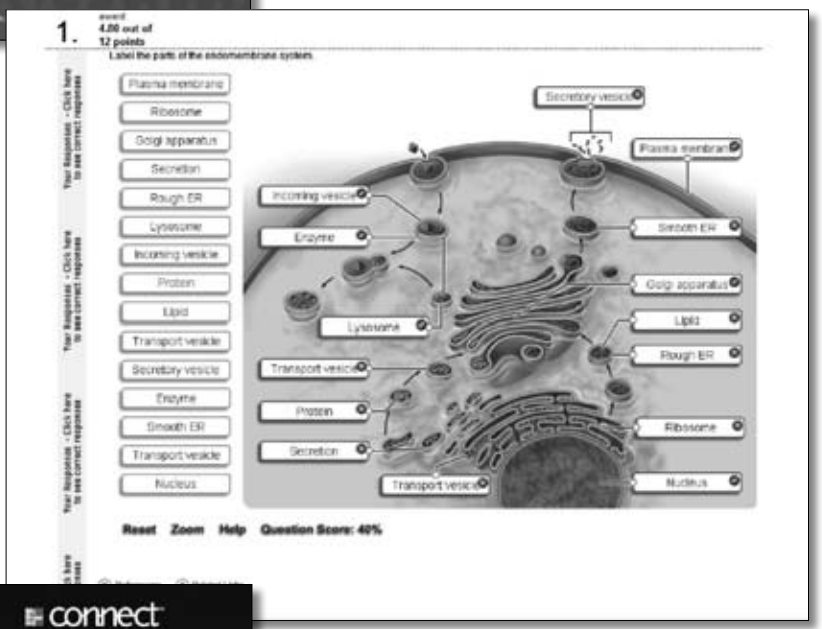
Learning is more than memorizing concepts. It's figuring out how to apply them. And no other web-based solution gives you the power to turn learning into success than **Connect.**

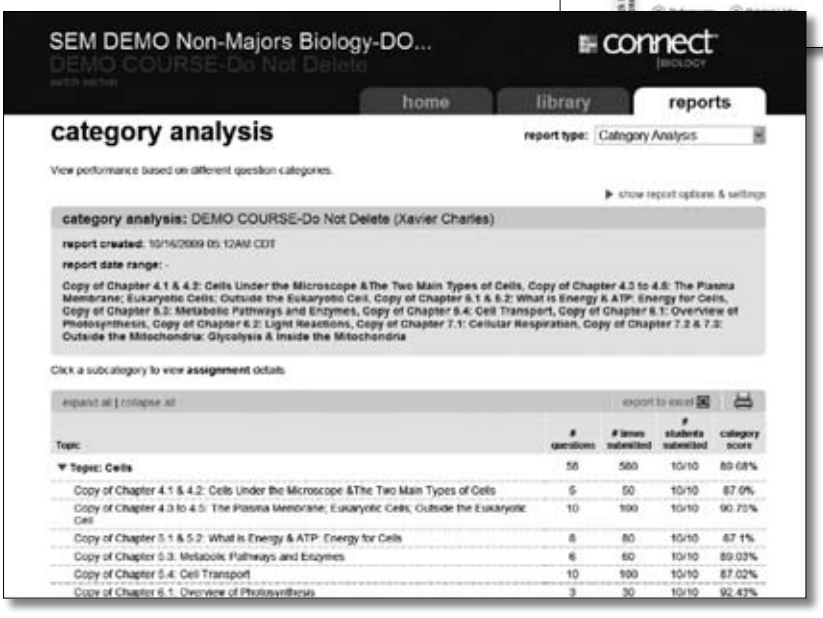
Easily Create Assignments & Presentations

Quickly set up classroom presentations or activities for your students. Assign full-book coverage, including all topics and every relevant figure from the textbook. If you wish, you can customize your Connect content: labels, hints, feedback, and more.

Students Take Rich, Interactive Assignments & Receive Instant Feedback

Engage students with labeling, sequencing, art exploration, classification, and composition problems. Once an assignment is completed, students can see immediately how they've performed and receive feedback on each question.



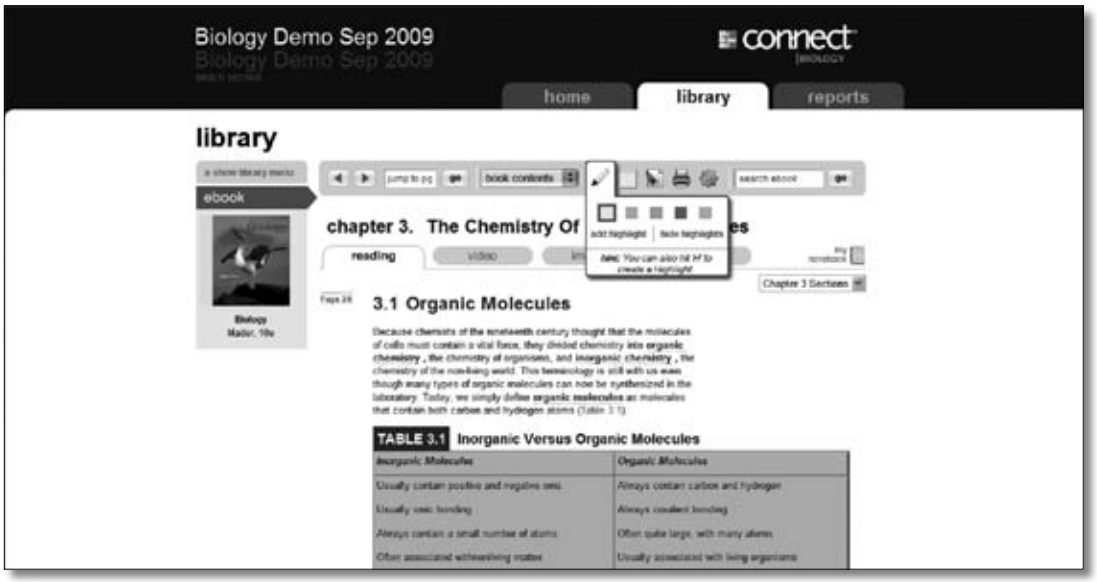


Impressive Reporting Solutions

With Connect's detailed reporting, you can quickly assess how students are doing in regards to overall class performance; specific objectives; individual assignments; and each question!

McGraw-Hill reinvents the textbook learning experience for the modern student with ***Connect Plus***. A seamless integration of an eBook and **Connect**, ***Connect Plus*** provides all of the Connect features plus the following:

- An integrated, printable eBook, allowing for anytime, anywhere access to the textbook.
- Dynamic links between the problems or questions you assign to your students and the location in the eBook where that problem or questions is covered.
- Assign sections of the eBook to your students as readings with engaging audio files, animations and videos embedded within the eBook.
- Instructors have the ability to share notes, highlights, bookmarks, figures and animations with their students.
- A powerful search function to pinpoint and connect key concepts in a snap!
- Pagination that exactly matches the printed text, allowing students to rely on Connect Plus as the complete resource for your course.



Learn and View Connect Demo at **www.mcgrawhillconnect.com**

LearnSmart™

Built around metacognition learning theory, LearnSmart provides your students with a GPS (**G**uided **P**ath to **S**uccess) for your course. Using artificial intelligence, LearnSmart intelligently assesses a student's knowledge of course content through a series of adaptive questions. It pinpoints concepts the student does not understand and maps out a personalized study plan for success.

- ***Connect to Content:*** Simulation allows students to practice course critical content.
- ***Learn More Effectively:*** Personal learning path is created based upon student knowledge level.
- ***Anywhere, At Your Pace:*** Students can access LearnSmart anytime and from anywhere that has internet access including the iPhone or iPod Touch.

LearnSmart is available as an integrated feature of McGraw-Hill's Connect or separately. You can incorporate LearnSmart into your course in a number of ways to

- Gauge student knowledge before a lecture
- Reinforce learning after lecture
- Prepare students for assignments and exams

Discover for yourself how the LearnSmart diagnostic ensures students will **connect** with the content, **learn** more effectively, and **succeed** in your course.

Visit **www.mhhe.com/learnsmart** to view a demo.

Connect Learn Succeed™

Connect content varies with courses. Contact your local McGraw-Hill representative to learn more about Connect and LearnSmart.

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connect™

ENGINEERING

LESS MANAGING.
MORE TEACHING.
GREATER LEARNING.

What is Connect?

McGraw-Hill Connect™ is an online assignment and assessment solution that connects your students with the tools and resources they'll need to achieve success.

With Connect, enjoy simple course management so you can spend less time administering and more time teaching. You'll have access to rich course resources and tools that drive performance like never before.

Connect Features:

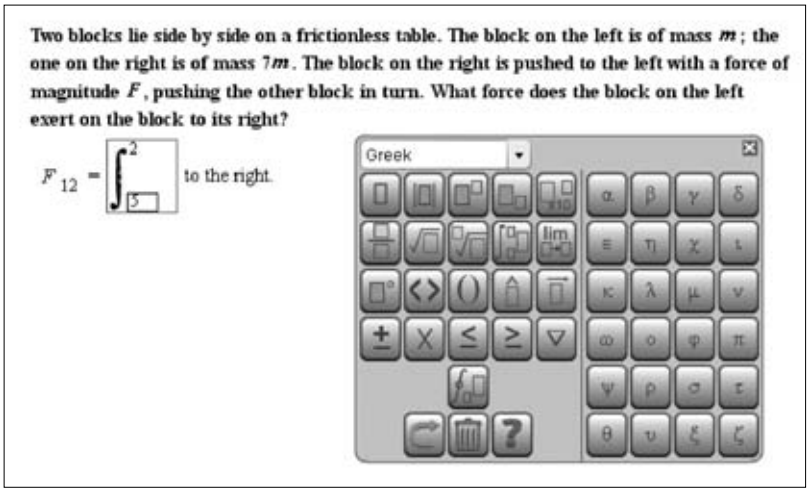
McGraw-Hill Connect offers a number of powerful tools and features to make managing assignments easier, so you can spend more time teaching. With Connect, students can engage with their coursework anytime and anywhere, making the learning process more accessible and efficient.

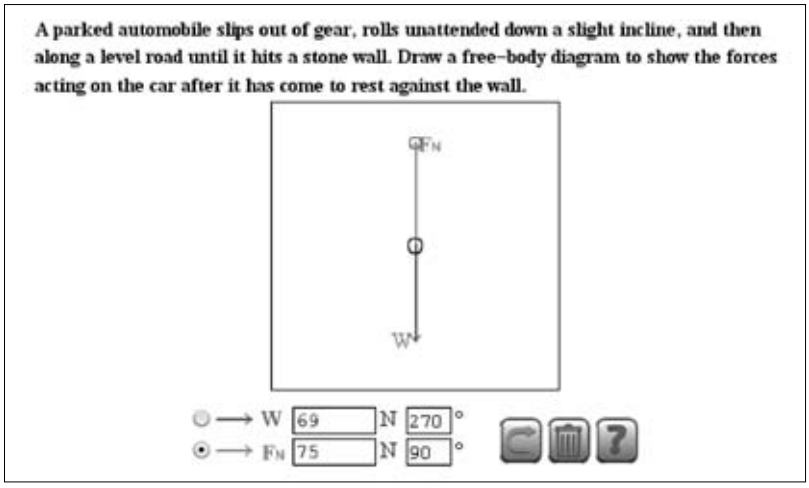
- ***Simple assignment management***
  With Connect, creating assignments is easier than ever, so you can spend more time teaching and less time managing.
- ***Smart grading***
  When it comes to studying, time is precious. Connect helps students learn more efficiently by providing feedback and practice material when they need it, where they need it.
- ***Student Progress Tracking***
  Staying informed about your students' progress allows for targeted teaching. Connect keeps you updated on how your students are performing on an individual or course-wide level, so you can better help them succeed.

Mc Graw Hill connect™
ENGINEERING

Large Selection of Customizable Exercises

- Customize to fit the needs of your course and your students.



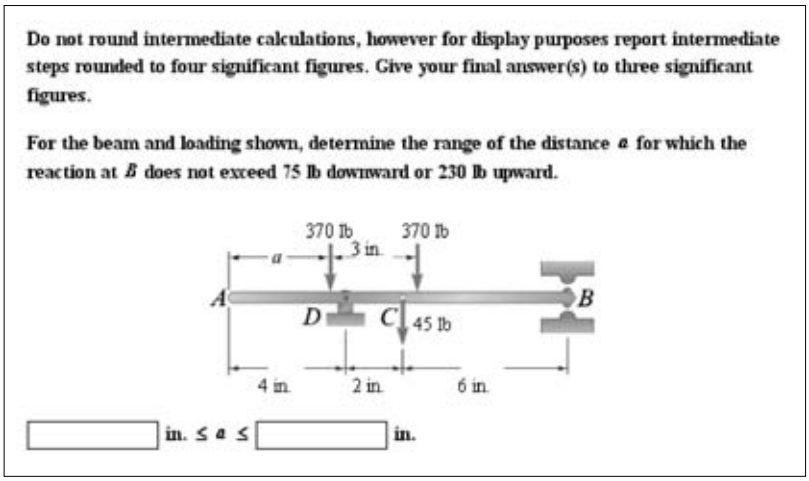


Free-Body Diagram Answer Submission

- Students can use the Free Body Diagram tool to enter the answer to many exercises in Connect Engineering.
- Students will be able to graphically enter their answers just as an engineer would solve a problem by creating a visual representation of the solution rather than just raw numbers.

Flexible Presentation of Course Content

- Customize your assignments in whatever way that you like to fit the needs of your course.



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connect plus+ MATH

Hosted by ALEKS Corp.

Built by Math Educators for Math Educators

Connect Math Hosted by ALEKS Corporation is an exciting, new assignment and assessment platform combining the strengths of McGraw-Hill Higher Education and ALEKS Corporation. Connect Math Hosted by ALEKS is the first platform on the market to combine an artificially-intelligent, diagnostic assessment with an intuitive ehomework platform designed to meet your needs.

Connect Math Hosted by ALEKS Corporation is the culmination of a one-of-a-kind market development process involving math full-time and adjunct Math faculty at every step of the process. This process enables us to provide you with a solution that best meets your needs.

Connect Math Hosted by ALEKS Corporation is built by Math educators for Math educators!

1 *Your students want a well-organized homepage where key information is easily viewable.*

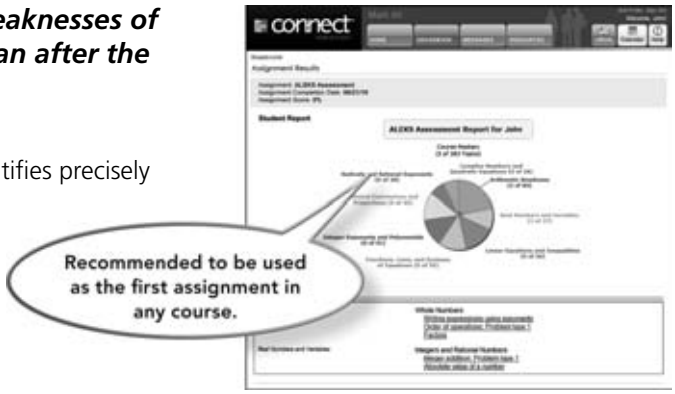
Modern Student Homepage

- This homepage provides a dashboard for students to immediately view their assignments, grades, and announcements for their course. (Assignments include HW, quizzes, and tests.)
- Students can access their assignments through the course Calendar to stay up-to-date and organized for their class.

2 *You want a way to identify the strengths and weaknesses of your class at the beginning of the term rather than after the first exam.*

Integrated Aleks® Assessment

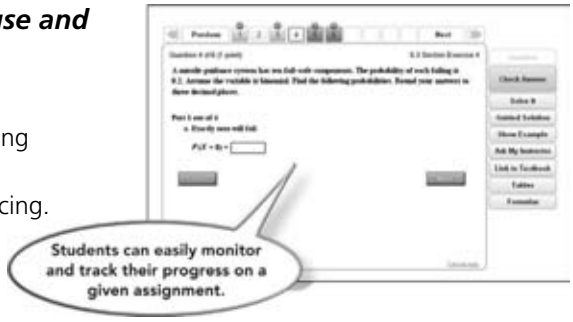
- This artificially-intelligent (AI), diagnostic assessment identifies precisely what a student knows and is ready to learn next.
- Detailed assessment reports provide instructors with specific information about where students are struggling most.



3 *Your students want an assignment page that is easy to use and includes lots of extra help resources.*

Efficient Assignment Navigation

- Students have access to immediate feedback and help while working through assignments.
- Students have direct access to a media-rich eBook for easy referencing.
- Students can view detailed, step-by-step solutions written by instructors who teach the course, providing a unique solution to each and every exercise.



4 *You want a more intuitive and efficient assignment creation process because of your busy schedule.*

Assignment Creation Process

- Instructors can select textbook-specific questions organized by chapter, section, and objective.
- Drag-and-drop functionality makes creating an assignment quick and easy.
- Choose your preferred method of feedback for your students–***table*** or ***graphing calculator*** based stepped-out-solutions.

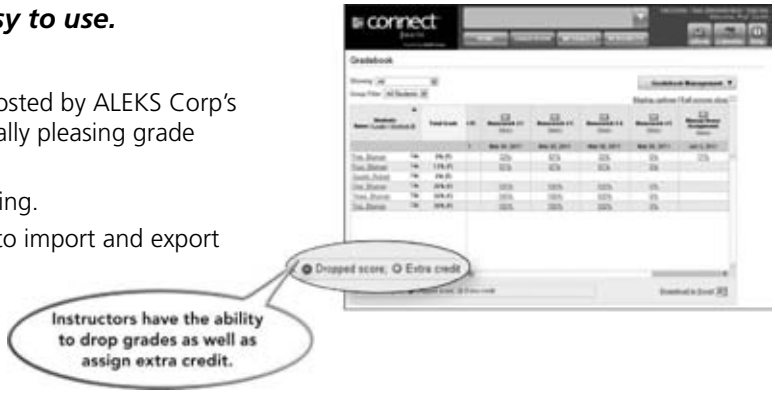
5 *Your students want an interactive eBook with rich functionality integrated into the product.*

connect plus+ MATH
Hosted by ALEKS Corp.

Integrated Media-Rich eBook

- A Web-optimized eBook is seamlessly integrated within ConnectPlus Math Hosted by ALEKS Corp for ease of use.
- Students can access videos, images, and other media in context within each chapter or subject area to enhance their learning experience.
- Students can highlight, take notes, or even access shared instructor highlights/notes to learn the course material.

6 *You want a flexible gradebook that is easy to use.*



Flexible Instructor Gradebook

- Based on instructor feedback, Connect Math Hosted by ALEKS Corp's straightforward design creates an intuitive, visually pleasing grade management environment.
- Assignment types are color-coded for easy viewing.
- The gradebook allows instructors the flexibility to import and export additional grades.

7 *You want algorithmic content that was developed by math faculty to ensure the content is pedagogically sound and accurate.*

Digital Content Development Story

The development of McGraw-Hill's Connect Math Hosted by ALEKS Corp. content involved collaboration between McGraw-Hill, experienced instructors, and ALEKS, a company known for its high-quality digital content. The result of this process, outlined below, is accurate content created with your students in mind. It is available in a simple-to-use interface with all the functionality tools needed to manage your course.

1. McGraw-Hill selected experienced instructors to work as Digital Contributors.
2. The Digital Contributors selected the textbook exercises to be included in the algorithmic content to ensure appropriate coverage of the textbook content.
3. The Digital Contributors created detailed, stepped-out solutions for use in the Guided Solution and Show Me features.
4. The Digital Contributors provided detailed instructions for authoring the algorithm specific to each exercise to maintain the original intent and integrity of each unique exercise.
5. Each algorithm was reviewed by the Contributor, went through a detailed quality control process by ALEKS Corporation, and was copyedited prior to being posted live.

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Digital Contributors

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Vanessa Coffelt, *Blinn College*
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What did thousands of students tell us was the most valued part of the course?

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Research with over 6600 students revealed that your lecture is valued above all instructional material. Tegrity Campus, allows you to make your lectures available to your students to search, replay and review outside of class.

Tegrity Campus records your lectures, automatically capturing, storing, and indexing everything presented in class. It's a simple click to start recording, everything is done for you and you can lecture exactly as you have before.

Why Instructors LOVE Tegrity Campus.

- No hardware needed or IT assistance.
- Using Tegrity Campus to record your lectures saves you time, serving as a 24-7 teaching assistant.
- Instructors using lecture capture consistently receive better course ratings from their students

Why Students LOVE Tegrity Campus.

- Your recorded lectures help your students review for tests, finish homework and complete notes.
- Students use Tegrity Campus but not other lecture capture services, because it is the only service that offers students a keyword search feature. Students can search in a lecture or across lectures to get only the information they need.

"The course evaluations and student feedback indicated that Tegrity greatly improved the students' learning experiences. The students were unanimous in viewing Tegrity as a valuable resource."

Dr. Darrell Brann, professor and associate director of the Institute of Neuroscience - John Meyer

Improves Course Performance

"During class I pay more attention and participate more; I don't have to take up my instructor's time after class."

Elizabeth Williams - Calhoun Community College

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For more information visit us at

http://tegritycampus.mhhe.com

McGraw-Hill's **ARIS**

The Smart Solution.

Whether you're looking for a ready-to-use system or one you can customize to fit your specific course needs, ARIS is your smart solution.

*Exclusive to McGraw-Hill, ARIS – **A**ssessment, **R**eview, and **I**nstruction **S**ystem – gives you the power and freedom to achieve those goals that are most important to you, goals such as:*

- ***Standardizing your curriculum** – across class, grade, school, and district.*
- ***Easily test and assess** your students' understanding and achievement.*
- ***Provide a central, secure, electronic resource** accessible anytime and anywhere you or your students have internet connectivity.*
- ***Assign homework, quizzing and self-study material**, which may be graded automatically to provide immediate student feedback. ARIS allows you to use pre-built, text-specific assignments, or provides the tools so you can create your own.*
- ***Enhance your students' learning experience.** ARIS content is tied directly to your McGraw-Hill textbook, which allows your students to spend time outside of class mastering curricular goals with unlimited practice and smart tutorial feedback.*

For more information,

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MCGRAW-HILL'S **ARIS** GIVES YOU FLEXIBILITY, POWER, AND EASE OF USE—AND ALL AT YOUR FINGERTIPS.

standardize your curriculum

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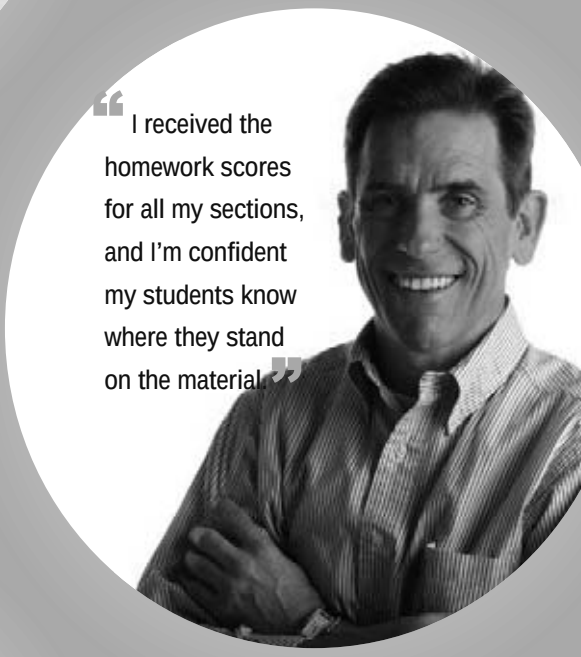

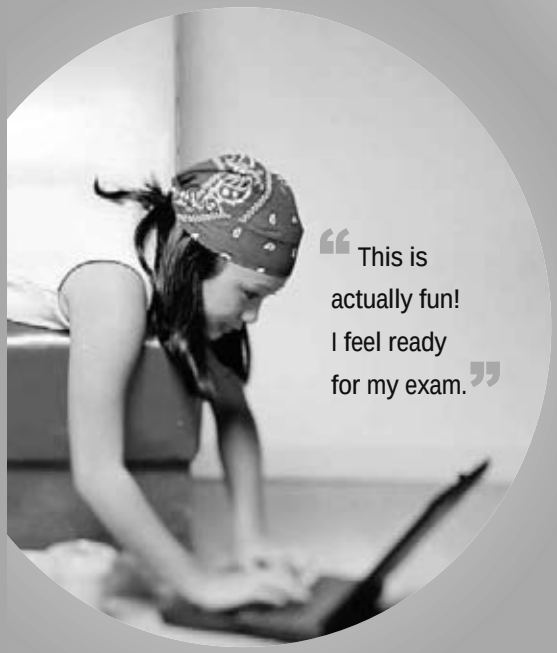

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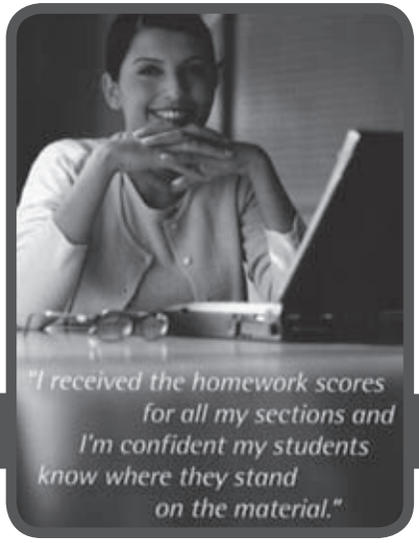

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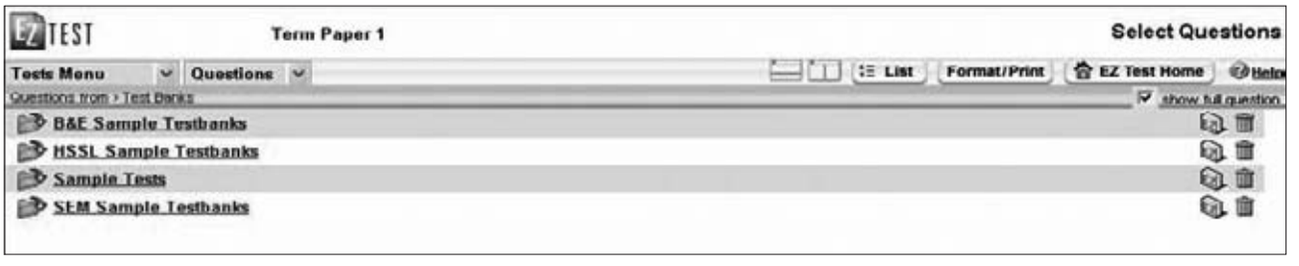

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Introduction To Computer Science

SCHAUM'S OUTLINE OF PRINCIPLES OF COMPUTER SCIENCE

by Paul Tymann, Rochester Inst Of Technology, Carl Reynolds, Rochester Inst Of Technology

2008 / Softcover / 384 pages
ISBN: 9780071460514

(A Schaum's Publication)

Schaum's Outline of Principles of Computer Science provides a concise overview of the theoretical foundation of computer science. It also includes focused review of object-oriented programming using Java.

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Introduction to Computer Science
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A Roadmap
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Basic Concepts
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TCP/IP
The world wide web
Social Issues
Privacy
Viruses
Hacking
Encryption
Can computers kill?

INTERNATIONAL EDITION

SCHAUM'S OUTLINE OF INTRODUCTION TO COMPUTER SCIENCE

by Ramon Mata-Toledo and Pauline K Cushman, James Madison University in Harrisonburg, Virginia

2000 / 240 pages / softcover
ISBN: 9780071345545 (Out-of-Print)
ISBN: 9780071165969 [IE]

(A Schaum's Publication)

(International Edition is not for sale in Japan.)

Illustrates key computing concepts using examples in the most popular programming languages. This is an essential guide for the hundreds of thousands of students studying Introduction to Computer Science or Introduction to Programming, presenting the basic concepts of computer science and illlustrating them with examples in C/C++, and Java. More than 285,000 college majors and 11,000 high school Advanced Placement candidates are enrolled in required Computing Science courses. Explains algorithm development and data abstraction. Supplements leading computer science textbooks.

Introduction To Computing Systems

INTERNATIONAL EDITION

INTRODUCTION TO COMPUTING SYSTEMS: From Bits and Gates to C and Beyond 2nd Edition

by Yale N Patt, University of Texas at Austin and Sanjay J Patel, University of Illinois, Champaign

2004 / 656 pages / Softcover
ISBN: 9780072467505 (with CD-ROM)
ISBN: 9780071245012 [IE - 2 Color]

www.mhhe.com/patt2

Introduction to Computing Systems: From bits & gates to C & beyond, now in its second edition, is designed to give students a better understanding of computing early in their college careers in order to give them a stronger foundation for later courses. The book is in two parts: (a) the underlying structure of a computer, and (b) programming in a high level language and programming methodology. To understand the computer, the authors introduce the LC-3 and provide the LC-3 Simulator to give students hands-on access for testing what they learn. To develop their understanding of programming and programming methodology, they use the C programming language. The book takes a "motivated" bottom-up approach, where the students first get exposed to the big picture and then start at the bottom and build their knowledge bottom-up. Within each smaller unit, the same motivated bottom-up approach is followed. Every step of the way, students learn new things, building on what they already know. The authors feel that this approach encourages deeper understanding and downplays the need for memorizing. Students develop a greater breadth of understanding, since they see how the various parts of the computer fit together.

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Part I: 1 Welcome Aboard!
2 Bits, Data Types, and Operations.
3 Digital Logic Structures.
4 The Von Neumann Model.
5 The LC-3.
6 Programming.

7 Assembly Language.
8 I/O.
9 TRAP Routines and Subroutines.
10 And, Finally...
Part II:
11 Introduction to Programming in C.
12 Variables and Operators.
13 Control Structures.
14 Functions.
15 Debugging.
16 Recursion.
17 Pointers and Arrays.
18 I/O in C.
19 Data Structures.
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Appendix B From LC-3 to x86.
Appendix C The Microarchitecture of the LC-3.
Appendix D The C Programming Language.
Appendix E Extending C to C++.
Appendix F Useful Tables

Programming - General

Programming Languages

INTERNATIONAL EDITION

INTRODUCTION TO LANGUAGES AND THE THEORY OF COMPUTATION
4th Edition

by John Martin, North Dakota State University-Fargo

2011 (February 2010) / Hardcover / 488 pages
ISBN: 9780073191461
ISBN: 9780071289429 [IE]

www.mhhe.com/martin

Introduction to Languages and the Theory of Computation helps students make the connection between the practice of computing and an understanding of the profound ideas that defines it. The book's organization and the author's ability to explain complex topics clearly make this introduction to the theory of computation an excellent resource for a broad range of upper level students. The author has learned through many years of teaching that the best way to present theoretical concepts is to take advantage of the precision and clarity of mathematical language. In a way that is accessible to students still learning this language, he presents the necessary mathematical tools gently and gradually which provides discussion and examples that make the language intelligible.

CONTENTS

Preface
Introduction
Chapter 1: Mathematical Tools and Techniques
Chapter 2: Finite Automata and the Languages They Accept
Chapter 3: Regular Expressions, Nondeterminism, and Kleene's Theorem
Chapter 4: Context-Free Languages
Chapter 5: Pushdown Automata
Chapter 6: Context-Free and Non-Context-Free Languages
Chapter 7: Turing Machines
Chapter 8: Recursively Enumerable Languages
Chapter 9: Undecidable Decision Problems
Chapter 10: Computable Functions
Chapter 11: Introduction to Computational Complexity
Index

INTERNATIONAL EDITION

PROGRAMMING LANGUAGES
2nd Edition

by Allen B. Tucker, Bowdoin College, and Robert Noonan, College of William and Mary

2006 / Hardcover
ISBN: 9780072866094
ISBN: 9780071254397 [IE]

www.mhhe.com/tucker

Most current programming language text that provides a balanced mix of explanation and experimentation. Opening chapters present the fundamental principals of programming languages, while optional companion chapters provide implementation-based, hands-on experience that delves even deeper. This edition also includes a greatly expanded treatment of the four major programming paradigms, incorporating a number of the most current languages such as Perl and Python. Special topics presented include event-handling, concurrency, and an all-new chapter on correctness. Overall, this edition provides both broad and deep coverage of language design principles and the major paradigms, allowing users the flexibility of choosing what topics to emphasize.

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1 Overview
2 Syntax
3 Lexical and Syntactic Analysis
4 Names
5 Types
6 Type Systems
7 Semantics
8 Semantic Interpretation
9 Functions
10 Function Implementation
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12 Imperative Programming
13 Object-Oriented Programming
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Glossary
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Parallel Programming

INTERNATIONAL EDITION

PARALLEL PROGRAMMING IN C WITH MPI AND OPEN MP

by Michael J. Quinn, Oregon State University

2004 / 480 pages / Softcover
ISBN: 9780072822564 (Out-of-Print)
ISBN: 9780071232654 [IE]

http://highered.mcgraw-hill.com/sites/0072822562

The era of practical parallel programming has arrived, marked by the popularity of the MPI and OpenMP software standards and the emergence of commodity clusters as the hardware platform of choice for an increasing number of organizations. This exciting new book, Parallel Programming in C with MPI and OpenMP addresses the needs of students and professionals who want to learn how to design, analyze, implement, and benchmark parallel programs in C using MPI and/or OpenMP. It introduces a rock-solid design methodology with coverage of the most important MPI functions and OpenMP directives. It also demonstrates, through a wide range of examples, how to develop parallel programs that will execute efficiently on today's parallel platforms.

CONTENTS

Part I: Introduction to Parallel Computing:
1 Motivation and History.
2 Parallel Architectures.
3 Parallel Algorithm Design.
4 Performance Analysis.
Part II: Introduction to MPI:
5 Message-passing Programming.
6 The Sieve of Eratosthenes.
7 Floyd's Algorithm.
8 Matrix-vector Multiplication I.
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14 Finite Difference Methods.
15 Sorting.
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17 Exhaustive Search.
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18 Getting Started with OpenMP.
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Systems Programming

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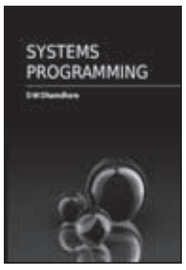

SYSTEMS PROGRAMMING

by D M Dhamdhere, Department of Computer Science & Engineering, IIT, India

2011 (June 2011) / 556 pages / Softcover
ISBN: 9780071333115
(A McGraw-Hill India Title)

This book offers in-depth treatment for the fundamentals concepts in systems programming and different kinds of system software. It stresses on the use of system programming concepts in designing various system softwares. It provides an overview of contemporary trends in system software. This book is designed for undergraduate and post-graduate courses offered on Systems Programming.

FEATURES

- Dedicated chapters on Interpreters, Scanners and Parsers
- Detailed coverage of topics such as Assemblers, Macro Processors, Java Language Environment and Operating Systems
- Stresses on the use of system programming concepts in designing various system softwares
- Provides an overview of contemporary trends in system software
- Includes a rich pool of solved examples interspersed throughout the text

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6. Scanning and Parsing
7. Compilers
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9. Software Tools
Part II : Operating Systems
10. Overview of Operating Systems11. Program Management12. Memory Management13. File Systems14. Security and Protection

Programming

C: Intro to Programming/CS1

Asia Adaptation

NEW

C PROGRAMMING: A Q&A APPROACH

by H H Andrew Tan, Morrison Knudsen Corporation, and T.B. D'Orazio, San Francisco State University, Siu-Hang Or, The Chinese University of Hong Kong, and Marian Ming Yan Choy, The University of Hong Kong

2012 (September 2011) / 542 pages / softcover
ISBN: 9780071311168
(An Asian Publication)

www.mheducation.asia/olc/cprogramming

This book was developed to address the difficulty beginning students often find reading computer language texts. Tan and D'Orazio aim to make the process of learning a first language easier and fun, by involving readers in their text, holding their interest, and getting them to think about the meaning and uses of C code. The authors accomplish this goal by using a question and answer style, where the reader's thought processes are stimulated by the same questions about code that students themselves often ask. Tan and D'Orazio answer these questions clearly and directly, focusing the reader's attention on the important issues of C programming. The new co-authors, Or and Choy have further enhanced on this book by "condensing" the book by focusing on the essential programming content. The end product is a book which arouses the student's interest and guides the student along as he / she learns the necessary programming concepts. The new edition will feature an improved layout in 2 colors and a supporting website for instructors and students. Instructors using this book will also be well supported with solutions, teaching slides and testbank. Students will also find useful resources such as additional practice questions in the text website.

FEATURES

1 Question and Answer (Q&A) Approach

By structuring each topic with Source Code, Output, Explanation and Further Exploration, the authors aim to clarify questions that students have on C Programming.

❖ **Explanation** containing a list of questions and answers is used to explain and clarify "what" and "why" the program is doing. The value of this approach lies in the authors' ability to craft the "questions" based on what the students often ask and tailoring the answers in a manner which is easily understood. The authors suggest that student treats the questions as a puzzle and try to answer some of it.

❖ **Further Exploration** is where more advanced concepts are covered.

2 Pedagogical Tools

❖ **Structured Program Development Method** The authors emphasise a structured program development method demonstrated in the Application Programs. The steps include developing the relevant equations, manual calculation, writing an algorithm and using the algorithm to write the actual source code. As the pograms become more complex, more steps such as developing structure charts and data flow diagrams are demonstrated. The authors believe that by highlighting the use of these tools, the students will learn and develop the skill to better understand the underlying processes especially for more complicated program development.

❖ **Source Code** is annotated with comments to assist the student to better understand the program details and flow.

❖ **Illustrations** and **diagrams** are used extensively to help the students visualise.

❖ **Chapter Objective, Chapter Review** in each chapter and **Concept Recap** at the end of each lesson help the students to reinforce their learning.

❖ **Exercises** are varied and numerous; in the form of short exercises, application programs, modification exercises and application exercises. The Application Programs contain examples ranging from general to more specific ones relating to computer science and engineering such as algorithms, circuits, fluid mechanics and seismology.

3 Topics covered

❖ **Debugging**. Students often struggle with debugging because the process is new and foreign to them. Recognising this, we have included an example of debugging very early in the text (Chapter 1). This text focuses on loops and illustrates how values change as loops are executed as students often find debugging loops challenging. Students learn to trace loops and find errors. In addition, common beginners' errors are noted at appropriate locations throughout the text.

❖ **Pointers.** To understand pointers, students need to be able to visualise. By using tables and grid-like sketches of memory, we have taken much of the mystery out of pointers.

❖ **C++.** Chapter 9 An Introduction to C++ is available online. Because of the thorough coverage of C, we are able to describe many of the core issues of object oriented programming with C++. Classes, encapsulation and polymorphism are described in simple terms. This chapter is richly illustrated. The simple language and illustrations provide students the background to use many of the fundamental C++ features.

CONTENTS

1 Programming Fundamentals
2 The Basics of C—Math Functions, and Input/Output
3 Beginning Decision Making and Looping
4 Functions
5 Numeric Arrays
6 File Input/Output, Strings and Pointers
7 Structures and Large Program Design
8 Introduction to C++

PROGRAMMING IN ANSI C
5th Edition

by E Balagurusamy, Member,Union Public Commission,Dholpur House, Shahjahan Road,New Delhi

2010 (August 2010) / Softcover / 568 pages
ISBN: 9780070681828 [with CD]

(McGraw-Hill India Title)

www.mhhe.com/balagurusamy/ansic5e

This book gives a simple and lucid presentation of the C programming concepts. It helps the beginners in better understanding of the implementation and applications of C language through sample programs, case-studies, programming problems and projects. The book is developed including the new features of C99 standards.

CONTENTS

Chapter 1: Overview of C
Chapter 2: Constants, Variables, and Data Types
Chapter 3: Operators and Expressions
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Chapter 5: Decision Making and Branching
Chapter 6: Decision Making and Looping
Chapter 7: Arrays
Chapter 8: Character Arrays and Strings
Chapter 9: User-defined Functions
Chapter 10: Structures and Unions
Chapter 11: Pointers
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TEST YOUR SKILLS IN C
2nd Edition

by S Thamarai Selvi, M S University - Tirnunelveli and R Murugesan, Tiruvalluvar College, Tamil Nadu

2009 (June 2009) / Softcover
ISBN: 9780070145856

(McGraw-Hill India Title)

The revised edition of Test your Skills in C retains its appeal as a complete self-taught and handy text to students as well as a guide for aspiring IT professionals. This book refreshes C programming knowledge of readers in a short span, thereby equipping them to thoroughly prepare for various screening tests and campus interviews.

CONTENTS

Chapter 1. Elements of C Language
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Chapter 17. Timing of Basic C Operations in Our Host Machine
Chapter 18. ANCI C Library Functions

INTERNATIONAL EDITION

APPLIED C
An Introduction and More

by Alice Fischer and Stephen M Ross, both of the University of New Haven

2000 / 1136 pages / softcover
ISBN: 9780070217485 - (Out of Print)
ISBN: 9780071184595 [IE]

www.mhhe.com/fischer/

Applied C: An Introduction and More provides an introduction to C programming from a “hands on” perspective. With this book both Computer Science and Engineering students learn the C language and how to program through the reading and writing of basic programs early in the book. After introducing students to the basics, the authors use a spiral approach to build on concepts incrementally so that by the end students are able to write longer programs that require multiple functions. The teaching of these programming concepts is accompanied by a focus on sound program design that emphasizes the need for complete and accurate program specification as well as careful testing from the beginning.

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Appendix E: Advanced Aspects of C Operators.
Appendix F: Glossary and Alphabet Soup.

SCHAUM'S OUTLINE OF PROGRAMMING WITH C
2nd Edition

by Byron Gottfried, University of Pittsburgh

1996 / 544 pages / Softcover

ISBN: 9780070240353

(A Schaum's Publication)

The broad, yet in-depth coverage of C programming language, within the context of today's C programming style, makes this book as useful for practicing professionals as it is for beginning programmers. This study guide solves many sample problems using other programming languages so readers can compare several popular languages. It also includes clear explanations of most of the features in the current ANSI standard. The emphasis

CONTENTS

Introductory Concepts.
C Fundamentals.
Operators and Expressions.
Data Input and Output.
Preparing and Running a Complete C Program.
Control Statements.
Functions.
Program Structure.
Arrays.
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Structure and Unions.
Data Files.
Low-Level Programming.
Some Additional Features of C.
Appendices: A: Number Systems.
B: Escape Sequences.
C: Operator Summary.
D: Data Types and Data Conversation Rules.
E: The ASCII Character Set.
F: Control Statement Summary.
G: Commonly used scanf and printf Conversion Characters.

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C Programming for Engineers

INTERNATIONAL EDITION

C FOR ENGINEERS AND SCIENTISTS WITH COMPANION CD

by Harry H. Cheng, University Of California Davis

2010 (March 2009) / Softcover / 928 pages

ISBN: 9780077290467
ISBN: 9780071078696 [IE]

www.mhhe.com/cheng

C for Engineers and Scientists is a complete and authoritative introduction to computer programming in C, with introductions to object-oriented programming in C++, and graphical plotting and numerical computing in C/C++ interpreter Ch® and MATLAB® for applications in engineering and science. This book is designed to teach students how to solve engineering and science problems using C. It teaches beginners with no previous programming experience the underlying working principles of scientific computing and a disciplined approach for software development. All the major features of C89 and C99 are presented with numerous engineering application examples derived from production code. The book reveals the coding techniques used by the best C programmers and shows how experts solve problems in C. It is also an invaluable resource and reference book for seasoned programmers.

C for Engineers and Scientists focuses on systematic software design approach in C for applications in engineering and science following the C99, the latest standard developed by the ANSI and ISO C Standard Committees which resolved many deficiencies of C89 for applications in engineering and science. The book includes a companion CD which contains the C/C++ interpreter Ch for use as an instructional tool as well as Visual C++ and gcc/g++ compilers to help teaching and learning of C and C++. Ch presents a pedagogically effective user-friendly interactive computing environment for the simplest possible teaching/learning computer programming in C so that the students can focus on improving their program design and problem solving skills.

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Chapter 18 Getting Started with Ch
Chapter 19 Computational Arrays and Matrix Computations
Chapter 20 Two and Three-Dimensional Plotting
Chapter 21 Advanced Numerical Analysis
Part 4: Introduction to MATLAB®
Chapter 22 Introduction to MATLAB®
Part 5: Introduction to Fortran 90
Chapter 23 Introduction to Fortran

INTERNATIONAL EDITION

C PROGRAMMING FOR ENGINEERING AND COMPUTER SCIENCE (B.E.S.T Series)

by H H Tan, Morrison Knudsen Corporation, and T.B. D'Orazio

1999 / 600 pages / Softcover
ISBN: 9780079136787 [with 3.5" Disk]
ISBN: 9780071167888 [IE with 3.5" Disk]

http://highered.mcgraw-hill.com/sites/0079136788

This book was developed to address the difficulty beginning students often find reading computer language texts. Tan and D'Orazio aim to make the process of learning a first language easier and fun, by involving readers in their text, holding their interest, and getting them to think about the meaning and uses of C code. The authors accomplish this goal by using a question and answer style, where the reader's thought processes are stimulated by the same questions about code that students themselves often ask. Tan and D'Orazio answer these questions clearly and directly, focusing the reader's attention on the important issues of C programming.

CONTENTS

1 Computers and Computing Fundamentals
2 Getting Started with C
3 The Basics of C
4 Beginning Decision Making and Looping
5 Functions
6 Arrays and Index Variables
7 Character Arrays and Strings
8 Pointers, Addresses, and Special Variable Types
9 Introduction to C++

Java Programming/CSI

INTERNATIONAL EDITION

NEW

JAVA PROGRAMMING A Comprehensive Introduction

by Herbert Schildt , Dale Skrien, Colby College

2013 (January 2012) / Softcover / 1216 pages
ISBN: 9780078022074 (IE)

www.mhhe.com/schildt

Java Programming: A Comprehensive Introduction is designed for an introductory programming course using Java. This text takes a logical approach to the presentation of core topics, moving step-by-step from the basics to more advanced material, with objects being introduced at the appropriate time. The book is divided into three parts:

❖ Part One covers the elements of the Java language and the fundamentals of programming. An introduction to object-oriented design is also included.

❖ Part Two introduces GUI (Graphical User Interface) programming using Swing.

❖ Part Three explores key aspects of Java's API (Application Programming Interface) library, including the Collections Framework and the concurrency API.

Herb Schildt has written many successful programming books in Java, C++, C, and C#. His books have sold more than three million copies. Dale Skrien is a professor at Colby College with degrees from the University of Illinois-Champaign, the University of Washington, and St. Olaf College. He's also authored two books and is very active in SIGCSE.

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26. Networking with java.net
27. The Concurrency Utilities
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Appendix B: An Introduction to Regular Expressions
Appendix C: Answers to Selcted Exercises

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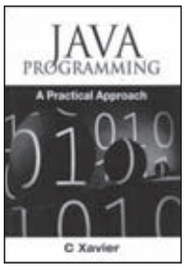

JAVA PROGRAMMING
A Practical Approach

by C Xavier, HCL Technologies Ltd, Chennai

2011 (February 2011) / Softcover / 852 pages
ISBN: 9780070702097

(A McGraw-Hill India TItle)

Java Programming: A Practical Approach is intended for students of all computer science and information technology degree and diploma courses, taking a paper on Java programming. This book is written in a lucid style explaining every single concept with apt examples, the right illustrations accompanying a program and the best possible laboratory exercises. Hundreds of Lab Projects and Industry Projects make the book handy for students as well as practitioners.

FEATURES

- Pure object-oriented approach
- Detailed explanations for Windows, Graphical User Interface and Remote Method Invocation
- Swings and AWT given equal importance
- Applets and Windows given balanced approach
- Elaborate coverage of Networking and Socket Programming with complete examples
- Detailed real-life examples with table structures, connectivity and processing of database data in the chapter on JDBC
- Real-life examples on Servlets
- Provides various program designing steps, for example, Problem Specification, High Level Design, Methods Design, Test Cases, Output along with screenshots to demonstrates the implementation of examples and Projects
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12. AWT Text Components and Menu
13. Swings
14. Events and Exception Handling
15. Multithreading
16. Remote Method Invocation
17. Java Database Connectivity
18. Java Servlet
19. Network Programming

INTERNATIONAL EDITION

AN INTRODUCTION TO OBJECT-ORIENTED PROGRAMMING WITH JAVA
5th Edition

by C. Thomas Wu (Otani), Naval Postgraduate School

2010 (March 2009) / Softcover / 1008 pages
ISBN: 9780073523309
ISBN: 9780071283687 [IE]

www.mhhe.com/wu

An Introduction to Object-Oriented Programming with Java takes a full-immersion approach to object-oriented programming. Proper object-oriented design practices are emphasized throughout the book. Students learn how to use the standard classes first, then learn to design their own classes.

Wu uses a gentler approach to teaching students how to design their own classes, separating the coverage into two chapters. GUI coverage is also located independently in the back of the book and can be covered if desired.

Wu also features a robust set of instructors' materials including PowerPoint slides, code samples, and quiz questions.

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Appendix D UML Diagrams

International edition

JAVA PROGRAMMING: FROM THE GROUND UP

by Ralph Bravaco, Stonehill College, and Shai Simonson, Stonehill College

2010 (January 2009) / Softcover / 928 pages
ISBN: 9780073523354
ISBN: 9780071271264 [IE]

www.mhhe.com/bravaco

Java Programming, From The Ground Up, with it's flexible organization, teaches Java in a way that is refreshing, fun, interesting and still has all the appropriate programming pieces for students to learn. The motivation behind this writing is to bring a logical, readable, entertaining approach to keep your students involved. Each chapter has a Bigger Picture section at the end of the chapter to provide a variety of interesting related topics in computer science. The writing style is conversational and not overly technical so it addresses programming concepts appropriately. Because of the flexibile organization of the text, it can be used for a one or two semester introductory Java programming class, as well as using Java as a second language.

The text contains a large variety of carefully designed exercises that are more effective than the competition.

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Appendix E: Package

JAVA IN TWO SEMESTERS
3rd Edition

by Quentin Charatan, and Aaron Kans, University of East London

2009 (October 2009) / 600 pages / Softcover
ISBN: 9780077122676
(McGraw-Hill UK Title)

www.mcgraw-hill.co.uk/textbooks/charatan

The third edition of the successful textbook, Java in Two Semesters, provides a comprehensive treatment of object-oriented programming, covering both introductory material and the more advanced topics of a second level course.

Thoroughly revised and updated to reflect the latest release of Java language, the new edition covers the most recent developments in Java programming.

The book's comprehensive coverage allows it to be tailored to suit a range of Java modules of differing lengths and levels and can also serves as an excellent student reference text.

Part One takes the student through simple programming concepts, such as variables, control structures and arrays before moving on to focus on classes and objects, inheritance and polymorphism.

Part Two introduces topics such as advanced graphics programming, exceptions, threads, file handling, network programming and programming for mobile devices.

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Advanced graphics programming
Enhancing the user interface
Working with files
Multi-threaded programs
Packages
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Java in a network environment
Mobile Java
Java in context

OBJECT ORIENTED PROGRAMMING WITH JAVA

by Raj Kumar Buyya, Department of Computer Science & Software, Engineering, The University of Melbourne, Australia.

2009 / Softcover
ISBN: 9780070669086
(McGraw-Hill India Title)

This book provides a detailed discussion on Object Oriented Programming with Java. It covers the complete spectrum from basic JAVA programming to the advanced concepts. Replete with numerous solved examples and practical problems, it offers a balanced treatment of theory and practice for developing desktop, enterprise, and web applications.

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Chapter 1. Software Development and Object-Oriented Programming Paradigms
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Chapter 16. Advanced GUI Programmingand Applets
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Chapter 18. JDBC Programming
Chapter 19. Java Servlet Programming
Chapter 20. JavaServer Pages and Java Beans

PROGRAMMING WITH JAVA: A PRIMER
4th Edition

by E Balagurusamy

2009 (October 2009) / Softcover / 470 pages
ISBN: 9780070141698
(McGraw-Hill India Title)

www.mhhe.com/balagurusamy/java4

This book gives an excellent account of the fundamentals of JAVA programming. The language concepts are aptly explained in simple and easy-to-understand style, supported with examples, illustrations and programming & debugging exercises

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Chapter 1: Fundamentals of Object-Oriented Programming
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Chapter 8: Classes, Objects and Methods
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Chapter 10: Interfaces: Multiple Inheritance
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INTERNATIONAL EDITION

OBJECT-ORIENTED DESIGN USING JAVA

by Dale Skrien, Colby College

2009 (January 2008) / 416 pages / Hardcover
ISBN: 9780072974164
ISBN: 9780071263870 [IE]

www.mhhe.com/skrien

The primary strength of Object-Oriented Design Using Java is that it has one of the best presentations of problem solving using patterns available. It has received rave reviews from instructors, and has been class tested at a number of schools where the response from both professors and students has been extremely positive. This book is intended for the object-oriented programming design course where UML is used extensively for design and notation. It has been especially designed to be accessible to students and is full of real-world examples, case studies, and other aids to assist student understanding.

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Chapter 1: Elegance in Object-Oriented Design and Implementation
Chapter 2: Fundamentals of Object Orientation
Chapter 3: Elegance and Implementation Inheritance
Chapter 4: Elegance and Methods
Chapter 5: Elegance and Classes
Chapter 6: Simple Case Study of a Money Class
Chapter 7: Introduction to Design Patterns
Chapter 8: Figure-Drawing Application Case Study
Chapter 9: Language Parser Case Study
Appendix A: An Introduction to UML
Appendix B: Coding Conventions and Javadoc comments

INTERNATIONAL EDITION

INTRODUCTION TO PROGRAMMING WITH JAVA: A Problem Solving Approach

by John Dean, Park University-Parkville, and Ray Dean, University Of Kansas-Lawrence

2008 / Hardcover / 840 pages
ISBN: 9780073047027
ISBN: 9780071269674 [IE]

www.mhhe.com/dean

This book teaches the reader how to write programs using Java. It does so with a unique approach that combines fundamentals first with objects early. The book transitions smoothly through a carefully selected set of procedural programming fundamentals to object-oriented fundamentals. During this early transition and beyond, the book emphasizes problem solving. For example, Chapter 2 is devoted to algorithm development, Chapter 8 is devoted to program design, and problem-solving sections appear throughout the book. Problem-solving skills are fostered with the help of an interactive, iterative presentation style: Here's the problem. How can we solve it? How can we improve the solution? Some key features include: • A conversational, easy-to-follow writing style. • Many executable code examples that clearly and efficiently illustrate key concepts. • Extensive use of UML class diagrams to specify problem organization. • Simple GUI programming early, in an optional standalone graphics track. • Well-identified alternatives for altering the book's sequence to fit individual needs. • Well-developed projects in six different academic disciplines, with a handy summary. • Detailed customizable PowerPointTM lecture slides, with icon-keyed hidden notes. The authors have done a superb job of organizing the various chapters to allow the students to enjoy programming in Java from day one. I am deeply impressed with the entire textbook. I would have my students keep this text and use it throughout their academic career as an excellent Java programming source book. – Benjamin B. Nystuen, University of Colorado at Colorado Springs The authors have done a great job in describing the technical aspects of programming. The authors have an immensely readable writing style. I have an extremely favorable impression of Dean and Dean's proposed text. – Shyamal Mitra, University of Texas at Austin The overall impression of the book was that it was "friendly" to read. I think this is a great strength, simply because students reading it, and especially students who are prone to reading to understand, will appreciate this approach rather than the regular hardcore programming mentality. – Andree Jacobson, University of New Mexico

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Chapter 11. Type Details and Alternate Coding Mechanisms.
Chapter 12. Composition and Inheritance
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INTERNATIONAL EDITION

A COMPREHENSIVE INTRODUCTION TO OBJECT-ORIENTED PROGRAMMING WITH JAVA

by C. Thomas Wu (Otani), Naval Postgraduate School

2008 (February 2007) / Softcover / 256 pages
ISBN: 9780073317083 (with ARIS Bind-in card)
ISBN: 9780071276108 [IE]

www.mhhe.com/wu

An Introduction to Object-Oriented Programming with Java provides an accessible and technically thorough introduction to the basics of programming using java. The text takes a truly object-oriented approach. Objects are used early so that students think in objects right from the beginning.

CONTENTS

0 Introduction to Computers and Programming Languages.
1 Introduction to Object-Oriented Programming and Software Development.
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17 Generics.
18 List ADT.
19 Queue ADT.
20 Stack ADT

INTERNATIONAL EDITION

JAVA 5.0 PROGRAM DESIGN

By James P. Cohoon, and Jack W. Davidson, both of University Of VA-Charlottesville

2006 / 920 pages / Softcover
ISBN: 9780073250304
ISBN: 978007131281-3 [IE, 1-color text]

www.mhhe.com/cohoon

Java 5.-0 Program Design is about the fundamentals of programming and software development using Java. It is targeted for a first programming course and has been designed to be appropriate for people from all disciplines. The authors assume no prior programming skills and use mathematics and science at a level appropriate to first-year college students. The breadth of coverage and the arrangement of the chapters provide flexibility for the instructor in what and when topics are introduced. Key to Java 5.0 Program Design is an introduction to problem solving. The basics of problem-solving techniques are introduced in chapter one and then reinforced during the explanations of Java programming and design. In addition, software engineering design concepts are introduced via problem studies and software projects.

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1 Background
2 Java Basics
3 Using Objects
4 Being Classy
5 Decisions
6 Iteration.
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11 Recursive Problem Solving
12 Threads
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Appendix B: Number Representation.
Appendix C: Formatted I/O.
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Appendix E: Standard Java Packages

INTERNATIONAL EDITION

AN INTRODUCTION TO COMPUTER SCIENCE USING JAVA
2nd Edition

by Samuel N Kamin, and Dennis Mickunas, both of the University of Illinois, Champaign

2002 / 784 pages / softcover
ISBN: 9780071122320 [IE]

www.mhhe.com/kamin

An Introduction to Computer Science Using Java by Kamin and Mickunas is designed for a CS1/Intro to Programming course in which java is used. The authors emphasize the process of programming, which teaches students how to develop correct, efficient, well-structed and stylish programs. In this new edition, the authors put more emphasis on object-oriented programming, greatly expanding their coverage and using a more graphical approach. At the same time, the text has retained its coverage of the traditionally fundamental computer science topics such as the development of correct programs, iteration, arrays, recursion, and algorithm analysis. This blend prepares students to become sophisticated computer programmers, not simply JAVA programmers.

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Appendix D Class Diagrams

INTERNATIONAL EDITION

OBJECTS HAVE CLASS
An Introduction to Programming with Java with CD-ROM and OLC

by David A. Poplawski, Michigan Technological University

2002

ISBN: 9780071124065 [IE]

www.mhhe.com/poplawski

Objects Have Class!: An Introduction to Programming with Java is intended for the CS1 course on computer programming. It assumes no prior programming skills and takes an intuitive, user-friendly approach to getting students started writing their own object-oriented programs. The philosophy the book espouses is that programming ought to be fun. In keeping with this, the author uses a graphically driven presentation to quickly engage the student. The graphical approach facilitates a very early introduction to the definition and use of objects, so students have the opportunity to work from within an object-oriented paradigm for the entire semester. The author's conversational style and pedagogically sound presentation combine with his graphical approach to produce an innovative and attractive invitation to learning basic programming skills.

CONTENTS

1 Computers, Programs, and Java.
2 Writing Programs.
3 Getting Started.
4 Variables, Expressions, and Assignment.
5 Defining and Creating Multiple Objects.
6 Interacting Objects and Events.
7 Making Decisions.
8 Program Testing.
9 Simple Class Extension.
10 Repetition,
11 Arrays.
12 Application Programs.
13 Input and Output.
14 Graphical User Interface Classes.
15 Class Hierarchies.
16 Abstract Data Types and Linked Data Structures.
17 Introduction to Recursion.
Appendix A Java Reserved Words.
Appendix B Java Primitive Types.
Appendix C The Java Development Kit.
Appendix D The Animator

INTERNATIONAL EDITION

JAVA
An Object-Oriented Language

by Michael Smith, University of Brighton

1999 / 450 pages / softcover

ISBN: 9780071169141 [IE]

(McGraw-Hill UK Title)

This book teaches an object-oriented approach to program development using the programming language Java. It provides complete coverage, beginning with an introduction to programming for those with no programming experience and progressing to a full and comprehensive treatment of object oriented software design and implementation. There are numerous examples to illustrate programming ideas and concepts. These examples represent complete programs which readers may run for themselves. The examples provide a practical illustration of how the language may be used. At the conclusion of each chapter, a set of self-assessment exercises and programming exercises are provided to allow the reader to review and practice the material presented.

CONTENTS

Introduction to Programming.
Introductory Concept.
Fundamentals of Program Instructions.
Solving a Simple Problem Using Java.
The Full Language: Introduction to Design Using an OO Methodology.
Introduction - Part 1 Introduction - Part 2 The Class: Class Variables and Methods.
Wrapper Classes.
Parameters to Methods.
Windowed Programming.
Arrays. Inheritance.
Polymorphism.
The Game of Checkers.
Exceptions.
Clonable Objects.
File I/O.
Object Serialization

SCHAUM'S OUTLINE OF PRINCIPLES OF COMPUTER SCIENCE

by Paul Tymann, Rochester Inst Of Technology, Carl Reynolds, Rochester Inst Of Technology

2008 (January 2008) / Softcover / 384 pages
ISBN: 9780071460514

(A Schaum's Publication)

Schaum's Outline of Principles of Computer Science provides a concise overview of the theoretical foundation of computer science. It also includes focused review of object-oriented programming using Java.

CONTENTS

Introduction to Computer Science
Definition
Algorithms
A Brief History Lesson
A Roadmap
Algorithms
What are they, what are they good for?
Developing an algorithm
Efficiency
Formal models of computation
Hardware
Binary and other number systems
Boolean Logic
Gates
Computer Organization
The VonNeumann Model
Control Unit
Registers
ALU
Memory
Software
Languages
Compiled, interpreted
Virtual machines
OOP, Scripting
Programming in Java
Types, operators, identifiers
Classes, objects
Basic control structures
Methods
Operating Systems
What are they?
Multi-tasking, multi-user
Scheduling
Networking
Basic Concepts
The Internet
TCP/IP
The world wide web
Social Issues
Privacy
Viruses
Hacking
Encryption
Can computers kill?

SCHAUM'S OUTLINE OF PROGRAMMING WITH JAVA
2nd Edition

by John R Hubbard, University of Richmond

2004 / Softcover / 352 pages
ISBN: 9780071420402

(A Schaum's Publication)

Introduced by Sun Microsystems in 1995, Java transformed the way people use the Internet. This up-to-the-minute study guide on programming with Java simplifies and demonstrates the central concepts of the program through examples and solved problems. Updated to reflect the newest version of Java, Schaum's Outline of Programming with Java, Second Edition addresses the program's new data structures and language additions. The book supports the major computer textbooks being used in college classrooms across the country.

C# Programming

INTERNATIONAL EDITION

PROGRAMMING IN VISUAL C# 2008
3rd Edition

by Julia Case Bradley, Mt San Antonio College, and Anita C. Millspaugh, Mt San Antonio College

2010 (January 2009) / Softcover / 704 pages
ISBN: 9780073517216
ISBN: 9780070172814 [IE]

www.mhhe.com/c#2008

Be sharp. Learn C#. Programming in Visual C# 2008 gives you a fresh and easily accessible approach to learning programming concepts using Visual C# for 2008, one of the most pervasive programming languages in the job market today. Best-selling authors Bradley and Millspaugh apply their proven pedagogy, incorporating basic concepts of programming, problem solving, and programming logic and design techniques to teach a mastery of Visual C# at an introductory level. A hands-on approach, Programming in Visual C# 2008 lets you begin programming in the very first chapter. Thought-provoking feedback questions and in-chapter tips are dispersed throughout so students can reflect on a topic introduced and evaluate their understanding of the details. Comprehensive Hands-On Programming Examples found in each chapter reinforce the programming logic and techniques learned in the chapter.

CONTENTS

Chapter 1 Introduction to Programming and Visual C# 2008 1
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PROGRAMMING IN C#
3rd Edition

E Balagurusamy, Member,Union Public Commission,Dholpur House, Shahjahan Road,New Delhi

2010 (June 2010) / Softcover / 550 pages
ISBN: 9780070702073
(McGraw-Hill India Title)

This revised edition maintains the lucid flow and continuity that have been hallmarks of this book. This book takes the student through a step-by-step process, starting from simple programming problems to more complex and difficult ones. The content of this new edition has been enriched with the inclusion of new topics, projects and sample programs and offers hands-on practice to students at developing real-life C# applications.

CONTENTS

1. Introducing C#
2. Understanding .NET: The C# Environment
3. Overview of C#
4. Literals, Variables and Data Types
5. Operators and Expressions
6. Decision Making and Branching
7. Decision Making and Looping
8. Methods in C#
9. Handling Arrays
10. Manipulating Strings
11. Structures and Enumerations
12. Classes and Objects
13. Inheritance and Polymorphism
14. Interface: Multiple Inheritance
15. Operator Overloading
16. Delegates and Events
17. Managing Console I/O Operations
18. Managing Errors and Exceptions
19. Multithreading in C#
20. WindowForms and Web-based Application Development on .NET
Appendix A: Minor Project 1: Project Planner
Appendix B: Minor Project 2: Task Actions
Appendix C: Major Project: Voting Control for Asp.Net
Appendix D: The CLR and the .NET Framework
Appendix E: Building C# Applications

C++ Programming/CS1

NEW

OBJECT ORIENTED PROGRAMMING WITH C++
5th Edition

by E Balagurusamy, Chairman, EBG Foundation, Coimbatore, India

2011 (June 2011) / Softcover / 584 pages
ISBN: 9780071072830
(McGraw-Hill India Title)

www.mhhe.com/balagurusamy/oop5

Designed for novice programmers, the book in its fifth edition continues to maintain its simplicity and lucid presentation of C++ concepts using object-oriented programming. This edition is refreshed with enhanced topical coverage, and new solved programs, exercises and projects.

FEATURES

❖ Topical inclusions—Recursion, Preprocessor, Virtual Constructors and Destructors, Exceptions in Constructors and Destructors, Exceptions in Operator Overloaded Functions

❖ Topical elaborations—Dynamic Memory Management, Overloading, Structure and Union, Storage Classes, Abstract classes, Type casting and RTTI

❖ Includes two projects—Telephone Billing System (Major) and Typing Tutor (Minor) to provide hands-on approach

❖ Offers an updated and refreshed C++ Proficiency Test along with answers based on technical interview question pattern

CONTENTS

1.Principles of Object-Oriented Programming
2.Beginning with C++
3.Tokens, Expressions and Control Structures
4.Functions in C++
5.Classes and Objects
6.Constructors and Destructors
7.Operator Overloading and Type Conversions
8.Inheritance: Extending Classes
9.Pointers, Virtual Functions and Polymorphism
10.Managing Console I/O Operations
11.Working with Files
12.Templates
13.Exception Handling
14.Introduction to the Standard Template Library
15. Manipulating Strings
16.New Features of ANSI C++ Standard
17.Object-Oriented Systems Development
Appendix D : Glossary of ANSI C++ Keywords
Appendix E : C++ Operator Precedence
Appendix F : Points to Remember
Appendix G : Glossary of Important C++ and OOP Terms
Appendix H : C++ Proficiency Test
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INTERNATIONAL EDITION

PROGRAMMING IN C++: LESSONS AND APPLICATIONS

by Tim B. D'Orazio, San Francisco State University

2004 / 976 pages
ISBN: 9780072424126 (Out-of-Print)
ISBN: 9780071272452 [IE]

http://highered.mcgraw-hill.com/sites/0072424125

D'Orazio's Programming in C++: Lessons and Applications provides an accessible introduction to programming in C++. It teaches the C++ language and object-oriented design to students with no previous programming experience. The focus is on developing programs for solving a variety of problems. Each chapter of the book is divided into two parts--Lessons and Applications. The Lessons teach C++ language elements and simple programming techniques, and the Applications teach program design. A step-by-step methodology for program development is presented early in the text and reinforced throughout with the help of the application examples and over thirty case studies.

CONTENTS

1 Computers and Computing Fundamentals.
2 Getting Started - Program Structure, Printing, and Comments.
3 The Basics of C++ - Variables, Arithmetic Operations, Math Functions, Input/Output, Characters, Objects, and Classes.
4 Decision Making.
5 Loops.
6 Functions.
7 One-Dimensional Numeric Arrays.
8 Multi-Dimensional Numeric Arrays, Arrays as Data Members, Arrays of Objects.
9 Strings.
10 The C++ Sring Class.
11 More About Classes, Objects, and Object-Oriented Design.
12 Inheritance, Virtual Functions, and Polymorphism.
13 Data Structures, Recursion, and Other Topics.
14 Templates and the C++ Standard Template Library

SCHAUM'S OUTLINE OF PROGRAMMING WITH C++
2nd Edition

by John R Hubbard, University of Richmond, Virginia

2000 / 422 pages / Softcover
ISBN: 9780071353465

(A Schaum's Publication)

Schaum's Outline of Programming with C++, 2nd Edition is an update of the highly successful first edition. Due to the recognition of a Standard version of C++ by the ISO in 1998, the version of the language present in the first edition of this book is now outdated and incomplete. A revision updating the language will allow us to obtain the validation of the ISO and is likely to improve sales of the book, which will be in high demand by professional programmers and students in need of learning how to program with the approved ISO standard. Additionally, since ETS recently changed the programming language for the Advanced Placement Computer Science Exam from Pascal to C++ many students will be looking for a guide to C++.

CONTENTS

Chapter 1: Elementary C++ Programming.
Chapter 2: Fundamental Types.
Chapter 3: Selection.
Chapter 4: Iteration.
Chapter 5: Functions.
Chapter 6: Arrays.
Chapter 7: Pointers and References.
Chapter 8: C-Strings.
Chapter 9: Standard C++ Strings.
Chapter 10: Classes.
Chapter 11: Overloading Operators.
Chapter 12: Composition and Inheritance.
Chapter 13: Templates and Iterators.
Chapter 14: Standard C++ Vectors.
Chapter 15: Container Classes.
Appendices:
A: Character Codes.
B: Standard C++ Keywords.
C: Standard C++ Operators.
D: Standard C++ Container Classes.
E: Standard C++ Generic Algorithms.
F: The Standard C Library.
G: Hexadecimal Numbers.
H: References.

SCHAUM'S OUTLINE OF FUNDAMENTALS OF COMPUTING WITH C++

by John Hubbard, University of Richmond, Virginia

1998 / 368 pages / softcover
ISBN: 9780070308688

(A Schaum's Publication)

This Schaum's Outline will cover all the material and topics usually taught in the first-year, two-semester survey course in computer science required of all Computer Science majors. It also covers the syllabus of AP Computer Science courses for secondary school students. Standard textbook devote most of their text to theory, the emphasis on examples and solved problems in the Outline will make it a valuable supplementary product.

CONTENTS

Introduction to Computing.
Logic.
Control Structures.
Algorithms.
Text Processing.
Arrays.
Data Abstraction.
Inheritance.
Polymorphism.
Containers.
Recursion.
Mathematical Induction.
Sorting.
Complexity Analysis.
Hash Tables.
Linked Lists.
Trees.
External Structures.
Graphs.
Simultation.
Appendices: A: C++ Syntax.
B: Standard C++ Libraries.
C: C++ Syntax.
D: Logarithms.
E: Factorials, Permutations, and Combinations.
F: Stirling's Formula.
G: Catalan Numbers.
H: Counting Principles.
I: Recurrence Relations.
J: References.

FORTRAN Programming

SCHAUM'S OUTLINE OF PROGRAMMING WITH FORTRAN 77

by William Mayo and Martin Cwiakala, Rutgers University

1995 / 352 pages / softcover

ISBN: 9780070411555

(A Schaum's Publication)

Students can master FORTRAN 77 programming in less time with this powerful study aid. They'll learn plenty of example code and debugging shortcuts and find clear explanations of algorithm development, program design, control structures, loops, arrays, subprograms and data files. They're sure to find this book the perfect tool for preparing for graduate or professional exams.

Python Programming

INTERNATIONAL EDITION

EXPLORING PYTHON

by Timothy A. Budd, Oregon State University

2010 (February 2009) / Softcover / 288 pages

ISBN: 9780073523378

ISBN: 9780071267533 [IE]

www.mhhe.com/buddpython

Exploring Python takes an active learning approach which engages the student as an equal partner in the process of learning the fun, educational, and powerful programming language. This approach instills habits that students will carry with them throughout their programming career and helps them retain and use the information they have learned.

Tim Budd is one of the best-known authors in Computer Science and has a reputation for producing writing texts along the leading edge of the discipline. Exploring Python provides an accessible and reliable introduction into programming with the Python language.

CONTENTS

Part I. Basic features of Python
1. Interactive Execution
2. Programs in Python
3. Functions
4. Strings
5. Dictionaries
6. Files
7. Classes
8. Functional Programming
9. Object-Oriented Programming
10. Modules
11. Advanced Features
Part II.
12. GUI programming with Tkinter
13. Web-based Applications
14. A Blog
15. A Wiki web
16. A Suduko Solver
17. XML parsing with the iTunes database
18. Data Structures
Appendices
A. Python Reference Manual
B. How to Learn a Second Programming Language

Algorithms and Data Structures

Algorithms

INTERNATIONAL EDITION

ALGORITHMS

by Sanjoy Dasgupta, University of California–San Diego, Christos H. Papadimitriou, University of California–Berkeley, and Umesh Vazirani, University of California–Berkeley

2008 (September 2006) / Softcover / 336 pages

ISBN: 9780073523408

ISBN: 9780071259750 [IE]

www.mhhe.com/dasgupta

An alternative to the comprehensive algorithm texts in the market. This text, extensively class-tested over a decade at UC Berkeley and UC San Diego, explains the fundamentals of algorithms in a story line that makes the material enjoyable and easy to digest. Emphasis is placed on understanding the crisp mathematical idea behind each algorithm, in a manner that is intuitive and rigorous without being unduly formal. Features include: The use of boxes to strengthen the narrative: pieces that provide historical context, descriptions of how the algorithms are used in practice, and excursions for the mathematically sophisticated. Carefully chosen advanced topics that can be skipped in a standard one-semester course, but can be covered in an advanced algorithms course or in a more leisurely two-semester sequence. An accessible treatment of linear programming introduces students to one of the greatest achievements in algorithms. An optional chapter on the quantum algorithm for factoring provides a unique peephole into this exciting topic. "Algorithms" is an outstanding undergraduate text, equally informed by the historical roots and contemporary applications of its subject. Like a captivating novel, it is a joy to read. Tim Roughgarden Stanford University

CONTENTS

0 Prologue.
1 Algorithms with Numbers.
2 Divide-and-conquer algorithms.
3 Decompositions of graphs.
4 Paths in graphs.
5 Greedy algorithms.
6 Dynamic Programming.
7 Linear Programming and Reductions.
8 NP-complete Problems.
9 Coping with NP-completeness.
10 Quantum Algorithms.

INTRODUCTION TO THE DESIGN AND ANALYSIS OF ALGORITHMS

by R. C. T. Lee, Shian-Shyong Tseng, Ruei-Chuan Chang, and Y. T. Tsai

2005 / 752 pages / Softcover
ISBN: 9780071243469
(Asian Publication)

Communication network design, VLSI layout and DNA sequence analysis are important and challenging problems that cannot be solved by naïve and straightforward algorithms. Thus, it is critical for a computer scientist to have a good knowledge of algorithm design and analysis.

This book presents algorithm design from the viewpoint of strategies. Each strategy is introduced with many algorithms designed under the strategy. Each algorithm is presented with many examples and each example with many figures.

In recent years, many approximation algorithms have been developed. Introduction to the Design and Analysis of Algorithms presents two important concepts clearly: PTAS and NPO-complete. This book also discusses the concept of NP-completeness before introducing approximation algorithms. Again, this is explained through examples which make sure that the students have a definite idea about this very abstract concept.

In addition, this book also has a chapter on on-line algorithms. Each on-line algorithm is introduced by first describing the basic principle behind it. Amortized analysis is a new field in algorithm research. In this book, detailed descriptions are given to introduce this new and difficult-to-understand concept.

This book can be used as a textbook by senior undergraduate students or master level graduate students in computer science.

CONTENTS

Preface.
1 Introduction.
2 The complexity of algorithms and the lower bounds of problems.
3 The greedy method.
4 The divide-and-conquer strategy.
5 Tree searching strategies.
6 Prune-and-search.
7 Dynamic programming.
8 The theory of NP-completeness.
9 Approximation algorithms.
10 Amortized analysis.
11 Randomized algorithms.
12 On-line algorithms.
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Subject index.

Data Structures In Java

SCHAUM'S OUTLINE OF DATA STRUCTURES WITH JAVA
2nd Revised Edition

by John R. Hubbard, University Of Richmond

2009 (May 2009) / Softcover / 333 pages
ISBN: 9780071611619
(A Schaum's Publication)

Fortunately for you, there's Schaum's Outlines. More than 40 million students have trusted Schaum's to help them succeed in the classroom and on exams. Schaum's is the key to faster learning and higher grades in every subject. Each Outline presents all the essential course information in an easy-to-follow, topic-by-topic format. You also get hundreds of examples, solved problems, and practice exercises to test your skills.

CONTENTS

Chapter 1. Advanced Java
Chapter 2. Object-Oriented Programming
Chapter 3. Abstract Data Types
Chapter 4. Generics in java
Chapter 5. Linked Structures
Chapter 6. Stacks
Chapter 7. Queues
Chapter 8. Collections
Chapter 9. Lists
Chapter 10. Hash Tables
Chapter 11. Recursion
Chapter 12. Trees
Chapter 13. Binary Trees
Chapter 14. Search Trees
Chapter 15. Heaps and Priority Queues
Chapter 16. Sorting
Chapter 17. Sets
Chapter 18. Graphs

Data Structures In C

STRUCTURING DATA AND BUILDING ALGORITHMS
An ANSI-C Based Approach
Updated Edition

by Ian Chai, and Jonathon David White

2010 (August 2011) / 448 pages / Softcover
ISBN: 9780071327503

(Asian Publication)

The famous mathematician, physician, theologian and philosopher Sir Isaac Newton (1642–1727) once wrote, "If I had seen further [than certain other people], it is by standing on the shoulders of giants." This is very true in computer programming as well. Imagine if all programmers had to discover for themselves by trial and error how to solve common problems in programming. It is much better to learn the solutions that other programmers have already discovered and build upon that foundation.

This book is about those foundational solutions. It describes how to structure data and build algorithms to solve common programming tasks. Some of these techniques have names that come from ordinary non-computer life – e.g. stacks, queues and sorting – and others have names that might be completely unfamiliar to a new student of programming – e.g. recursion, backtracking and arrays. Occasionally, a new tool is discovered, or at least, refined, but most of the techniques in this book are standards in the programmer's tool chest.

Unlike the majority of textbooks in the field, this book takes a "code first" approach. After a brief introduction of the concepts, a short complete ANSI-C program is presented for students to analyse. A number of questions arising from the code are then posed and answered in the Socratic format. In this way, the reader will not only become fluent in the concepts but also in the nuts and bolts of translating these concepts into functioning, efficient standard C code. Variable pointer diagrams are developed and used extensively to aid understanding of the more complex data structures and their manipulation.

"A picture is worth a thousand words," as the saying goes, and what more a movie? The animation movies on the accompanying CD-ROM illustrate different data structures and algorithms, making concepts which may be difficult to grasp on paper easier to understand.

CONTENTS

Part 1: Structuring Data
1 Structuring Data: Variables and Pointers
2 Structuring Data: Arrays and Records
3 Structuring Data: Linked Lists
4 Structuring Data: Trees
5 Structuring Data: Graphs and Sets
Part 2: Building Algorithms
6 Building Algorithms: Basic Techniques
7 Building Algorithms: Key Concept
Part 3: Algorithms and Data Structures in Action
8 Searching
9 Sorting
10 NP-hard Problems
Part 4: Theory of Computing
11 Finite State Automata
12 Turing Machines
Appendix: Annotated Bibliography
Answers to Problems
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Data Structures In C++

INTERNATIONAL EDITION

DATA STRUCTURES AND THE STANDARD TEMPLATE LIBRARY

by William Collins, Lafayette College

2003 / 688 pages / Softcover
ISBN: 9780071150972 [IE]

www.mhhe.com/collins

Data Structures and the Standard Template Library by William Collins teaches the fundamentals of Data Structures and their implementations. It uses C++ as the language of instruction. Most of the data structures are provided in the Standard Template Library (STL), which students will be able to use in their further coursework and beyond. To further students' understanding of implementation issues, alternative implementation (other than the STL) are also discussed. Hands-on learning is promoted throughout the text by the use of Programming Projects and labs. Programming projects, at the end of each chapter, allow students to develop and implement their own data structures or to extend or apply data structures introduced in the chapter. Additionally, optional labs accompany the text and allow students to practice by giving them opportunities to code. These labs can be used in many different ways such as in a closed lab, in an open lab, or for optional homework assignments.

CONTENTS

1 Important Features in C++.
2 Storage Structures for Container Classes.
3 Introduction to Software Engineering.
4 Introduction to Recursion.
5 Vectors and Deques.
6 Lists.
7 Queues and Stacks.
8 Binary Trees and Binary Search Trees.
9 AVL Trees.
10 Red-Black Trees.
11 Priority Queues.
12 Sorting.
13 Searching and the Hash Classes.
14 Graphs, Trees, and Networks.
Appendix 1 Mathematical Background.
Appendix 2 The String Class.
Appendix 3 Polymorphism

INTERNATIONAL EDITION

SCHAUM'S OUTLINE OF DATA STRUCTURES WITH C++

by John R Hubbard, University of Richmond

2000 / 407 pages / Softcover

ISBN: 9780071183581 [IE]

(A Schaum's Publication)

(International Edition is not for sale in Japan.)

Over 119,000 computer science majors and advanced placement students enroll yearly in required Data Structures/Computer Science II classes, and C++ is the language they use. Adhering to the new ISO standard for C++ (which has rendered previous C++ guides obsolete) Schaum's presents the most up-to-date study guide on Data Structures, simplifying and demonstrating difficult concepts through solved problems and examples.

CONTENTS

Chapter 1: Review of C++.
Chapter 2: Pointers and Arrays.
Chapter 3: Class.
Chapter 4: Recursion.
Chapter 5: Stacks.
Chapter 6: Queuses.
Chapter 7: Lists.
Chapters 8: Tables.
Chapter 9: Trees.
Chapter 10: Binary Trees.
Chapter 11: Search Tree.
Chapter 12: Heaps and Priority Queues.
Appendices. Index.

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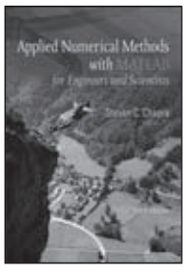
- *submit online at www.mheducation.asia*

Mathematics and Logic

Numerical Methods

INTERNATIONAL EDITION

NEW



APPLIED NUMERICAL METHODS WITH MATLAB FOR ENGINEERS AND SCIENTISTS

3rd Edition

by Steven C. Chapra, Tufts University

2012 (February 2011) / Hardcover / 640 pages

ISBN: 9780073401102
ISBN: 9780071086189 [IE]

www.mhhe.com/chapra

Steven Chapra's Applied Numerical Methods with MATLAB, third edition, is written for engineering and science students who need to learn numerical problem solving. Theory is introduced to inform key concepts which are framed in applications and demonstrated using MATLAB. The book is designed for a one-semester or one-quarter course in numerical methods typically taken by undergraduates.

The third edition feature new chapters on Numerical Differentiation, Optimization, and Boundary-Value Problems (ODEs) and is accompanied by an extensive set of m-files and instrutor materials.

NEW TO THIS EDITION

❖ Updated Coverage Many new problems and examples have been added, and there are new explanations for certain MATLAB functions including: fzero, fminbnd, quad, & ODE23.

❖ Two New Chapters Chapter 13-Eigenvalues, and Chapter 16-Fast Fourier Transform have been added in response to instructor requests.

CONTENTS

Part One: Modeling, Computers, and Error Analysis
Chapter 1: Mathematical Modeling, Numerical Methods and Problem Solving
Chapter 2: MATLAB Fundamentals
Chapter 3: Programming with MATLAB
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Chapter 6: Roots: Open Methods
Chapter 7: Optimization
Part Three: Linear Systems
Chapter 8: Linear Algebraic Equations and Matrices
Chapter 9: Gauss Elimination
Chapter 10: LU Factorization
Chapter 11: Matrix Inverse and Condition
Chapter 12: Iterative Methods
Chapter 13: Eigenvalues
Part Four: Curve Fitting
Chapter 14: Linear Regression

Chapter 15: General Linear Least-Squares and Nonlinear Regression
Chapter 16: Fast Fourier Transform
Chapter 17: Polynomial Interpolation
Chapter 18: Splines and Piecewise Interpolation
Part Five: Integration and Differentiation
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Chapter 20: Numerical Integration of Functions
Chapter 21: Numerical Differentiation
Part Six: Ordinary Differential Equations
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Chapter 23: Adaptive Methods and Stiff Systems
Chapter 24: Boundary-Value Problems
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Appendix B: MATLAB M-file Functions
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International edition

NUMERICAL METHODS FOR ENGINEERS
6th Edition

by Steven C. Chapra, Tufts University, and Raymond P. Canale, Emeritus University of Michigan

2010 (April 2009) / Hardcover / 960 pages
ISBN: 9780073401065
ISBN: 9780071267595 [IE]

www.mhhe.com/chapra

Instructors love Numerical Methods for Engineers because it makes teaching easy! Students love it because it is written for them--with clear explanations and examples throughout. The text features a broad array of applications that span all engineering disciplines. The sixth edition retains the successful instructional techniques of earlier editions. Chapra and Canale's unique approach opens each part of the text with sections called Motivation, Mathematical Background, and Orientation. This prepares the student for upcoming problems in a motivating and engaging manner. Each part closes with an Epilogue containing Trade-Offs, Important Relationships and Formulas, and Advanced Methods and Additional References. Much more than a summary, the Epilogue deepens understanding of what has been learned and provides a peek into more advanced methods. Approximately 20% of the problems are new or revised in this edition. The expanded breadth of engineering disciplines covered is especially evident in the problems, which now cover such areas as biotechnology and biomedical engineering.

Users will find use of software packages, specifically MATLAB®, Excel® with VBA and Mathcad®. This includes material on developing MATLAB® m-files and VBA macros.

CONTENTS

Part 1 Modeling, Computers, and Error Analysis
1 Mathematical Modeling and Engineering Problem Solving
2 Programming and Software
3 Approximations and Round-Off Errors
4 Truncation Errors and the Taylor Series
Part 2 Roots of Equations
5 Bracketing Methods
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8 Case Studies: Roots of Equations
Part 3 Linear Algebraic Equations
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International edition

SCIENTIFIC COMPUTING
2nd Edition

by Michael T Heath, University of Illinois at Urbana-Champaign

2002 / 576 pages / hardcover
ISBN: 9780072399103
ISBN: 9780071244893 [IE]

www.mhhe.com/engcs/compsci/heath

Heath 2/e, presents a broad overview of numerical methods for solving all the major problems in scientific computing, including linear and nonlinear equations, least squares, eigenvalues, optimization, interpolation, integration, ordinary and partial differential equations, fast Fourier transforms, and random number generators. The treatment is comprehensive yet concise, software-oriented yet compatible with a variety of software packages and programming languages. The book features more than 160 examples, 500 review questions, 240 exercises, and 200 computer problems. Changes for the second edition include: expanded motivational discussions and examples; formal statements of all major algorithms; expanded discussions of existence, uniqueness, and conditioning for each type of problem so that students can recognize "good" and "bad" problem formulations and understand the corresponding quality of results produced; and expanded coverage of several topics, particularly eigenvalues and constrained optimization. The book contains a wealth of material and can be used in a variety of one- or two-term courses in computer science, mathematics, or engineering. Its comprehensiveness and modern perspective, as well as the software pointers provided, also make it a highly useful reference for practicing professionals who need to solve computational problems.

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1 Scientific Computing.
2 Systems of Linear Equations. 3 Linear Least Squares.
4 Eigenvalues Problems.
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6 Optimization.
7 Interpolation.
8 Numerical Integration and Differentiation.
9 Initial Value Problems for ODEs.
10 Boundary Value Problems for ODEs.
11 Partial Differential Equations.
12 Fast Fourier Transform.
13 Random Numbers and Simulation

INTERNATIONAL EDITION

ELEMENTARY NUMERICAL ANALYSIS
An Algorithmic Approach
3rd Edition

by Samuel D. Conte, Purdue University, and Carl deBoor, University of Wisconsin, Madison

1980 / 408 pages
ISBN: 9780070662285 [IE]

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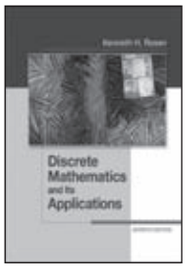
Discrete Mathematics

GLOBAL EDITION

NEW



DISCRETE MATHEMATICS AND ITS APPLICATIONS
7th Edition

by Kenneth H. Rosen, Visiting Research Professor, Monmouth University, New Jersey

2012 (June 2011) / Hardcover / 1072 pages
ISBN: 9780073383095
ISBN: 9780071317108 [GE]

www.mhhe.com/rosen

Discrete Mathematics and its Applications, Seventh Edition, is intended for one- or two-term introductory discrete mathematics courses taken by students from a wide variety of majors, including computer science, mathematics, and engineering. This renowned best-selling text, which has been used at over 500 institutions around the world, gives a focused introduction to the primary themes in a discrete mathematics course and demonstrates the relevance and practicality of discrete mathematics to a wide a wide variety of real-world applications…from computer science to data networking, to psychology, to chemistry, to engineering, to linguistics, to biology, to business, and to many other important fields.

NEW TO THIS EDITION

❖ Improved Introduction and Organization - For the seventh edition the first part of the book has been restructured to present core topics in a more efficient, more effective, and more flexible way.

❖ Expanded and Improved Coverage - The seventh edition offers brand-new or expanded coverage in several key areas to present important topics with better care, detail, and flexibility.

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Chapter 12: Boolean Algebra
Chapter 13: Modeling Computation
Appendices

International edition

DISCRETE MATHEMATICS AND ITS APPLICATIONS
6th Edition

by Kenneth H. Rosen, AT&T Bell Laboratories

2007 / 896 pages / Hardcover
ISBN: 9780073229720 (with Mathzone)
ISBN: 9780071244749 [IE]

www.mhhe.com/rosen

Discrete Mathematics and its Applications, Sixth Edition, is intended for one- or two-term introductory discrete mathematics courses taken by students from a wide variety of majors, including computer science, mathematics, and engineering. This renowned best-selling text, which has been used at over 500 institutions around the world, gives a focused introduction to the primary themes in a discrete mathematics course and demonstrates the relevance and practicality of discrete mathematics to a wide a wide variety of real-world applications…from computer science to data networking, to psychology, to chemistry, to engineering, to linguistics, to biology, to business, and to many other important fields.

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INTERNATIONAL EDITION

DISCRETE MATHEMATICS BY EXAMPLE

by Andrew Simpson, Oxford Brookes

2002 / 450pages
ISBN: 9780077098407
ISBN: 9780071229142 [IE] - Out of Print
(McGraw-Hill UK Title)

Discrete Mathematics by Example is designed for an undergraduate course and provides many exercises and examples, enabling the development of students' understanding of the principles of discrete mathematics through appropriate pedagogical methods. The text includes chapters on propositional and predicate logic; typed set theory; boolean algebra; relations; functions; sequences; induction and graph theory. Discrete Mathematics by Example is designed for an undergraduate course and provides many exercises and examples, enabling the development of students' understanding of the principles of discrete mathematics through appropriate pedagogical methods. The text includes chapters on propositional and predicate logic; typed set theory; boolean algebra; relations; functions; sequences; induction and graph theory.

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SCHAUM'S OUTLINE OF ESSENTIAL COMPUTER MATHEMATICS

by Seymour Lipschutz, Temple University

1982 / 256 pages / Softcover
ISBN: 9780070379909
(A Schaum's Publication)

The mathematical knowledge needed for computer and information sciences, including, particularly, the binary number system, logic circuits, graph theory, linear systems, probability and statistics, get clear and concise coverage in this invaluable study guide. Basic high school math is all that's needed to follow the explanations and learn from hundreds of practical problems solved step-by-step. Hundreds of review questions with answers help reinforce learning and increase skills.

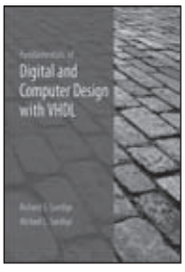
CONTENTS

Binary Number System.
Computer Codes. Computer Arithmetic.
Logic.
Flowcharts.
Sets and Relations.
Boolean Algebra, Logic Gates.
Simplifying Logic Circuits, Karnaugh Maps.
Vectors, Matrices, Subscripted Variables.
Linear Equations.
Combinatorics.
Probability.
Statistics, Random Variables.
Graph Theory.
Trees, Directed Graphs, Machines.

Digital Logic/Logic Design

INTERNATIONAL EDITION

NEW



FUNDAMENTALS OF DIGITAL AND COMPUTER DESIGN WITH VHDL

by Richard S. Sandige, Calif ornia Polytechnic State University, and Michael L. Sandige

2012 (September 2011) / Hardcover / 736 pages
ISBN: 9780073380698
ISBN: 9780071316392 [IE]

www.mhhe.com/sandige

This text is intended for an introductory digital design course for students at the freshman level; it also is intended for an introductory computer design course with assembly language programming for students at the sophomore level. This text uses a spiral teaching approach by introducing a design problem and then, in the same chapter or a later chapter, either (1) reemphasizing the same concepts when a different design is presented, or (2) working the same problem using a different technique. This is done to increase the likelihood of retention.

FEATURES

❖ VHDL is introduced in the first chapter using just Boolean functions. This prepares students to use VHDL early in their laboratory experiments.

❖ Helpful information is provided following Figures, Tables, Listings (for VHDL code), and Waveforms in a bulleted section starting with "Things you should notice about..."

❖ Homework problems are keys to each section, for instructor and student convenience. Homework solutions will be made available to instructors via the web.

❖ Laboratory experiments are included in Appendix A, to connect the theory presented in the book with the real world of modern digital programmable logic devices. Experiment solutions will be made available to instructors via the web. For reviewers: to see examples of Experiments for Chapters 1 (Experiment 1) and Chapter 9 (Experiment 11), go to the author's website at http://www.ee.calpoly.edu/faculty/rsandige/.

❖ A Karnaugh Map Explorer program is provided to help students learn K-maps. The Karnaugh Map Explorer program will be made available to instructors via the web. For reviewers: to see the program and use it, go to the author's website at http://www.ee.calpoly.edu/faculty/rsandige/

❖ A special program called EASY1 (Editor/Assembler/Simulator for VBC1 (Very Basic Computer 1)) is provided to help students learn how to write and test assembly language for VBC1. EASY1 will be made available to instructors via the web. VBC1 is a very simple 4-bit Harvard type computer for students to design and learn how

to program, since it only has 8 instructions with 22 variations. For reviewers: to see the program and use it, go to the author's website at http://www.ee.calpoly.edu/faculty/rsandige/

❖ Beginning in Chapter 12, Designing Input/Output Circuits, VHDL is used as a tool to teach students how to design VBC1.

❖ The popular Xilinx ISE WebPACK software is use as the design tool for VHDL. This tool contains the ISE synthesizer and built-in ISE simulator to allow students to verify that their designs work prior to downloading them in the Spartan 3E on the Nexys 2 board. Xilinx ISE WebPACK is a free download from Xilinx via their web site.

❖ In Chapter 18, VBC1-E is introduced. VBC1-E is an enhanced version of VBC1 with 25 instructions with 71 variations.

CONTENTS

Chapter 1: Boolean Algebra, Boolean Functions, VHDL, and Gates
Chapter 2: Number Conversions, Codes, and Function Minimization
Chapter 3: Introduction to Logic Circuit Analysis and Design
Chapter 4: Combinational Logic Circuit Design with VHDL
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Chapter 6: Simple Finite State Machine Design with VHDL
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Chapter 23: Designing Extented Instruction Memory for VBC1-E
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INTERNATIONAL EDITION

INTRODUCTION TO LOGIC DESIGN
3rd Edition

by Alan B. Marcovitz, Florida Atlantic University-Boca Raton

2010 (January 2009) / Hardcover / 656 pages
ISBN: 9780073191645
ISBN: 9780070164901 [IE]

www.mhhe.com/marcovitz

Introduction to Logic Design by Alan Marcovitz is intended for the first course in logic design, taken by computer science, computer engineering, and electrical engineering students. As with the previous editions, this edition has a clear presentation of fundamentals and an exceptional collection of examples, solved problems and exercises.

The text integrates laboratory experiences, both hardware and computer simulation, while not making them mandatory for following the main flow of the chapters. Design is emphasized throughout, and switching algebra is developed as a tool for analyzing and implementing digital systems. The presentation includes excellent coverage of minimization of combinational circuits, including multiple output ones, using the Karnaugh map and iterated consensus. There are a number of examples of the design of larger systems, both combinational and sequential, using medium scale integrated circuits and programmable logic devices.

The third edition features two chapters on sequential systems. The first chapter covers analysis of sequential systems and the second covers design. Complete coverage of the analysis and design of synchronous sequential systems adds to the comprehensive nature of the text. The derivation of state tables from word problems further emphasizes the practical implementation of the material being presented.

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1 Introduction
2 Combinational Systems
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INTERNATIONAL EDITION

FUNDAMENTALS OF DIGITAL LOGIC WITH VHDL DESIGN WITH CD-ROM

3rd Edition

by Stephen Brown, University of Toronto, Canada, and Zvonko Vranesic, University of Toronto, Canada

2009 (March 2008) / 960 pages / Hardcover
ISBN: 9780077221430
ISBN: 9780071268806 [IE, with CD-Rom]

www.mhhe.com/brownvranesic

Fundamentals of Digital Logic with VHDL Design teaches the basic design techniques for logic circuits. It emphasizes the synthesis of circuits and explains how circuits are implemented in real chips. Fundamental concepts are illustrated by using small examples, which are easy to understand. Then, a modular approach is used to show how larger circuits are designed. VHDL is used to demonstrate how the basic building blocks and larger systems are defined in a hardware description language, producing designs that can be implemented with modern CAD tools. The book emphasizes CAD through the use of Altera's Quartus II CAD software, a state-of-the-art digital circuit design package. This software produces automatic mapping of designs written in VHDL into Field Programmable Gate Arrays (FPGAs) and Complex Programmable Logic Devices (CPLDs).

CONTENTS

Chapter 1: Design Concepts
Chapter 2: Introduction to Logic Circuits
Chapter 3: Implementation Technology
Chapter 4: Optimized Implementation of Logic Functions
Chapter 5: Number Representation and Arithmetic Circuits
Chapter 6: Combinational-Circuit Building Blocks
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INTERNATIONAL EDITION

FUNDAMENTALS OF DIGITAL LOGIC WITH VERILOG DESIGN

2nd Edition

by Stephen Brown, University of Toronto, Canada, and Zvonko Vranesic, University of Toronto, Canada

2008 / Hardcover / 960 pages
ISBN: 9780077211646
ISBN: 9780071265980 [IE, with CD]

www.mhhe.com/brown

Fundamentals of Digital Logic With Verilog Design teaches the basic design techniques for logic circuits. It emphasizes the synthesis of circuits and explains how circuits are implemented in real chips. Fundamental concepts are illustrated by using small examples.

Use of CAD software is well integrated into the book. A CD-ROM that contains Altera's MAX+plusII CAD software comes free with every copy of the text. The CAD software provides automatic mapping of a design written in Verilog into Field Programmable Gate Arrays (FPGAs) and Complex Programmable Logic Devices (CPLDs). Students will be able to try, firsthand, the book's Verilog examples (over 140) and homework problems.

Engineers use MAX+plusII for designing, simulating, testing and implementing logic circuits. The version included with this text supports all major features of the commercial product and comes with a compiler for the IEEE standard Verilog language. Students will be able to:

- enter a design into the CAD system
- compile the design into a selected device
- simulate the functionality and timing of the resulting circuit
- implement the designs in actual devices (using the school's laboratory facilities)

Verilog is a complex language, so it is introduced gradually in the book. Each Verilog feature is presented as it becomes pertinent for the circuits being discussed. To teach the student to use the MAX+plusII, the book includes three tutorials.

CONTENTS

Chapter 1 Design Concepts
Chapter 2 Introduction to Logic Circuits
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International edition

INTRODUCTION TO LOGIC AND COMPUTER DESIGN WITH CD

by Alan B. Marcovitz, Florida Atlantic University-Boca Raton

2008 (February 2007) / Hardcover with disk / 688 pages
ISBN: 9780073314174
ISBN: 9780071276115 [IE, with CD]

www.mhhe.com/marcovitz

Introduction to Logic and Computer Design by Alan Marcovitz takes the successful formula realized in the author's previous books and makes it even better. With the inclusion of several chapters on computer design, Marcovitz now offers everything a fundamentals-oriented logic design course might include. Further, this new book is supported by an ARIS site - McGraw-Hill's electronic homework management systems -- including 350 algorithmic problems and a host of new media supplements to make both the instructor's and the student's tasks easier. As with Marcovitz's previous books, the clear presentation of concepts and well-paced writing style make Introduction to Logic and Computer Design the ideal companion to any first course in digital logic. Users rave about the book's extensive set of examples — well integrated into the body of the text and included at the end of each chapter in sections of solved problems — that give students multiple opportunities to understand the topics being presented.

CONTENTS

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Part I Logic Design
2 Combinational Systems
3 The Karnaugh Map
4 Designing Combinational Systems
5 Analysis of Sequential Systems
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7 Solving Larger Sequential Problems
Part II Computer Design
8 Computer Organization
9 Computer Design Fundamentals
10 The Design of a Central Processing Unit
11 Beyond the Central Processing Unit

International edition

DIGITAL PRINCIPLES AND DESIGN WITH CD-ROM

by Donald Givone, SUNY- Buffalo

2003 / 832 pages
ISBN: 9780072551327
ISBN: 9780071230056 [IE]

www.mhhe.com/givone

This exciting first edition provides more depth than existing digital design books, using a traditional approach to the subject. Digital Principles and Design contains introductory material in digital principles with emphasis on logic design, as well as more advanced material. With the exception of the digital circuits appendix, it assumes no background on the part of the reader. The text can be used by readers in computer science, computer engineering and electrical engineering. The emphasis in the book is on the thorough presentation of basic principles of logic design and the illustration of these principles. While many introductory texts only provide the mechanics of classical logic design, Givone provides justifications behind these procedures to give students the understanding they need for the advanced topics they will learn about in subsequent courses. Some of the topics that the book thoroughly presents include: the simplification of Boolean expressions with Karnaugh maps, variable-entered Karnaugh maps, and the analysis and design of both clocked synchronous sequential networks and asynchronous sequential networks. Every book contains a CD-ROM with Altera's advanced MAX+plus II 10.1 Student Edition CAD system, as well as Multisim 2001 Textbook Edition from Electronics Workbench. An appendix and the book website provide additional resources on these software tools, as well as LogicWorks.

CONTENTS

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8 Algorithmic State Machines.
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Appendix A: Digital Circuits.
Appendix B: TBD

INTERNATIONAL EDITION

COMPUTER ARCHITECTURE AND LOGIC DESIGN

by Thomas C. Bartee, IDA

1991 / 640 pages / Softcover
ISBN: 9780071125543 [IE]

Sound fundamental book on computer organization and architecture, hardware and logic design. 68030-68040-, 386-486-, cache and virtual memory, many other modern topics and latest advances in technology are covered.

CONTENTS

1. Introduction.
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3. Boolean Algebra and Gate Networks.
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Theory Of Computation

INTERNATIONAL EDITION

INTRODUCTION TO LANGUAGES AND THE THEORY OF COMPUTATION
4th Edition

by John Martin, North Dakota State University-Fargo

2011 (February 2010) / Hardcover / 448 pages
ISBN: 9780073191461
ISBN: 9780071289429 [IE]

www.mhhe.com/martin

Introduction to Languages and the Theory of Computation helps students make the connection between the practice of computing and an understanding of the profound ideas that defines it. The book's organization and the author's ability to explain complex topics clearly make this introduction to the theory of computation an excellent resource for a broad range of upper level students. The author has learned through many years of teaching that the best way to present theoretical concepts is to take advantage of the precision and clarity of mathematical language. In a way that is accessible to students still learning this language, he presents the necessary mathematical tools gently and gradually which provides discussion and examples that make the language intelligible.

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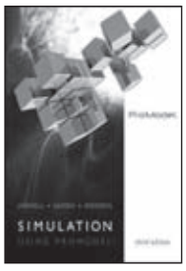
Simulation and Modeling

INTERNATIONAL EDITION

NEW



SIMULATION USING PROMODEL
3rd Edition

by Charles R. Harrell, Brigham Young University-Provo

2012 (February 2011) / Hardcover / 768 pages
ISBN: 9780073401300
ISBN: 9780071086448 [IE]

www.mhhe.com/harrell3e

Simulation Using ProModel covers the art and science of simulation in general and the use of ProModel simulation software in particular. The text blends theory with practice. Actual applications in business, services and manufacturing and a hands-on approach to simulation, including real-world simulation projects, are emphasized.

The third edition of Simulation Using ProModel reflects the most recent version of the ProModel software in all the examples and labs as well as expanded coverage on generating random variates and design of experiments.

Additionally, the lead author is founder and Chief Technology Advisor for ProModel Corporation.

NEW TO THIS EDITION

- Updated Examples to reflect current version of ProModel.
- Expanded Random Variate Coverage
- Simulation Covered Earlier The material has been rearranged from the previous edition so students are introduced to actual simulation sooner. The text includes a complete account of a real-world simulation project.
- Expanded Coverage of Experiment Design to help students learn how to set up and run a meaningful experiment and document the results.
- Enhanced Website accompanies the text and allows users of the text to download the latest student version of ProModel as well as the current ProModel Tutorial and Basic Training course. In addition, instructors have access to the solutions manual, lab exercises, and PowerPoint lecture slides.

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Lab 9 Comparing Alternative Systems
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INTERNATIONAL EDITION

SIMULATION WITH ARENA
5th Edition

by W. David Kelton, University Of Cincinnati-Cincinnati, Randall P. Sadowski, and Nancy B. Swets, Rockwell Automation

2010 (July 2009) / Hardcover / 656 pages
ISBN: 9780073376288
ISBN: 9780071267717 [IE]

www.mhhe.com/kelton

Simulation with Arena provides a comprehensive treatment of simulation using industry-standard Arena software. The text starts by having the reader develop simple high-level models, and then progresses to advanced modeling and analysis. Statistical design and analysis of simulation experiments is integrated with the modeling chapters, reflecting the importance of mathematical modeling of these activities. An informal, tutorial writing style is used to aid the beginner in fully understanding the ideas and topics presented. The academic version of Arena and example files are available through the book's website. Verified instructors can also download a 30-seat site license of Arena for use in their course.

CONTENTS

1. What Is Simulation?
2. Fundamental Simulation Concepts
3. A Guided Tour Through Arena
4. Modeling Basic Operations and Inputs
5. Modeling Detailed Operations
6. Statistical Analysis of Output from Terminating Simulations
7. Intermediate Modeling and Steady-State Statistical Analysis
8. Entity Transfer
9. A Sampler of Further Modeling Issues and Techniques
10. Arena Integration and Customization
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13. Conducting Simulation Studies Appendix A: A Functional Specification for The Washington Post Appendix B: A Refresher on Probability and Statistics Appendix C: Arena's Probability Distributions Appendix D: Academic Software Installation Instructions
References
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INTERNATIONAL EDITION

SIMULATION MODELING AND ANALYSIS 4th Edition

by Averill Law, Averill M. Law & Associates

2007 / Hardcover / 792 pages
ISBN: 9780073294414 (with Expertfit Software)
ISBN: 9780071255196 [IE]

www.mhhe.com/law

CONTENTS

1 Basic Simulation Modeling.
2 Modeling Complex Systems.
3 Simulation Software.
4 Review of Basic Probability and Statistics.
5 Building Valid, Credible, and Appropriately Detailed Simulation Models.
6 Selecting Input Probability Distributions.
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8 Generating Random Variates.
9 Output Data Analysis for a Single System.
10 Comparing Alternative System Configurations.
11 Variance-Reduction Techniques.
12 Experimental Design, Sensitivity Analysis, and Optimization.
13 Simulation of Manufacturing Systems

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Computer Organization & Architecture

Assembly Languages

INTERNATIONAL EDITION

ASSEMBLY LANGUAGE PROGRAMMING AND ORGANIZATION OF THE IBM PC

by Ytha Yu and Charles Marut, both of California State University, Hayward

1992 / 512 pages
ISBN: 9780071128964 [IE]

This introduction to the organization and programming of the 8086 family of microprocessors used in IBM microcomputers and compatibles is comprehensive and thorough. Includes coverage of I/O control, video/graphics control, text display, and OS/2. Strong pedagogy with numerous sample programs illustrates practical examples of structured programming.

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CHAPTER 10: Arrays and Addressing Modes The String Instructions.
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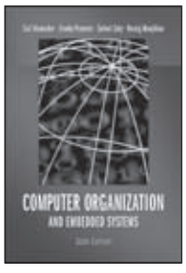
CHAPTER 13: Memory Management.
CHAPTER 14: Bios and DOS Interrupts.
CHAPTER 15: Color Graphics.
CHAPTER 16: Recursion.
CHAPTER 17: Advanced Arithmetic.
CHAPTER 18: Disk Operations.
CHAPTER 19: 80286/80386/80486 Microprocessors and OS/2

Computer Organization and Architecture

INTERNATIONAL EDITION

NEW



COMPUTER ORGANIZATION
6th Edition

Carl Hamacher, Queen's University, Canada, Zvonko Vranesic, Professor, Dept. of Electrical & Computer Engineering & Computer Science University of Toronto, Safwat Zaky, University of Toronto, Canada, Naraig Manjikian, Queen's University

2012 (February 2011) / Hardcover / 736 pages
ISBN: 9780073380650
ISBN: 9780071089005 [IE]

www.mhhe.com/hamacher

The sixth edition of this book covers the key topics in computer organization and embedded systems. It presents hardware design principles and shows how hardware design is influenced by the requirements of software. The book is suitable for undergraduate electrical and computer engineering majors and computer science specialists. It is intended for a first course in computer organization and embedded systems.

NEW TO THIS EDITION

❖ Four Popular Processors are represented in the book. While the main explanations are generic, Altera's Nios II, Freescale's ColdFire, ARM, and Intels IA-32 are covered in detail in separate appendices.

❖ More Coverage of Embedded Systems reflects the reality that many devices not thought of as computers do have computers in them. Microcontrollers and system-on-a-chip implementations are discussed and demonstrated.

❖ Graduated Difficulty Problems at the end of each chapter are classified as Easy, Medium, or Difficult. This allows instructors to easily assign problems based upon difficulty level.

❖ Companion Website contains PowerPoint slides and solutions. http://www.mhhe.com/hamacher

CONTENTS

1 Basic Structure of Computers
2 Instruction Set Architecture
3 Basic Input/Output
4 Software
5 Basic Processing Unit
6 Pipelining
7 Input/output Organization
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Appendix C The ColdFire Processor
Appendix D The ARM Processor
Appendix E The Intel IA-32 Architecture

NEW

COMPUTER ARCHITECTURE
An Embedded Approach

by Ian Vince McLoughlin

2011 (January 2011) / Softcover / 544 pages
ISBN: 9780071311182

(An Asian Publication)

www.mheducation.asia/olc/mcloughlin

This textbook presents the subject of computer architecture in a modern light to match the needs of educational institutions and graduates for modern industry. The book reflects the fact that there are around 40 times as many embedded systems sold as desktop computers each year, and many more graduates will end up designing embedded systems hardware than will ever design a traditional desktop computer.

Without overlooking the historical perspective of computers, or the traditional topics in computer architecture, Computer Architecture: an embedded approach presents the subject in a readable and interesting format, and above all, provides the background and places emphasis on the increasingly important embedded systems that we all rely upon for our day-to-day living.

Whilst traditional computer engineering textbooks were fine resources for students needing to learn about computers, work on desktop or mainframe systems of the 1980s and 1990s, these older approaches are looking increasingly dated as technological progress marches on. Students of today tend to be more inspired by the iPod than by ENIAC, and working with such tiny, low power embedded devices is precisely what Computer Architecture: an embedded approach aims towards. This means that modern and interesting topics for embedded systems are included in this book. An embedded systems-relevant approach, this book addresses the needs of industry, inspires students in their studies, and interlinks with neighbouring electronics, computer engineering or computer science course within a typical curriculum. It is not just a computer architecture book with an extra chapter on embedded system, it looks at the computer architecture of today, which is built upon the foundation and history of bigger and older machines and drives toward greater levels of integration within embedded systems.

FEATURES

❖ A comprehensive textbook covering the main “Computer Architecture” sections of the IEEE Body of Knowledge in Computer Engineering.

❖ An embedded systems-relevant approach, the book includes topics that are current in industry, and issues and technologies that embedded systems engineers face these days, which is what industry increasingly demands and tomorrow’s graduates will need to be conversant in. Some of these topics, which are not found in traditional texts, are:

1. Programming of memory in embedded systems, especially JTAG

2. Overlays and pages in code contexts

3. The different types of memory available, including parallel and serial flash (NOR/NAND)

4. Power supply issues, how clocking and system design relates to low power

5. System reset, testing and error checking (detection and

correction)

6. General purpose I/O and pin configuration, especially in system-on-chip processors

7. Modern buses including I2C, SPI, LVDS etc... Evolved PC/104 systems

8. The use of memory management unit (MMU) in diskless embedded systems

9. Soft core processors – including an entire chapter in which we design and build our own

10. System-on-chip processors, application-specific ICs and field programmable gate arrays (FPGAs)

❖ Apart of the main items in the typical computer architecture theory curriculum relevant to embedded engineers, the book offers a wealth of practical information including the opportunity to build and test out a custom soft-core processor.

❖ Topics are placed into an academic framework that not only discusses the how and what, but also the why. Plenty of diagrams are given to explain tricky concepts and many explanatory boxes (containing extra worked examples, interesting snippets of information and additional explanations) are provided throughout to augment the main text.

❖ SI units are used throughout, including the newer "kibibyte" and "mebibyte" measures for computer memory.

❖ Each chapter ends with a set of 20 problems (with answers provided in the instructors' manual).

❖ Supplementary materials:

Solution manuals (with detail explanations to end-of-chapter problems in the textbook), powerpoint slides, diagrams, extra teaching material (including recommendations for further reading), ready-made laboratory sessions are available for instructors on the instructors' website. These supplement materials are available only to instructors using the textbook for their teaching purposes. Please contact your local McGraw-Hill sales representatives if you require further assistance.

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COMPUTER SYSTEM ORGANISATION

by Naresh Jotwani, Director, School of Solar Energy, PDPU, Gandhinagar, Gujarat

2009 / Softcover / 372 pages

ISBN: 9780070087101

(McGraw-Hill India Title)

An introductory text that helps students in developing good understanding of a complete Computer System through an integrated approach to hardware, software and processor design. Numerous solved and unsolved problems as well as case studies on commercial processors enables user to be tune with the current developments.

CONTENTS

Chapter 1: Overview
Chapter 2: Representation of Data in Binary
Chapter 3 : Hardware Building Blocks
Chapter 4 : Processor Instruction Set-I
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Chapter 6: Processor Design
Chapter 7: Control Unit
Chapter 8: Computer Arithmetic
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INTERNATIONAL EDITION

COMPUTER ARCHITECTURE AND ORGANIZATION
3rd Edition

by John P Hayes, University of Michigan

1998 / 624 pages / Softcover

ISBN: 9780071159975 [IE]

The third edition of Computer Architecture and Organization features a comprehensive updating of the material-especially case studies, worked examples, and problem sets-while retaining the book's time-proven emphasis on basic prinicples. Reflecting the dramatic changes in computer technology that have taken place over the last decade, the treatment of performance-related topics such as pipelines, caches, and RISC's has been expanded. Many examples and end-of-chapter problems have also been added.

CONTENTS

1 Computation and Computers.
2 Design Methodology.
3 Processor Design.
4 Datapath Design.
5 Control Design.
6 Memory Organization.
7 System Organization

INTERNATIONAL EDITION

COMPUTER ARCHITECTURE AND LOGIC DESIGN

by Thomas C. Bartee, IDA

1991 / 640 pages / Softcover

ISBN: 9780071125543 [IE]

Sound fundamental book on computer organization and architecture, hardware and logic design. 68030-68040-, 386-486-, cache and virtual memory, many other modern topics and latest advances in technology are covered.

CONTENTS

1. Introduction.
2. Number Systems.
3. Boolean Algebra and Gate Networks.
4. Logic Design.
5. The Arithmetic-Logic Unit.
6. The Memory Element.
7. Input-Output.
8. Buses and Interfaces.
9. The Control Unit.
10. Computer Architecture.
11. Selected Architectures.
12. Logic Circuits Overview.

Embedded Systems

INTRODUCTION TO EMBEDDED SYSTEMS

by K. V. Shibu

2009 / Softcover

ISBN: 9780070145894

(McGraw-Hill India Title)

Meant for students and practicing engineers, this book provides a comprehensive introduction to the design and development of embedded hardware and firmware, their integration, and the management of Embedded System development process.

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Part 1:
Embedded System: Understanding the Basic Concepts
1. Introduction to Embedded Systems
2. The Typical Embedded System
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Advanced Computer Architecture

INTERNATIONAL EDITION

ADVANCED COMPUTER ARCHITECTURE
Parallelism, Scalability, Programmability

by Kai Hwang, University of Southern California

1993 / 672 pages / Softcover

ISBN: 9780071247139 [IE]

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6 Pipelining and Superscalar Techniques
Part Three•Parallel and Scalable Architectures
7 Multiprocessors and Multi-computers
8 Multivector and SIMD Supercomputers
9 Scalable, Multi-threaded, and Dataflow Architectures
Part Four•Software for Parallel Programming
10 Parallel Models, Languages and Compilers
11 Development of Parallel Programs
12 Unix Extensions for Parallel Computers
Bibliography

Advanced Microprocessors & Microcomputers

SCHAUM'S OUTLINE OF COMPUTER ARCHITECTURE

by Nick Carter, University of Illinois - Champaign

2002 / Softcover / 304 pages

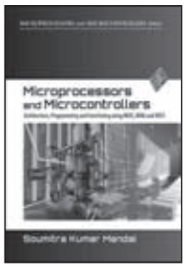
ISBN: 9780071362078

(A Schaum's Publication)

A problem/solution manual, integrating general principles and laboratory exercises, that provides students with the hands-on experience needed to master the basics of modern computer system design. Features more than 200 detailed problems, with step-by-step solutions; many detailed graphics and charts; chapter summaries with additional "rapid-review" questions; and expert sidebar tips. Describes analytical methods for quantifying real-world design choices regarding instruction sets, pipelining, cache, memory, I/O, and other critical hardware and software elements involved in building computers. An ideal educational resource for the more than 70,000 undergraduate and graduate students who, each year, enroll in computer architecture and related courses

Microprocessors & Microcontrollers

NEW



MICROPROCESSORS AND MICROCONTROLLERS Architecture, Programming & Interfacing Using 8085, 8086 And 8051

by Soumitra Kumar Mandal, Dept of Electrical Engineering, NITTTR, Kolkata

2011 (July 2011) / Softcover / 896 pages
ISBN: 9780071329200

(A McGraw-Hill India Title)

This book provides coverage on basic concepts of Microprocessors and Microcontrollers. It offers in-depth treatment of architecture, programming and interfacing concepts related to Microprocessors and Microcontrollers. Examples of assembly-language programs and a variety of theoretical and multiple-choice questions give students a chance to check and enhance their conceptual understanding. This book can be used as a textbook for undergraduate and postgraduate courses offered on Microprocessors and Microcontrollers at degree and diploma levels.

FEATURES

- Architecture, Programming, Interfacing of Microprocessors and Microcontrollers explained in lucid language
- Detailed coverage of Advanced Microprocessors
- Hands-on approach through applications such as Traffic Control, Keyboard Interfacing, Stepper Motor Control, Seven-Segment Display, Control of Firing Circuit of a Thyristor
- Large number of assembly-language programs incorporated from examination papers of different universities and competitive examinations like IES, UPSC and GATE
- Strong pedagogy:
- 100 Solved examples and programs
- 258 MCQs
- 130 Short-Answer Questions
- 339 Review Questions

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6. Instruction Set and Addressing Modes of the 8086 Microprocessor
7. Assembly-Language Programs of the 8086 Microprocessor and 8087, 80287 and 80387 Numeric Data Processors
8. I/O and Memory Interfacing Using 8085/8086
9. Communication and Bus Interfacing with the 8085/8086 Microprocessor
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11. 80186, 80286, 80386 and 80486 Microprocessors
12. Pentium and RISC Processors
13. Introduction to 8051 Microcontroller
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Operating Systems

LINUX

INTERNATIONAL EDITION

HARLEY HAHN'S GUIDE TO UNIX AND LINUX

by Harley Hahn

2009 (February 2008) / Softcover / 960 pages
ISBN: 9780073133614
ISBN: 9780071283977 [IE] - Out of Print

www.mhhe.com/harleyhahn

"Harley Hahn's Guide to Unix and Linux" is a modern, comprehensive text for anyone who wants to learn how to use Unix or Linux. The book is suitable as a primary or secondary textbook for classroom use, as well as for readers who want to teach themselves. The text covers all the basic concepts and tools Unix/Linux users need to master: Unix vs Linux, GUIs, the command line interface, the online manual, syntax, the shell, standard I/O and redirection, pipes and filters, vi and Emacs, the Unix file system, and job control. Hahn offers a thoroughly readable approach to teaching Unix & Linux by emphasizing core ideas and carefully explaining unfamiliar terminology. The book walks readers through Unix & Linux systems from the very beginning, assuming no prior knowledge, and laying out material in a logical, straightforward manner.An experienced author, Hahn writes in a clear, engaging, and student-friendly style, resulting in a text that is both easy and entertaining to read. Motivating pedagogy, such as “What’s in a Name?” boxes and highlighted Hints provide readers with interesting background and helpful tips. For additional resources, readers can visit the author’s website at www.harley.com

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SCHAUM'S OUTLINE OF OPERATING SYSTEMS

by J. Archer Harris, James Madison University

2002 / Softcover / 256 pages

ISBN: 9780071364355

(A Schaum's Publication)

Schaum's Outline of Operating Systems is intended for use as a problem-solved approach text in courses taken in the second and third years in Computer Science, and as graduate course review. This book covers the fundamental design principles common in modern operating systems, including UNIX and DOS. The emphasis is on the system principles in abstract, not how they are implemented in an one particular operating system. It is designed to supplement traditional operating system courses and can be used by professionals familiar with a particular operating system who desire inowledge of the abstract principles underlying that operating system.

Operating Systems (OS)

International edition

OPERATING SYSTEMS: A SPIRAL APPROACH

by Ramez Elmasri, University Of Texas Arlington, A G. Carrick, and David Levine, University Of Texas Arlington

2010 (February 2009) / Hardcover / 544 pages

ISBN: 9780072449815

ISBN: 9780070164543 [IE]

www.mhhe.com/elmasri

Elmasri, Levine, and Carrick's "spiral approach" to teaching operating systems develops student understanding early and helps students approach the more difficult aspects of operating systems with confidence.

While operating systems have changed dramatically over the years, the authors of most operating systems books use a linear approach that is difficult for students to follow and requires instructors to constantly put materials in context. Elmasri, Levine, and Carrick do things differently by following an integrative or "spiral" approach to explaining operating systems. The spiral approach alleviates the need for an instructor to "jump ahead" when explaining processes by helping students "completely" understand a simple, working, functional system as a whole in the very beginning. This is more effective pedagogically, and it inspires students to continue exploring more advanced concepts with confidence.

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1 Getting Started
2 Operating System Concepts, Components, and Architectures
PART 2: Building Operating Systems Incrementally: A Breadth-Oriented Spiral Approach
3 A Simple, Single Process Operating System
4 A Single User Multi-tasking Operating System
5 An Advanced Single User Multi-tasking Operating System
6 A Multiple-User Operating System--Linux
7 Parallel and Distributed Computing, Clusters and Grids
PART 3: In Depth--Processes and Memory
8 Process Management: Concepts, Threads, and Scheduling
9 More Process Management: Inter-process Communication, Synchronization, and Deadlocks
10 Basic Memory Management
11 Advanced Memory Management
PART 4: In Depth--Files and Input/Output
12 File Systems--Basics
13 File Systems--Examples and More Features
14 Disk Scheduling and Input/Output Management
PART 5: In Depth--Networks and Distributed Processing
15 Introduction to Computer Networks
16 Protection and Security
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PART 6: Case Studies
18 Windows Vista
19 Linux
20 The Palm OS
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Appendix A: Overview of Computer System and Architecture Concepts

International edition

OPERATING SYSTEMS: A CONCEPT-BASED APPROACH
2nd Edition

by D. M. Dhamdhere, Indian Institute of Technology, Bombay

2006 / Softcover

ISBN: 9780070611948

ISBN: 9780071264365 [IE]

(McGraw-Hill India Title)

www.mhhe.com/dhamdhere/os

This edition of the book involves extensive revision by way of restructured and rewritten content. Elaborate chapter overviews and introductions have been added in order to improve the effectiveness of the content and to make it more user friendly. Chapters and sections have been rewritten to improve their presentation and flow. Like the previous edition, the major emphasis of this edition too is on the fact that the study of operating systems must be based on a sound understanding of the concepts.

CONTENTS

PART I : FUNDAMENTAL CONCEPTS
1 Introduction
2 Overview of Operating Systems
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6 Virtual Memory
7 File Systems
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PART II : ADVANCED TOPICS
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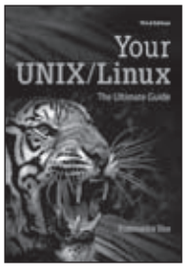
PART III : DISTRIBUTED OPERATING SYSTEMS
15 Distributed Systems
16 Theoretical Issues in Distributed Systems
17 Distributed Control Algorithms
18 Recovery and Fault Tolerance
19 Distributed File Systems
20 Distributed System Security

UNIX

INTERNATIONAL EDITION

NEW



YOUR UNIX/LINUX: THE ULTIMATE GUIDE
3rd Edition

by Sumitabha Das, Faculty Consultant, PDSIT, Bengal Engineering College, Howrah

2013 (January 2012) / Hardcover / 832 pages
ISBN: 9780073376202
ISBN: 9780071086295 [IE]

www.mhhe.com/das

Your UNIX/Linux: The Ultimate Guide, written with both users and programmers in mind, is the ultimate UNIX/Linux text. Both pedagogical tool and exhaustive reference, it is well-suited to any course that includes UNIX or Linux. A strong pedagogical framework sets it apart from similar texts and allows beginning students to gain a firm grasp of fundamental concepts, while chapters on advanced topics inspire the more experienced reader to move beyond the basics. Nearly a thousand exercises and self-test questions provide a way for students to test and reinforce their understanding of the material.

NEW TO THIS EDITION

❖ While the chapter on vi/vim has been retained, the one on emacs has been condensed and relegated to an appendix. To make the transition to vi easier for beginners, Chapter 3 features the pico editor.

❖ A separate chapter on the essentials of C programming has been added. The treatment, though brief, is just adeqate to understand the two chapters on Systems Programming that follow.

❖ Chapter 15 now includes the popular Concurrent Version System (CVS), which is found on all Linux systems. SCCS and RCS continue to find place in this edition, but at least one of them would be removed in the next edition.

❖ The GNU debugger (gdb) has been included in this edition since it is superior to dbx, even though the latter has been retained.

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INTERNATIONAL EDITION

HARLEY HAHN'S GUIDE TO UNIX AND LINUX

by Harley Hahn

2009 (February 2008) / Softcover / 960 pages
ISBN: 9780073133614
ISBN: 9780071283977 [IE] - Out of Print

www.mhhe.com/harleyhahn

"Harley Hahn's Guide to Unix and Linux" is a modern, comprehensive text for anyone who wants to learn how to use Unix or Linux. The book is suitable as a primary or secondary textbook for classroom use, as well as for readers who want to teach themselves. The text covers all the basic concepts and tools Unix/Linux users need to master: Unix vs Linux, GUIs, the command line interface, the online manual, syntax, the shell, standard I/O and redirection, pipes and filters, vi and Emacs, the Unix file system, and job control. Hahn offers a thoroughly readable approach to teaching Unix & Linux by emphasizing core ideas and carefully explaining unfamiliar terminology. The book walks readers through Unix & Linux systems from the very beginning, assuming no prior knowledge, and laying out material in a logical, straightforward manner.An experienced author, Hahn writes in a clear, engaging, and student-friendly style, resulting in a text that is both easy and entertaining to read. Motivating pedagogy, such as “What’s in a Name?” boxes and highlighted Hints provide readers with interesting background and helpful tips. For additional resources, readers can visit the author’s website at www.harley.com

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INTERNATIONAL EDITION

JUST ENOUGH UNIX
5th Edition

by K Paul Andersen, New Mexico State University - Las Cruces

2006 / Softcover / 608 pages
ISBN: 9780072952971
ISBN: 9780071244183 [IE]

www.mhhe.com/andersen

Just Enough UNIX provides a quick and gentle introduction to the UNIX operating system. The fifth edition of this highly successful text reflects changes and updates to the UNIX curriculum that have taken place since the publication of the fourth edition. The book is written in a clear, straightforward style that avoids unnecessary jargon. This short, yet comprehensive text covers the basics of UNIX. It can be used in both a freshman engineering course or to supplement other courses where the student needs to learn UNIX for the first time. The book is enhanced by strong pedagogical tools that will be very useful to those in the classroom, as well as those engaged in self-study.

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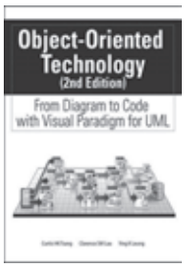
Software Engineering

NEW



OBJECT-ORIENTED TECHNOLOGY
From Diagram to Code with Visual Paradigm for UML
2nd Edition

by Curtis HK Tsang, Clarence SW Lau and Ying K Leung

2011 (September 2010) / 456 pages
ISBN: 9780071269216

(An Asian Publication)

This book introduces students and software developers to some basic concepts in object-oriented technology by examining the structural, use case and dynamic modeling and analysis techniques supported by the Unified Modeling Language (UML). These concepts are extensively illustrated with Visual Paradigm for UML (VP-UML) – an award-winning CASE tool which allows readers to put theory into practice immediately – as well as comprehensive case studies at the end of various chapters.

This second edition includes a chapter on UML 2.0, the first major update to the standard since 1997.

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GLOBAL EDITION

OBJECT-ORIENTED AND CLASSICAL SOFTWARE ENGINEERING
Eighth Edition

by Stephen R. Schach, Vanderbilt University - Nashville

2011 (February 2010) / Hardcover / 672 pages
ISBN: 9780073376189
ISBN: 9780071081719 (GE)

www.mhhe.com/schach

Building on seven strong editions, the eighth edition maintains the organization and approach for which Object-Oriented and Classical Software Engineering is known while making significant improvements and additions to content as well as problems and projects. The revisions for the eighth edition make the text easier to use in a one-semester course.

Integrating case studies to show the object oriented approach to software engineering, Object-Oriented and Classical Software Engineering, 8/e presents an excellent introduction to software engineering fundamentals, covering both traditional and object-oriented techniques.

While maintaining a unique organization with Part I covering underlying software engineering theory, and Part II presenting the more practical life cycle, the eighth edition includes significant revision to problems, new content, as well as a new chapter to enable instructors to better-utilize the book in a one-semester course. Complementing this well-balanced approach is the straightforward, student-friendly writing style, through which difficult concepts are presented in a clear, understandable manner.

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INTERNATIONAL EDITION

SOFTWARE ENGINEERING: A PRACTITIONER'S APPROACH 7th Edition

by Roger S. Pressman, R.S. Pressman & Associates

2010 (January 2009) / Hardcover / 928 pages
ISBN: 9780073375977
ISBN: 9780071267823 [IE]

www.mhhe.com/pressman

For almost three decades, Roger Pressman's Software Engineering: A Practitioner's Approach has been the world's leading textbook in software engineering. The new seventh edition represents a major restructuring and update of previous editions, solidifying the book's position as the most comprehensive guide to this important subject.

The seventh edition of Software Engineering: A Practitioner's Approach has been designed to consolidate and restructure the content introduced over the past two editions of the book. The chapter structure will return to a more linear presentation of software engineering topics with a direct emphasis on the major activities that are part of a generic software process. Content will focus on widely used software engineering methods and will de-emphasize or completely eliminate discussion of secondary methods, tools and techniques. The intent is to provide a more targeted, prescriptive, and focused approach, while attempting to maintain SEPA's reputation as a comprehensive guide to software engineering.

The book will be organized in five (5) parts-Process, Modeling, Quality Management, Project Management, and Advanced Topics. The chapter count will remain at 32, unchanged from the sixth edition. However, eight new chapters have been developed and another six chapters have undergone major or moderate revisions. The remaining chapters have undergone minor edits/updates.

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INTERNATIONAL EDITION

WEB ENGINEERING: A PRACTIONER'S APPROACH

by Roger S. Pressman, R.S. Pressman & Associates, and David Lowe, University of Technology, Sydney

2009 (January 2008) / Softcover / 352 pages
ISBN: 9780073523293
ISBN: 9780071263771 [IE]

www.mhhe.com/pressman

This book by the author of the best-selling Software Engineering: A Practitioner's Approach is unique in its application of software engineering principles to building effective web-based systems and applications. Roger Pressman and his co-author, David Lowe, offer practical advice to students and professionals alike on how to engineer and maintain complex websites.

Roger Pressman is the leading authority in software engineering and one of the best-known authors in computer science. His new book targets the emerging web engineering market, an area whose parameters and character are still evolving and where an experienced and trusted voice is especially welcome.

This book is designed to provide students with a solid understanding of a pragmatic process for engineering Web-based applications. It is written in an informal, conversational style, using a question and answer format to mentor the reader in this new engineering discipline.

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Chapter 17: Future Directions

INTERNATIONAL EDITION

OBJECT-ORIENTED SOFTWARE ENGINEERING

by Stephen R. Schach, Vanderbilt University - Nashville

2008 (September 2007) / Hardcover / 576 pages
ISBN: 9780073523330
ISBN: 9780071259415 [IE]

www.mhhe.com/schach

Object-Oriented Software Engineering is written for both the traditional one-semester and the newer two-semester software engineering curriculum. Part I covers the underlying software engineering theory, while Part II presents the more practical life cycle, workflow by workflow.

The text is intended for the substantial object-oriented segment of the software engineering market. It focuses exclusively on object-oriented approaches to the development of large software systems that are the most widely used. Text includes 2 running case studies, expanded coverage of agile processes and open-source development.

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INTERNATIONAL EDITION

OBJECT-ORIENTED SOFTWARE ENGINEERING: Practical Software Development Using UML and Java
2nd Edition

by Timothy Lethbridge, and Robert Laganiere

2004 / 528 pages / Softcover
ISBN: 9780077109080
ISBN: 9780071247702 [IE]
(McGraw-Hill UK Title)

www.mcgraw-hill.co.uk/textbooks/lethbridge

The authors' focus in this book is to deliver software engineering knowledge and skills that readers can put into immediate practical use. The book provides the essential topic coverage required by students of software engineering, from the nuts and bolts of objects to software architecture, from writing code to testing, from software development processes to project management.

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SCHAUM'S OUTLINE OF SOFTWARE ENGINEERING

by David Gustafson

2002 / Softcover / 256 pages
ISBN: 9780071377942

(A Schaum's Publication)

Designed to assist students and professors in software engineering courses and degree programs, Schaum's Outlinne of Software Engineering presents the theory and techniques of software engineering as a series of steps that students can apply to complete any software project successfully. An ideal supplement to all leading textbooks, it provides more than 200 detailed problems with step-by-step solutions, clear, concise explanations of all relevant concepts and applications, and complete coverage of the material taught in the course.

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Software Engineering (Advanced)

NEW

SOFTWARE QUALITY ASSURANCE

by Milind Limaye, CEO, Consulting Firm, Pune

2011 (March 2011) / Softcover / 610 pages
ISBN: 9780071072526
(A McGraw-Hill India Title)
www.mhhe.com/limaye/sqa

Software quality assurance (SQA) consists of a means of monitoring the software engineering processes and methods used to ensure quality. SQA encompasses the entire software development process, which includes processes such as requirements definition, software design, coding, source code control, code reviews, change management, configuration management, testing, release management, and product integration.

This book follows a general view of the quality-assurance process, providing a comprehensive synthesis of fundamental concepts and techniques and showcasing a practical way of implementing quality assurance using the outlined processes. The quality-assurance domain with managerial, technical and process orientation includes the latest improvements such as corporate governance and risk management. This book discusses the various ways of implementation of quality-assurance standards in any organisation, be it a software-development company, an engineering enterprise or any other.

FEATURES

- Adopts an integrated approach to quality-assurance techniques and process-requirement activities
- Provides a comprehensive insight of quality-assurance fundamental concepts, major models and standards, implementation methodology along with risk analysis in SQA
- Elucidates a hands-on approach for implementing quality assurance in a typical organisation
- Enriched with information on IT service management, quantitative analysis and metrics
- Uses terminologies in sync with the current industry position
- Quality Tips, Important Definitions and Examples enhance the theoretical discussions
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CASE STUDY: Planning a Mailing Software

Unified Modeling Language (UML)

INTERNATIONAL EDITION

PRACTICAL OBJECT-ORIENTED DESIGN WITH UML
2nd Edition

by Mark Priestley, **University of Westminster**

2004 / 376 pages / softcover

ISBN: 9780077103934

ISBN: 9780071239233 [IE]

(McGraw-Hill UK Title)

www.mcgraw-hill.co.uk/textbooks/priestley

The new second edition of Practical Object Oriented Design with UML provides a concise introduction to the design of object-oriented programs using UML. The book focuses on the application of UML in the development of software, and also offers a detailed tutorial introduction to the UML notation and its application. The book provides the ideal introduction to UML for undergraduates taking modules in object-oriented techniques as part of a Computer Science or Software Engineering degree programme.

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INTERNATIONAL EDITION

SCHAUM'S OUTLINE OF GUIDE TO UML
2nd Edition

by Simon Bennett, John Skelton and Ken Lunn

2005 / 380 pages / Softcover

ISBN: 9780077107413

ISBN: 9780071247719 [IE]

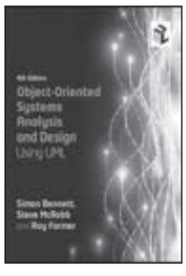
(McGraw-Hill UK Title)

(A Schaum's Publication)

All undergraduate programs in computer science and information systems worldwide offer courses using UML. In the U.S. they are typically taken in the second or third year of the undergraduate curriculum. In management information systems, courses are: Systems Analysis and Design, and Advanced Systems Analysis and Design; in computer science: Software Engineering, Systems Analysis and Design, Object-Oriented Modeling, Systems Development Methods, and Object-Oriented Programming.

Systems Analysis & Design

NEW



OBJECT-ORIENTED SYSTEMS ANALYSIS
4th Edition

by Simon Bennett, Steve McRobb, and Ray Farmer

2011 (January 2010) / Softcover / 720 pages

ISBN: 9780077125363

(McGraw-Hill UK Title)

www.mcgraw-hill.co.uk/textbooks/bennett

The fourth edition of Object- Oriented Systems Analysis and Design has been revised and updated to reflect the most up-to-date approaches to information systems development. Still a best-seller in its field, Bennett's, McRobb's and Farmer's text remains a key teaching resource for Systems Analysis and Design courses at both undergraduate and postgraduate level.

The book provides a clear, practical framework for development that uses all the major techniques from UML 2.2. It follows an iterative and incremental approach based on the industry-standard Unified Process, placing systems analysis and design in the context of the whole systems lifestyle. Structured in four parts, the first provides the background to information systems analysis and design and to object-orientation. The second part focuses on the activities of requirements gathering and systems analysis, as well as the basic notation of UML. Part three covers the activities of systems architecture and design, and UML notation for object design, and the book concludes with the implementation of systems and the issues of how the systems life cycle is organized and how reusable components can be developed.

FEATURES

❖ Updated notation following the very latest version of the UML standard.

❖ Two realistic case studies that are used throughout the book - one for illustrative examples and the other for practical exercises for the reader.

❖ Brand new, two colour text design.

❖ Additional material on the Online Learning Centre website to complement the chapters in the book.

CONTENTS

A1 Agate Ltd Case Study—Introduction
B1 FoodCo Ltd Case Study—Introduction
1 Information Systems—What Are They?
2 Challenges in Information Systems Development
3 Meeting the Challenges
4 What is Object-Orientation?
5 Modelling Concepts
6 Requirements Capture
A2 Agate Ltd Case Study—Requirements Model
7 Requirement Analysis
A3 Agate Ltd Case Study—Requirements Analysis
8 Refining the Requirements Model
9 Object Interaction
10 Specifying Operations
11 Specifying Control
A4 Agate Ltd Case Study—Further Analysis
12 Moving into Design
13 Systems Design and Architecture
14 Detailed Design
15 Design Patterns
16 Human–Computer Interaction
17 Designing Boundary Classes
18 Data Management Design
A5 Agate Ltd Case Study—Design
19 Implementation
20 Software Reuse
21 Software Development Processes

Object-Oriented Design

INTERNATIONAL EDITION

OBJECT-ORIENTED DESIGN USING JAVA

by Dale Skrien, Colby College

2009 (January 2008) / 416 pages / Hardcover
ISBN: 9780072974164
ISBN: 9780071263870 [IE]

www.mhhe.com/skrien

The primary strength of Object-Oriented Design Using Java is that it has one of the best presentations of problem solving using patterns available. It has received rave reviews from instructors, and has been class tested at a number of schools where the response from both professors and students has been extremely positive. This book is intended for the object-oriented programming design course where UML is used extensively for design and notation. It has been especially designed to be accessible to students and is full of real-world examples, case studies, and other aids to assist student understanding.

CONTENTS

Chapter 1: Elegance in Object-Oriented Design and Implementation
Chapter 2: Fundamentals of Object Orientation
Chapter 3: Elegance and Implementation Inheritance
Chapter 4: Elegance and Methods
Chapter 5: Elegance and Classes
Chapter 6: Simple Case Study of a Money Class
Chapter 7: Introduction to Design Patterns
Chapter 8: Figure-Drawing Application Case Study
Chapter 9: Language Parser Case Study
Appendix A: An Introduction to UML
Appendix B: Coding Conventions and Javadoc comments

INTERNATIONAL EDITION

PRACTICAL OBJECT-ORIENTED DESIGN WITH UML
2nd Edition

by Mark Priestley, **University of Westminster**
2004 / 376 pages / softcover
ISBN: 9780077103934
ISBN: 9780071239233 [IE]
(McGraw-Hill UK Title)

www.mcgraw-hill.co.uk/textbooks/priestley

The new second edition of Practical Object Oriented Design with UML provides a concise introduction to the design of object-oriented programs using UML. The book focuses on the application of UML in the development of software, and also offers a detailed tutorial introduction to the UML notation and its application. The book provides the ideal introduction to UML for undergraduates taking modules in object-oriented techniques as part of a Computer Science or Software Engineering degree programme.

CONTENTS

Part 1: Introduction to object-oriented design:
1 Introduction to UML.
2 Modelling with objects.
3 Software development processes.
Part 2: Case study: Restaurant Booking System:
4 Restaurant system: use case model.
5 Restaurant system: analysis.
6 Restaurant system: design.
7 Restaurant system: implementation.
Part 3: UML Tutorial:
8 Class and object diagrams.
9 Interaction diagrams.
10 Statecharts and activity diagrams.
11 Constraints and OCL.
12 Implementation models.
Part 4: Object-oriented design in practice:
13 Code generation and reverse engineering.
14 Principles and patterns.
Appendices: Reference material.
A: UML notation reference.
B: OCL reference.
C: A use case template.
References and Further Reading.
Index

Software Project Management

SOFTWARE PROJECT MANAGEMENT
5th Edition

By Bob Hughes, and Mike Cotterell, both from University of Brighton
2010 (May 2009) / 400 pages / Softcover
ISBN: 9780077122799
(McGraw-Hill UK Title)

www.mcgraw-hill.co.uk/textbooks/hughes

Software project management is a crucial element in successful software and IT development, and requires students to develop an understanding of technical methodology and an appreciation of the many human factors that can play a part in software projects. The new fifth edition of Software Project Management has been fully revised and updated to help students to grasp these contrasting skills, and learn about new developments in the discipline. It provides both undergraduate and postgraduate students with a comprehensive introduction to software project management and has enjoyed a loyal following of users since the first edition published.

CONTENTS

Chapter 1 Introduction to software project management
Chapter 2 Project evaluation and programme management
Chapter 3 An overview of project planning
Chapter 4 Selection of an appropriate project approach
Chapter 5 Software effort estimation
Chapter 6 Activity planning
Chapter 7 Risk management
Chapter 8 Resource allocation
Chapter 9 Monitoring and control
Chapter 10 Managing contracts
Chapter 11 Managing people in software environments
Chapter 12 Working in teams
Chapter 13 Software quality

Networking and Telecommunications

Local Area Networks

INTERNATIONAL EDITION

LOCAL AREA NETWORKS

by Behrouz A. Forouzan, De Anza College

2002 / 640 pages

ISBN: 9780071150804 [IE]

www.mhhe.com/forouzan

Local Area Networks (LANs) have become an integral part of communication in today's world. LAN applications are used in businesses, educational facilities, hospitals, stock exchanges, and warehouses to name a few. Forouzan's Local Area Networks offers reader-friendly, comprehensive coverage of LAN technologies, which prepares students the reader to use these technologies in real-world applications. Local Area Networks is ideal for students both in the classroom and later as a reference. Forouzan motivates topics by practical applications, and his liberal use of figures makes difficult technical topics easier to grasp by providing an intuitive, visual representation of concepts. Extensive practice sets are also provided at the end of each chapter, which reinforce what the student has learned.

CONTENTS

Chapter 1 Introduction.
Chapter 2 Data Communication Models.
Chapter 3 Data Transmission.
Chapter 4 Transmission Media.
Chapter 5 Error Detection.
Chapter 6 LAN Topologies.
Chapter 7 Flow & Error Control.
Chapter 8 Medium Access Methods.
Chapter 9 Logical Link Control (LLC).
Chapter 10 Ethernet: 10 Mbps.
Chapter 11 Ethernet Evolution: Fast and Gigabit Ethernet.
Chapter 12 Token Bus. Chapter 13 Token Ring.
Chapter 14 ATM LANs. Chapter 15 Wireless LANs.
Chapter 16 LAN Performance.
Chapter 17 Connecting LANs.
Chapter 18 TCP/IP.
Chapter 19 Data Encryption.
Chapter 20 Network Management.
Appendix A ASCII Code.
Appendix B Numbering Systems & Transformation.
Appendix C Spanning Tree.
Appendix D Information Theory.
Appendix E ATM. Appendix F DQDB.
Appendix G FDDI.
Appendix H Virtual Local Area Networks (VLANs).
Appendix I Virtual Private Networks (VPNs).
Appendix J Probability.
Glossary.
Solutions.
Index

INTERNATIONAL EDITION

LOCAL AREA NETWORKS WITH CD-ROM 2nd Edition

by Gerd Keiser, PhotonicsComm Solutions, Inc.

2002 / 552 pages / Hardcover

ISBN: 9780071226509 [IE with CD-ROM]

www.mhhe.com/engcs/electrical/keiser2

The second edition of Keiser's Local Area Networks has been updated extensively with the latest LANs technology. The book has been written with the purpose of providing the basic material for an introductory senior or first-year graduate course in the analysis and modeling of local area networks. The book will also serve as a working reference for practicing engineers dealing with local area network design and applications. The book is organized to give a clear and logical sequence of key LAN topics.

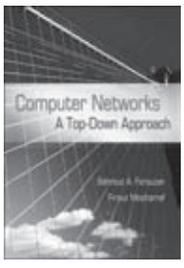
CONTENTS

1 Overview of LANs.
2 Network Architectures and Protocols.
3 Data Communication Concepts.
4 LAN Access Techniques.
5 Ethernet.
6 Token-Passing LANs.
7 ATM LANs.
8 Wireless LANs.
9 Fibre Channel and SANSs.
10 Internetworking.
11 Network Management.
12 Network Security

Computer Networks

INTERNATIONAL EDITION

NEW



COMPUTER NETWORKS
A Top Down Approach

By Behrouz A. Forouzan, Deanza College, And Firouz Mosharraf, Rio Hondo College

2012 (March 2011) / Hardcover / 864 pages
ISBN: 9780073523262
ISBN: 9780071326896 [IE]

www.mhhe.com/forouzan

This new networking text follows a top-down approach. The presentation begins with an explanation of the application layer, which makes it easier for students to understand how network devices work, and then, with the students fully engaged, the authors move on to discuss the other layers, ending with the physical layer. With this top-down approach, its thorough treatment of the topic, and a host of pedagogical features, this new networking book offers the market something it hasn't had for many years- a well-crafted, modern text that places the student at the center of the learning experience.

Forouzan's Computer Networks presents a complex topic in an accessible, student-friendly way that makes learning the material not only manageable but fun as well. The appealing visual layout combines with numerous figures and examples to provide multiple routes to understanding. Students are presented with the most up-to-date material currently available and are encouraged to view what they are learning in a real-world context. This approach is both motivating and practical in that students begin to see themselves as the professionals they will soon become.

FEATURES

- Top-down approach
- Covers network programming in both C (chapter 2) and Java (chapter 11).
- Whole chapter on Java Programming
- Numerous examples throughout the text
- Rich visual layout
- Large number of well-executed figures
- Key terms in each chapter (Kurose doesn't have these)
- Further reading section in each chapter
- Exercises in each chapter
- Glossary (Kurose doesn't have one)
- Abbreviation list (Kurose doesn't have this)
- Bibliography
- Host of supplements including a set of quizzes for each chapter, lab assignments, animated Power-Points, several Java Aplets for each chapter, student solutions, professor solutions

CONTENTS

Chapter 1: Introduction
Chapter 2: Application Layer
Chapter 3: Transport Layer
Chapter 4: Network Layer
Chapter 5: Data Link Layer: Wired LANs and WANs
Chapter 6: Data Link Layer:Wireless LANs and WANs
Chapter 7: Physical Layer
Chapter 8: Multimedia
Chapter 9: Network Management
Chapter 10: Network Security
Chapter 11: Network Programming in Java

INTERNATIONAL EDITION

NEW

COMPUTER NETWORKS
An Open Source Approach

By Ying-Dar Lin, National Chiao Tung University, Ren-Hung Hwang, And Fred Baker

2012 (January 2011) / Hardcover / 768 pages
ISBN: 9780073376240
ISBN: 9780071315876 [IE]

www.mhhe.com/lin

Ying-Dar Lin, Ren-Hung Hwang, and Fred Baker's Computer Networks will be the first text to implement an Open Source Approach, discussing the network layers, their applications, and the implementation issues. Thus, it tries to narrow the gap between domain knowledge and hands-on skills. The book is internet focused and discusses 56 open source code segments among all chapters. It is meant for the first course in Computer Networks.

FEATURES

- Open-Source Approach leverages the ever-broadening scope of open-source communities as well as Linux development.
- Bridges the Gap Between Design & Implementation. The book is accompanied by over 50 code samples that allow students to run code and implement their designs and benchmark them.
- Skills-based Presentation helps lower the barrier to open-source implementations. Specific Linux-based examples are located in the appendices.
- Strong Learning System helps students follow the key points of the text. "A Packet's Life" from the server and router perspectives clearly illustrates how to trace packet flow in code.

CONTENTS

Chapter 1: Fundamentals
Chapter 2: Physical Layer
Chapter 3: Link Layer
Chapter 4: Internet Protocol Layer
Chapter 5: Transport Layer
Chapter 6: Internet Services
Chapter 7: Internet QoS
Chapter 8: Network Security

Appendix A: Who's Who
Appendix B: Linux Kernel Overview
Appendix C: Development Tools
Appendix D: Network Utilities

TCP/IP

INTERNATIONAL EDITION

TCP/IP PROTOCOL SUITE
4th Edition

by Behrouz A. Forouzan, Deanza College
2010 / Hardcover / 928 pages
ISBN: 9780073376042
ISBN: 9780071084208 [IE]

www.mhhe.com/forouzan

In a world where the number of people who need to learn about data communications and networking is exploding, Forouzan's book is the answer. The book's visual approach makes it easy for students to learn about and understand the concepts involved in this rapidly developing field.

TCP/IP Protocol Suite teaches students and professionals, with no prior knowledge of TCP/IP everything they need to know about the subject. This comprehensive book uses hundreds of figures to make technical concepts easy to grasp as well as many examples which help tie the material to the real-world.

The fourth edition of TCP/IP Protocol Suite has been fully updated to include all of the recent technology changes in the field. Additionally, out-of-date material has been overhauled to reflect recent changes in technology.

CONTENTS

1 Introduction
2 The OSI Model and the TCP/IP Protocol Suite
3 Underlying Technologies
4 IP Addresses: Classful Addressing
5 IP Addresses: Classless Addressing
6 Delivery, Forwarding, and Routing of IP Packets
7 ARP and RARP
8 Internet Protocol (IP)
9 Internet Control Message Protocol (ICMP)
10 Internet Group Management Protocol (IGMP)
11 User Datagram Protocol (UDP)
12 Transmission Control Protocol (TCP)
13 Stream Control Transmission Protocol (SCTP)
14 Unicast Routing Protocols (RIP, OSPF, and BGP)
15 Multicasting and Multicast Routing Protocols
16 Host Configuration: BOOTP and DHCP
17 Domain Name System (DNS)
18 Remote Login: TELNET
19 File Transfer: FTP and TFTP
20 Electronic Mail: SMTP, POP, and IMAP
21 Network Management: SNMP
22 World Wide Web: HTTP
23 IP over ATM
24 Mobile IP
25 Multimedia
26 Private Networks, Virtual Private Networks, and Network Address Translation
27 Next Generation: IPv6 and ICMPv6
28 Network Security
Appendix A ASCII Code
Appendix B Numbering Systems
Appendix C Checksum
Appendix D Error Detection
Appendix E Project 802
Appendix F Contact Addresses
Appendix G RFCs
Appendix H UDP and TCP Ports

Network Security

INTERNATIONAL EDITION

CRYPTOGRAPHY AND NETWORK SECURITY

by Behrouz A. Forouzan, De Anza College
2008 (February 2007) / Hardcover / 480 pages
ISBN: 9780073327532
ISBN: 9780071263610 [IE]

www.mhhe.com/forouzan

A textbook for beginners in security. In this new first edition, well-known author Behrouz Forouzan uses his accessible writing style and visual approach to simplify the difficult concepts of cryptography and network security. Forouzan presents difficult security topics from the ground up. A gentle introduction to the fundamentals of number theory is provided in the opening chapters, paving the way for the student to move on to more complex security and cryptography topics. Difficult math concepts are organized in appendices at the end of each chapter so that students can first learn the principles, then apply the technical background. Hundreds of examples, as well as fully coded programs, round out a practical, hands-on approach which encourages students to test the material they are learning.

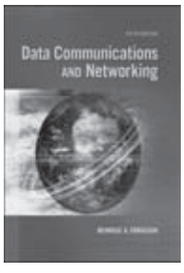
CONTENTS

1 Introduction
Part 1 Symmetric-Key Encipherment
2 Mathematics of Cryptography
3 Traditional Symmetric-Key Ciphers
4 Mathematics of Cryptography
5 Introduction to Modern Symmetric-Key Ciphers
6 Data Encryption Standard (DES)
7 Advanced Encryption Standard (AES)
8 Encipherment Using Modern Symmetric-Key Ciphers
Part 2 Asymmetric-Key Encipherment
9 Mathematics of Cryptography
10 Asymmetric-Key Cryptography
Part 3 Integrity, Authentication, and Key Management
11 Message Integrity and Message Authentication
12 Cryptographic Hash Functions
13 Digital Signature
14 Entity Authentication
15 Key Management
Part 4 Network Security
16 Security at the Application Layer: PGP and S/MIME
17 Security at the Transport Layer: SSL and TLS
18 Security at the Network Layer: IPSec

Wireless Communications & Networking

GLOBAL EDITION

NEW



DATA COMMUNICATIONS AND NETWORKING
5th Edition

by Behrouz A. Forouzan, Deanza College

2013 (February 2012) / Hardcover / 1184 pages
ISBN: 9780073376226
ISBN: 9780071326285 [GE]

www.mhhe.com/forouzan

Data Communications and Networking is designed to help students understand the basics of data communications and networking, and the protocols used in the Internet in particular by using the protocol layering of the Internet and TCP/IP protocol suite. Technologies related to data communication and networking may be the fastest growing in today's culture. The appearance of some new social networking applications is a testimony to this claim. In this Internet-oriented society, specialists need to be trained to run and manage the Internet, part of the Internet, or an organization's network that is connected to the Internet. As both the number and types of students are increasing, it is essential to have a textbook that provides coverage of the latest advances, while presenting the material in a way that is accessible to students with little or no background in the field.

Using a bottom-up approach, Data Communications and Networking presents this highly technical subject matter without relying on complex formulas by using a strong pedagogical approach supported by more than 830 figures. Now in its Fifth Edition, this textbook brings the beginning student right to the forefront of the latest advances in the field, while presenting the fundamentals in a clear, straightforward manner. Students will find better coverage, improved figures and better explanations on cutting-edge material. The "bottom-up" approach allows instructors to cover the material in one course, rather than having separate courses on data communications and networking.

NEW TO THIS EDITION

❖ Changes is the End-of-Chapter Materials. Lab assignments have been added to some chapters. Applets have been posted in the book website to allow students to see some problems and protocols in action.

CONTENTS

Part I: Overview
Chapter 1 Introduction
Chapter 2 Network Models
Part 2: Physical Layer
Chapter 3 Introduction to Physical Layer
Chapter 4 Digital Transmission
Chapter 5 Analog Transmission
Chapter 6 Bandwidth Utilization: Multiplexing and Spreading Chapter 7 Transmission Media
Chapter 8 Switching
Part 3: Data Link Layer
Chapter 9 Introduction to Data-Link Layer
Chapter 10 Error Detection and Correction
Chapter 11 Data Link Control (DLC)
Chapter 12 Media Access Control (MAC)
Chapter 13 Wired LANs: Ethernet
Chapter 14 Other Wired Networks
Chapter 15 Wireless LANs
Chapter 16 Other Wireless Networks
Chapter 17 Connecting Devices and Virtual LANs
Part 4: Network Layer
Chapter 18 Introduction to Network Layer
Chapter 19 Network-Layer Protocols
Chapter 20 Unicast Routing
Chapter 21 Multicast Routing
Chapter 22 Next Generation IP
Part 5: Transport Layer
Chapter 23 Introduction to Transport Layer
Chapter 24 Internet Transport-Layer Protocols
Part 6: Application Layer
Chapter 25 Introduction to Application Layer
Chapter 26 Standard Client-Server Protocols
Chapter 27 Network Management
Chapter 28 Multimedia
Chapter 29 Peer-to-Peer Paradigm
Part 7: Topics Related to All Layers
Chapter 30 Quality of Service
Chapter 31 Cryptography and Network Security
Chapter 32 Internet Security
Appendices
Appendix A Unicode
Appendix B Positioning Numbering System
Appendix C HTML, CSS, XML, and XSL
Appendix D A Touch of Probability
Appendix E Mathematical Review
Appendix F Miscellaneous Information
Appendix G 8B/6T Code
Appendix H Telephone History

All Global Editions are adapted to better meet the needs of courses outside the United States. Please contact your local sales representative for more details.

NEW

DATA COMMUNICATIONS AND NETWORKS
2nd Edition

by Achyut S. Godbole, Managing Director, Softexcel Consultancy Services, Mumbai, and Atul Kahate, i-flex Solutions Ltd. Pune

2011 (May 2011) / Softcover / 544 pages
ISBN: 9780071077705

(A McGraw-Hill India title)

This book fulfills the need for a basic comprehensive text on data communications and networks. This second edition lays emphasis on key topics such as data transmission, transmission media, data compression, security, network types and topologies, Internet and TCP/IP protocol suite.

NEW TO THIS EDITION

❖ New chapter on Wireless Communication including discussion of IEEE Standards, Bluetooth, Wireless LANs, and Cellular Telephones

❖ 875 chapter-end exercises include 600 Objective-type Questions with Answers (True/False and Multiple-Choice Questions) and 275 Review Questions

CONTENTS

1.Introduction to Data Communication and networking (existing Chapter-1)
2. Analog and Digital Transmission Methods (existing-3)
3. Modes of Data Transmission and Multiplexing (existing Chapter-4)
4. Transmission Errors: Detection and Correction (existing Chapter-5)
5. Data Compression and Encryption (existing Chapter-6)
6. Transmission Media (existing Chapter-7)
7. Network Topologies, Switching and Routing Algorithms (existing Chapter-8)
8. Networking Protocols and OSI Model (existing Chapter-9)
9. Local Area Networks(LAN), Metropolitan Area Networks (MAN) and Wide Area Networks (WAN)
10. Medium Access Sub Layer and ISDN (renamed; existing Chapter-11)
11. X.25 Protocol (existing Chapter-12)
12. Frame Relay and Congestion Control (renamed; existing Chapter-13)
13. Asynchronous Transfer Mode (ATM) (existing Chapter-14)
14. Wireless Communication (New)
15. Internetworking Concepts, Devices, Internet Basics, History and Architecture (existing Chapter-15)
16. Ways of Accessing the Internet (existing Chapter-16)
17. TCP/IP Part I: An Introduction to TCP/IP, IP, ARP, RARP, ICMP (existing Chapter-17)
18. TCP/IP Part II (TCP, UDP) (existing Chapter-18)
19. TCP-IP Part III (DNS, Email, FTP, TFTP) (existing Chapter-19)
20. TCP-IP Part IV (WWW, HTTP, TELNET) (existing Chapter-20)
21. Multimedia Communications (existing Chapter-21)
Appendix A: Internet Protocol Version 6 (Ipv6)
Appendix B: Hardware for Error Detection
Appendix C: Network Management and Monitoring

INTERNATIONAL EDITION

COMMUNICATION NETWORK
2nd Edition

by Alberto Leon-Garcia, University of Toronto and Indra Widjaja

2004 / 848 pages
ISBN: 9780072463521
ISBN: 9780071257091 [IE]

http://highered.mcgraw-hill.com/sites/007246352X

This book is designed for introductory one-semester or one-year courses in communications networks in upper-level undergraduate programs. The second half of the book can be used in more advanced courses. As pre-requisites the book assumes a general knowledge of computer systems and programming, and elementary calculus. The second edition expands on the success of the first edition by updating on technological changes in networks and responding to comprehensive market feedback.

CONTENTS

Preface. 1 Communication Networks and Services. 2 Application and Layered Architectures. 3 Digital Transmission Fundamentals. 4 Transmission Systems and Circuit Switching Networks. 5 ARQ and Flow Control. 6 Local Area Networks and Medium Access Control. 7 Packet-Switching Networks. 8 TCP/IP. 9 ATM Networks. 10 Advanced Network Architectures. 11 Network Security. 12 Multi-Media Information and Networking. Epilogue. Appendixes. A Delay and Loss Performance. B Network Management

SCHAUM'S OUTLINE OF COMPUTER NETWORKING

by Ed Tittel

2002 / Softcover / 304 pages
ISBN: 9780071362856

(A Schaum's Publication)

Schaum's Outline of Computer Networking introduces the underlying concepts, principles, and terminology of computer networks. Covering the full scope of material taught in computer networking courses, this problem-solved approach presents the different components of a network and shows how these components fit together as well as explaining the varied harmonizing functions needed for the interconnection of many heterogeneous computer networks.

Database Systems

SQL Programming

SCHAUM'S OUTLINE OF FUNDAMENTALS OF SQL PROGRAMMING

by Ramon Mata-Toledo and Pauline Cushman

2001 / 314 pages / Softcover
ISBN: 9780071359535
(A Schaum's Publication)

Standard SQL guarantees that no matter what the database implementation, the features of the language will be applicable across all platforms. Over 200 completely solved problems plus 200 supplementary problems reinforce students' understanding and skills. Features the syntax used by the most important database developers, Oracle and Microsoft, to familiarize students with this common language. Includes labs and practice tests like those used in database certification exams.

CONTENTS

An Introduction to SQL and Relational Database Concepts.
Implementation of the Relational Operators in SQL.
Boolean Operators and Pattern Matching.
Arithmetic Operations and Built-In Functions.
Group Functions.
Processing Date and Time Information.
Complex Queries and Set Operators.
Basic Security Issues Using SQL.
Appendices.

Database Management & Design

NEW

DATABASE MANAGEMENT SYSTEMS

by G K Gupta, Adjunct Professor of Computer ScienceMonash University, ClaytonAustralia

2011 (April 2011) / Softcover / 792 pages
ISBN: 9780071072731
(A McGraw-Hill India Title)

This book provides simple and comprehensive explanation of fundamentals of database management systems. It focuses on building database applications by emphasizing on concepts that are the foundation of database processing. This book is intended to be a complete text for undergraduate and graduate level database management courses offered across a range of academic disciplines such as computer science, information systems, and business management.

FEATURES

❖ Concepts like Relational Model, ER Model, etc., elucidated through a running example of a cricket database, especially formulated for Indian students

❖ In-depth coverage of Transaction Management and Concurrency, Query Processing, Distributed Databases, and Backup and Recovery

❖ Discussion of new technologies like Mobile Databases and Cloud Computing

❖ Strong pedagogical features:

* 342 Review Questions along with Section References
* 348 Short Answer Questions
* 409 Multiple Choice Questions with Answers
* 246 Exercises
* 56 Lab Assignments
* 43 Projects

CONTENTS

1. Introduction to Database Management
2. Entity–Relationship Data Model
3. Relational Model
4. Relational Algebra and Relational Calculus
5. SQL
6. Normalization
7. Physical Storage and Indexing
8. Query Processing
9. Transaction Management and Concurrency
10. Database Backup and Recovery
11. Database Security
12. Integrity Constraints and Active Databases
13. Distributed Databases
14. Object-Oriented Databases
15. Data Warehouses and OLAP
16. Data Mining

17. Web Databases and XML
18. Emerging Database Technologies

INTERNATIONAL EDITION

DATABASE MANAGEMENT SYSTEMS
3rd Edition

by Raghu Ramakrishnan, University of Wisconsin - Madison and Johannes Gehrke, University of Wisconsin - Madison

2003 / 928 pages
ISBN: 9780072465631
ISBN: 9780071230575 [IE]

http://highered.mcgraw-hill.com/sites/0072465638

Database Management Systems provides comprehensive and up-to-date coverage of the fundamentals of database systems. Coherent explanations and practical examples have made this one of the leading texts in the field. The third edition continues in this tradition, enhancing it with more practical material. The new edition has been reorganized to allow more flexibility in the way the course is taught. Now, instructors can easily choose whether they would like to teach a course which emphasizes database application development or a course that emphasizes database systems issues. New overview chapters at the beginning of parts make it possible to skip other chapters in the part if you don't want the detail. More applications and examples have been added throughout the book, including SQL and Oracle examples. The applied flavor is further enhanced by the two new database applications chapters.

CONTENTS

Foundations.
Chapter 1 Introduction to Database Systems.
Chapter 2 The Entity-Relationship Model.
Chapter 3 The Relational Model.
Chapter 4 Relational Algebra and Calculus.
Chapter 5 SQL: Queries, Programming, Triggers.
Storage and Indexing.
Chapter 6 Overview of File Organizations and Indexes.
Chapter 7 Storing Data: Disks and Files.
Chapter 8 Tree-Structured Indexing.
Chapter 9 Hash-Based Indexing.
Query Evaluation.
Chapter 10 Overview of Query Evaluation.
Chapter 11 External Sorting.
Chapter 12 Evaluation of Relational Operators.
Chapter 13 A Typical Relational Query Optimizer.
Application Development.
Chapter 14 Schema Refinement and Normal Forms.
Chapter 15 Physical Database Design and Tuning.
Chapter 16 Security.
Chapter 17 Database Applications and the Internet: Concepts.
Chapter 18 Database Applications and the Internet: Practice.
Transaction Management.
Chapter 19 Overview of Transaction Management.
Chapter 20 Concurrency.
Chapter 21 Crash Recovery.
Advanced Topics.
Chapter 22 Parallel and Distributed Databases.
Chapter 23 Data on the Web: XML and XQuery.
Chapter 24 Information Retrieval and Database Systems.
Chapter 25 Decision Support.
Chapter 26 Data Mining.
Chapter 27 Object-Database Systems.
Chapter 28 Additional Reading

Database Systems

INTERNATIONAL EDITION

DATABASE SYSTEM CONCEPTS
6th Edition

by Abraham Silberschatz, Yale University, Henry F. Korth, Lehigh University, and S. Sudarshan

2011 (January 2010) / Hardcover / 1376 pages
ISBN: 9780073523323
ISBN: 9780071289597 [IE]

www.mhhe.com/silberschatz

Database System Concepts by Silberschatz is now in its 6th edition and is one of the cornerstone texts of database education. It presents the fundamental concepts of database management in an intuitive manner geared toward allowing students to begin working with databases as quickly as possible.

Silberschatz is designed for a first course in databases at the junior/senior undergraduate level or the first year graduate level. It also contains additional material that can be used as supplements or as introductory material for an advanced course. Because the authors present concepts as intuitive descriptions, a familiarity with basic data structures, computer organization, and a high-level programming language are the only prerequisites. Important theoretical results are covered, but formal proofs are omitted. In place of proofs, figures and examples are used to suggest why a result is true.

CONTENTS

Chapter 1: Introduction
Part 1: Relational Databases
Chapter 2: Introduction to the Relational Model
Chapter 3: Introduction to SQL
Chapter 4: Intermediate SQL
Chapter 5: Advanced SQL
Chapter 6: Formal Relational Query Languages
Part II: Database Design
Chapter 7: Database Design and the E-R Model
Chapter 8: Relational Database Design
Chapter 9: Application Design and Development
Part III: Data Storage and Querying
Chapter 10: Storage and File Structure
Chapter 11: Indexing and Hashing
Chapter 12: Query Processing
Chapter 13: Query Optimization
Part IV: Transaction Management
Chapter 14: Transactions
Chapter 15: Concurrency Control
Chapter 16: Recovery System
Part V: System Architecture
Chapter 17: Database-System Architectures
Chapter 18: Parallel Databases
Chapter 19: Distributed Databases
Part VI: Data Mining and Information Retrieval
Chapter 20: Data Mining
Chapter 21: Information Retrieval
Part VII: Specialty Databases
Chapter 22: Object-Based Databases
Chapter 23: XML
Chapter 24: Advanced Application Development
Chapter 25: Advanced Data Types and New Applications
Chapter 26: Advanced Transaction Processing
Part IX: Case Studies
Chapter 27: PostgreSQL
Chapter 28: Oracle
Chapter 29: IBM DB2 Universal Database
Chapter 30: Microsoft SQL Server

Part X: Appendices
Appendix A: Detailed University Schema
Appendix B: Other Relational Query Languages
Appendix C: Advanced Relational Database Design
Appendix D: Network Model
Appendix E: Hierarchical Model

INTRODUCTION TO DATABASE SYSTEMS

by Stephane Bressan, and Barbara Catania

2005 / 168 pages / Softcover

ISBN: 9780071246507

(Asian Publication)

Most books on databases have the size and content of a book of magic written in the ancient language of Tolkien's Ents. To counter this trend, Introduction to Database Systems is small and concise by design. It aims to provide students, academics and professionals with a rigorous, convenient and economical reference.

The book describes the essential concepts pertaining to the design and programming of database applications with relational database management systems. It covers conceptual modelling with the entity-relationship model and logical modelling with the relational model. It also presents the techniques for the normalisation of logical designs based on functional dependencies, i.e. the decomposition into Boyce-Codd and third normal forms.

Also covered are t-upple and domain relational calculi, as well as relational algebra. This book illustrates the main SQL data definition and data manipulation statements and looks at contemporary approaches to coupling SQL with general purpose programming languages.

Introduction to Database Systems concludes with a brief catalogue raisonné of textbooks on databases.

CONTENTS

Preface.
About the Authors.
1 What's in a Database?
2 Relational Model.
3 Relational Calculus.
4 Relational Algebra.
5 SQL.
6 SQL and Programming Languages.
7 Entity-Relationship Model.
8 Normalisation.
9 Conclusion.
References.
Index.

Computer Graphics

INTERNATIONAL EDITION

INTRODUCTION TO COMPUTER GRAPHICS

by N Krishnamurthy, Software Consultant, Singapore

2001 / 352 pages / softcover

ISBN: 9780070435360 (Out-of-Print)
ISBN: 9780071207041 [IE]

(McGraw-Hill India Title)

CONTENTS

1 Introduction.
2 Applications.
3 Graphics Mathematics.
4 Input Hardware.
5 Output Hardware.
6 Output Characteristics.
7 Line Drawing Algorithms.
8 Programming.
9 Business and Scientific Graphics.
10 Window and Viewport.
11 Clipping.
12 Modeling Transformations.
13 Transformation Applications.
14 Tools and Techniques.
15 3D Input and Processing.
16 3D Realism and Output.
17 Conclusion.
Appendices: A: Coordinate Systems.
B: Lines and Curves in 2D.
C: Matrix Algebra.
D: Lines and Surfaces in 3D.
E : References and Resources.
F: Captions and Notes on Colour Plates. Index

INTERNATIONAL EDITION

COMPUTER GRAPHICS
2nd Edition

by Steven Harrington, Xerox Corporation, Rochester

1987 / 466 pages

ISBN: 9780071004725 [IE]

An introductory undergraduate text for computer graphics, this text retains its practical orientation through the integration of CORE. Its coverage of GKS is increased as is coverage of raster graphics, color models, and factuals.

SCHAUM'S OUTLINE OF COMPUTER GRAPHICS
2nd Edition

by Roy A Plastock and Zhigang Xiang, New Jersey Institute of Technology

2001 / 347 pages

ISBN: 9780071357814

(A Schaum's Publication)

Scores of examples and problems allow students to hone their skills. Clear explanations of fundamental tasks facilitate students' understanding of important concepts. New! Chapters on shading models, shadow, and texture—including the Phong illumination model—ex-

plain the latest techniques and tools for achieving photorealism in computer graphics.

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Two-Dimensional Viewing and Clipping.
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Geometric Represenation.
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Color and Shading Models.
Ray Tracing.
Mathematics for Two-Dimensional Computer Graphics.
Mathematics for Three-Dimensional Computer Graphics.

Artificial Intelligence

Artificial Intelligence (AI)

INTERNATIONAL EDITION

MACHINE LEARNING

by Tom M Mitchell, Carnegie Mellon University
1997 / 414 pages / hardcover
ISBN: 9780070428072
ISBN: 9780071154673 [IE]

www.cs.cmu.edu/afs/cs.cmu.edu/user/mitchell/ftp/m1book.html

This book covers the field of machine learning, which is the study of algorithms that allow computer programs to automatically improve through experience. The book is intended to support upper level undergraduate and introductory level graduate courses in machine learning.

CONTENTS

1 Introduction
2 Concept Learning and the General-to-Specific Ordering
3 Decision Tree Learning
4 Artificial Neural Networks
5 Evaluating Hypotheses
6 Bayesian Learning
7 Computational Learning Theory
8 Instance-Based Learning
9 Genetic Algorithms
10 Learning Sets of Rules
11 Analytical Learning
12 Combining Inductive and Analytical Learning
13 Reinforcement Learning

Neural Networks & Fuzzy Systems

INTERNATIONAL EDITION

NEURAL NETWORKS: A CLASSROOM APPROACH

by Satish Kumar, Dayalbagh Educational Institute, India
2004 / 768 pages / Softcover
ISBN: 9780070482920
ISBN: 9780071246729 [IE]
(McGraw-Hill India Title)

http://highered.mcgraw-hill.com/sites/0070482926

Neural Networks is an integral component fo the ubiquitous soft computing paradigm. An in-depth understanding of this field requires some background of the principles of neuroscience, mathematics and computer programming. Neural Networks: A Classroom Approach, achieves a balanced blend of these areas to weave an appropriate fabric for the exposition of the diversity of neural network models.

This book is unique, in the sense that it stresses on an intuitive and geometric understanding of the subject and on the heuristic explanation of the theoretical results.

CONTENTS

I. Traces of History and A Neuroscience Briefer:
1 Brain Style Computing: Origins and Issues.
2 Lessons from Neuroscience.
II. Feedforward Neural Networks and Supervised Learning:
3 Artificial Neurons, Neural Networks and Architectures.
4 Geometry of Binary Threshold Neurons and Their Networks.
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6 Supervised Learning.
II: Backpropagation and Beyond:
7 Neural Network: A Statistical Pattern Recognition Perspective.
8 Focussing on Generalization: Support Vector Machines and Radial Basis Function Networks.
III. Recurrent Neurodynamical Systems.
9 Dynamical Systems Review.
10 Attractor Neural Networks.
11 Adaptive Resonance Theory
12 Towards the Self Organizing Feature Map.
IV. Contemporary Topics:
13 Pulsed Neuron Models: The New Generation.
14 Fuzzy Sets, Fuzzy Systems and Applications.
15 Neural Networks and the Soft Computing Paradigm

Internet/Multimedia

Multimedia

MULTIMEDIA TECHNOLOGIES

by Ashok Banerji, and Ananda Mohan Ghosh

2009 / Softcover

ISBN: 9780070669239

(McGraw-Hill India Title)

This book is designed to provide comprehensive of Multimedia Technologies with a strong focus on field practice and active experimentation. Amply supplemented with rich pedagogy, it offers an unparalleled learning experience to both students and practitioners.

CONTENTS

Chapter 1. Introduction To Multimedia
Chapter 2. Uses Of Multimedia
Chapter 3. Interaction Technologies And Devices
Chapter 4. Compression Technologies For Multimedia
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Chapter 6. Digital Images
Chapter 7. Computer Graphics And Image Editing
Chapter 8. Digital Audio
Chapter 9. Audio-Visual Media
Chapter 10. Creating Animation In Flash
Chapter 11. Designing Multimedia
Chapter 12. Internet And WWW
Chapter 13. Future Directions

Bioinformatics

INTERNATIONAL EDITION

BIOINFORMATICS
A Computing Perspective

by Shuba Gopal, Rochester Institute of Technology, Anne Haake, Rochester Institute of Technology, Rhys Price Jones, and Paul Tymann, Rochester Inst Of Technology

2009 (May 2008) / Hardcover / 480 pages

ISBN: 9780073133645

ISBN: 9780071263900 [IE]

www.mhhe.com/gopal

This book is written by a very experienced author team representing the many areas out of which the new discipline of Bioinformatics is emerging. Their common sense approach and carefully detailed presentation have positioned Bioinformatics: A Computing perspective on the front lines for defining how the college Bioinformatics course will ultimately be taught. Bioinformatics: A Computing Approach is to make students conversant with key concepts in the biological sciences and knowledgeable about current iconoclastic tools and approaches. It successfully ties interesting computational challenges to relevant biological phenomenon, avoiding the "bioinformatics" vs. "computational" debate that tends to confuse students rather than interest and instruct them.

CONTENTS

Chapter 1. Road Map
Chapter 2. Biological Basics
Chapter 3. Wet and Dry Lab Techniques
Chapter 4. Fragment Assembly
Chapter 5. Sequence Alignment
Chapter 6. Simulating and Modeling Evolution
Chapter 7. Gene Finding
Chapter 8. Gene Expression
Chapter 9. Projects

Software Testing

SOFTWARE TESTING

by S S. Limaye, Principal, RKN Engg College and Professor of Electronics

2009 / Softcover

ISBN: 9780070139909

(McGraw-Hill India Title)

www.mhhe.com/limaye1st

This book employs an integrated approach to test management, techniques and process requirement activities. This text uses testing tools, processes and case designs as few of the many elements that prepare the audience to be a worthy keeper of the 'Quality Gate'.

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PART I QUALITY ASSURANCE
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Chapter 13. Testing Tools
PART IV TESTING PROCESS
Chapter 14. Test Planning
Chapter 15. Test Metrics and Test Reports
Chapter 16. Qualitative and Quantitative Analysis
PART V TEST PROCESS MANAGEMENT
Chapter 17. Test Process Improvement

Professional References

THE DATA WAREHOUSE MENTOR
Practical Data Warehouse and Business Intelligence Insights

by Robert Laberge

2011 (May 2011) / Softcover / 416 pages
ISBN: 9780071745321

(Osborne Media Professional Title)

Empower your users and drive better decision making across your enterprise with detailed instructions and best practices from an expert developer and trainer. The Data Warehouse Mentor: Practical Data Warehouse and Business Intelligence Insights shows how to plan, design, construct, and administer an integrated end-to-end DW/BI solution. Learn how to choose appropriate components, build an enterprise data model, configure data marts and data warehouses, establish data flow, and mitigate risk. Change management, data governance, and security are also covered in this comprehensive guide.

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Part I: Preparation
Chapter 1: Data Warehouse and Business Intelligence Overview
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Chapter 10: ETL and Data Quality
Chapter 11: Project Planning and Methodology
Part III: Let's Build
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Chapter 13: Data Governance
Chapter 14: Post-Project Review
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JAVA 7 THE COMPLETE REFERENCE
8th Edition

by Herbert Schildt

2011 (June 2010) / Softcover / 1000 pages
ISBN: 9780071606301

(Osborne Media Professional Title)

In this international bestseller, top-selling programming author Herbert Schildt shows you everything you need to develop, compile, debug, and run Java programs. The book has been updated to cover the latest version of the world's number-one programming language.

Java 7: The Complete Reference, Eighth Edition covers all of the Java 7 features, including closures, superpackages, reified generic types, the enhanced switch statement, chained method invocations, extension methods, the enhanced catch statement, and enum values. The book also includes details on the Swing Application Framework and a chapter on language-level XML support.

CONTENTS

Part One: The Java Language;
Chapter 1. The History and Evolution of Java;
Chapter 2. An Overview of Java;
Chapter 3. Data Types, Variables, and Arrays;
Chapter 4. Operators;
Chapter 5. Control Statements;
Chapter 6. Introducing Classes;
Chapter 7. A Closer Look at Methods and Classes;
Chapter 8. Inheritance;
Chapter 9. Packages and Interfaces;
Chapter 10. Exception Handling;
Chapter 11. Multithreaded Programming;
Chapter 12. Enumerations, Autoboxing, and Annotations;
Chapter 13. I/O, Applets, and Other Topics;
Chapter 14. Generics;
Part Two: The Java Library;
Chapter 15. String Handling;
Chapter 16. Exploring java.lang;
Chapter 17. java.util Part 1: The Collections Framework;
Chapter 18. java.util Part 2: More Utility Classes;
Chapter 19. Input/Output: Exploring java.io;
Chapter 20. Networking;
Chapter 21. The Applet Class;
Chapter 22. Event Handling;
Chapter 23. Introducing the AWT: Working with Windows, Graphics, and Text;
Chapter 24. Using AWT Controls, Layout Managers, and Menus;
Chapter 25. Images;
Chapter 26. The Concurrency Utilities;
Chapter 27. NIO, Regular Expressions, and Other Packages;
Part 3: Software Development Using Java;
Chapter 28. Java Beans;
Chapter 29. Introducing Swing;
Chapter 30. Exploring Swing;
Chapter 31. Servlets;
Part 4: Applying Java;
Chapter 32. Financial Applets and Servlets;
Chapter 33. Creating a Download Manager;
Appendix A: Using Java's Documentation Comments

MULTIMEDIA MAKING IT WORK
8th Edition

by Tay Vaughan

2011 / Softcover / 478 pages
ISBN: 9780071748469

(Osborne Media Professional Title)

Learn the basic elements of multimedia and the skills required for a successful multimedia career from this up-to-date, full-color resource. Covering both Windows and Mac platforms, Multimedia: Making It Work, Eighth Edition explains how to incorporate text, images, sound, animation, and video into compelling projects. Hardware and software tools are described in detail. Discover how to design, organize, produce, and deliver multimedia projects on the Web, CD-ROM, and DVD. Each chapter includes full-color illustrations and screenshots, professional insights from multimedia experts, self-quizzes, and hands-on projects.

CONTENTS

Chapter 1. What is Multimedia;
Chapter 2. Text;
Chapter 3. Images;
Chapter 4. Sound;
Chapter 5. Animation;
Chapter 6. Video;
Chapter 7. Making Multimedia;
Chapter 8. Multimedia Skills;
Chapter 9. Planning and Costing;
Chapter 10. Designing and Producing;
Chapter 11. Content and Talent;
Chapter 12. The Internet and Multimedia;
Chapter 13. Designing for the World Wide Web;
Chapter 14. Delivering;
Appendix

ORACLE VM IMPLEMENTATION AND ADMINISTRATION GUIDE

by Edward Whalen

2011 / Softcover / 448 pages
ISBN: 9780071639194

(Osborne Media Professional Title)

Set up and maintain a dynamic virtualization platform across your enterprise using the detailed information contained in this Oracle Press guide. Oracle VM Implementation and Administration Guide contains key virtualization concepts, practical instructions, examples, and best practices. Find out how to design Oracle VM server farms, build and deploy virtual machines, handle provisioning and cloning, and work with Oracle VM Manager. Monitoring, tuning, and security techniques are also covered in this comprehensive volume.

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Part I: Introduction
Chapter 1: Introduction to Virtualization
Chapter 2: What is Oracle VM?
Chapter 3: Oracle VM Architecture
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Part II: Installing and Configuring Oracle VM
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Chapter 18: Converting Other Virtual Images to Oracle VM
Chapter 19: Managing the VM Environment and Virtual Machines
Chapter 20: Virtualization Summary and Best Practices
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Appendix A: Configuring Linux Support Functions
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MOBILE APPLICATION SECURITY

by Himanshu Dwivedi, Chris Clark and David Thiel

2010 (February 2010) / Softcover / 400 pages
ISBN: 9780071633567

(Osborne Media Professional Title)

This is the only book on the market that shows IT and Web professionals how to secure mobile devices and the new Web 2.0 applications that run on them. You will learn best practices for securing applications that are written for the most popular mobile platforms, such as Apple iPhone, Windows Mobile, and Google Android. The author provides global case studies based on his work building mobile applications for major international corporate clients.

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1 Mobile Application Security Overview
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10 Bluetooth Security
11 SMS, MMS and Radio Interface Security
12 Mobile Location Services (GPS)
13 Enterprise Security on the Mobile OS
14 Mobile Enterprise Mail Scenarios

HACKING EXPOSED COMPUTER FORENSICS 2nd Edition

by Aaron Philipp, David Cowen, and Chris Davis

2010 (September 2009) / Softcover / 544 pages
ISBN: 9780071626774

(Osborne Media Professional Title)

Identify and investigate computer criminals of all stripes with help from this fully updated. real-world resource. Hacking Exposed Computer Forensics, Second Edition explains how to construct a high-tech forensic lab, collect prosecutable evidence, discover e-mail and system file clues, track wireless activity, and recover obscured documents. Learn how to re-create an attacker's footsteps, communicate with council, prepare court-ready reports, and work through legal and organizational challenges. Case studies straight from today's headlines cover IP theft, mortgage fraud, employee misconduct, securities fraud, embezzlement, organized crime, and consumer fraud cases.

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Ch. 5: Remote Investigations and Collections;
Part 3: Forensic Investigation Techniques;
Ch. 6: Microsoft Windows Systems Analysis;
Ch. 7: Linux Analysis;
Ch. 8: Macintosh Analysis;
Ch. 9: Defeating Anti-Forensic Techniques;
Ch. 10: Enterprise Storage Analysis;
Ch. 11: Email Analysis;
Ch. 12: Tracking User Activity;
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COMPUTER INFORMATION TECHNOLOGY

COMPUTER INFORMATION TECHNOLOGY

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Computing Essentials 2013, Complete Edition	O'Leary	9780073516820	70
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2012

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Computing Essentials 2012, Introductory Edition, 22e	O'Leary	9780077470814	68
Microsoft Office 2010 Now: A Skills Approach	Triad Interactive	9780073516479	73

2011

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NEW TITLES

Computer Concepts

Brief Computer Concepts

INTERNATIONAL EDITION

NEW

COMPUTING ESSENTIALS 2013 INTRODUCTORY EDITION

by Timothy J. O'Leary, Arizona State University

2013 (January 2012) / Softcover / 416 pages
ISBN: 9780077538989
ISBN: 9780071314725 [IE]

Computing Essentials 2013...Making IT Work for You! How are you learning about the most important, essential, and current concepts of information technology? Computing Essentials 2013 allows you to Make IT Work for You through relevant Explorations, Ethics and Environment themes throughout each chapter. Make IT Work for You!

INTERNATIONAL EDITION

NEW

USING INFORMATION TECHNOLOGY 10TH EDITION INTRODUCTORY EDITION

by Brian Williams, Deakin University

2013 (January 2012) / Softcover / 416 pages
ISBN: 9780077470678
ISBN: 9780071317900 [IE]

USING INFORMATION TECHNOLOGY; A Practical Introduction to Computers & Communications 10/e "If there is anything we have learned during 18 years of writing and revising this computer concepts book, it is this: Not only does the landscape of computer education change rapidly, but so do the students. . . . This edition, then, is written for the Always On generation, helping students use technology to enrich their personal lives." –Brian K. Williams & Stacey C. Sawyer

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Chapter 7: Personal Technology: The Future Is You
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INTERNATIONAL EDITION

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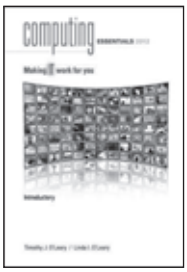

COMPUTING ESSENTIALS 2012 INTRODUCTORY EDITION

by Timothy J. O'Leary, Arizona State University

2012 (January 2011) / Softcover / 416 pages
ISBN: 9780077470814
ISBN: 9780071222006 [IE]

www.computing-2012.com

O'Leary, Computing Essentials 2012 Introductory and Complete versions available "Making IT Work for You!" Your essential guide to computing concepts… Computing Essentials 2012 provides you with a complete learning solution focusing on the most important, essential, and current concepts of information technology. Students are given a streamlined, concise, relevant approach to the fundamental issues surrounding the world of computing through a balance between theory and applied learning of these important topics. Overall, all of the items featured with this text—including the end-of-chapter materials and the text Web site—work together to help students truly understand the basics of computer concepts.

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❖ CURRENT INFORMATION AND FUTURE DIRECTION: "A Look to the Future" section at the end of each chapter to engage students with emerging technologies.

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2 The Internet, The Web, And Electronic Commerce
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4 Specialized Application Software
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INTERNATIONAL EDITION

USING INFORMATION TECHNOLOGY INTRODUCTORY EDITION 9th Edition

by Brian Williams, Deakin University

2011 (February 2010) / Softcover / 352 pages
ISBN: 9780077331085
ISBN: 9780071221283 [IE]

The Williams, Using Information Technology, 9th edition utilizes a practical, applied approach to technology. This text is user-focused and has been highly updated including topics, pictures and examples. The Williams text contains less theory and more application to engage students who might be more familiar with technology. Continually published and updated for over 15 years, Using Information Technology was the first text to foresee and define the impact of digital convergence—the fusion of computers and communications. It was also the first text to acknowledge the new priorities imposed by the Internet and World Wide Web and bring discussion of them from late in the course to the beginning. Today, it is directed toward the "Always On" generation that is at ease with digital technology—comfortable with iPhones, MySpace, Facebook, Twitter, Wikipedia, and the blogosphere—but not always savvy about its processes, possibilities, and liabilities. This 9th edition continues to address the two most significant challenges that instructors face in teaching this course: •Trying to make the course interesting and challenging, and •Trying to teach to students with a variety of computer backgrounds. This text also correlates with SimNet Online, our online training and assessment program for the MS Office Suite and also computing concepts!

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5. Hardware: Input & Output
Taking Charge of Computing & Communications
6. Communications, Networks, & Safeguards
The Wired & Wireless World
7. Personal Technology
The Future Is You

INTERNATIONAL EDITION

PETER NORTON'S COMPUTING FUNDAMENTALS
6th Edition

by Peter Norton

2006 / Softcover / 512 pages
ISBN: 9780072978476
ISBN: 9780071117159 [IE]

CONTENTS

Chapter 1: Introducing Computer Systems.
Chapter 2: Presenting the Internet. Computing Keynotes #1: Creating Your Own Web Page.
Chapter 3: Interacting with Your Computer.
Chapter 4: Seeing, Hearing, and Printing Data. Computing Keynotes #2: Buying Your First Computer.
Chapter 5: Processing Data.
Chapter 6: Storing Data.
Chapter 7: Using Operating Systems.
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Chapter 10: Working in the Online World.
Computing Keynotes #3: Professional Certification Programs.
Chapter 11: Development of Information Systems.
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Comprehensive Computer Concepts

INTERNATIONAL EDITION

NEW

COMPUTING NOW

by McGraw-Hill

2013 (January 2012) / Softcover / 368 pages
ISBN: 9780073516851
ISBN: 9780071317559 [IE]

www.mhhe.com/computingnow

McGraw-Hill's Computing Now! 2012 "Today's Computing Concepts" Computing Now! 2012 offers students of today an engaging resource designed to provide current, intriguing information about computing concepts. With society's ever-changing technology, isolating need-to-know information is imperative so that only accurate, realistic concepts are emphasized. Computing Now! provides a fresh new design via its magazine- style approach to enhance student learning and bring these important concepts to life! Computing Now! 2012 also correlates with SimNet Online, our online training and assessment program for Microsoft Office 2010 skills and also computing concepts! Computing Now! 2012 Today's Computing Concepts for today's students.

FEATURES

❖ MAGAZINE APPROACH: Brand new, unmatched approach to a computing concepts textbook.

❖ ENGAGING APPROACH: Design, organization, and features developed to bring life to the concepts course.

❖ REALISTIC CHOICES PRESENTED: "Career Buzz," "Focus on the Issues," and "Ethical Dilemma" features highlight choices in computing today.

❖ PERCEPTION IS REALITY: "From the Perspective of" feature allows students to learn various views of computing concepts.

❖ CURRENCY: In Computing Now! 2012, currency of information is important and thus a key theme of this title.

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INTERNATIONAL EDITION

NEW

COMPUTING ESSENTIALS 2013 COMPLETE EDITION

by Timothy J. O'Leary, Arizona State University

2013 (January 2012) / Softcover / 544 pages
ISBN: 9780073516820
ISBN: 9780071317535 [IE]

www.computing2013.com

Computing Essentials 2013...Making IT Work for You! How are you learning about the most important, essential, and current concepts of information technology? Computing Essentials 2013 allows you to Make IT Work for You through relevant Explorations, Ethics and Environment themes throughout each chapter. Make IT Work for You!

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INTERNATIONAL EDITION

NEW

COMPUTING ESSENTIALS 2012 COMPLETE EDITION

by Timothy J. O'Leary, Arizona State University

2012 (January 2011) / Softcover / 544 pages
ISBN: 9780073516806
ISBN: 9780071221078 [IE]

www.mhhe.com/ce2012

O'Leary, Computing Essentials 2012 Introductory and Complete versions available "Making IT Work for You!" Your essential guide to computing concepts… Computing Essentials 2012 provides you with a complete learning solution focusing on the most important, essential, and current concepts of information technology. Students are given a streamlined, concise, relevant approach to the fundamental issues surrounding the world of computing through a balance between theory and applied learning of these important topics. Overall, all of the items featured with this text—including the end-of-chapter materials and the text Web site—work together to help students truly understand the basics of computer concepts.

NEW TO THIS EDITION

❖ APPROACH: Concise, streamlined approach to fundamental computing issues.

❖ THEME of RELEVANCE: Highlights the relevance of current, essential topics for better student understanding.

❖ REMEMBER the "E-BOXs"! Environment, Ethics, and Exploration boxes for enhanced student learning.

❖ STUDENT RELEVANCE: "Careers in IT" section at the end of each chapter provide information on a variety of positions in the IT industry.

❖ CURRENT INFORMATION AND FUTURE DIRECTION: "A Look to the Future" section at the end of each chapter to engage students with emerging technologies

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INTERNATIONAL EDITION

NEW

USING INFORMATION TECHNOLOGY 10TH EDITION COMPLETE EDITION

by Brian Williams, Deakin University

2013 (January 2012) / Softcover / 608 pages
ISBN: 9780073516837
ISBN: 9780071318006 [IE]

www.mhhe.com/uit10e

USING INFORMATION TECHNOLOGY; A Practical Introduction to Computers & Communications 10/e "If there is anything we have learned during 18 years of writing and revising this computer concepts book, it is this: Not only does the landscape of computer education change rapidly, but so do the students. . . . This edition, then, is written for the Always On generation, helping students use technology to enrich their personal lives." –Brian K. Williams & Stacey C. Sawyer

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Chapter 5: Hardware: Input & Output: Taking Charge Of Computing & Communications
Chapter 6: Communications, Networks, & Safeguards: The Wired & Wireless World
Chapter 7: Personal Technology: The Future Is You
Chapter 8: Databases Are In Your Life: Digital Engines For Today's Economy
Chapter 9: The Challenges Of The Digital Age: Society & Information Technology Today
Chapter 10: Building Systems & Applications: Software Development, Programming, & Languages

INTERNATIONAL EDITION

USING INFORMATION TECHNOLOGY COMPLETE EDITION
9th Edition

by Brian Williams, Deakin University

2011 (February 2010) / Softcover / 608 pages
ISBN: 9780073516776
ISBN: 9780071221399 [IE]

www.mhhe.com/uit9e

The Williams, Using Information Technology, 9th edition utilizes a practical, applied approach to technology. This text is user-focused and has been highly updated including topics, pictures and examples. The Williams text contains less theory and more application to engage students who might be more familiar with technology. Continually published and updated for over 15 years, Using Information Technology was the first text to foresee and define the impact of digital convergence—the fusion of computers and communications. It was also the first text to acknowledge the new priorities imposed by the Internet and World Wide Web and bring discussion of them from late in the course to the beginning. Today, it is directed toward the "Always On" generation that is at ease with digital technology—comfortable with iPhones, MySpace, Facebook, Twitter, Wikipedia, and the blogosphere—but not always savvy about its processes, possibilities, and liabilities. This 9th edition continues to address the two most significant challenges that instructors face in teaching this course: •Trying to make the course interesting and challenging, and •Trying to teach to students with a variety of computer backgrounds. This text also correlates with SimNet Online, our online training and assessment program for the MS Office Suite and also computing concepts!

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7. Personal Technology
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8. Databases & Information Systems
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9. The Challenges of the Digital Age
Society & Information Technology
10. Systems Analysis & Programming
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INTERNATIONAL EDITION

PETER NORTON'S INTRODUCTION TO COMPUTERS
6th Edition

by Peter Norton

2006 / Softcover / 640 pages
ISBN: 9780072978902
ISBN: 9780071117166 [IE]

www.mhhe.com/peternorton

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Chapter 1: Introducing Computer Systems.
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Office Intro

NEW

MICROSOFT OFFICE 2010 NOW: A SKILLS APPROACH

by Triad Interactive

2012 (March 2011) / Spiral Bound / 600 pages
ISBN: 9780073516479

www.mhhe.com/office2010skills

"Office Skills on Demand" Today's world is a world of INSTANT gratification. We want information at our fingertips and resources easily within our reach. The Office 2010: Skills approach provides a truly unique approach in learning Office skills with it's completely isolated skills for customized learning. Created from the "Teach Me" pages from SimNet Online, our online training and assessment program, this textbook has 1:1 content with SimNet Online. As a result, it provides the most flexible book on the market as you can access the specific, isolated skills that you need for customized learning.

FEATURES

- 1:1 content with SimNet Online
- Isolated skills for quick, efficient learning
- Intuitive design for at-a-glance accessibility
- Concise instructions for skills
- "From the Perspective of" feature and end-of-chapter projects relate the content to a variety of common career paths for a larger understanding of the material
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MICROSOFT OFFICE 2010: A CASE APPROACH Introductory

by Linda I. O'Leary, Independent, and Timothy J. O'Leary, Arizona State University-Tempe

2011 (November 2010) / Spiral Bound/Comb / 1216 pages
ISBN: 9780073519302

www.mhhe.com/oleary

Timothy and Linda O'Leary and the Computer Information Technology Team at McGraw-Hill Higher Education offer your students a fully integrated learning program with time-tested quality and reliability. Office 2010: A Case Approach offers running case study throughout the text to help students understand the material in a consistent, relevant environment. Through this theme of "Making Office Relevant," this text helps students understand why they need this course and these skills. Student success is assured through clear step-by-step instruction, plentiful screen captures and conceptual explanations. Each Lab, designed to be covered in 1 hour of class time, combines conceptual coverage with detailed software-specific instructions. Each Lab opens with a running case study that highlights real-world applications of each software program and leads students from problem to solution. The O'Leary Series helps students learn specific applications skills along with those that cross all Office applications, which is especially important in mastering this version of Office. The O'Leary Series also correlates with SimNet Online, our online training and assessment program for Office 2010.

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MICROSOFT OFFICE 2010: A LESSON APPROACH

by Deborah Hinkle

2011 (August 2010) / Spiral Bound / 1088 pages
ISBN: 9780077454890

www.mhhe.com/lessonapproach2010

McGraw-Hill is proud to introduce the Hinkle et al., Office 2010: A Lesson Approach Series. Utilizing the author team of Deborah Hinkle, Kathleen Stewart, John Carter and Pat Graves from the former Professional Approach Series for Microsoft Office, this Office 2010: Lesson Approach series provides a fresh, clear, modular introduction of Microsoft Office 2010 skills. It's "Learn by Doing" theme is incorporated in each lesson so students can experience hands-on learning throughout the entire text. Students first focus on the introductory skills that are isolated in each lesson and then complete individual skill exercises that ensure a clear learning path. The application case studies provide even more context to the student so they can better associate lesson goals and themes. This text also correlates with SimNet Online for Office 2010, our online training and assessment program, and also SimGrader, our online project grader component which contains a full project library including projects from this Lesson Approach Series and also projects from our other Microsoft Office 2010 textbook series.

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WINDOWS 7

by Linda I. O'Leary, Independent

2011 (July 2011) / 608 pages
ISBN: 9780077331252

www.mhhe.com/oleary

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MICROSOFT OFFICE 2007 BRIEF: A PROFESSIONAL APPROACH

by Deborah Hinkle, John Carter, New Mexico State University-Las Cruces, Kathleen Stewart, Pat R. Graves, Eastern Illinois University, Amie Mayhall, Olney Central College, and Jon Juarez

2010 (January 2009) / Spiral Bound/Comb / 976 pages
ISBN: 9780073519265

www.mhhe.com/pas07brief

The Hinkle, Professional Approach Series for Office 2007 BRIEF text is a more concise text of the Hinkle, Professional Approach Office 2007 text. It is briefer with all of the end of chapter projects and material relocated online. The PAS text offers an entirely new way of mastering Office 2007 applications. Using unique exercises from realistic business situations, this step-by-step approach is supported by a colorful graphics program. The series is ideal for students new to the world of computers, yet in-depth enough to challenge more savvy users. Each lesson contains up to 25 skill applications and each unit contains up to 5 skill applications that take students from simple to complex situations. Each of the individual application books are approved courseware for the MCAS Certificaiton exams. This "Learn by Doing" text is very hands on and provides a clear learning path with learning objectives so students see the skills they know and they ones they don't. This text also correlates with SimNet Online, our online training and assessment program for Office 2007.

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OFFICE 2007 WINDOWS VISTA VERSION

by Linda I. O'Leary, Independent

2010 (February 2009) / Spiral Bound/Comb / 1408 pages
ISBN: 9780073519272

www.mhhe.com/oleary

Timothy and Linda O'Leary and the Computer Information Technology Team at McGraw-Hill Higher Education offer your students a fully integrated learning program with time-tested quality and reliability. It's theme of "Making Office Relevant" helps students understand why they need this course and these skills. Student success is assured through clear step-by-step instruction, plentiful screen captures and conceptual explanations, UPDATED FOR VISTA USERS! Each Lab, designed to be covered in 1 hour of class time, combines conceptual coverage with detailed software-specific instructions. Each Lab opens with a running case study that highlights real-world applications of each software program and leads students from problem to solution. The O'Leary Series helps students learn specific applications skills along with those that cross all Office applications, which is espeicially important in mastering this version of Office. The O'Leary Series also correlates with SimNet Online, our online training and assesment program for Office 2007.

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Word Intro

MICROSOFT OFFICE WORD 2010: A CASE APPROACH INTRODUCTORY

by Linda I. O'Leary, Independent

2011 (June 2010) / Softcover / 384 pages
ISBN: 9780077331283

www.mhhe.com/oleary

Timothy and Linda O'Leary and the Computer Information Technology Team at McGraw-Hill Higher Education offer your students a fully integrated learning program with time-tested quality and reliability. Office 2010: A Case Approach offers running case study throughout the text to help students understand the material in a consistent, relevant environment. Through this theme of "Making Office Relevant," this text helps students understand why they need this course and these skills. Student success is assured through clear step-by-step instruction, plentiful screen captures and conceptual explanations. Each Lab, designed to be covered in 1 hour of class time, combines conceptual coverage with detailed software-specific instructions. Each Lab opens with a running case study that highlights real-world applications of each software program and leads students from problem to solution. The O'Leary Series helps students learn specific applications skills along with those that cross all Office applications, which is especially important in mastering this version of Office. The O'Leary Series also correlates with SimNet Online, our online training and assessment program for Office 2010.

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Lab 1 – Creating and Editing a Document
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Working Together 1 – Word 2010 and Your Web Browser

Word Complete

MICROSOFT OFFICE WORD 2010: A CASE APPROACH COMPLETE

by Linda I. O'Leary, Independent

2011 (March 2011) / Softcover / 576 pages
ISBN: 9780077331276

www.mhhe.com/oleary

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MICROSOFT OFFICE WORD 2010: A LESSON APPROACH COMPLETE

by Deborah Hinkle

2011 (July 2010) / Spiral Bound/Comb / 912 pages

ISBN: 9780073519296

www.mhhe.com/lessonapproach2010

Utilizing the author team of Deborah Hinkle, Kathleen Stewart, John Carter and Pat Graves from the former Professional Approach Series for Microsoft Office, this Office 2010: Lesson Approach series provides a fresh, clear, modular introduction of Microsoft Office 2010 skills. It's "Learn by Doing" theme is incorporated in each lesson so students can experience hands-on learning throughout the entire text. Students first focus on the introductory skills that are isolated in each lesson and then complete individual skill exercises that ensure a clear learning path. The application case studies provide even more context to the student so they can better associate lesson goals and themes. This text also correlates with SimNet Online for Office 2010, our online training and assessment program, and also SimGrader, our online project grader component which contains a full project library including projects from this Lesson Approach Series and also projects from our other Microsoft Office 2010 textbook series. Together, SimNet and SimGrader provide the complete solution for today's student learning Microsoft Office 2010.

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Excel Intro

MICROSOFT OFFICE EXCEL 2010 A CASE APPROACH, INTRODUCTORY

by Linda I. O'Leary, Independent, and Timothy J O'Leary, Arizona State University

2011 (November 2010) / Softcover / 352 pages

ISBN: 9780077331269

www.mhhe.com/oleary

Timothy and Linda O'Leary and the Computer Information Technology Team at McGraw-Hill Higher Education offer your students a fully integrated learning program with time-tested quality and reliability. Office 2010: A Case Approach offers running case study throughout the text to help students understand the material in a consistent, relevant environment. Through this theme of "Making Office Relevant," this text helps students understand why they need this course and these skills. Student success is assured through clear step-by-step instruction, plentiful screen captures and conceptual explanations. Each Lab, designed to be covered in 1 hour of class time, combines conceptual coverage with detailed software-specific instructions. Each Lab opens with a running case study that highlights real-world applications of each software program and leads students from problem to solution. The O'Leary Series helps students learn specific applications skills along with those that cross all Office applications, which is especially important in mastering this version of Office. The O'Leary Series also correlates with SimNet Online, our online training and assessment program for Office 2010.

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Excel
Lab 1 – Creating and Editing a Worksheet
Lab 2 – Charting Worksheet Data
Lab 3 – Managing and Analyzing a Workbook
Working Together 1 – Linking and Embedding between Word 2010 and Excel 2010

Excel Complete

International Edition

MICROSOFT OFFICE EXCEL 2010 A CASE APPROACH COMPLETE

by Linda I. O'Leary, Independent

2011 (July 2011) / Softcover / 576 pages
ISBN: 9780077331368
ISBN: 9780071221269 [IE]

www.mhhe.com/oleary

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MICROSOFT OFFICE EXCEL 2010 A PROFESSIONAL APPROACH COMPLETE

by Kathleen Stewart

2011 (July 2010) / Spiral Bound/Comb / 832 pages
ISBN: 9780077331214

www.mhhe.com/lessonapproach2010

This comprehensive and understandable Excel text sets your students on the way to becoming a proficient Microsoft Excel 2010 user. Each component talks to your students in a conversational, motivational tone to promote confidence, knowledge, and skill development. In 18 lessons, students follow a time-tested approach as they move from simple to complex learning. The lessons, tasks, and activities relate to AllAround Vision Care, a fictional eye care group that has a relationship with non-profit entities. This combination reinforces typical business Excel work and expands the student's awareness into other potential uses. Many exercises and tasks incorporate global and environmental concerns, too. A lesson includes explanatory exercises, relevant figures, notes, tips, and reviews. End-of-lesson activities are coordinated with lesson content so that you can assign some of them at various points throughout the lesson. An annotated instructor's edition is available on the Online Learning Center, along with test bank questions, unit exams and projects, data and solution files, and answer keys. And for skill exploration, there are coordinated GoogleDocs projects on the OLC, too. The text is also supported by SimNet Online for Office 2010.

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Lesson 1: Getting Acquainted with Excel
Lesson 2: Developing Workbooks
Lesson 3: Developing and Editing Formatting Skills
Unit 2 – Working with Formulas and Functions
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Lesson 7: Building Worksheet Charts
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Lesson 16: Working with Macros
Lesson 17: Using Templates
Lesson 18: Sharing Work

INTERNATIONAL EDITION

MICROSOFT EXCEL 2007: A PROFESSIONAL APPROACH

By Kathleen Stewart

2008 (June 2007) / Softcover / 864 pages
ISBN: 9780073519210
ISBN: 9780071284042 [IE]

www.mhhe.com/pas07

The Professional Approach Series is designed for students unfamiliar with the Microsoft Office Suite, or even students who are nervous about trying to learn computer skills. It is ideal for students who are new to the world of computers, yet in-depth enough to teach and challenge more savvy users. Each lesson contains up to 25 skill-applications and 5 end-of-unit skill-applications that take students from simple to complex situations. The Office 2007 texts complete instruction in all skill sets and activities for the appropriate MCAS Exams.

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Lesson 23 – Using Workgroup Features.

Access Intro

MICROSOFT OFFICE ACCESS 2010 A CASE APPROACH INTRODUCTORY

by Linda I. O'Leary, Independent

2011 (November 2010) / Softcover / 384 pages
ISBN: 9780077331320

www.mhhe.com/oleary

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Access
Lab 1 – Creating a Database
Lab 2 – Modifying and Filtering a Table and Creating a Form
Lab 3 – Querying Tables and Creating Reports
Working Together 1 – Exporting Data

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Access Complete

MICROSOFT ACCESS 2010 A CASE APPROACH COMPLETE

by Linda I. O'Leary, Independent

2011 (March 2011) / Softcover / 576 pages
ISBN: 9780077331351

www.mhhe.com/oleary

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Previewing and Printing a Table
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MICROSOFT OFFICE ACCESS 2010: A LESSON APPROACH COMPLETE

by John Carter, New Mexico State University-Las Cruces, and Jon Juarez

2011 (September 2010) / Spiral Bound/Comb / 640 pages
ISBN: 9780077331245

www.mhhe.com/lessonapproach2010

Utilizing the author team of Deborah Hinkle, Kathleen Stewart, John Carter and Pat Graves from the former Professional Approach Series for Microsoft Office, this Office 2010: Lesson Approach series provides a fresh, clear, modular introduction of Microsoft Office 2010 skills. It's "Learn by Doing" theme is incorporated in each lesson so students can experience hands-on learning throughout the entire text. Students first focus on the introductory skills that are isolated in each lesson and then complete individual skill exercises that ensure a clear learning path. The application case studies provide even more context to the student so they can better associate lesson goals and themes. This text also correlates with SimNet Online for Office 2010, our online training and assessment program, and also SimGrader, our online project grader component which contains a full project library including projects from this Lesson Approach Series and also projects from our other Microsoft Office 2010 textbook series. Together, SimNet and SimGrader provide the complete solution for today's student learning Microsoft Office 2010.

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Unit 1 – Understanding Access Databases
Lesson 1: Getting Started with a Database
Lesson 2: Viewing and Modifying Records
Lesson 3: Finding, Filtering, Sorting, and Summarizing Data
Lesson 4: Creating New Databases and Tables
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Lesson 5: Managing Data Integrity
Lesson 6: Designing Queries
Lesson 7: Adding and Modifying Forms
Lesson 8: Adding and Modifying Reports
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Lesson 12: Building Advanced Reports
Unit 4 – Using Advanced Database Features Lesson 13: Advanced Database Features Lesson 14: Using Special Controls and Tools Lesson 15: Working with Macros and Modules

Powerpoint Intro

MICROSOFT OFFICE POWERPOINT 2010 A CASE APPROACH INTRODUCTORY

by Linda I. O'Leary, Independent

2011 (November 2010) / Softcover / 224 pages
ISBN: 9780077331344

www.mhhe.com/oleary

Timothy and Linda O'Leary and the Computer Information Technology Team at McGraw-Hill Higher Education offer your students a fully integrated learning program with time-tested quality and reliability. Office 2010: A Case Approach offers running case study throughout the text to help students understand the material in a consistent, relevant environment. Through this theme of "Making Office Relevant," this text helps students understand why they need this course and these skills. Updated for Office 2010, student success is assured through clear step-by-step instruction, plentiful screen captures and conceptual explanations. Each Lab, designed to be covered in 1 hour of class time, combines conceptual coverage with detailed software-specific instructions. Each Lab opens with a running case study that highlights real-world applications of each software program and leads students from problem to solution. Moreover, 25-50% of all end of chapter exercises are completely new. The O'Leary Series helps students learn specific applications skills along with those that cross all Office applications, which is especially important in mastering this version of Office. The O'Leary Series also correlates with SimNet Online, our online training and assessment program for Office 2010.

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PowerPoint
Lab 1 – Creating a Presentation
Lab 2 – Modifying and Refining a Presentation
Working Together 1 – Copying, Embedding, and Linking between Applications

Powerpoint Complete

MICROSOFT OFFICE POWERPOINT 2010: A LESSON APPROACH COMPLETE

by Pat R. Graves, Eastern Illinois University, and Amie Mayhall, Olney Central College

2011 (July 2010) / Spiral Bound/Comb / 624 pages
ISBN: 9780077331191

www.mhhe.com/lessonapproach2010

Utilizing the author team of Deborah Hinkle, Kathleen Stewart, John Carter and Pat Graves from the former Professional Approach Series for Microsoft Office, this Office 2010: Lesson Approach series provides a fresh, clear, modular introduction of Microsoft Office 2010 skills. It's "Learn by Doing" theme is incorporated in each lesson so students can experience hands-on learning throughout the entire text. Students first focus on the introductory skills that are isolated in each lesson and then complete individual skill exercises that ensure a clear learning path. The application case studies provide even more context to the student so they can better associate lesson goals and themes. This text also correlates with SimNet Online for Office 2010, our online training and assessment program, and also SimGrader, our online project grader component which contains a full project library including projects from this Lesson Approach Series and also projects from our other Microsoft Office 2010 textbook series. Together, SimNet and SimGrader provide the complete solution for today's student learning Microsoft Office 2010.

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Unit 1 – Basic Skills
Lesson 1: Getting Started in PowerPoint
Lesson 2: Developing Presentation Text
Lesson 3: Revising Presentation Text
Unit 2 – Presentation Illustration
Lesson 4: Working with Images
Lesson 5: Creating Tables
Lesson 6: Creating Charts
Lesson 7: Creating SmartArt Graphics
Unit 3 – Visual Impact
Lesson 8: Customizing Colors and Effects
Lesson 9: Refining Original Illustrations
Lesson 10: Animating and Using Multimedia Effects
Lesson 11: Customizing Themes and Slide Masters
Unit 4 – Development and Distribution
Lesson 12: Integrating and Other Programs
Lesson 13: Preparing a Presentation for Delivery
Lesson 14: Preparing for Electronic Distribution

MICROSOFT® POWERPOINT 2010: A CASE APPROACH, COMPLETE

by Timothy J. O'Leary, Arizona State University-Tempe, and Linda I. O'Leary, Independent

2011 (August 2011) / Softcover / 512 pages
ISBN: 9780077331306

http://www.mhhe.com/oleary

Timothy and Linda O'Leary and the Computer Information Technology Team at McGraw-Hill Higher Education offer your students a fully integrated learning program with time-tested quality and reliability. Office 2010: A Case Approach offers running case study throughout the text to help students understand the material in a consistent, relevant environment. Through this theme of "Making Office Relevant," this text helps students understand why they need this course and these skills. Student success is assured through clear step-by-step instruction, plentiful screen captures and conceptual explanations. Each Lab, designed to be covered in 1 hour of class time, combines conceptual coverage with detailed software-specific instructions. Each Lab opens with a running case study that highlights real-world applications of each software program and leads students from problem to solution. The O'Leary Series helps students learn specific applications skills along with those that cross all Office applications, which is especially important in mastering this version of Office. The O'Leary Series also correlates with SimNet Online, our online training and assessment program for Office 2010.

CONTENTS

Lab 1 Creating a Presentation
Starting a New Presentation
Editing a Presentation
Using Spelling Checker
Using Slide Sorter View
Selecting a Slide Layout
Changing a Placeholder
Formatting Slide Text
Working with Graphics
Rehearsing a Presentation
Documenting a File
Previewing and Printing the Presentation
Exiting Power Point
Lab 2 Modifying and Refining a Presentation
Finding and Replacing Text
Creating a Simple Table
Inserting and Enhancing Pictures
Inserting and Enhancing Shapes
Working with Text Boxes
Changing the Presentation Design
Working with Master Slides
Animating the Presentation
Preparing for the Slide Show
Adding Headers and Footers
Customizing Print Settings
Working Togeter 1: Copying, Embedding, and Linking between Applications
Copying between Applications
Embeddng a Word Table in a PowerPoint Slide
Linking Between Applications
Printing Selected Slides
Lab 3 Using Advanced Presentation Features
Creating a Presentation from Multiple Sources
Creating a SmartArt Graphic
Creating an Organization Chart
Creating a Chart Slide
Creating a WordArt Object
Adding an Animated Graphic
Organizing Slides into Sections
Delivering Presentations
Creating Custom Shows
Lab 4 Creating a Presentaion for a Kiosk and the Web
Modifying the Design Template
Customizing Graphics

Inserting a Screenshot
Creating a Complex Table
Setting Up a Presentation for a Kiosk
Setting up the Presentation for Browsing
Publishing the Presentation on the Web
Saving a Presentation as a Design Template
E-mailing a Presentation as a Design Template
Packaging Presentations for a CD
Working Together 2: Reviewing and Embedding a Presentation
Reviewing a Presentation
Embedding a Presentation

Training & Assessment

SIMGRADER FOR MICROSOFT OFFICE 2010

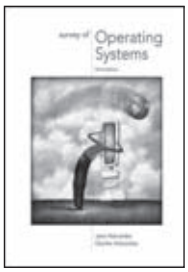
by Triad Interactive

2011 (August 2010)
ISBN: 9780073519364

Triad Interactive; SimGrader "Your Project Library" SimGrader is the most recent addition to SimNet Online, McGraw-Hill's online training and assessment software for Microsoft Office skills and more. This online program provides automatic grading of projects for Microsoft Office Word, Excel and PowerPoint and can be used seamlessly within SimNet Online or can be used separately if needed. Available with a full project library, SimGrader offers the widest range of projects from any of our Office series. Moreover, this offers instructors the benefit of utilizing projects that are specifically related to their student's needs and areas of study. SimNet and SimGrader are a completely online system that is easy-to-use for both instructors and students alike. Together, they provide an ideal solution for students to gain complete knowledge of Office skills and application.

Operating Systems

NEW



SURVEY OF OPERATING SYSTEMS
3rd Edition

by Charles Holcombe, and Jane Holcombe

2012 (March 2011) / Softcover / 448 pages
ISBN: 9780073518176

www.mhhe.com/holcombe3e

Holcombe, Survey of Operating Systems, 3e "Your Foundation for IT Success!" McGraw-Hill is proud to introduce the third edition of Jane and Charles Holcombe's, Survey of Operating Systems. This edition is a unique revision of the successful previous editions. Every chapter has been updated to include more illustrations and hands-on activities for students building a foundation for IT success through a fundamental understanding of desktop operating systems, including Windows 7, Mac OS X, and Linux. Due to market feedback and customer response, the textbook has been streamlined to provide a new pedagogy, including more extensive coverage on security that is, presented earlier in the text, and a new chapter on Desktop Virtualization. Survey of Operating Systems offers today's student a visual, interactive, and empowering approach to learning desktop operating systems so they can build their foundation for IT success!

CONTENTS

1 Introduction to Microcomputer Operating Systems
2 Computer Security Basics
3 Desktop Virtualization
4 Disk Operating System (DOS)
5 Windows XP Professional
6 Today's Windows (Windows 7 and Windows Vista)
7 Under the Windows Desktop
8 Linux on the Desktop
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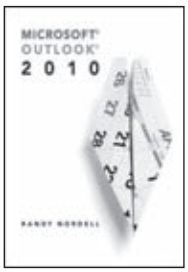
Outlook Intro

NEW



MAKING MICROSOFT OUTLOOK 2010 WORK FOR YOU

by Randy Nordell, American River College

2012 (January 2011) / Spiral Bound/Comb / 448 pages
ISBN: 9780073519289

www.mhhe.com/nordell

Randy Nordell Making Outlook 2010 Work for You "A Comprehensive Look at Outlook" With Microsoft Office 2010, Outlook has added valuable new features and has significant enhancements, including the addition of the ribbon format. This textbook, Making Outlook 2010 Work for You by Randy Nordell, provides a comprehensive solution for learning Outlook 2010. While starting with a foundation of E-mail, Calendar, Contacts, and Tasks in the first six chapters, the later half delves deeper into these essential topics to cover the advanced features available in Outlook. Making Outlook 2010 Work for You provides students and instructors with a blended approach of a step-by-step tutorial textbook and a reference text, thus allowing for continued learning both within the course and beyond! This textbook also correlates with SimNet Online, our online training and assessment program for Microsoft Office 2010.

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Making Outlook Work For You
What Is Outlook?
Working With Outlook
Navigating Outlook
What's New in Outlook 2010?
Outlook As A Stand-Alone Program
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Understanding Arrangement And Icons
Cleaning Up Your Inbox
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Putting Outlook to Work
Chapter 3: E-mail Special Features
Chapter Flyover
Making Outlook Work For You
Types of E-Mail Format
Message Options
Voting Buttons
Customize Your E-Mail
Chapter Highlights
What Do You Know About Outlook?
Putting Outlook to Work
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Creating Contacts
Editing Contact Info
Changing Views In Contacts
Using Contacts
Chapter Highlights
What Do You Know About Outlook?
Putting Outlook to Work
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Navigating The Calendar Views
Creating And Editing Calendar Items
Creating And Using Meeting Requests
Chapter Highlights
What Do You Know About Outlook?
Putting Outlook to Work
Chapter 6: Tasks And To-Do Items
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Making Outlook Work For You
Understanding Tasks And To-Do Items
Creating Tasks
Viewing Tasks And To-Do Items
Managing Tasks
Chapter Highlights
What Do You Know About Outlook?
Putting Outlook to Work
Chapter 7: Folders, Rules, Quick Steps, Categories, and Follow Up Flags
Chapter Flyover
Making Outlook Work For You
Using Folders
Using Rules And Quick Steps
Using Categories
Using Follow Up Flags
Chapter Highlights
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Putting Outlook to Work
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Setting Up Additional E-Mail Accounts
Managing Multiple E-Mail Accounts
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Printing And Sharing An Outlook Calendar

Advanced Calendar Features
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Putting Outlook to Work
Chapter 11: Notes, Journal, Search Folders, Shortcuts, and Archiving
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Making Outlook Work For You
Using Notes
Using The Journal
Using Search Folders
Using Shortcuts
Archiving Highlights
Chapter Highlights
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Putting Outlook to Work
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Security
Searching For Outlook Items
Customizing Outlook To Fit Your Needs
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What Do You Know About Outlook?
Putting Outlook to Work
Quick Tips And Troubleshooting Appendix A: Setting Up Outlook For An On-Stie Or Online Classroom Environment Appendix B: Outlook Shortcuts Appendix C: Outlook Quick Refernce Guide Appendix D: Exchange Server Versus Stand Alone Usage Glossary Index

Programming

Visual Basic

INTERNATIONAL EDITION

PROGRAMMING IN VISUAL BASIC 2010

by Julia Case Bradley, Mt San Antonio College, and Anita C. Millspaugh, Mt San Antonio College

2011 (July 2010) / Softcover / 704 pages
ISBN: 9780073517254
ISBN: 9780071326766 [IE]

www.mhhe.com/vb2010

Bradley; Programming in Visual Basic 2010 The author team of Julia Bradley and Anita Millspaugh remain the guiding light for countless students around the world in Programming with Visual Basic 2010. How better to master the most popular object-oriented programming language than to use the bestselling textbook? Be at the cutting edge of technology with examples, feedback questions, and a full Hands On Programming Example. Apply the concepts yourself with Case Studies and Exercises. Screen captures, step-by-step exercises, and thorough appendices ensure that Programming Excellence Begins Here.

CONTENTS

1 – Introduction to Visual Basic 2010
2 – User Interface Design
3 – Variables, Constants, and Calculations
4 – Decisions and Conditions
5 – Menus, Common Dialog Boxes, Sub Procedures, and Function Procedures
6 – Multiform Projects
7 – Lists, Loops, and Printing
8 – Arrays
9 – Web Applications
10 – Database Applications
11 – Data Files
12 – OOP: Creating Object-Oriented Programs
13 – Graphics, Animation, Sound, and Drag-and-Drop
14 – Additional Topics in Visual Basic

INTERNATIONAL EDITION

ADVANCED PROGRAMMING USING VISUAL BASIC 2008
Fourth Edition

by Julia Case Bradley, Mt San Antonio College, and Anita C. Millspaugh, Mt San Antonio College

2010 (January 2009) / Softcover / 672 pages
ISBN: 9780073517223
ISBN: 9780071310079 [IE]

www.mhhe.com/AdvVB2008

The author team of Julia Bradley and Anita Millspaugh remain the guiding light for countless students around the world in Programming in Visual Basic 2008. How better to master the most popular object-oriented programming language than to use the bestselling textbook? Be at the cutting edge of technology with examples, feedback questions, and a full Hands-On Programming Example. Apply the concepts yourself with Case Studies and Exercises. Screen captures, step-by-step exercises, and thorough appendices ensure that Programming Excellence Begins Here.

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INTERNATIONAL EDITION

PROGRAMMING IN VISUAL C# 2008
Third Edition

by Julia Case Bradley, Mt San Antonio College, and Anita C. Millspaugh, Mt San Antonio College

2010 (January 2009) / Softcover / 704 pages
ISBN: 9780073517216
ISBN: 9780070172814 [IE]

www.mhhe.com/c#2008

Be sharp. Learn C#. Programming in Visual C# 2008 gives you a fresh and easily accessible approach to learning programming concepts using Visual C# for 2008, one of the most pervasive programming languages in the job market today. Best-selling authors Bradley and Millspaugh apply their proven pedagogy, incorporating basic concepts of programming, problem solving, and programming logic and design techniques to teach a mastery of Visual C# at an introductory level. A hands-on approach, Programming in Visual C# 2008 lets you begin programming in the very first chapter. Thought-provoking feedback questions and in-chapter tips are dispersed throughout so students can reflect on a topic introduced and evaluate their understanding of the details. Comprehensive Hands-On Programming Examples found in each chapter reinforce the programming logic and techniques learned in the chapter.

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INTERNATIONAL EDITION

PROGRAMMING IN VISUAL BASIC 6.0 UPDATE EDITION WITH CD

by Julia Case Bradley and Anita C. Millspaugh, Mt. San Antonio College

2002
ISBN: 9780072518740 [Out-of-Print]
ISBN: 9780071204811 [IE]

www.mhhe.com/cit/program/bradley6

Intro Programming course is estimated currently at 150-200,000 and growing. Visual Basic is taking over where BASIC, Qbasic, and QuickBasic once dominated, in the Introductory Business Programming course. That trend will continue as VB continues to encroach on other less progressive languages such as COBOL and the Basic variations listed above within CIS and Business departments. The courses that can be supported by this text are not specific to any one type of institution, since VB in a Business course is largely a functional topic needed by all types of students from 2-4 year, to Vo-Tech, to extended, to even adult education.

CONTENTS

1. Introduction to Visual Basic.
2. More Controls.
3. Variables, Constants, and Calculations.
4. Decisions and Conditions.
5. Menus, Sub Procedures, and Sub Functions.
6. Multiple Forms. 7. Lists, Loops, and Printing.
8. Arrays.
9. OOP-Creating Object-Oriented Programs.
10. Data Files.
11. Accessing Database Files.
12. Data Handling-Grids, Validation, Selection, and Sorting.
13. Drag-and-Drop.
14. Graphics.
15. Advanced Topics in Visual Basic.
Appendix A Answers to Feedback Questions.
Appendix B Functions for Working with Dates, Financial Calculations, Mathematics, and String Operations.
Appendix C Tips and Shortcuts for Mastering the VB Environment.
Appendix D A Preview of Microsoft's VB.NET

SCHAUM'S OUTLINE OF VISUAL BASIC

by Byron S Gottfried, University of Pittsburgh, Pittsburgh

2001 / 325 pages
ISBN: 9780071356718
(A Schaum's Publication)

CONTENTS

Chapter 1: Introducing Visual Basic.
Chapter 2: Visual Basic Fundamentals.
Chapter 3: Branching and Looping.
Chapter 4: Visual Basic Control Fundamentals.
Chapter 5: Menus and Dialog Boxes.
Chapter 6. Executing and Debugging a New Project.
Chapter 7: Procedures.
Chapter 8: Arrays.
Chapter 9: Data Files.
Appendix A: The ASCII Character Set.
Appendix B: Incompatibilities with Visual Basic.NET.
Answers to Selected Problems.

Web Programming/Design

HTML

INTERNATIONAL EDITION

EVEN MORE EXCELLENT HTML WITH HTML REFERENCE GUIDE
2nd Edition

by Timothy T. Gottleber, North Lake College and Timothy Trainor, Muskegon County Community College

2003
ISBN: 9780072561784
ISBN: 9780071212854 [IE] - Out of Print

www.mhhe.com/it/eme

HTML texts from other academic publishers treat HTML in a step-by-step cookbook fashion, as though it were a simple software application, limiting the amount of material and concepts covered. Unique in the marketplace, Gottleber and Trainor's Even More Excellent HTML combines the pedagogical support of academic texts with the comprehensive coverage found in trade books. No previous knowledge of HTML or Web design is assumed.

CONTENTS

Chapter 1 An HTML Overview.
Chapter 2 Your First Web Page.
Chapter 3 Links - Let's Get Hyper.
Chapter 4 Lists - Bringing Order to the Chaos.
Chapter 5 Formatting - Is What You See What You Get?
Chapter 6 Images A Picture is Worth a 1,000 Words.
Chapter 7 Tables - Data in Rows and Columns.
Chapter 8 Styles - Some Have It and Some Don't.
Chapter 9 Multimedia Beyond Static Web Pages.
Chapter 10 Frames - Divide and Conquer.
Chapter 11 Forms - Handling User Input.
Chapter 12 Jazzing Up Your HTML.
Chapter 13 JavaScript Programs for HTML.
Chapter 14 Images Maps and Dynamic HTML.
Chapter 15 XML Overview (New).
Chapter 16 Pragmatic Hypertext - It Ain't All Pictures!
Appendix A Style Guides.
Appendix B Using File Transfer Protocol.
Appendix C History of the Internet (New)
HTML Reference Guide Contents.
Section A Summary of HTML 4.0 Elements (New).
Section B Summary of XML Elements (New).
Section C Style Properties and Values (old Appendix B).
Section D Common Character Sets (old Appendix C).
Section E Color blow-in/bind in page

INTERNATIONAL EDITION

WORLD WIDE WEB DESIGN WITH HTML

by C Xavier

1999 / 272 pages
ISBN: 9780074639719
ISBN: 9780071189989 [IE] - (Out of Print)
(McGraw-Hill India Title)

Web literacy will be a basic skill as the cyber revolution gets the world up to speed. The World Wide Web is going to fundamentally change how we work and play.

CONTENTS

1. Introduction to Internet
2. Internet Technologies
3. Internet Browsers
4. Introduction to HTML
5. Head and Body
6. Designing the Body Section
7. Ordered and Unordered Listing
8. Table Handling
9. DHTML and Style Sheets
10. Frames

INTERNATIONAL EDITION

SCHAUM'S OUTLINE OF HTML

by David Mercer, AFC Computer Services

2002 / 360 pages
ISBN: 9780071210348 [IE]
(A Schaum's Publication)

(International Edition is not for sale in Japan.)

Schaum's Outline of HTML provides a succinct overview of the principles of Web design, HTML, and XHTML markup. Includes numerous examples where proper design techniques and markup are demonstrated. Offers pointers to copious additional resources, examples, and information on these topics online. Across all potential markets, there are over 400,000 students per year taking such courses at the college level; triple this number to account for high-school and adult/continuing education programs. This book is intended to provide a tightly focused, succinct overview of the concepts, terminology, techniques, and markup involved in creating effective, correct Web pages. It will include coverage of the most recent HTML specification (HTML 4.01), the current and pending XHTML specificaitons (XHTML 1.0 and 1.1), plus information about Web page design, layout, style sheets, frames and content management.

Game Design & Development

INTERNATIONAL EDITION

INTRODUCTION TO VIDEO GAME DESIGN AND DEVELOPMENT WITH STUDENT CD

by Joseph Saulter, American Intercontinental University

2007 / Softcover
ISBN: 9780073294025
ISBN: 9780071100472 [IE, with Student CD]

www.mhhe.com/saulter1e

This text offers a comprehensive introduction of the concepts and processes involved in video game design and development. This book is a text book for Game Design and Development Studies across the nation as well as internationally. Introduction to Video Game Design and Development is written for the student to learn and the educator to teach in a classroom setting. It is special because it is designed to stimulate creativity in the Game Design and Development Arena, to educate both the student and the teacher as an applied application.

CONTENTS

Brief Table of Contents.
Chapter 1 Overview of Games, Gameplay, and the Game Experience.
Chapter 2 Evolution of Video and Computer Games.
Chapter 3 Game Components:
Part One.
Chapter 4 Game Components:
Part Two
Chapter 5 Serious Games.
Chapter 6 The Game Development Team.
Chapter 7 Game Development Process
Part One: Concept and Preproduction.
Chapter 8 Game Development Process
Part Two: Production and Postrelease.
Chapter 9 The Business of Game Development, Current Gaming Trends, and the Future of Game Development.
Glossary

Networking

Network Security

INTERNATIONAL EDITION

PRINCIPLES OF COMPUTER SECURITY
Security+ and Beyond

by Wm. Arthur Conklin, University of Texas at San Antonio; Gregory B White, Center for Infrastructure Assurance and Security, University of Texas San Antonio; Chuck Cothren, University of Texas at San Antonio; Dwayne Williams, University of Texas at San Antonio and Roger L. Davis

2005 / Softcover / 704 pages
ISBN: 9780072255096
ISBN: 9780071245005 [IE]

http://mhteched.com/security/conklin

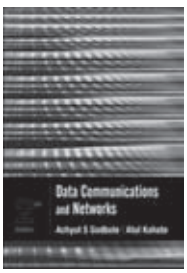
Learn the essentials of computer and network security while getting complete coverage of all the objectives for CompTIA's Security+ certification exam, plus coverage of the (ISC)2 SSCP certification, which focuses on best practices, roles, and responsibilities of security experts. Written and edited by leaders in the IT security field, this text explains the fundamentals of communication, infrastructure, and operational security. You'll also get details on methods to defend your computer systems and networks and how to prevent attacks.

CONTENTS

1: Introduction and Security Trends.
2: General Security Concepts.
3: Operational/ Organizational Security.
4: The Role of People in Security.
5: Cryptography.
6: Public Key Infrastructure.
7: Standards and Protocols.
8: The Impact of Physical Security on Network Security.
9: Network Fundamentals.
10: Infrastructure Security.
11: Remote Access.
12: Wireless and Instant Messaging.
13: Intrusion Detection Systems.
14: Security Baselines.
15: Attacks and Malware.
16: E-mail.
17: Web Components.
18: Software Development.
19: Disaster Recovery, Business Continuity, and Organizational Policies.
20: Risk Management.
21: Change Management.
22: Privilege Management.
23: Computer Forensics.
24: Security and Law.
A: About the CD-ROM.
B: About the Security+ Exam

Networking Essentials

NEW



DATA COMMUNICATIONS AND NETWORKS
2nd Edition

by Achyut S. Godbole, Managing Director, Softexcel Consultancy Services, Mumbai, and Atul Kahate, i-flex Solutions Ltd. Pune

2011 (May 2011) / Softcover / 544 pages
ISBN: 9780071077705

(A McGraw-Hill India title)

This book fulfills the need for a basic comprehensive text on data communications and networks. This second edition lays emphasis on key topics such as data transmission, transmission media, data compression, security, network types and topologies, Internet and TCP/IP protocol suite.

NEW TO THIS EDITION

- New chapter on Wireless Communication including discussion of IEEE Standards, Bluetooth, Wireless LANs, and Cellular Telephones
- 875 chapter-end exercises include 600 Objective-type Questions with Answers (True/False and Multiple-Choice Questions) and 275 Review Questions

CONTENTS

1.Introduction to Data Communication and networking (existing Chapter-1)
2. Analog and Digital Transmission Methods (existing-3)
3. Modes of Data Transmission and Multiplexing (existing Chapter-4)
4. Transmission Errors: Detection and Correction (existing Chapter-5)
5. Data Compression and Encryption (existing Chapter-6)
6. Transmission Media (existing Chapter-7)
7. Network Topologies, Switching and Routing Algorithms (existing Chapter-8)
8. Networking Protocols and OSI Model (existing Chapter-9)
9. Local Area Networks(LAN), Metropolitan Area Networks (MAN) and Wide Area Networks (WAN)
10. Medium Access Sub Layer and ISDN (renamed; existing Chapter-11)
11. X.25 Protocol (existing Chapter-12)
12. Frame Relay and Congestion Control (renamed; existing Chapter-13)
13. Asynchronous Transfer Mode (ATM) (existing Chapter-14)
14. Wireless Communication (New)
15. Internetworking Concepts, Devices, Internet Basics, History and Architecture (existing Chapter-15)
16. Ways of Accessing the Internet (existing Chapter-16)
17. TCP/IP Part I: An Introduction to TCP/IP, IP, ARP, RARP, ICMP (existing Chapter-17)
18. TCP/IP Part II (TCP, UDP) (existing Chapter-18)
19. TCP-IP Part III (DNS, Email, FTP, TFTP) (existing Chapter-19)
20. TCP-IP Part IV (WWW, HTTP, TELNET) (existing Chapter-20)
21. Multimedia Communications (existing Chapter-21)
Appendix A: Internet Protocol Version 6 (Ipv6)
Appendix B: Hardware for Error Detection
Appendix C: Network Management and Monitoring

INTERNATIONAL EDITION

PRINCIPLES OF VOICE & DATA COMMUNICATIONS

by Regis "Bud" J. Bates, TC International Consulting, Inc. and Marcus Bates

2007 / Softcover / 816 pages
ISBN: 9780072257328 - Out of Print
ISBN: 9780071257671 [IE]

www.mhhe.com/bates1e and http://www.mhhe.com/batesvdc

CONTENTS

Chapter 1 Principles of Voice and Data Communications-An Introduction.
Chapter 2 The Evolution of the Telephone Set.
Chapter 3 Introduction of the Carriers and Regulation in the Industry.
Chapter 4 Signaling System 7, Intelligent Networks and Number Portability.
Chapter 5 Analog versus Digital Communications.
Chapter 6 Integrated Services Digital Network and SONET.
Chapter 7 Data standards in Use.
Chapter 8 Data Communications.
Chapter 9 The Internet.
Chapter 10 Local Area Networks (LANs).
Chapter 11 Packets, Frames and Cell Switching Concepts.
Chapter 12 xDSL.
Chapter 13 Cable Modem Systems and Technology.
Chapter 14 Overview of Cellular communications.
Chapter 15 Security and Virtual Private Networks (VPN

Wireless Networking

INTERNATIONAL EDITION

FUNDAMENTALS OF WIRELESS NETWORKING

By Ron Price

2007 / 528 pages / Softcover
ISBN: 9780072256680
ISBN: 9780071106610 [IE with CD]

Wireless networks are growing at a rapid rate in all areas of society, from corporate networks to coffee shops to home networks. As a result, the need for people who know how to install, configure, and troubleshoot wireless networks is growing fast. Many schools are creating programs designed to provide students with the fundamental skills, knowledge, attitudes, and experiences needed to provide technical support in the installation, troubleshooting and maintenance of networks that support wireless (and wired) telecommunications systems.

CONTENTS

1 Introduction to Wireless Networks.
2 Wireless Network Architectures.
3 Wireless Network Devices.
4 RF Communications.
5 Wireless LAN Standards.
6 Infrared Devices.
7 Bluetooth.
8 Wireless LAN Planning and Design.
9 Wireless LAN Configuration and Installation Planning.
10 Antennas and Cables.
11 Wireless LAN Security.
12 SOHO and Enterprise WLANs.
13 Troubleshooting Wireless Devices.
14 Wireless WANs.
Appendix A Wireless Certification.
Appendix B TCP/IP Review.
Appendix C Network Addressing Basics.
Appendix D Answers to the Line Check Exercises.
Glossary.

Professional References

OCP JAVA SE 6 PROGRAMMER PRACTICE EXAMS (EXAM 310-065)

by Bert Bates, and Katherine Sierra

2011 (October 2010) / Softcover / 448 pages
ISBN: 9780072260885

(Osborne Media Professional Title)

Written by two of the lead developers of the Java SE Programmer Exam, OCP Java SE 6 Programmer Practice Exams is filled with more than 260 realistic practice questions to prepare you for this challenging exam. To help you understand this material, in-depth explanations of both the correct and incorrect answers are included for every question. This practical guide covers all official objectives for Exam 310-065 and is the perfect companion to SCJP Sun Certified Programmer for Java 6 Study Guide.

CONTENTS

Chapter 1: Self-Assessment Test 1
Chapter 2: Self-Assessment Test 2
Chapter 3: Practice Exam 1
Chapter 4: Coding Exercises
Chapter 5: Practice Exam 2
Chapter 6: Practice Exam 3
Chapter 7: Practice Exam 4
Appendix: Objectives Index

IT AUDITING USING CONTROLS TO PROTECT INFORMATION ASSETS
2nd Edition

by Chris Davis, Mike Schiller, and Kevin Wheeler

2011 (January 2011) / Hardcover / 512 pages
ISBN: 9780071742382

(Osborne Media Professional Title)

Filled with solid techniques, checklists, forms, coverage of leading-edge tools, and systematic procedures for common IT audits, IT Auditing, Second Edition covers real-life scenarios and fosters the skills necessary for auditing complex IT systems. Fully updated to cover new technology including cloud computing, virtualization, and storage, the book provides guidance on creating an effective and value-added internal IT audit function. Information is presented in easy-to-follow sections, allowing you to quickly grasp critical and practical techniques.

The Second Edition contains updated tools and checklists, as well as discussions of key concepts and methods for their effective use. This definitive guide offers a unique combination of 'how to' information on IT auditing for new auditors, and cutting-edge audit techniques for experienced professionals.

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Part I: Audit Overview;
Chapter 1. Building an Effective Internal IT Audit Function;
Chapter 2. The IT Audit Process;
Part II: Auditing Techniques;
Chapter 3. Auditing Entity Level Controls;
Chapter 4. Auditing Data Centers and Disaster Recovery;
Chapter 5. Auditing Routers, Switches, and Firewalls;
Chapter 6. Auditing Windows Operating Systems; Chapter 7. Auditing UNIX and Linux Operating Systems;
Chapter 8. Auditing Web Servers and Web Applications;
Chapter 9. Auditing Databases;
Chapter 10. Auditing Storage;
Chapter 11. Auditing Virtualized Environments; Chapter 12. Auditing WLAN and Mobile Devices; Chapter 13. Auditing Applications;
Chapter 14. Auditing Cloud Computing and Outsourced Operations;
Chapter 15. Auditing Company Projects;
Part III: Standards, Frameworks, and Regulations;
Chapter 16. Standards and Frameworks;
Chapter 17. Regulations;
Chapter 18. Risk Management

MULTIMEDIA MAKING IT WORK
8th Edition

by Tay Vaughan

2011 (November 2010) / Softcover / 560 pages
ISBN: 9780071748469

(Osborne Media Professional Title)

This thoroughly revised and updated full-color text covers the most current multimedia tools, techniques, and technologies, including Web and mobile content design and delivery

Multimedia: Making It Work, Eighth Edition teaches fundamental multimedia concepts and shows you the process of managing multimedia production. Beginning with the essential multimedia building blocks of text, images, sound, animation, and video, the book educates you on the business of making multimedia. Project planning, costs, design, production, talent acquisition, testing, and delivery are also covered.

Discussions of the most up-to-date technologies run throughout the chapters, with coverage of Multimedia Messaging Service (MMS), the architecture for multimedia content delivery used in mobile devices. Lab projects have been updated with applications of multimedia on the Web, such as shooting videos on a cell phone and uploading the results to websites. Both Windows and Mac environments are covered. Starting with this edition, software tools will be drawn from Open Source and shareware. Each chapter of the text focuses on highlighted learning objectives and includes chapter summaries, key term lists, end-of-chapter quizzes, and lab projects.

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Chapter 1. What is Multimedia;
Chapter 2. Text;
Chapter 3. Images;
Chapter 4. Sound;
Chapter 5. Animation;
Chapter 6. Video;
Chapter 7. Making Multimedia;
Chapter 8. Multimedia Skills;
Chapter 9. Planning and Costing;
Chapter 10. Design and Production;
Chapter 11. Content and Talent;
Chapter 12. The Internet and Multimedia;
Chapter 13. Designing for the Web;
Chapter 14. Delivering

PMP CERTIFICATION: A BEGINNER'S GUIDE

by George G. Angel

2010 (September 2009) / Softcover / 464 pages
ISBN: 9780071633703

(Osborne Media Professional Title)

This accessible guide bridges the gap between being a project manager and becoming a globally recognized Project Management Professional (PMP). Covering the latest PMP exam content from the Project Management Institute (PMI), the book explains PMI's worldwide standard methods, nine knowledge areas, and 42 processes. You'll learn proven strategies for improving project efficiency and effectiveness, balancing constraints, communicating timely and accurate project status, and successfully bringing a project to completion. A real-world case study that's followed throughout the book provides helpful examples, checklists, and proven project results.

CONTENTS

Part I: Essentials of Project Management and PMP Certification;
Chapter 1. Bridging the Gap Between PM and PMP;
Chapter 2. The Emerging World of Project Management;
Chapter 3. Project Management Process Groups;
Part II: The Nine Knowledge Areas;
Chapter 4. Project Integration Management;
Chapter 5. Project Scope Management;
Chapter 6. Project Time Management;
Chapter 7. Project Cost Management;
Chapter 8. Project Quality Management;
Chapter 9. Project Human Resource Management;
Chapter 10. Project Communication Management;
Chapter 11. Project Risk Management;
Chapter 12. Project Procurement Management;
Chapter 13. Closing the Project: Are We There Yet;
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CWNA CERTIFIED WIRELESS NETWORK ADMINISTRATOR & CWSP CERTIFIED WIRELESS SECURITY PROFESSIONAL ALL-IN-ONE EXAM GUIDE (PW0-104 & PW0-204)

by Tom Carpenter

2010 (May 2010) / Hardcover / 800 pages
ISBN: 9780071713887

(Osborne Media Professional Title)

Get complete coverage of all the material included on the CWNA and CWSP exams inside this comprehensive resource. Written by a wireless systems expert, this authoritative guide covers exams PW0-104 and PW0-204 in full detail. You'll find learning objectives at the beginning of each chapter, exam tips, practice exam questions, and in-depth explanations. Designed to help you pass these challenging exams with ease, this definitive volume also serves as an essential on-the-job reference.

CONTENTS

Part I: Wireless Fundamentals;
Chapter 1. Wireless Standards, Organizations, and Applications;
Chapter 2. Radio Frequency Fundamentals;
Chapter 3. RF Math;
Chapter 4. Wireless Network Antennas;
Chapter 5. Spread Spectrum Technologies;
Chapter 6. IEEE 802.11;
Part II: Planning and Installing Wireless LANs;
Chapter 7. Infrastructure Hardware and Software;
Chapter 8. Client Devices;
Chapter 9. Wireless Network Design;
Chapter 10. Performing Site Surveys;
Chapter 11. Installing the Wireless LAN;
Part III: Administering, Optimizing, and Troubleshooting Wireless LANs;
Chapter 12. Administering Wireless LANs;
Chapter 13. Performance Tuning for Wireless LANs;
Chapter 14. Troubleshooting Common Problems;
Part IV: Wireless Security;
Chapter 15. Wireless Network Attacks;
Chapter 16. Wireless LAN Threat Analysis;
Chapter 17. Security Policies;
Chapter 18. Fundamentals of Wireless LAN Security;
Chapter 19. Implementing 802.1X Authentication Solutions;
Chapter 20. Fast and Secure Roaming;
Chapter 21. Wireless Intrusion Monitoring and Prevention;
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SQL THE COMPLETE REFERENCE 3rd Edition

by James R. Groff, Paul N. Weinberg, and Andy Oppel

2010 / Softcover / 912 pages
ISBN: 9780071592550

(Osborne Media Professional Title)

Get comprehensive coverage of every aspect of SQL from three leading industry experts. Revised with coverage of the latest RDBMS software versions, this one-stop guide explains how to build, populate, and administer high-performance databases and develop robust SQL-based applications.

SQL: The Complete Reference, Third Edition shows you how to work with SQL commands and statements, set up relational databases, load and modify database objects, perform powerful queries, tune performance, and implement reliable security policies. Learn how to employ DDL statements and APIs, integrate XML and Java scripts, use SQL objects, build web servers, handle remote access, and perform distributed transactions. Techniques for managing in-memory, stream, and embedded databases that run on today's mobile, handheld, and wireless devices are included in this in-depth volume.

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Part I: An Overview of SQL
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Chapter 2. A Quick Tour of SQL
Chapter 3. SQL in Perspective
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Chapter 7. Multitable Queries (Joins)
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Part III: Updating Data
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Chapter 16. The System Catalog
Part V: Programming with SQL
Chapter 17. Embedded SQL
Chapter 18. Dynamic SQL*
Chapter 19. SQL APIs
Part VI: SQL Today and Tomorrow
Chapter 20. Database Processing and Stored Procedural SQL
Chapter 21. SQL and Data Warehousing
Chapter 22. SQL and Application Servers
Chapter 23. SQL Networking and Distributed Databases
Chapter 24. SQL and Objects
Chapter 25. SQL and XML

Chapter 26. Specialty Databases
Chapter 27. The Future of SQL
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Appendix B. DBMS Vendor Profiles
Appendix C. SQL Syntax Reference
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MAC OS X SYSTEM ADMINISTRATION

by Guy Hart-Davis

2010 (May 2010) / Softcover / 512 pages
ISBN: 9780071668972

(Osborne Media Professional Title)

Mac OS X System Administration is a task-based, hands-on implementation guide to setting up and administering networks based on the newest release of Mac OS X – Snow Leopard. The book assumes minimal starting knowledge of Snow Leopard Server, then moves the reader rapidly into a position of full practical knowledge. This detailed resource provides network administrators with the information they need to do their jobs smoothly and efficiently

CONTENTS

Part I: Plan and Create the Network;
Chapter 1. Plan Your Mac Network;
Chapter 2. Set Up the Network Hardware;
Chapter 3. Set Up Mac OS X Servers;
Chapter 4. Configure Your Servers;
Chapter 5. Set Up Directory Services;
Chapter 6. Enable Client Systems;
Chapter 7. Create and Control Users;
Chapter 8. Add the iPhone or iPod Touch to Your Network;
Part II: Provide Services and Applications;
Chapter 9. Provide Internet Access and Internet<B
Chapter 10. Connect E-mail;
Chapter 11. Set Up File Services;
Chapter 12. Install and Manage Applications;
Chapter 13. Run Windows Applications on Macs;
Chapter 14. Manage Printers;
Chapter 15. Allow Remote Access to Your Network;
Part III: Secure and Maintain Your Network;
Chapter 16. Secure Your Macs and Your Network;
Chapter 17. Maintain, Update, and Optimize Client Macs;
Chapter 18. Back Up and Restore Data;
Part IV: Create Different Types of Networks
Chapter 20. Use Windows Clients on a Mac-Based Network;
Chapter 21. Use Mac Clients on a Windows Network;
Chapter 22. Create Peer-to-Peer Mac Networks for Small Offices

ASP.NET 4.0 PROGRAMMING

by Joydip Kanjilal

2010 / Softcover / 400 pages
ISBN: 9780071604109

(Osborne Media Professional Title)

Deliver faster, lighter, more efficient distributed applications using the powerful technologies and tools available in ASP.NET 4.0 and Visual Studio 2010. Written by a Microsoft MVP in ASP.NET, this definitive guide lays out each development tactic alongside detailed code samples and real-world examples. Build feature-rich web applications, leverage the power of the ASP.NET MVC framework, interface with databases using ADO.NET, create modular Web Parts, integrate Dynamic Data controls, and deploy all-new Ajax and LINQ features. ASP.NET 4.0 Programming also covers the latest security, verification, tracing, and troubleshooting techniques.

CONTENTS

Chapter 1. Introduction to ASP.NET 4.0;
Chapter 2. ASP.NET State Management;
Chapter 3. Working with ADO.NET;
Chapter 4. Binding Data in ASP.NET;
Chapter 5. Building and Deploying ASP.NET Web Sites;
Chapter 6. Internationalization in ASP.NET; Chapter 7. The ASP.NET Security Model;
Chapter 8. Tracing and Debugging in ASP.NET;
Chapter 9. Dynamic Data;
Chapter 10. Silverlight;
Chapter 11. Web Parts;
Chapter 12. Language Integrated Query (LINQ);
Chapter 13. ASP.NET Ajax;
Chapter 14. Programming ASP.NET Ajax;
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Chapter 18. Program ASP.NET MVC Framework;
Chapter 19. Working with jQuery in ASP.NET;
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VMWARE VSPHERE 4 IMPLEMENTATION

by Mike Laverick

2010 (February 2010) / Softcover / 704 pages
ISBN: 9780071664523

(Osborne Media Professional Title)

Written by internationally recognized VMware expert Mike Laverick, this is an in-depth implementation guide to VMware's new suite of virtualization technologies, vSphere4. The book provides best practices for deploying the vSphere product in real-world enterprise environments. You will get insider tips for planning, designing, implementing, and securing a virtual infrastructure and automating tasks and procedures.

CONTENTS

Introduction
1 Installing ESX 4 Classic
2 Installing ESX 4i
3 Installing vCenter
4 Standard Networking
5 Distributed Viral Networking (DVN)
6 Storage
7 Create and Modify VMs
8 Rapid VM
9 Access Control
10 Resource Monitoring
11 Resource Management
12 VMotion, Storage VMotion and Cold Migration
13 Vmware Distributed Resource

14 Vmware Distributed Power Management
15 Vmware High Availability
16 Vmware Fault-Tolearance (FT)
17 vSphere Advanced Configuration Tools
18 Vmware View (VDI) Jumpstart
19 Virtual Machine Backup
20 Vmware Patch Management
21 Upgrading from Vi3.5 to vSphere 4

WINDOWS 7 QUICKSTEPS

by Marty Matthews

2010 / Softcover / 272 pages
ISBN: 9780071635691

(Osborne Media Professional Title)

Get started using Windows 7 right away--the QuickSteps way. Color screenshots with streamlined explanations show you how to use all the new and improved features of this sleek operating system. You'll find tips for customizing your desktop, managing files, connecting to the Internet, using email, adding hardware and software, and enjoying photos, music, and video. Learn how to set up a wired or wireless network and secure your entire system too. Get the book that gets you up-and-running on Windows 7 in no time.

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1 Stepping into Windows 7
2 Customizing Windows 7
3 Storing Information
4 Using the Internet
5 Managing Windows 7
6 Working with Documents and Photos
7 Working with Multimedia
8 Controlling Security
9 Setting up Networking
10 Using Networking

WIRELESS MOBILITY HANDBOOK

by Neil Reid

2010 (June 2010) / Softcover / 608 pages
ISBN: 9780071628624

(Osborne Media Professional Title)

Wireless Mobility covers the newest technologies, including WiFi, WiMAX, 802.11n, 802.15, mobile cellular, Zigbee, PTT, and more. This book will prepare IT and business-process stakeholders to lead the discussions on mobility and implement a wireless mobile network.

Neil Reid, wireless Cisco expert and bestselling author, incorporates the best of what has been learned from some of the most complex and challenging wireless deployments in the industry. Wireless Mobility discusses significant technical changes in the areas of the 802.11n standard, security, centralized architectures, advances in complex deployment practices, and Optimal Project Sequencing for complex enterprise class wireless networks.

CONTENTS

Chapter 1: The Big Picture
Chapter 2: Mobility- The Purpose Driven Network
Chapter 3: Mobility and the CIO
Chapter 4: Virtualization--the New Frontier
Chapter 5: Mobility Doesn't Make Things- It Makes Things Better
Chapter 6: Value Propositions and Success Metrics
Chapter 7: Optimal Project Sequencing
Chapter 8: Multi-Medium Mobility
Chapter 9: It's a Mad, Mad, Mad Unlicensed World
Chapter 10: Next Gen Mobility
Chapter 11: The Vendor Perspective
Chapter 12: Intelligent Buildings and Mobility
Appendix A- Mobility definitions
Appendix B- Relevant IEEE mobility Standards
Appendix C- Key mobility groups to know

JAVASCRIPT: A BEGINNER'S GUIDE 3rd Edition

by John Pollock

2010 (September 2009) / Softcover / 512 pages
ISBN: 9780071632959

(Osborne Media Professional Title)

Create dynamic Web pages complete with special effects using today's leading Web development language. JavaScript: A Beginner's Guide, Third Edition gives you step-by-step coverage of the fundamentals, including variables, functions, operators, event handlers, objects, arrays, strings, forms, and frames. You'll also learn about more advanced techniques, including debugging and security. This hands-on guide explains how JavaScript works with XHTML Transitional and covers the new features available in JavaScript. Get started using JavaScript right away with help from this fast-paced tutorial.

CONTENTS

Ch. 1. Introduction to JavaScript
Ch. 2. Placing JavaScript in an HTML File
Ch. 3. Using Variables
Ch. 4. Using Functions
Ch. 5. JavaScript Operators
Ch. 6. Conditional Statements and Loops
Ch. 7. Event Handlers
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Ch. 9. The Document Object
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Ch. 12. Math, Number, and Date Objects
Ch. 13. Handling Strings
Ch. 14. JavaScript and Forms
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CSS & XHTML: THE COMPLETE REFERENCE 5th Edition

by Thomas Powell

2010 (January 2010) / Softcover / 1008 pages
ISBN: 9780071496292

(Osborne Media Professional Title)

The fifth edition of this comprehensive resource on client side Web page creation provides full coverage of XHTML 1.0, 1.1, and the emerging HTML 5 standard; CSS (Cascading Style Sheets) 2.1; and browser-specific CSS rules adopted from the upcoming CSS 3 specification. You will learn, step-by-step, how to use all of these tools to build impressive Web pages.

CSS & XHTML: The Complete Reference, Fifth Edition covers the newest browser versions including Firefox 3, Internet Explorer 8, and Safari; the latest development trends; and current W3C standards. Hundreds of examples of correct markup and style are included.

WIRELESS NETWORK ADMINISTRATION: A BEGINNER'S GUIDE

by Wale Soyinka

2010 (July 2010) / Softcover / 464 pages
ISBN: 9780071639217

(Osborne Media Professional Title)

FEATURES

- Covers the latest in wireless networking; WiFi,802.11, the new 802.11n standard, 802.15.4/Zigbee, and Bluetooth Personal Area Networks
- Covers both the US CDMA and European GSM standards
- Covers Linux, Windows, and Mac platforms

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Part I: Overview;
Chapter 1. Uses, Benefits, and Drawbacks of Wireless;
Chapter 2. Standards and Standards Bodies;
Chapter 3. Wave Theory and Radio Concepts;
Part II: Hardware;
Chapter 4. Client Side Devices;
Chapter 5. Infrastructure Side Devices;
Chapter 6. Chipsets;
Part III: Wireless Network Topologies and Design;
Chapter 7. Design Overview;
Chapter 8. Wireless Topologies;
Part IV: Wireless Infrastructure Backend;
Chapter 9. Importance of Backend Infrastructure;
Chapter 10. Standard Infrastructure Services and Protocols;
Chapter 11. Optional Infrastructure Services and Protocols;
Part V: Administering Users;
Chapter 12. Windows;
Chapter 13. MACs;
Chapter 14. Linux;
Part VI: Security;
Chapter 15. Wireless Security Vulnerabilities;
Chapter 16. Common Wireless Security Attacks and Solutions;
Part VII: Wireless LAN Trouble Shooting, Tuning and Monitoring;
Chapter 17. Spectrum Analyzers;
Chapter 18. WIDS and IDS

PRINCIPLES OF COMPUTER SECURITY, COMPTIA SECURITY+ AND BEYOND 2nd Edition

By Wm. Arthur Conklin, University Of Houston---Houston, Gregory B. White, University Of Texas At San Antonio, Dwayne Williams, Univ Of Texas At San Antonio, Roger L. Davis, Chuck Cothren, Univ Of Texas At San Antonio, And Corey Schou, Idaho State Univ

2010 / Softcover with CDROM / 730 pages
ISBN: 9780071633758

(Osborne Media Professional Title)

Learn the fundamentals of computer and information security while getting complete coverage of all the objectives for the latest release of CompTIA's Security+ certification exam. This instructive, full-color guide discusses communication, infrastructure, operational security, and methods for preventing attacks. Written and edited by leaders in the field, Principles of Computer Security, Second Edition will help you pass the CompTIA Security+ exam and become an IT security expert.

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Chapter 1. Introduction and Security Trends;
Chapter 2. General Security Concepts;
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Chapter 8. Physical Security;
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Chapter 16. E-mail and Instant Messaging;
Chapter 17. Web Components;
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Chapter 19. Disaster Recovery, Business Continuity, and Organizational Policies;
Chapter 20. Risk Management;
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MANAGEMENT INFORMATION SYSTEMS

2013

	Author	ISBN	Page
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M: Information Systems, 2e	Baltzan	9780073376868	101,106
Annual Editions: Technologies, Social Media and Society, 18e	De Palma	9780073528731	111, 116
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Introduction to Information Systems, 16e	Marakas	9780073376882	102,107

2012

	Author	ISBN	Page
Business Driven Information Systems, 3e	Baltzan	9780073376820	102,107

2011

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Introduction to Information Systems

NEW

M: INFORMATION SYSTEMS
2nd Edition

By Paige Baltzan, University of Denver

2013 (January 2012) / 384 pages
ISBN: 9780073376868

www.mhhe.com/baltzanm2e

The visual impact of the magazine format will win students over quickly. They'll love the price. And the fascinating, sometimes hard-to-believe real examples will keep them reading. Baltzan's approach discusses various business initiatives first and how technology supports those initiatives second. The premise for this unique approach is that business initiatives drive technology choices in a corporation. Therefore, every discussion addresses the business needs first and addresses the technology that supports those needs second. This approach takes the difficult and often intangible MIS concepts, brings them down to the student's level, and applies them using a hands-on approach to reinforce the concepts. M: Information Systems provides the foundation that will enable students to achieve excellence in business, whether they major in operations management, manufacturing, sales, marketing, etc. M: Information Systems is designed to give students the ability to understand how information technology can be a point of strength in an organization.

NEW TO THIS EDITION

❖ Streamlined Table of Contents. This edition has been streamlined to include three modules with nine chapters.

- Completely Updated: This text has been completely updated to reflect the latest in research and practice in the work of Management information Systems and ensures students are introduced to the latest technology utilized by today's businesses.
- Thoroughly updated examples throughout the text with the most current information available about the large number of companies of all sizes and industries (e.g., service, manufacturing, nonprofit, and profit) in the United States and around the world included in this text.
- NEW! Database Cohesion Case: This is a new product that mimics the original cohesion case on the Broadway Café and focuses on databases. The database case challenges your students to pull together core material from each chapter and apply this material to databases. The case can be found at www.cohesioncase.com\Database. In addition, the original Cohesion Case has been very successful: The Broadway Cafe is a running case instructors can use to reinforce core material such as customer relationship management, supply chain management, business intelligence, and decision making. The case has 15 sections that challenge students to develop and expand their grandfather's coffee shop. Students receive hands-on experience in business and learn technology's true value of enabling business. Please note that the Cohesion Case is not a McGraw-Hill product but a Baltzan direct product. The case can be found at www.cohesioncase.com.

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Module Two: Technical Foundations of MIS
Chapter 5: Infrastructure: Sustainable Technologies
Chapter 6: Data: Business Intelligence
Chapter 7: Networks: Mobile Business
Module Three: Enterprise MIS
Chapter 8: Enterprise Applications: Business Communications
Chapter 9: Systems Development and Project Management: Corporate Responsibility

INTERNATIONAL EDITION

NEW

INTRODUCTION TO INFORMATION SYSTEMS
16th Edition

By George Marakas, University of Kansas-Lawrence and James A O'Brien (deceased)

2013 (January 2012) / 704 pages
ISBN: 9780073376882 (Loose-Leaf)
ISBN: 9780071318044 [IE]

www.mhhe.com/marakas

(Details unavailbale at press time)

INTERNATIONAL EDITION

NEW

BUSINESS DRIVEN INFORMATION SYSTEMS
3rd Edition

By Paige Baltzan and Amy Phillips of University of Denver

2012 (February 2011) / 544 pages
ISBN: 9780073376820
ISBN: 9780071314565 [IE]

www.mhhe.com/bdis3e

Business Driven Information Systems story: Business Driven Information Systems discusses various business initiatives first and how technology supports those initiatives second. The premise for this unique approach is that business initiatives should drive technology choices. Every discussion first addresses the business needs and then addresses the technology that supports those needs. This text provides the foundation that will enable students to achieve excellence in business, whether they major in operations management, manufacturing, sales, marketing, finance, human resources, accounting, or virtually any other business discipline. Business Driven Information Systems is designed to give students the ability to understand how information technology can be a point of strength for an organization.

NEW TO THIS EDITION

- New paperback format!
- Streamlined Table of Contents. This edition has been streamlined to include three modules with nine chapters.
- New application and business focused pedagogical boxes in each chapter. These boxes provide discussion starters and encourage students to think critically about the information and how it relates to practical, everyday business concerns. Each chapter contains a number of these thought provoking conversation starters, under a variety of categories, including:
- Business Driven Discussion – see page 6 for an example of the responsibility that comes with greater access to information
- Business Driven MIS – see page 9 for an example concerning manipulation of data to find your version of the truth
- Business Driven Ethics and Security – see page 10 for an example of inappropriate data handling
- Business Driven Globalization – see page 15 for an example regarding the competitive landscape for students
- Business Driven Innovation – see page 19 for a discussion about fixing the post office
- Business Driven Debate – see page 21 for the debate about the iPad – greatest product in history or just another gadget?
- Business Driven Start-Up – see page 23 for an example of a college student start-up invented to solve a problem
- New end-of-chapter pedagogical elements:
- Critical Business Thinking:The best way to learn MIS is to apply it to scenarios and real-world business dilemmas. These projects require students to apply critical thinking skills and chapter concepts to analyze the problems and make recommended business decisions.
- Entrepreneurial Challenge:This unique feature represents a run-

ning project that allows students to challenge themselves by applying the MIS concepts to a real business. The flexibility of the case allows each student to choose the type of business they would like to operate throughout the case. Each chapter provides hands-on projects your students can work with their real-business scenarios.

❖ NEW! Database Cohesion Case: This is a new product that mimics the original cohesion case on the Broadway Café and focuses on databases. The database case challenges your students to pull together core material from each chapter and apply this material to databases. The case can be found at www.cohesioncase.com\ Database. In addition, the original Cohesion Case has been very successful: The Broadway Cafe is a running case instructors can use to reinforce core material such as customer relationship management, supply chain management, business intelligence, and decision making. The case has 15 sections that challenge students to develop and expand their grandfather's coffee shop. Students receive hands-on experience in business and learn technology's true value of enabling business. Please note that the Cohesion Case is not a McGraw-Hill product but a Baltzan direct product. The case can be found at www.cohesioncase.com.

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International edition

INTRODUCTION TO INFORMATION SYSTEMS 15th Edition

By James A O'Brien (deceased) and George Marakas, University of Kansas-Lawrence

2010 (November 2009) / 608 pages
ISBN: 9780073376776
ISBN: 9780070167087 [IE]

www.mhhe.com/obrien15e

O'Brien's Introduction to Information Systems 15e reflects the contemporary use of enterprise-wide business systems. New real-world case studies continue to correspond with this industry reality. The text's focus is on teaching the future manager the potential effect on business of the most current IT technologies such as the Internet, Intranets, and Extranets for enterprise collaboration, and how IT contributes to competitive advantage, reengineering business processes, problem solving, and decision-making.

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INTERNATIONAL EDITION

ESSENTIALS OF BUSINESS DRIVEN INFORMATION SYSTEMS

By Paige Baltzan and Amy Phillips of University of Denver

2009 (January 2008) / 480 pages
ISBN: 9780073376721
ISBN: 9780071270342 [IE]

www.highered.mcgraw-hill.com:80/sites/0073376728

Essentials of Business Driven Information Systems discusses various business initiatives first and how technology supports those initiatives second. The premise for this unique approach is that business initiatives should drive technology choices. Every discussion first addresses the business needs and then addresses the technology that supports those needs.

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Appendix A Business Basics (on the OLC only)
Appendix B Business Process (on the OLC only)

INTERNATIONAL EDITION

INFORMATION SYSTEMS ESSENTIALS
3rd Edition

By Stephen Haag, University of Denver and Maeve Cummings, Pittsburg State University

2009 (December 2008) / 464 pages
ISBN: 9780073376752
ISBN: 9780071285490 [IE]

www.mhhe.com/haag3e

9 chapters plus 3 appendices cover the traditional core material of MIS. A comprehensive set of group projects and e-commerce projects support an applied component to the course. Consistent with Haag's best-selling MIS for the Information Age, IS Essentials 3/e conveys the impact of IS on the individual with contemporary writing and lively examples

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1 The Information Age in which You Live: Changing the Face of Business
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Electronic Commerce Projects

Management Information Systems

INTERNATIONAL EDITION

NEW

BUSINESS DRIVEN TECHNOLOGY
5th Edition

By Paige Baltzan, Amy Phillips and Stephen Haag of University of Denver

2013 (January 2012) / 640 pages
ISBN: 9780073376844
ISBN: 9780071317795 [IE]

www.mhhe.com/bdt5e

Unlike any other MIS textbook franchise, our Baltzan texts (Business Driven Technology, Business Driven Information Systems and M: Information Systems) discuss various business initiatives first and how technology supports those initiatives second. The premise for this unique approach is that business initiatives should drive technology choices. Every discussion in these texts first addresses the business needs and then addresses the technology that supports those needs Business Driven Technology5e offers you the flexibility to customize your course according to your needs and the needs of your students by covering only essential concepts and topics in the five core units, while providing additional in-depth coverage in the business and technology plug-ins. This text contains 20 chapters, 20 business plug-ins, and 12 technology plug-ins offering you the ultimate flexibility in tailoring content to the exact needs of your MIS or IT course. The unique construction of this text allows you to cover essential concepts and topics in the five core units while providing you with the ability to customize a course and explore certain topics in greater detail with the business and technology plug-ins. Plug-ins are fully developed modules of text that include student learning outcomes, case studies, business vignettes, and end-of-chapter material such as key terms, individual and group questions and projects, and case study exercises We realize that instructors today require the ability to cover a blended mix of topics in their courses. While some instructors like to focus on networks and infrastructure throughout their course, others choose to focus on ethics and security. Business Driven Technology was developed to easily adapt to your needs. Each chapter and plug-in is independent so you can:

- Cover any or all of the chapters as they suit your purpose.
- Cover any or all of the business plug-ins as they suit your purpose.
- Cover any or all of the technology plug-ins as they suit your purpose.
- Cover the plug-ins in any order you wish.

Baltzan, Business Driven Technology 5e: Engaging • Flexible • 100% Supported

NEW TO THIS EDITION

❖ NEW: All Technology Plug-Ins updated for Office 2010.

❖ All new end-of-chapter element: Entrepreneurial Challenge. This section offers an exciting running case that tasks students with applying MIS concepts to their own start-up business.

❖ 27 new Making Business Decisions projects that help students focus on decision making as they relate to the topical elements in the chapters and plug-ins.

❖ 10 new Apply Your Knowledge business projects to reinforce the business initiatives explored in the text. These projects help to develop the application and problem-solving skills of your students through challenging and creative business-driven scenarios.

❖ 9 new cases to promote critical thinking.

❖ Completely Updated: This text has been completely updated to reflect the latest in research and practice in the work of Management information Systems and ensures students are introduced to the latest technology utilized by today's businesses.

❖ Thoroughly updated examples throughout the text with the most current information available about the large number of companies of all sizes and industries (e.g., service, manufacturing, nonprofit, and profit) in the United States and around the world included in this text.

❖ NEW! Database Cohesion Case: This is a new product that mimics the original cohesion case on the Broadway Café and focuses on databases. The database case challenges your students to pull together core material from each chapter and apply this material to databases. The case can be found at www.cohesioncase.com\Database. In addition, the original Cohesion Case has been very successful: The Broadway Cafe is a running case instructors can use to reinforce core material such as customer relationship management, supply chain management, business intelligence, and decision making. The case has 15 sections that challenge students to develop and expand their grandfather's coffee shop. Students receive hands-on experience in business and learn technology's true value of enabling business. Please note that the Cohesion Case is not a McGraw-Hill product but a Baltzan direct product. The case can be found at www.cohesioncase.com.

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NEW

M: INFORMATION SYSTEMS
2nd Edition

By Paige Baltzan, University of Denver

2013 (January 2012) / 384 pages
ISBN: 9780073376868

http://mhhe.com/baltzanm2e

The visual impact of the magazine format will win students over quickly. They'll love the price. And the fascinating, sometimes hard-to-believe real examples will keep them reading. Baltzan's approach discusses various business initiatives first and how technology supports those initiatives second. The premise for this unique approach is that business initiatives drive technology choices in a corporation. Therefore, every discussion addresses the business needs first and addresses the technology that supports those needs second. This approach takes the difficult and often intangible MIS concepts, brings them down to the student's level, and applies them using a hands-on approach to reinforce the concepts. M: Information Systems provides the foundation that will enable students to achieve excellence in business, whether they major in operations management, manufacturing, sales, marketing, etc. M: Information Systems is designed to give students the ability to understand how information technology can be a point of strength in an organization.

NEW TO THIS EDITION

❖ Streamlined Table of Contents. This edition has been streamlined to include three modules with nine chapters.

- Completely Updated: This text has been completely updated to reflect the latest in research and practice in the work of Management information Systems and ensures students are introduced to the latest technology utilized by today's businesses.
- Thoroughly updated examples throughout the text with the most current information available about the large number of companies of all sizes and industries (e.g., service, manufacturing, nonprofit, and profit) in the United States and around the world included in this text.
- NEW! Database Cohesion Case: This is a new product that mimics the original cohesion case on the Broadway Café and focuses on databases. The database case challenges your students to pull together core material from each chapter and apply this material to databases. The case can be found at www.cohesioncase.com\Database. In addition, the original Cohesion Case has been very successful: The Broadway Cafe is a running case instructors can use to reinforce core material such as customer relationship management, supply chain management, business intelligence, and decision making. The case has 15 sections that challenge students to develop and expand their grandfather's coffee shop. Students receive hands-on experience in business and learn technology's true value of enabling business. Please note that the Cohesion Case is not a McGraw-Hill product but a Baltzan direct product. The case can be found at www.cohesioncase.com.

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INTERNATIONAL EDITION

NEW

MANAGEMENT INFORMATION SYSTEMS FOR THE INFORMATION AGE 9th Edition

By Stephen Haag, University of Denver and Maeve Cummings, Pittsburg State University

2013 (February 2012) / 608 pages
ISBN: 9780073376851
ISBN: 9780071314640 [IE]

(Details unavailable at press time)

INTERNATIONAL EDITION

NEW

INTRODUCTION TO INFORMATION SYSTEMS 16th Edition

By George Marakas, University of Kansas-Lawrence and James A O'Brien (deceased)

2013 (January 2012) / 704 pages
ISBN: 9780073376882 (Loose-Leaf)
ISBN: 9780071318044 [IE]

www.mhhe.com/marakas

(Details unavailbale at press time)

INTERNATIONAL EDITION

NEW

BUSINESS DRIVEN INFORMATION SYSTEMS 3rd Edition

By Paige Baltzan and Amy Phillips of University of Denver

2012 (February 2011) / 544 pages
ISBN: 9780073376820
ISBN: 9780071314565 [IE]

www.mhhe.com/bdis3e

Business Driven Information Systems story: Business Driven Information Systems discusses various business initiatives first and how technology supports those initiatives second. The premise for this unique approach is that business initiatives should drive technology choices. Every discussion first addresses the business needs and then addresses the technology that supports those needs. This text provides the foundation that will enable students to achieve excellence in business, whether they major in operations management, manufacturing, sales, marketing, finance, human resources, accounting, or virtually any other business discipline. Business Driven Information Systems is designed to give students the ability to understand how information technology can be a point of strength for an organization.

NEW TO THIS EDITION

❖ New paperback format!

❖ Streamlined Table of Contents. This edition has been streamlined to include three modules with nine chapters.

❖ New application and business focused pedagogical boxes in each chapter. These boxes provide discussion starters and encourage students to think critically about the information and how it relates to practical, everyday business concerns. Each chapter contains a number of these thought provoking conversation starters, under a variety of categories, including:

❖ Business Driven Discussion – see page 6 for an example of the responsibility that comes with greater access to information

❖ Business Driven MIS – see page 9 for an example concerning manipulation of data to find your version of the truth

❖ Business Driven Ethics and Security – see page 10 for an example of inappropriate data handling

❖ Business Driven Globalization – see page 15 for an example regarding the competitive landscape for students

❖ Business Driven Innovation – see page 19 for a discussion about fixing the post office

❖ Business Driven Debate – see page 21 for the debate about the iPad – greatest product in history or just another gadget?

❖ Business Driven Start-Up – see page 23 for an example of a college student start-up invented to solve a problem

❖ New end-of-chapter pedagogical elements:

❖ Critical Business Thinking:The best way to learn MIS is to apply it to scenarios and real-world business dilemmas. These projects require students to apply critical thinking skills and chapter concepts to analyze the problems and make recommended business decisions.

❖ Entrepreneurial Challenge:This unique feature represents a running project that allows students to challenge themselves by applying

the MIS concepts to a real business. The flexibility of the case allows each student to choose the type of business they would like to operate throughout the case. Each chapter provides hands-on projects your students can work with their real-business scenarios.

❖ NEW! Database Cohesion Case: This is a new product that mimics the original cohesion case on the Broadway Café and focuses on databases. The database case challenges your students to pull together core material from each chapter and apply this material to databases. The case can be found at www.cohesioncase.com\Database. In addition, the original Cohesion Case has been very successful: The Broadway Cafe is a running case instructors can use to reinforce core material such as customer relationship management, supply chain management, business intelligence, and decision making. The case has 15 sections that challenge students to develop and expand their grandfather's coffee shop. Students receive hands-on experience in business and learn technology's true value of enabling business. Please note that the Cohesion Case is not a McGraw-Hill product but a Baltzan direct product. The case can be found at www.cohesioncase.com.

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Appendix C: Designing Databases

Global Edition

MANAGEMENT INFORMATION SYSTEMS
10th Edition

By James O'Brien amd George Marakas, University of Kansas-Lawrence

2011 (October 2010) / 704 pages
ISBN: 9780073376813
ISBN: 9780071221092 [GE]

The benchmark text for the syllabus organized by technology (a week on databases, a week on networks, a week on systems development, etc.) taught from a managerial perspective. O'Brien defines technology and then explains how companies use the technology to improve performance. Real world cases finalize the explanation.

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14. Enterprise and Global Management of Information Technology
Section I Managing Information Technology
Section II Managing Global IT

All Global Editions are adapted to better meet the needs of courses outside the United States. Please contact your local sales representative for more details.

INTERNATIONAL EDITION

BUSINESS DRIVEN TECHNOLOGY WITH PREMIUM CONTENT CARD

4th Edition

By Paige Baltzan, Amy Phillips and Stephen Haag of University of Denver

2010 (September 2009)
ISBN: 9780077359355
ISBN: 9780071220545 [IE]

www.mhhe.com/bdt4e

The Baltzan and Phillips approach in Business Driven Technology discusses various business initiatives first and prolifically through the Business Plug-Ins, and how technology supports those initiatives second. The premise for this unique approach is that business initiatives drive technology choices in a corporation. With 21 Business Plug Ins, instructors may customize the degree in which the business initiative is explored prior to the technology solution making those possible. This approach takes the difficult and often intangible MIS concepts, brings them down to the student's level, and applies them using a hands-on approach to reinforce the concepts. BDT provides the foundation that will enable students to achieve excellence in business, whether they major in operations management, manufacturing, sales, marketing, etc. BDT is designed to give students the ability to understand how information technology can be a point of strength in an organization.

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T11 Creating Web Pages Using Dreamweaver (OLC only)
T12 Creating Gantt Charts with Excel and Microsoft Project (OLC only)

INTERNATIONAL EDITION

MANAGEMENT INFORMATION SYSTEMS FOR THE INFORMATION AGE
8th Edition

By Stephen Haag, University of Denver, Maeve Cummings, Pittsburg State University and Amy Phillips, University of Denver

2010 (November 2009) / 608 pages
ISBN: 9780073376783
ISBN: 9780070167094 [IE]

www.mhhe.com/haag8e

Chapters cover what instructors want students to know about MIS while Extended Learning Modules (XLMs) show students what they can do with MIS. A contemporary writing style and a wealth of examples engage students. Arranged with chapter opening cases that highlight how an organization has successfully implemented many of the chapter's concepts and chapter closing cases that help students apply what they just learned gives students the hands-on knowledge that is applicable in both their personal and professional experiences.

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XLM D Decision Analysis with Spreadsheet Software (Office 2007)
XLM E Network Basics
XLM H Computer Crime and Digital Forensics
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XLM F Building a Web Page with HTML
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XLM K Careers in Business
XLM L Building Web Sites with FrontPage
XLM M Programming in Excel with VBA

INTERNATIONAL EDITION

INTRODUCTION TO INFORMATION SYSTEMS
15th Edition

By James A O'Brien (deceased) and George Marakas, University of Kansas-Lawrence

2010 (November 2009) / 608 pages
ISBN: 9780073376776
ISBN: 9780070167087 [IE]

www.mhhe.com/obrien15e

O'Brien's Introduction to Information Systems 15e reflects the contemporary use of enterprise-wide business systems. New real-world case studies continue to correspond with this industry reality. The text's focus is on teaching the future manager the potential effect on business of the most current IT technologies such as the Internet, Intranets, and Extranets for enterprise collaboration, and how IT contributes to competitive advantage, reengineering business processes, problem solving, and decision-making.

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INFORMATION TECHNOLOGY FOR RETAILING

By Ajeet Khurana, Educational Consultant

2009 (July 2009) / 152 pages
ISBN: 9780070159228
McGraw-Hill India Title

This book is about Information Technology and about Retail Management. This two dimensional approach leads to the biggest advantage of reading this book. Information Technology is so deeply entrenched in business processes that many regard it as a 'black box', i.e., they know what goes into a computer system and what comes out. But they do not know how the input is processed. In such a scenario, it is vital that retail professionals understand the perspective that different participants have towards technology. This book attempts to explain technology from multiple perspectives. For instance, in explaining the Cash Register, the perspectives of the customer, manager and operator are explored separately.

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By Jeffrey L. Whitten, Purdue University–West Lafayette, and Lonnie D. Bentley, Purdue University–West Lafayette

2007 (December 2005) / 768 pp / Hardcover
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INFORMATION SYSTEMS DEVELOPMENT
4th Edition

By David Avison, University of Southampton and ESSEC and Guy Fitzgerald, Brunei University

2006 (March 2006) / 656 pages
ISBN: 9780077114176
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Object-Oriented System Analysis & Design

OBJECT-ORIENTED SYSTEMS ANALYSIS AND DESIGN USING UML
4th Edition

by Simon Bennett, Celesio AG, Steve McRobb, De Montfort University, and Ray Farmer, Coventry University

2010 (April 2010) / 688 pages
ISBN: 9780077125363
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www.mcgraw-hill.co.uk/textbooks/bennett

The fourth edition of Object- Oriented Systems Analysis and Design has been revised and updated to reflect the most up-to-date approaches to information systems development. Still a best-seller in its field, Bennett's, McRobb's and Farmer's text remains a key teaching resource for Systems Analysis and Design courses at both undergraduate and postgraduate level. The book provides a clear, practical framework for development that uses all the major techniques from UML 2.2. It follows an iterative and incremental approach based on the industry-standard Unified Process, placing systems analysis and design in the context of the whole systems lifestyle. Structured in four parts, the first provides the background to information systems analysis and design and to object-orientation. The second part focuses on the activities of requirements gathering and systems analysis, as well as the basic notation of UML. Part three covers the activities of systems architecture and design, and UML notation for object design, and the book concludes with the implementation of systems and the issues of how the systems life cycle is organized and how reusable components can be developed.

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INTRODUCTION TO OBJECT-ORIENTED ANALYSIS AND DESIGN

by Stephen R Schach, Vanderbilt University - Nashville

2004 / 544 pages
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By Regis Bates, TC International Consulting Inc and Marcus Bates

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Decision Support Systems

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by Efrem G Mallach, University Massachusetts Lowell

2000 / 672 pages

ISBN: 9780071163569 [IE]

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Project Management

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INTRODUCTION TO INFORMATION SYSTEMS PROJECT MANAGEMENT
2nd Edition

by David Olson, University of Nebraska, Lincoln

2004 / 360 pages

ISBN: 9780071232616 [IE]

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PMBOK Cross References

Advanced MIS

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CORPORATE INFORMATION STRATEGY AND MANAGEMENT
Text and Cases, 8th Edition

By Lynda M Applegate, Robert D Austin and F Warren McFarlan of Harvard Business School

2009 (December 2008) / 672 pages
ISBN: 9780073402932
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Corporate Information Strategy and Management: Text and Cases 8/e by Applegate, Austin, and Soule is written for students and managers who desire an overview of contemporary information systems technology management. This new edition examines how information technology (IT) enables organizations to conduct business in radically different and more effective ways. The author's objective is to provide readers with a better understanding of the influence of twenty-first century technologies on business decisions. The 8th edition discusses today's challenges from the point of view of the executives who are grappling with them. This text is comprised of an extensive collection of Harvard Business cases devoted to Information Technology.

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Enterprise Resource Planning

NEW

ENTERPRISE RESOURCE PLANNING
A Managerial Perspective

By DP Goyal, Management Development Institute, Gurgaon

2011 (July 2011) / 384 pages
ISBN: 9780071077972
McGraw-Hill India Title

www.mhhe.com/goyal

Enterprise Resource Planning (ERP) is considered essential both for competitiveness and responsiveness of any organisation since it provides a large number of benefits to all organisations. ERP has today become a total transformation strategy which needs to be understood, planned, deployed and managed properly. This book balances the two disciplines that are management and computer science to understand the applications of ERP Systems in a way that is easy to understand and easier to implement. This book would be useful for the students of Management, Engineering, Information Technology, Computer Applications and Business & Commerce. The practicing managers and entrepreneurs would also find the book useful in understanding the concepts of ERP and its applications to enhance their decision making.

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by David L Olson, University of Nebraska - Lincoln

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Data Mining

INTERNATIONAL EDITION

INTRODUCTION TO BUSINESS DATA MINING

by David L Olson, University of Nebraska - Lincoln, and Yong Shi, University of Nebraska-Omaha

2007 (November 2005) / 336 pages
ISBN: 9780072959710
ISBN: 9780071244701 [IE]

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Electricity Principles & Applications with Student Data CD-Rom, 8e	Fowler	9780077567620	124
Contemporary Communication Systems	Mesiya	9780073380360	165
Applied Circuit Analysis	Sadiku	9780078028076	129,132
Electronics Principles and Applications with Student Data CD-Rom, 8e	Schuler	9780077567705	137

2012

	Author	ISBN	Page
Introduction to Mechatronics and Measurement Systems, 4e	Alciatore	9780073380230	155
Electric Machinery Fundamentals, 5e	Chapman	9780073529547	156
Applied Numerical Methods with MatLab for Engineers and Scientists, 3e	Chapra	9780073401102	182
Computer Organization and Embedded Systems, 6e	Hamacher	9780073380650	161
Engineering Circuit Analysis, 8e	Hayt	9780073529578	133
Engineering Electromagnetics, 8e	Hayt	9780073380667	142
Electrical Principles for the Electrical Trades, Volume 2, 6e [MH Australia Title]	Jenneson	9780071013178	123
Semiconductor Physics and Devices, 4e	Neamen	9780073529585	140
Electrical Wiring Practice, Volume 2, 7e [MH Australia Title]	Pethebridge	9780070286436	124
Signals and Systems, 2e	Roberts	9780073380681	175
Fundamentals of Digital and Computer Design with VHDL	Sandige	9780073380698	147

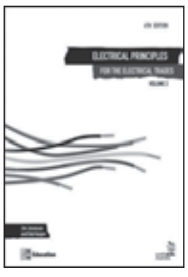
2011

	Author	ISBN	Page
Modern Power System Analysis, 4e [MH India Title]	Kothari	9780071077750	159
HVDC Transmission [MH India Title]	Kamakshaiah	9780071072533	166
Basic Electrical Engineering, Revised 1st Edition [MH India Title]	Kulshreshtha	9780071328968	125
Principles of Electromagnetics [MH India TItle]	Mahapatra	9780071072601	142
Computer Architecture: An Embedded Approach [Asian Publication]	McLoughlin	9780071311182	162
Power System Protection and Switchgear, 2e [MH India Title]	Ram	9780071077743	159
Analog Communication [MH India Title]	Rao	9780070704800	165
Digital Communication [MH India Title]	Rao	9780070707764	167
Digital Signal Processing, 2e [MH India Title]	Salivahanan	9780071329149	177

Introduction To Electrical Engineering

Introduction to Electrical Engineering

NEW



ELECTRICAL PRINCIPLES FOR THE ELECTRICAL TRADES, VOLUME 2
6th Edition

by Jim R. Jenneson, and Bob Harper

2012 (May 2012) / Softcover
ISBN: 9780071013178
(A McGraw-Hill Australia Title)

Electrical Principles for the Electrical Trades 6th Edition Volume 1 has been completely revised and updated to incorporate the relevant competencies of the new Electrotechnology Training Package (UEE07). Building on the classic 5th edition, this text provides students with the fundamental knowledge needed for a future career in the electrical trades.

The text features a clear writing style teamed with concise and informative full-colour illustrations which create an engaging and effective learning tool for Australian students.

NEW TO THIS EDITION

- Revised and updated to incorporate relevant competencies in UEE07 Electrotechnology Training Package
- Attractive and engaging new four-colour design
- A wealth of diagrams, photographs, graphs and figures to clearly illustrate key concepts
- Student-friendly writing style demonstrates the logical flow from simple to complex theories
- Revised and updated exercises and examples allow students to assess their understanding of the material
- Appendix material expands on key concepts and creates an authoritative and up-to-date text perfect for VET students and as a reference for trades professionals
- Ideal companion text to Electrical Wiring Practice 6th Edition Volume 1 and Volume 2 (available for semester 1 2011)

CONTENTS

1. Elementary electricity
2. Electrochemistry
3. Magnetism
4. DC Circuits
5. Resistors
6. Inductors
7. Capacitors
8. Single phase alternating current (1)
9. Single phase alternating current (2)
10. Three phase alternating current
11. Cells and batteries
12. Test equipment

ELECTRICAL PRINCIPLES FOR THE ELECTRICAL TRADES, VOLUME 1
6th Edition

by Jim R. Jenneson, and Bob Harper

2010 (August 2010) / Softcover
ISBN: 9780071000338
(McGraw-Hill Australia Title)

www.mhhe.com/au/jenneson6e

Electrical Principles for the Electrical Trades 6th Edition Volume 1 has been completely revised and updated to incorporate the relevant competencies of the new Electrotechnology Training Package (UEE07). Building on the classic 5th edition, this text provides students with the fundamental knowledge needed for a future career in the electrical trades. The text features a clear writing style teamed with concise and informative full-colour illustrations which create an engaging and effective learning tool for Australian students.

CONTENTS

1. Elementary electricity
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12. Test equipment

BASIC ELECTRICAL & ELECTRONICS ENGINEERING

by Ravish R. Singh, Vice-Principal & Head, Electronics and Telecomm Dept., Thakur College of Engineering & Technology, Mumbai

2009 / Softcover / 440 pages
ISBN: 9780070146136
(McGraw-Hill India Title)

Basic Electrical & Electronics Engineering is meant for the students of all engineering disciplines who are to take up the course in their first year. The book will be useful to students pursuing diploma courses in EEE and ECE. Lucid writing style and rich pedagogy are the USP of this book.

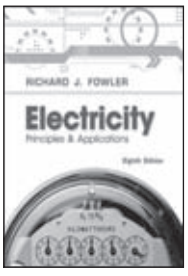
CONTENTS

1. Basic Circuit Concepts
2. DC Circuits
3. AC Circuits
4. Three-Phase Circuits
5. Single-Phase Transformer
6. Electrical Machines
7. Semiconductor Devices and Rectifiers

Basic Electricity

INTERNATIONAL EDITION

NEW



ELECTRICITY PRINCIPLES & APPLICATIONS WITH STUDENT DATA CD-ROM
8th Edition

by Richard J. Fowler

2013 (January 2012) / Hardcover
ISBN: 9780077567620
ISBN: 9780071317566 [IE]

www.mhhe.com/fowler8e

The eighth edition of Electricity: Principles and Applications is based on the same philosophy of previous editions. It continues to be written so that a student needs no prior knowledge of electrical theory and principles and at a level that allows students with limited math and reading skills can gain a clear understanding of electricity and electrical devices.

NEW TO THIS EDITION

- MORE examples, self-test questions and Chapter review questions and problems in every Chapter!
- An expanded section on energy efficiency now includes information on neon light bulbs and LEDs.
- New! Coverage on Fuel Cells.
- Examples emphasizing C, V, and Q relationships and RC time constants.
- More examples showing how to use "powers of 10".
- When to italicize a symbol (abbreviation) used in formulas.
- Advantage of using the current divider formula.

CONTENTS

Ch. 1: Basic Concepts
Ch. 2: Electrical Quantities and Units
Ch. 3: Basic Circuits, Laws and Measurements
Ch. 4: Circuit Components
Ch. 5: Multiple-Load Circuits
Ch. 6: Complex-Circuit Analysis
Ch. 7: Magnetism and Electromagnetism
Ch. 8: Alternate Current and Voltage
Ch. 9: Power in AC Circuits
Ch. 10: Capacitance
Ch. 11: Inductance
Ch. 12: Transformers
Ch. 13: R, C, and L Circuits
Ch. 14: Electric Motors
Ch. 15: Instruments and Measurements
Ch. 16: Residential Wiring Concepts

NEW

ELECTRICAL WIRING PRACTICE VOLUME 2
7th Edition

by Keith Pethebridge, and Ian Neeson, Sydney Institute of TAFE

2012 (May 2012) / Softcover / 368 pages
ISBN: 9780070286436
(McGraw-Hill Australia Title)

www.mhhe.com.au/pethebridge7e

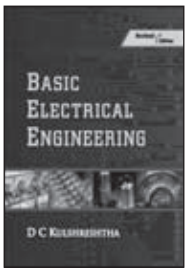
The 7th edition of Electrical Wiring Practice has been thoroughly updated to provide guidance in the use of the Australian and New Zealand Wiring Rules AS/NZS 3000:2007, including the 2009 Amendments and other related standards. This text presents the knowledge and skills specified in units of competency in national training packages for an electrical trade qualification and advanced trade competencies. Taking a practical approach, Electrical Wiring Practice employs clear visual tools to illustrate the knowledge and practices required by specified products and Standards.

Although the book is primarily written for students and teachers of electrical trades, it provides up-to-date reference material that will be helpful to many trade professionals.

CONTENTS

Chapter 10. Electrical protection and protective devices
Chapter 11. Installation of safety services
Chapter 12. Renewable energy and other alternative electrical supply installations
Chapter 13. Switchboards and control panels
Chapter 14. Installation design – selection of cables and protective devices
Chapter 15. Special electrical installations
Chapter 16. Appliances – electric heating and motors
Chapter 17. Lighting sources and applications
Chapter 18. Control and energy management

NEW



BASIC ELECTRICAL ENGINEERING
Revised 1st Edition

by D C Kulshreshtha, Professor of Electronics and Communication Engineering, Jaypee University of Information Technology

2011 (July 2011) / Softcover / 880 pages
ISBN: 9780071328968

[McGraw-Hill India Title]

This book provides a solid overview of electrical engineering principles geared for both electrical as well as non-electrical engineering students. With the liberal use of practical illustrations and numerous exercises, it offers an unparalleled exposure to Electricity Fundamentals, Network Theory, Electromagnetism, Electric Machines, Transformers and Measuring Instruments.

FEATURES

❖ Covers entire spectrum of Basic Electrical Engineering from the fundamentals to measuring instruments in a single volume

❖ Special focus on step-by-step and tutorial approach for solved examples

CONTENTS

1. Introduction
2. Ohm's Law
3. Network Analysis
4. Network Theorems
5. Electromagnetism
6. Magnetic Circuits
7. Self and Mutual Inductances
8. Dc Transients
9. Alternating Voltage and Current
10. Ac Circuits
11. Resonance in Ac Circuits
12. Three-Phase Circuits and Systems
13. Transformers
14. Alternators And synchronous Motors
15. Induction Motors
16. Dc Machines
17. Fractional Horsepower Motors
18. Electrical Measuring Instruments
19. Electrical Installation and Illumination

BASIC ELECTRICAL ENGINEERING
3rd Edition

by D P. Kothari, Professor, Centre for Energy Studies, IIT, Delhi, (Former Director In charge, IIT Delhi)

2009 (September 2009) / Softcover
ISBN: 9780070146112

(McGraw-Hill India Title)

www.mhhe.com/kothari/bee3

This hallmark text on Basic Electrical Engineering provides concise and balanced account of all key concepts as well as applications in the field. With the liberal use of practical illustrations and numerous exercises, it offers an unparalleled exposure to Electricity Fundamentals, Network Theory, Electromagnetism, Electric Machines, Transformers, and Measuring Instruments.

CONTENTS

Chapter 1. Elementary Concepts and Definitions
Chapter 2. Fundamentals of Resistive Circuits
Chapter 3. Fundamentals of Reactive Circuits
Chapter 4. Steady State Analysis For Sinusoidal Excitation
Chapter 5. Frequency Response
Chapter 6. Three-Phase Circuits
Chapter 7. Magnetic Circuits
Chapter 8. Transformers
Chapter 9. EMF and Torque in Electric Machines
Chapter 10. DC Machines
Chapter 11. Synchronous Machine
Chapter 12. Induction Motor
Chapter 13. Fractional-kW Motors
Chapter 14. Measurement Techniques and Electric and Electronic Instrumentation
Chapter 15. Power Systems
Chapter 16. Domestic Wiring

ELECTRICAL WIRING PRACTICE
VOLUME 1
7th Edition

by Keith Pethebridge, and Ian Neeson, Sydney Institute of TAFE

2009 / Softcover
ISBN: 9780070286412

(McGraw-Hill Australia Title)

www.mhhe.com/au/pethebridge7e

The 7th edition of Electrical Wiring Practice has been thoroughly updated to provide guidance in the use of the Australian and New Zealand Wiring Rules AS/NZS 3000:2007, including the 2009 Amendments and other related standards. This text presents the knowledge and skills specified in units of competency in national training packages for an electrical trade qualification and advanced trade competencies. Taking a practical approach, Electrical Wiring Practice employs clear visual tools to illustrate the knowledge and practices required by specified products and Standards.

Although the book is primarily written for students and teachers of electrical trades, it provides up-to-date reference material that will be helpful to many trade professionals. A portion of the profits from this book will go to WorldSkills Australia. Visit www.wordskills.org.au for more information.

CONTENTS

Volume 1

1. Electrical energy--past, present and future
2. Workplace and electrical safety
3. Regulations and standards
4. Cables, connections and terminations
5. Fixing methods and accessories for electrical and data/communications installations

6. Drawings, diagrams, schedules and documents used in electrical work
7. Wiring and cabling systems
8. Protection—earthing and other protective methods
9. Testing techniques and compliance verification
Answers
Acronyms
Index

International edition

FUNDAMENTALS OF ELECTRICAL ENGINEERING

by Giorgio Rizzoni, Ohio State University

2009 (February 2008) / 736 pages
ISBN: 9780073380377
ISBN: 9780071269506 [IE, with corrections]

www.mhhe.com/rizzoni

Rizzoni's Fundamentals of Electrical Engineering provides a solid overview of the electrical engineering discipline that is especially geared toward the many non-electrical engineering students who take this course. The book was developed to fit the growing trend of the Intro to EE course morphing into a briefer, less comprehensive course.

The hallmark feature of this text is its liberal use of practical applications to illustrate important principles. The applications come from every field of engineering and feature exciting technologies. The appeal to non-engineering students are the special features such as Focus on Measurement sections, Focus on Methodology sections, and Make the Connections sidebars.

CONTENTS

Chapter 1: Introduction to Electrical Engineering
Chapter 2: Fundamentals of Electric Circuits
Chapter 3: Resistive Network Analysis
Chapter 4: AC Network Analysis
Chapter 5: Transient Analysis
Chapter 6: Frequency Response and System Concepts
Chapter 7: AC Power
Chapter 8: Operational Amplifiers
Chapter 9: Semiconductors and Diodes
Chapter 10: Bipolar Junction Transistors: Operation, Circuit Models, and Application
Chapter 11: Field-Effect Transistors: Operation, Circuit Models, and Application
Chapter 12: Digital Logic Circuits
Chapter 13: Principles of Electromechanics
Chapter 14: Introduction to Electric Machines
Appendix A Linear Algebra and Complex Numbers
Appendix B The Laplace Transform
Appendix C Fundamentals of Engineering (FE) Examination
Appendix D Answers to Selected Problems

International edition

PRINCIPLES AND APPLICATIONS OF ELECTRICAL ENGINEERING

5th Edition

by Giorgio Rizzoni, Ohio State University

2007 / 1056 pages / Hardcover
ISBN: 9780073220338
ISBN: 9780071254441 [IE]

www.mhhe.com/rizzoni

Rizzoni provides a solid overview of the electrical engineering discipline that is especially geared toward the many non-electrical engineering students who take this course. The hallmark feature of the text is its liberal use of practical applications to illustrate important principles. The applications come from every field of engineering and feature exciting technologies such as Ohio State's world-record setting electric car. The appeal to non-EE's is further heightened by such special features as the book's Focus on Measurement sections, Focus on Methodology sections, and Make the Connection sidebars.

CONTENTS

1 Introduction to Electrical Engineering
Part I – Circuits
2 – Fundamentals of Electric Circuits
3 – Resistive Network Analysis
4 – AC Network Analysis
5 – Transient Analysis
6 – Frequency Response and System Concepts
7 – AC Power
Part II – Electronics
8 – Operational Amplifiers
9 – Semiconductors and Diodes
10 – Bipolar Junction Transistors: Operation, Circuit Models, and Applications
11 – Field-Effect Transistors: Operation, Circuit Models, and Applications
12 – Power Electronics
13 – Digital Logic Circuits
14 – Digital Systems
Part III – Instrumentation and Communication Systems
15 – Electronic Instrumentation and Measurements
16 – Analog Communication Systems
17 – Digital Communications
Part IV – Electromechanics
18 – Principles of Electromechanics
19 – Introduction to Electric Machines
20 – Special-Purpose Electric Machines
Appendices
Appendix A – Linear Algebra and Complex Numbers
Appendix B – The Laplace Transform
Appendix C – Fundamentals of Engineering (FE) Examination
Appendix D – Answers to Selected

INTERNATIONAL EDITION

BASIC ELECTRICITY: A TEXT-LAB MANUAL
7th Edition

by by Paul B Zbar and Joseph Sloop, Gordon Rockmaker, Electronic Industries Association

2000 / 460 pages / Softcover
ISBN: 9780078212758
ISBN: 9780071202848 [IE]
(A Glencoe/McGraw-Hill Title)

Designed for use in traditional DC/AC courses, this text serves equally well as a stand-alone introductory text and lab manual or as a lab manual for use with any basic theory text. The content of this text/lab manual is prepared with the technical assistance of the Electronic Industries Association, guaranteeing that the material is consistent with the competencies of the electronics manufacturing and service industries.

CONTENTS

Chapter 1: Introduction to Experiments.
Chapter 2: Resistor Color Code and Measurement of Resistance.
Chapter 3: Measurement of Voltage.
Chapter 4: Conductors and Insulators.
Chapter 5: Switches and Switching Circuits.
Chapter 6: Measurement of Direct Current.
Chapter 7: Ohm's Law.
Chapter 8: Series Circuits.
Chapter 9: Designing Series Circuit.
Chapter 10: Voltage-Divider Circuits unloaded).
Chapter 11: Current in a Parallel Circuit.
Chapter 12: Resistance of a Parallel Circuit.
Chapter 13: Designing Parallel Circuits.
Chapter 14: Resistance of Series-Parallel Circuits.
Chapter 15: Direct-Current Meters (shunts and multipliers).
Chapter 16: Kirchhoff's Voltage Law (one source).
Chapter 17: Kirchhoff's Current Law .
Chapter 18: Voltage-Divider Circuits (loaded).
Chapter 19: Designing Voltage and Current-Divider Circuits.
Chapter 20: Troubleshooting Electric Circuits using Voltage, Current, and Resistance Measurement.
Chapter 21: Maximum Power Transfer.
Chapter 22: Solving Circuits using Mesh Currents.
Chapter 23: Balanced-Bridge Circuit.
Chapter 24: Superposition Theorem.
Chapter 25: Thevenin's Theorem.
Chapter 26: Norton's Theorem.
Chapter 27: Millman's Theorem.
Chapter 28: Magnetic Field Associated with Current in a Wire.
Chapter 29: Inducing Voltage in a Coil.
Chapter 30: Applications of the DC Relay.
Chapter 31: Oscilloscope Operation.
Chapter 32: Oscilloscope Voltage and Frequency Measurement.
Chapter 33: Peak, RMS, and Average Values of AC.
Chapter 34: Characteristics of Inductance.
Chapter 35: Transformers.
Chapter 36Inductances in Series and Parallel.
Chapter 37: RC Time Constants.
Chapter 38: Reactance of a Capacitor (XC).
Chapter 39: Capacitors in Series and Parallel.
Chapter 40: The Capacitive Voltage Divider.
Chapter 41: Impedance of a Series RL Circuit.
Chapter 42: Voltage Relationships in a Series RL Circuit Impedance of a Series RC Circuit.
Chapter 43: Voltage Relationships in a Series RC Circuit.
Chapter 44: Power in AC Circuits.
Chapter 45: Frequency Response of a Reactive Circuit.
Chapter 46: Impedance of a Series RLC Circuit.
Chapter 47: Effects of Changes in Frequency on Impedance and
Chapter 48: Current in a Series RLC Circuit.
Chapter 49: Impedance of Parallel RL and RC Circuits.
Chapter 50: Impedance of a Parralles RLC Circuit.
Chapter 51: Resonant Frequency and Frequency Response of a Series RLC Circuit.
Chapter 52: Effect of Q on Frequency Response and Bandwidth of a Series Resonant Circuit.
Chapter 53: Characteristics of Parallel Resonant Circuits.
Chapter 54: Low-Pass and Hig h-Pass Filters.
Chapter 55: RC Bandpass and Bandstop Filters.
Chapter 56: Nonlinear Resistors - Thermistors.
Chapter 57: Nonlinear Resistors - Varistors (VDRS).
Appendices.
A: Wiring Methods
B: Familiarization with Hand Tools Used in Electronics
C: Soldering Techniques.

INTERNATIONAL EDITION

ELECTRICITY/ELECTRONICS FUNDAMENTALS
A Text-Lab Manual
4th Edition

by by Paul B Zbar and Joseph Sloop, Gordon Rockmaker, Electronic Industries Association

1993 / 384 pages / Softcover
ISBN: 9780028008431 (Out-of-Print}
ISBN: 9780071137805 [IE]
(A Glencoe/McGraw-Hill Title)

This combined text and lab manual covers the basics of electricity and electronics theory. Thoroughly revised, it is designed as an introductory course for electronic service technicians. It also is well suited for use in technical schools and two-year colleges as a principal lab manual in the typical basic courses that last two or three semesters or quarters. Emphasis is always placed on the commonsense manner of understanding or troubleshooting circuitry. Experiments, which use commonly available components, have been written in a down-to-earth style so that students can grasp the most fundamental concepts. Experimental procedures require students to think and make decisions. Summaries, self-tests, and questions are strategically placed throughout the text.

CONTENTS

Using the Multimeter
Series and Parallel Resistance Circuits
Voltage and Voltage Measurement
Measurement and Control of DC
Ohm's Law and the Series Circuit
The Parallel Circuit
Series-Parallel Circuits
Kirchhoff's Laws
Thevenin's Theorem
Power
Electricity and Magnetism
Alternating Current Measurement
Capacitors
Capacitive Reactance

SCHAUM'S OUTLINE OF BASIC ELECTRICITY
2nd Edition

by Milton Gussow, Johns Hopkins University

2009 (August 2009) / Softcover / 480 pages
ISBN: 9780071635288

(A Schaum's Publication)

The high-performance study guides that help you cut study time, hone problem-solving skills, and achieve top scores on exams! Success adds up when you choose Schaum's. From cable and fiberoptics to increased electricity demands, the job of the electronics technician has changed drastically over the last two decades. This revised textbook covers the latest technological advances.

CONTENTS

Chapter 1: The Nature of Electricity
Chapter 2: Electrical Standards and Conventions
Chapter 3: OHM's Law and Power
Chapter 4: Direct-Current Series Circuits
Chapter 5: Direct-Current Parallel Circuits
Chapter 6: Batteries
Chapter 7: Kirchhoff's Laws
Chapter 8: Determinant Solutions for DC Networks
Chapter 9: Network Calculations
Chapter 10: Magnetism and Electromagnetism
Chapter 11: Direct-Current Generators and Motors
Chapter 12: Principles of Alternating Current
Chapter 13: Inductance, Inductive Reactance, and Inductive Circuits
Chapter 14: Capacitance, Capacitive, Reactance, and Capacitive Circuits
Chapter 15: Single-Phase Circuits
Chapter 16: Alternating-Current Generators and Motors
Chapter 17: Complex Numbers and Complex Impedance for Series AC Circuits
Chapter 18: AC Circuit Analysis with Complex Numbers
Chapter 19: Transformers
Chapter 20: Three-Phase Systems
Chapter 21: Series and Parallel Resonance
Chapter 22: Waveforms and Time Constants
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SCHAUM'S OUTLINE OF BASIC ELECTRICAL ENGINEERING
2nd Edition

by J. J. Cathey, University of Kentucky; Syed A. Nasar, University of Kentucky

1997 / 304 pages
ISBN: 9780070113558

(A Schaum's Publication)

The chief emphasis is on solving realistic problems, hundreds of which are included with detailed solutions. This popular study guide concisely yet clearly covers all the areas taught in two-semester survey courses and serves as an ideal review for electrical engineers and others looking for high ratings on the Professional Engineer's Examination.

CONTENTS

Circuit Elements and Laws.
Analysis of DC Circuits.
AC Circuits: Sinusoidal Steady-State.
Transient Circuit Analysis.
Special Forcing Functions and Laplace Transforms.
State-Variable Circuit Analysis. Diodes.
Bipolar Junction Transistors.
Field-Effect Transistors.
Operational Amplifiers.
Switching Logic Circuits.
Digital Logic Applications.
Transformers.
Electromechanics and Electrical Machines.
Concepts of Control.
Transfer Functions.
Block Diagrams and Signal Flow Graphs.
Control Criteria and Response.

SCHAUM'S OUTLINE OF BASIC MATHEMATICS FOR ELECTRICITY AND ELECTRONICS
2nd Edition

by Aurthur Beiser, New York University

1993 / 224 pages
ISBN: 9780070044395

(A Schaum's Publication)

A solved-problems Outline of mathematical calculations for electricity and electronics technicians. All major types of problems are included. This edition will continue to follow the course trends as covered in the leading textbooks such as Singer and Forster, and Zbar. A new chapter on network theorems will introduce theorems of Thevenin, Norton, and Millman. Additions to other chapters will include impedance matching (AC and DC); superposition theorem and voltage dividers; voltampere reactive power (VAR power). The use of electronic calculators will be included. A mix of SI and customary units will occur throughout.

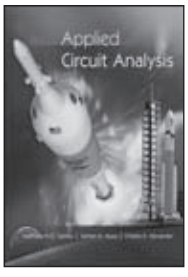
CONTENTS

Basic Electricity and Algebra.
Fractions, Decimals, and Percentage.
Power and Energy.
Powers of 10 and Logarithms.
Resistance and Wire Size.
Series Circuits.
Parallel Circuits.
Simultaneous Equations and Kirchhoff's Rules.
Network Theorems.
Inductance.
Capacitance.
Trigonometry and Vectors.
Alternating Current.
American Wire Gage Tables.
Appendices: A: Conversion Factors.
B: American Wire Gage Tables.
C: Table of Allowable Current Carrying Capacities (ampacities) of Copper Conductors.
D: Four-Place Logarithms.
E: Natural Trigonometric Functions.

Basic Electronics

INTERNATIONAL EDITION

NEW



APPLIED CIRCUIT ANALYSIS

by Matthew Sadiku, Prairie View A&M University, Charles K. Alexander, Cleveland State University, Sarhan Musa, Prairie View A&M University

2013 (January 2012) / Hardcover / 992 pages
ISBN: 9780078028076
ISBN: 9780071317825 [IE]

www.mhhe.com/sadiku

Applied Circuit Analysis 1e is intended to present circuit analysis to engineering technology students in a manner that is clearer, more interesting and easier to understand than other texts. This book was written for a two-semester or three-quarter course in linear analysis. The book may also be used for a one-semester course by a proper selection of chapters and sections by the instructor. It is broadly divided into two parts. Part 1, consisting of Chapters 1 to 10, is devoted to dc circuits. Part 2, containing Chapters 11 to 19, deals with ac circuits. The material in two parts is more than sufficient for a two-semester course so the instructor must select which chapters or sections to cover.

FEATURES

❖ In recognition of the requirements by ABET (Accreditation Board for Engineering and Technology) on integrating computer tools, the use of PSpice I and Multisim is encouraged in a student-friendly manner. Appendix C serves as a tutorial on PSpice for Windows, while Appendix D provides an introduction to Multisim.

❖ Ten review questions in the form of multiple-choice objective items are provided at the end of each chapter with answers. The review questions are intended to cover the little "tricks" which the examples and end-of-chapter problems may not cover. They serve as a self-test device and help students determine how well they have mastered the chapter.

CONTENTS

PART 1--DC Circuits
Chapter 1 Basic Concepts
Chapter 2 Resistance
Chapter 3 Power and Energy
Chapter 4 Series Circuits
Chapter 5 Parallel Circuits
Chapter 6 Series-Parallel Circuits
Chapter 7 Methods of Analysis
Chapter 8 DC Circuit Theorems
Chapter 9 Capacitors
Chapter 10 Inductors
PART 2--AC Circuits
Chapter 11 AC Voltage and Current
Chapter 12 Phasors and Impedance
Chapter 13 Sinusoidal Steady-State Analysis
Chapter 14 Power
Chapter 15 Resonance
Chapter 16 Filters and Bode Plots
Chapter 17 Three-Phase Circuits
Chapter 18 Transformers and Coupled Circuits
Chapter 19 Two-Port Networks
Appendix A Simultaneous Equations and Matrix Inversion
Appendix B Complex Numbers
Appendix C PSpice for Windows
Appendix D MutliSim
Aooendix E MATLAB
Appendix F TI-86 Calculators
Appendix G Answers to odd-numbered Problems

INTERNATIONAL EDITION

GROB'S BASIC ELECTRONICS
11th Edition

by Mitchel E. Schultz, Western Wisconsin Technical College

2011 (May 2010) / Hardcover with CD-Rom / 1280 pages
ISBN: 9780077410094 [with Student CD]
ISBN: 9780071314008 [IE, with Student CD]

(A Career Trade & Technical Title)

www.mhhe.com/grob11e

Grob's Basic Electronics, Eleventh Edition, is written for the beginning student pursuing a technical degree in Electronics Technology. In covering the fundamentals of electricity and electronics, this text focuses on essential topics for the technician, and the all-important development of testing and troubleshooting skills.

This highly practical approach combines clear, carefully-laid-out explanations of key topics with good, worked-out examples and problems to solve. Review problems that follow each section reinforce the material just completed, making this a very student-friendly text. It is a thoroughly accessible introduction to basic DC and AC circuits and electronic devices.

This eleventh edition of this longtime best-selling text has been refined, updated and made more student friendly. The focus on absolutely essential knowledge for technicians, and focus on real-world applications of these basic concepts makes it ideal for today's technology students.

CONTENTS

I Introduction to Powers of 10
Chapter 1 Electricity
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International edition

GROB'S BASIC ELECTRONICS Fundamentals of DC and AC Circuits with Simulations CD

by Mitchel E. Schultz, Western Wisconsin Technical College

2007 / Hardcover / 992 pages
ISBN: 9780073250366
ISBN: 9780071108096 [IE, with Student CD]

www.mhhe.com/grob10e

Grob's Basic Electronics: Fundamentals of DC/AC Circuits is written for the beginning student pursuing a degree in electronics technology. In covering the fundamentals of electricity and electronics, this text focuses on essential topics for the technician and the all-important development of troubleshooting skills.

This highly practical approach combines clear, carefully-laid-out explanations of key topics with worked-out examples and problems to solve. Review problems that follow each section reinforce material just completed making this a very student-friendly text. It provides the student with complete, comprehensive coverage of all of the fundamental concepts of DC and AC circuit theory. This first edition combines the tried and true Grob's Basic Electronics with more specific study in DC/AC Circuitry. For the first time, instructors can choose between Grob's Basic Electronics 10th edition, with its additional coverage of devices or this new, concise Fundamentals of DC/AC Circuits. The focus on absolutely essential knowledge for technicians, including troubleshooting failed circuitry, keeps this book completely practical.

CONTENTS

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4 Series Circuits
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24 Complex Numbers for AC Circuits
25 Resonance
26 Filters

International edition

ELECTRICITY/ELECTRONICS FUNDAMENTALS A Text-Lab Manual 4th Edition

by by Paul B Zbar and Joseph Sloop, Gordon Rockmaker, Electronic Industries Association

1993 / 384 pages / Softcover
ISBN: 9780028008431 (Out-of-Print}
ISBN: 9780071137805 [IE]
(A Glencoe/McGraw-Hill Title)

This combined text and lab manual covers the basics of electricity and electronics theory. Thoroughly revised, it is designed as an introductory course for electronic service technicians. It also is well suited for use in technical schools and two-year colleges as a principal lab manual in the typical basic courses that last two or three semesters or quarters. Emphasis is always placed on the commonsense manner of understanding or troubleshooting circuitry. Experiments, which use commonly available components, have been written in a down-to-earth style so that students can grasp the most fundamental concepts. Experimental procedures require students to think and make decisions. Summaries, self-tests, and questions are strategically placed throughout the text.

CONTENTS

Using the Multimeter
Series and Parallel Resistance Circuits
Voltage and Voltage Measurement
Measurement and Control of DC
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The Parallel Circuit
Series-Parallel Circuits
Kirchhoff's Laws
Thevenin's Theorem
Power
Electricity and Magnetism
Alternating Current Measurement
Capacitors
Capacitive Reactance

INTERNATIONAL EDITION

BASIC ELECTRONICS FOR SCIENTISTS
5th Edition

by James J Brophy, University of Utah

1990 / 462 pages / Softcover

ISBN: 9780071006750 [IE]

A leading book in electronics, Basic Electronics for Scientists is completely updated to reflect changes in the field. Features of the Fifth Edition include a new chapter on microprocessor circuits (including processing applications and DC-based instruments), an earlier introduction of diode circuits and semiconductor devices, a new emphasis on integrated circuits, and expanded treatment of digital measurement techniques.

CONTENTS

1 Direct Current Circuits
2 Alternating Currents
3 Diode Circuits
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Appendixes
1: Vacuum Tube Circuits
2: Binary Arithmetic

SCHAUM'S OUTLINE OF BASIC MATHEMATICS FOR ELECTRICITY AND ELECTRONICS
2nd Edition

by Aurthur Beiser, New York University

1993 / 224 pages

ISBN: 9780070044395

(A Schaum's Publication)

A solved-problems Outline of mathematical calculations for electricity and electronics technicians. All major types of problems are included. This edition will continue to follow the course trends as covered in the leading textbooks such as Singer and Forster, and Zbar. A new chapter on network theorems will introduce theorems of Thevenin, Norton, and Millman. Additions to other chapters will include impedance matching (AC and DC); superposition theorem and voltage dividers; voltampere reactive power (VAR power). The use of electronic calculators will be included. A mix of SI and customary units will occur throughout.

CONTENTS

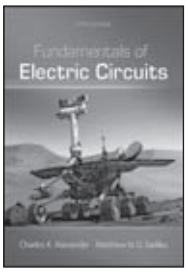
Basic Electricity and Algebra.
Fractions, Decimals, and Percentage.
Power and Energy.
Powers of 10 and Logarithms.
Resistance and Wire Size.
Series Circuits.
Parallel Circuits.
Simultaneous Equations and Kirchhoff's Rules.
Network Theorems.
Inductance.
Capacitance.
Trigonometry and Vectors.
Alternating Current.
American Wire Gage Tables.
Appendices: A: Conversion Factors.
B: American Wire Gage Tables.
C: Table of Allowable Current Carrying Capacities (ampacities) of Copper Conductors.
D: Four-Place Logarithms.
E: Natural Trigonometric Functions.

Circuits and Electronics

Circuits Analysis

GLOBAL EDITION

NEW



FUNDAMENTALS OF ELECTRIC CIRCUITS
5th Edition

by Charles K. Alexander, Cleveland State University, and Matthew Sadiku, Prairie View A&M University

2013 (January 2012) / Hardcover / 1056 pages
ISBN: 9780073380575
GE ISBN not available at press time

www.mhhe.com/alexander

Alexander and Sadiku's fifth edition of Fundamentals of Electric Circuits continues in the spirit of its successful previous editions, with the objective of presenting circuit analysis in a manner that is clearer, more interesting, and easier to understand than other, more traditional texts. Students are introduced to the sound, six-step problem solving methodology in chapter one, and are consistently made to apply and practice these steps in practice problems and homework problems throughout the text.

A balance of theory, worked examples and extended examples, practice problems, and real-world applications, combined with over 468 new or changed homework problems for the fifth edition and robust media offerings, renders the fifth edition the most comprehensive and student-friendly approach to linear circuit analysis.

This edition retains the Design a Problem feature which helps students develop their design skills by having the student develop the question as well as the solution. There are over 100 Design a Problem exercises integrated into the problem sets in the book.

NEW TO THIS EDITION

❖ ConnectEngineering is available with Fundamentals of Electric Circuits, 5e. ConnectEngineering is a powerful, web-based assignment management system that makes creating and grading assignments easy for instructors and learning convenient for students. It saves time and makes learning for students accessible anytime, anywhere. With Connect, instructors can easily manage assignments, grading, progress, and students receive instant feedback from assignments and practice problems.

❖ Over 450 new homework problems have been added to this edition, including 121 Design a Problem exercises, and there are now more than 2,400 problems provided in the text.

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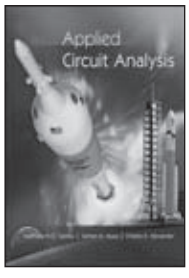
INTERNATIONAL EDITION

NEW



APPLIED CIRCUIT ANALYSIS

by Matthew Sadiku, Prairie View A&M University, Charles K. Alexander, Cleveland State University, Sarhan Musa, Prairie View A&M University

2013 (January 2012) / Hardcover / 992 pages
ISBN: 9780078028076
ISBN: 9780071317825 [IE]

www.mhhe.com/sadiku

Applied Circuit Analysis 1e is intended to present circuit analysis to engineering technology students in a manner that is clearer, more interesting and easier to understand than other texts. This book was written for a two-semester or three-quarter course in linear analysis. The book may also be used for a one-semester course by a proper selection of chapters and sections by the instructor. It is broadly divided into two parts. Part 1, consisting of Chapters 1 to 10, is devoted to dc circuits. Part 2, containing Chapters 11 to 19, deals with ac circuits. The material in two parts is more than sufficient for a two-semester course so the instructor must select which chapters or sections to cover.

FEATURES

❖ In recognition of the requirements by ABET (Accreditation Board for Engineering and Technology) on integrating computer tools, the use of PSpice I and Multisim is encouraged in a student-friendly manner. Appendix C serves as a tutorial on PSpice for Windows, while Appendix D provides an introduction to Multisim.

❖ Ten review questions in the form of multiple-choice objective items are provided at the end of each chapter with answers. The review questions are intended to cover the little "tricks" which the examples and end-of-chapter problems may not cover. They serve

as a self-test device and help students determine how well they have mastered the chapter.

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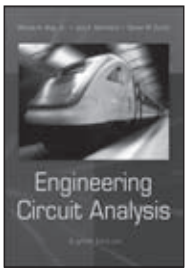
Appendix C PSpice for Windows
Appendix D MutliSim
Appendix E MATLAB
Appendix F TI-86 Calculators
Appendix G Answers to odd-numbered Problems

INTERNATIONAL EDITION

NEW



ENGINEERING CIRCUIT ANALYSIS
8th Edition

by William H. Hayt (deceased), Jack Kemmerly (deceased), and Steven M. Durbin, University of Buffalo

2012 (August 2011) / Hardcover / 880 pages
ISBN: 9780073529578
ISBN: 9780071317061 [IE]

www.mhhe.com/haytdurbin8e

The hallmark feature of this classic text is its focus on the student - it is written so that students may teach the science of circuit analysis to themselves. Terms are clearly defined when they are introduced, basic material appears toward the beginning of each chapter and is explained carefully and in detail, and numerical examples are used to introduce and suggest general results. Simple practice problems appear throughout each chapter, while more difficult problems appear at the end of chapters, following the order of presentation of text material. This introduction and resulting repetition provide an important boost to the learning process.

Hayt's rich pedagogy supports and encourages the student throughout by offering tips and warnings, using design to highlight key material, and providing lots of opportunities for hands-on learning. The thorough exposition of topics is delivered in an informal way that underscores the authors' conviction that circuit analysis can and should be fun.

NEW TO THIS EDITION

❖ Over eighty percent new end-of-chapter problems. These problems give your students new challenges and current examples that pique student interest. Many of these focus on design and problem-solving techniques

❖ New appendix posted online answers to selected odd-numbered EOC problems.

❖ Addition of active filter content.

❖ ConnectEngineering is available with Engineering Circuit Analysis, 8e. ConnectEngineering is a powerful, web-based assignment management system that makes creating and grading assignments easy for instructors and learning convenient for students. It saves time and makes learning for students accessible anytime, anywhere. With Connect, instructors can easily manage assignments, grading, progress, and students receive instant feedback from assignments and practice problems.

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Appendix 1 An Introduction to Network Topology
Appendix 2 Solution of Simultaneous Equations
Appendix 3 A Proof of Thevenin's Theorem
Appendix 4 A PSpice Tutorial
Appendix 5 Complex Numbers
Appendix 6 A Brief MATLAB Tutorial
Appendix 7 Additional Laplace Transform Theorems
Appendix 8 Selected Answers (Available Online)

All Global Editions are adapted to better meet the needs of courses outside the United States. Please contact your local sales representative for more details.

INTERNATIONAL EDITION

FUNDAMENTALS OF ELECTRIC CIRCUITS 4th Edition

by Charles Alexander, Cleveland State University, and Matthew Sadiku, Prairie View A&m University

2009 (August 2008) / Hardcover / 1056 pages
ISBN: 9780077263195
ISBN: 9780071272384 [IE]

www.mhhe.com/alexander

Alexander and Sadiku's fourth edition of Fundamentals of Electric Circuits continues in the spirit of its successful previous editions, with the objective of presenting circuit analysis in a manner that is clearer, more interesting, and easier to understand than other, more traditional texts. Students are introduced to the sound, six-step problem solving methodology in chapter one, and are consistently made to apply and practice these steps in practice problems and homework problems throughout the text. A balance of theory, worked examples and extended examples, practice problems, and real-world applications, combined with over 350 new homework problems for the fourth edition and robust media offerings, renders the fourth edition the most comprehensive and student-friendly approach to linear circuit analysis. This edition adds the Design a Problem feature which helps students develop their design skills by having the student develop the question as well as the solution. There are over 100 Design a Problem exercises integrated into the problem sets in the book. Alexander/Sadiku also offers you the convenience of ARIS -- the text-specific web site -- which allows you to assign homework online or create printed homework sets and solutions to your students. The website also features solutions and KCIDE software, which reinforces the books problem-solving approach.

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3 Methods of Analysis
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7 First-Order Circuits
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Appendix D PSpice for Windows
Appendix E MATLAB
Appendix F KCIDE
Appendix G Answers to Odd-Numbered Problems

INTERNATIONAL EDITION

PSPICE FOR BASIC CIRCUIT ANALYSIS 2nd Edition

by Joseph G Tront, Virginia Polytech Institute & State University

2007 / Softcover / 128 pages
ISBN: 9780073263199 (with CD)
ISBN: 9780071258883 [IE, with CD]

This practical PSpice manual, updated to support the latest release of OrCAD Pspice introduces students to the fundamental uses of this book in support of basic circuit analysis. The organization allows readers to advance quickly to solving a variety of circuit analysis problems. The modular approach allows this hand-on reference to be used with any introductory circuits text.

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1.2 The Design Process
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1.4 Versions of SPICE and Limitations
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SCHAUM'S OUTLINE OF ELECTRIC CIRCUITS
5th Edition

by Mahmood Nahvi and Joseph A. Edminister, University of Akron

2012 (July 2011) / Softcover / 504 pages
ISBN: 9780071633727

(A Schaum's Publication)

An update of this successful outline in electrical engineering, modified to conform to the current curriculum, Schaum's Outline of Electric Circuits, 5ed mirrors the course in scope and sequence to help enrolled students understand basic concepts and offer extra practice on topics such as amplifiers and operational amplifier circuits, waveforms and signals, first-order circuits, AC power, and more.

CONTENTS

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2. Circuit Concepts Circuit Laws
3. Analysis Methods
4. Amplifiers and Operational Amplifier Circuits
5. Waveforms and Signals
6. First-Order Circuits
7. Higher-Order Circuits and Complex Frequency
8. Sinusoidal Steady-State Circuit Analysis
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11. Frequency Response, Filters, and Resonance
12. Two-Port Networks
13. Mutual Inductance and Transformers
14. Circuit Analysis Using Spice and Pspice
15. The LaPlace Transform Method
17. Fourier Method of Waveform Analysis
Appendix A Complex Number System
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SCHAUM'S OUTLINE OF BASIC CIRCUIT ANALYSIS
2nd Edition

by John O'Malley, Ph.D., University of Florida

2011 (February 2011) / Softcover / 432 pages
ISBN: 9780071756433

(A Schaum's Publication)

Schaum's Outline of Basic Circuit Analysis mirrors the course in scope and sequence to help enrolled students understand basic concepts and offer extra practice on topics such as capacitance, capacitor construction, energy storage, magnetic flux, inductance, inductor construction, sine and cosine waves, and resistor sinusoidal response. Coverage also includes phasor-domain circuit elements, AC series circuit analysis, AC parallel circuit analysis, mesh and loop analyses, AC bridge circuits, circuit power absorption, wattmeters, reactive power, and power factor correction.

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1. Basic Concepts
2. Resistance
3. Series and Parallel DC Circuits
4. DC Circuit Analysis
5. DC Equivalent Circuits, Network Theorems, and Bridge Circuits
6. Operational-Amplifier Circuits
7. Pspice DC Circuit Analysis
8. Capacitors and Capacitance
9. Inductors, Inductance, and Pspice Transient Analysis
10. Sinusoidal Alternating Voltage and Current
11. Complex Algebra and Phasors
12. Basic AC Circuit Analysis, Impedance, and Admittance
13. Mesh, Loop, Nodal, and Pspice Analyses of AC Circuits
14. AC Equivalent Circuits, Network Theorems, and Bridge Circuits
15. Power in AC Circuits
16. Transformers
17. Three-Phase Circuits

Analog Integrated Circuits

INTERNATIONAL EDITION

DESIGN OF ANALOG CMOS INTEGRATED CIRCUITS

by Behzad Razavi, University of California, Los Angeles

2001 / 704 pages / Hardcover
ISBN: 9780072380323
ISBN: 9780071188395 [IE, Hardcover]

www.mhhe.com/razavi

This textbook deals with the analysis and design of analog CMOS integrated circuits, emphasizing recent technological developments and design paradigms that students and practicing engineers need to master to succeed in today's industry. Based on the author's teaching and research experience in the past ten years, the text follows three general principles: (1) Motivate the reader by describing the significance and application of each idea with real-world problems; (2) Force the reader to look at concepts from an intuitive point of view, preparing him/her for more complex problems; (3) Complement the intuition by rigorous analysis, confirming the results obtained by the intuitive, yet rough approach.

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1 Introduction to Analog Design.
2 Basic MOS Device Physics.
3 Single-Stage Amplifiers.
4 Differential Amplifiers.
5 Passive and Active Current Mirrors.
6 Frequency Response of Amplifiers.
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13 Nonlinearity and Mismatch.
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15 Phase-Locked Loops.
16 Short-Channel Effects and Device Models.
17 CMOS Processing Technology.
18 Layout and Packaging

Digital Integrated Circuits

INTERNATIONAL EDITION

ANALYSIS AND DESIGN OF DIGITAL INTEGRATED CIRCUITS
3rd Edition

by David A. Hodges, University of California—Berkeley, Horace G. Jackson, University of California, Berkeley and Resve Saleh, University of British Columbia

2004 / 504 pages
ISBN: 9780072283655 (Out of Print)
ISBN: 9780071181648 [IE]

www.mhhe.com/hodges

The third edition of Hodges and Jackson's Analysis and Design of Digital Integrated Circuits has been thoroughly revised and updated by a new co-author, Resve Saleh of the University of British Columbia. The new edition combines the approachability and concise nature of the Hodges and Jackson classic with a complete overhaul to bring the book into the 21st century.

The new edition has replaced the emphasis on Bipolar with an emphasis on CMOS. The book focuses on the latest CMOS technologies and uses standard deep submicron models throughout the book.

The material on memory has been expanded and updated. As well the book now includes more on SPICE simulation and new problems that reflect recent technologies. The emphasis of the book is on design, but it does not neglect analysis and has as a goal to provide enough information so that a student can carry out analysis as well as be able to design a circuit. This book provides an excellent and balanced introduction to digital circuit design for both students and professionals.

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1 Introduction.
2 MOS Devices.
3 Fabrication and Layout.
4 Basic Gates.
5 High-Speed CMOS Design.
6 Interconnect Design.
7 Clocks and Flip-Flops.
8 Dynamic Logic Circuits.
9 Memory Design (Part I).
10 Memory Design (Part II).
11 Bipolar Digital Circuits.
12 GaAs Digital Cicuits

INTERNATIONAL EDITION

CMOS DIGITAL INTEGRATED CIRCUITS ANALYSIS AND DESIGN
3rd Edition

by Sung-Mo (Steve) Kang, University of California—Santa Cruz and Yusuf Leblebici, Swiss Federal Institute of Technology

2003 / 672 pages
ISBN: 9780072460537
ISBN: 9780071243421 [IE]

www.mhhe.com/kang

CMOS Digital Integrated Circuits: Analysis and Design is the most complete book on the market for CMOS circuits. Appropriate for electrical engineering and computer science, this book starts with CMOS processing, and then covers MOS transistor models, basic CMOS gates, interconnect effects, dynamic circuits, memory circuits, BiCMOS circuits, I/O circuits, VLSI design methodologies, low-power design techniques, design for manufacturability and design for testability.

This book provides rigorous treatment of basic design concepts with detailed examples. It typically addresses both the computer-aided analysis issues and the design issues for most of the circuit examples. Numerous SPICE simulation results are also provided for illustration of basic concepts. Through rigorous analysis of CMOS circuits in this text, students will be able to learn the fundamentals of CMOS VLSI design, which is the driving force behind the development of advanced computer hardware.

CONTENTS

1 Introduction.
2 Fabrication of MOSFETS.
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4 Modeling of MOS Transistors Using SPICE.
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6 MOS Inverters: Switching Characteristics and Interconnect Effects.
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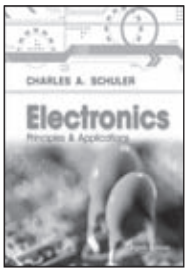
11 Low-Power CMOS Logic Circuits.
12 BiCMOS Logic Circuits.
13 Chip Input and Output (I/O) Circuits.
14 Design for Manufacturability.
15 Design for Testability

Electronics Principles

NEW



ELECTRONICS PRINCIPLES AND APPLICATIONS WITH STUDENT DATA CD-ROM
8th Edition

by Charles A. Schuler

2013 (January 2012)
ISBN: 9780077567705

www.mhhe.com/schuler8e

The eighth edition of Electronics: Principles and Applications is based on the same philosophy of previous editions. It continues to be written so that a student needs no prior knowledge of electrical theory and principles and at a level that allows students with limited math and reading skills can gain a clear understanding and the entry-level knowledge and skills for a wide range of occupations within electricity and electronics.

NEW TO THIS EDITION

- NEW examples, self-test questions and Chapter review questions and problems in every Chapter!
- New coverage of renwable energy topics.
- Troubleshooting examples are included throughout as well as within its own chapter
- Online Learning Center (OLC) includes a wealth of instructor resources, including:
- List of parts and equipment needed to perform lab experiments
- Answers to the textbook chapter review questions and problems
- Answers to the critical thinking questions
- Answers and data for lab experiments and assignments
- Detailed instructions for the construction of projects.
- Collection of art and figures from the text
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Ch. 13 Integrated Circuits
Ch. 14 Electronic Control Devices and Circuits
Ch. 15 Regulated Power Supplies
Ch. 16 Digital Signal Processing

INTERNATIONAL EDITION

ELECTRONICS PRINCIPLES
7th Edition

by Albert Paul Malvino and David J Bates, Western Wisconsin Technical College

2007 / Hardcover
ISBN: 9780073222776 (with Simulation CD)
ISBN: 9780071261913 [IE with SIM CD)]

(A Trade & Technical Title)

www.mhhe.com/malvino7e

This seventh edition of Malvino's classic Electronic Principles offers students a definitive overview of electronic circuits and devices. Expert knowledge of electronic devices is presented in a stimulating, clearly written, conversational style. The new, streamlined book design is full-color throughout, with ample, clear illustrations. Greater emphasis on modern integrated circuit (IC) technology, and the revision of nearly one third of the previous edition's chapter problems and review questions refresh this text while retaining its proven approach. In addition to the text there is a wealth of supplementary material included for both student and instructor. An upgraded Experiments Manual, the optional use of MultiSIM software, an instructor's manual with an Instructor Productivity Center CD-ROM, and the brand new Online Learning Center website make this text a powerful learning tool."

Electronic Principles is written for electronics students who have done course work in basic DC/AC circuit analysis, along with algebra and trigonometry prerequisites. The book gives clear, accessible coverage of basic electronics concepts in the first half of the book, then applies these to the important electronic circuits and devices most widely used in today's industry.

CONTENTS

1 Introduction.
2 Semiconductors.
3 Diode Theory.
4 Diode Circuits.
5 Special-Purpose Diodes.
6 Bipolar Junction Transistors.
7 Transistor Fundamentals.
8 Transistor Biasing.
9 AC Models.
10 Voltage Amplifiers.
11 CC and CB Amplifiers.
12 Power Amplifiers.
13 JFETs. 14 MOSFETs.
15 Thyristors.
16 Frequency Effects.
17 Differential Amplifiers.
18 Operational Amplifiers.
19 Negative Feedback.
20 Linear Op-Amp Circuits.
21 Active Filters.
22 Nonlinear Op-Amp Circuits.
23 Oscillators.
24 Regulated Power Supplies.

Analog OP AMPS

INTERNATIONAL EDITION

DESIGN WITH OPERATIONAL AMPLIFIERS AND ANALOG INTEGRATED CIRCUITS
3rd Edition

by Sergio Franco, San Francisco State University

2002 / 672 pages / Hardcover
ISBN: 9780072320848
ISBN: 9780071207034 [IE]

www.mhhe.com/franco3

Franco's "Design with Operational Amplifiers and Analog Integrated Circuits, 3e" is intended for a design-oriented course in applications with operational amplifiers and analog ICs. It also serves as a comprehensive reference for practicing engineers.

This new edition includes enhanced pedagogy (additional problems, more in-depth coverage of negative feedback, more effective layout), updated technology (current-feedback and folded-cascode amplifiers, and low-voltage amplifiers), and increased topical coverage (current-feedback amplifiers, switching regulators and phase-locked loops).

CONTENTS

1 Operational Amplifier Fundamentals.
2 Circuits with Resistive Feedback.
3 Active Filters:
Part I:
4 Active Filters:
Part II:
5 Static Op Amp Limitations.
6 Dynamic Op Amp Limitations.
7 Noise.
8 Stability.
9 Nonlinear Circuits.
10 Signal Generators.
11 Voltage References and Regulators.
12 D-A and A-D Converters.
13 Nonlinear Amplifiers and Phase-Locked Loops

Devices and Materials

Microelectronics

INTERNATIONAL EDITION

MICROELECTRONIC CIRCUIT DESIGN
4th Edition

by Richard C. Jaeger, Auburn University-Auburn, and Travis Blalock, University Of Virginia

2011 (March 2010) / Hardcover / 1360 pages
ISBN: 9780073380452
ISBN: 9780071221993 [IE]

www.mhhe.com/jaegar

Richard Jaeger and Travis Blalock present a balanced coverage of analog and digital circuits; students will develop a comprehensive understanding of the basic techniques of modern electronic circuit design, analog and digital, discrete and integrated.

A broad spectrum of topics are included in Microelectronic Circuit Design which gives the professor the option to easily select and customize the material to satisfy a two-semester or three-quarter sequence in electronics. Jaeger/Blalock emphasizes design through the use of design examples and design notes. Excellent pedagogical elements include chapter opening vignettes, chapter objectives, “Electronics in Action” boxes, a problem-solving methodology, and "Design Note” boxes. The use of the well-defined problem-solving methodology presented in this text can significantly enhance an engineer’s ability to understand the issues related to design. The design examples assist in building and understanding the design process.

CONTENTS

Part I--Solid State Electronics and Devices
Chapter 1 Introduction to Electronics
Chapter 2 Solid-State Electronics
Chapter 3 Solid-State Diodes and Diode Circuits
Chapter 4 Field-Effect Transistors
Chapter 5 Bipolar Junction Transistors
Part II--Digital Electronics
Chapter 6 Introduction to Digital Electronics
Chapter 7 Complementary MOS (CMOS) Logic Design
Chapter 8 MOS Memory and Storage Circuits
Chapter 9 Bipolar Logic Circuits
Part III--Analog Electronics
Chapter 10 Analog Systems and Ideal Operational Amplifiers
Chapter 11 Nonideal Operational Amplifiers and Feedback Amplifier Stability
Chapter 12 Operational Amplifier Applications
Chapter 13 Small-Signal Modeling and Linear Amplification
Chapter 14 Single Transistor Amplifiers
Chapter 15 Differential Amplifiers and Operational Amplifier Design
Chapter 16 Analog Integrated Circuit Design Techniques
Chapter 17 Amplifier Frequency Response
Chapter 18 Transistor Feedback Amplifiers and Oscillators
Appendices
A: Standard Component Values
B: Device Models and SPICE
C: Two-Port Review

INTERNATIONAL EDITION

MICROELECTRONICS CIRCUIT ANALYSIS AND DESIGN
4th Edition

by Donald A. Neamen, University Of New Mexico-Albuquerque

2010 (September 2009) / Hardcover / 1392 pages
ISBN: 9780073380643
ISBN: 9780071289474 [IE]

www.mhhe.com/neamen

Microelectronics: Circuit Analysis and Design is intended as a core text in electronics for undergraduate electrical and computer engineering students. The fourth edition continues to provide a foundation for analyzing and designing both analog and digital electronic circuits. The goal has always been to make this book very readable and student friendly.

An accessible approach to learning through clear writing and practical pedagogy has become the hallmark of Microelectronics: Circuit Analysis and Design by Donald Neamen. Now in its fourth edition, the text builds upon its strong pedagogy and tools for student assessment with key updates as well as revisions that allow for flexible coverage of op-amps.

CONTENTS

Part I: Semiconductor Devices and Basic Applications
Chapter 1: Semiconductor Materials and Diodes
Chapter 2: Diode Circuits
Chapter 3: The Field-Effect Transistor
Chapter 4: Basic FET Amplifiers
Chapter 5: The Bipolar Junction Transistor
Chapter 6: Basic BJT Amplifiers
Chapter 7: Frequency Response
Chapter 8: Output Stages and Power Amplifiers
Part II: Analog Electronics
Chapter 9: Ideal Operational Amplifiers and Op-Amp Circuits
Chapter 10: Integrated Circuit Biasing and Active Loads
Chapter 11: Differential and Multistage Amplifiers
Chapter 12: Feedback and Stability
Chapter 13: Operational Amplifier Circuits
Chapter 14: Nonideal Effects in Operational Amplifier Circuits
Chapter 15: Applications and Design of Integrated Circuits
Part III: Digital Electronics
Chapter 16: MOSFET Digital Circuits
Chapter 17: Bipolar Digital Circuits

INTERNATIONAL EDITION

PSPICE FOR BASIC MICROELECTRONICS

by Joseph G. Tront, Virginia Polytech Institute & State University

2008 (July 2007) / Softcover with CDROM
ISBN: 9780073263205
ISBN: 9780071263894 [IE, with CD]

The PSpice Manual will be sold as a stand-alone and, also, in packages with Neamen, Electronic Circuit Analysis and Jaeger, Microelectronic Circuit Design. Text introduces readers to the fundamental uses of Pspice in support of Microelectronic circuit analysis. This book goes beyond basic circuit analysis to include analysis of more complex electronic problems. Analysis of diodes, BJTs, JFETs, MOSFETs, and transformers will be included- -all key areas in the Electronics course. Key features include: • Step-by-step instructions to support novice users as they perform schematic capture and circuit simulation. • Detailed explanations and examples of the use of PSpice in typical problem-solving situations. • Explains some of the salient features of PSpice, including information on OrCAD Capture and Probe.

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1 Introduction
2 Getting Started
3 Simple DC Circuits
4 Time Domain Analysis
5 Frequency Domain Analysis
6 Mutual Inductance and Transformers
7 Diode Circuits
8 Bipolar Junction Transistor Circuits
9 Metal Oxide Semiconductor Field Effect Transistor (MOSFET) Circuits
10 Conclusions
Bibliography
Appendix I Converting OrCAD Version 9.x Files to Version 10.0
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INTERNATIONAL EDITION

SCHAUM'S OUTLINE OF ELECTRONIC DEVICES AND CIRCUITS
2nd Edition

by Jim Cathey, University of Kentucky—Lexington

2002 / 304 pages
ISBN: 9780071362702
ISBN: 9780071229180 [IE] - Out of Print

(International Edition is not for sale in Japan.)

(A Schaum's Publication)

This updated version of its internationally popular predecessor provides and introductory problem-solved text for understanding fundamental concepts of electronic devices, their design, and their circuitry. Providing an interface with Pspice, the most widely used program in electronics, new key features include a new chapter presenting the basics of switched mode power supplies, thirty-one new examples, and twenty-three PS solved problems.

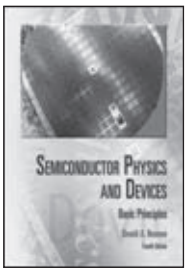
CONTENTS

Circuit Analysis: Port Point of View.
Semiconductor Diodes.
Characteristics of Bipolar Junction Transistors.
Characteristics of Field-Effect Transistors and Triodes.
Transistor Bias Considerations.
Small-Signal Midfrequency BJT Amplifiers.
Small-Signal Midfrequency FET Amplifiers.
Frequency Effects in Amplifiers.
Operational Amplifiers.
Switched Mode Power Supplies

Physics of Semiconductor Devices

INTERNATIONAL EDITION

NEW



SEMICONDUCTOR PHYSICS AND DEVICES
4th Edition

by Donald A. Neamen, University Of New Mexico-Albuquerque

2012 (January 2011) / Hardcover / 784 pages
ISBN: 9780073529585
ISBN: 9780071089029 [IE]

www.mhhe.com/neamen

With its strong pedagogy, superior readability, and thorough examination of the physics of semiconductor material, Semiconductor Physics and Devices, 4/e provides a basis for understanding the characteristics, operation, and limitations of semiconductor devices.

Neamen's Semiconductor Physics and Devices deals with the electrical properties and characteristics of semiconductor materials and devices. The goal of this book is to bring together quantum mechanics, the quantum theory of solids, semiconductor material physics, and semiconductor device physics in a clear and understandable way.

NEW TO THIS EDITION

❖ Revised Organization MOS transistor coverage is now before bipolar transistors, updates have been made to the coverage of MOS transistors in Chapter 10 and 11 and light-emitting diodes and solar cells in Chapter 14. Text additions include coverage of microwave devices in Chapter 15, as well as a new appendix on effective mass concepts.

❖ Enhanced Learning System Additional "Test Your Understanding Exercises" have been added, exercises are added after each example, and learning objectives are included before each example as well. A preview section opens each chapter and links the current chapter's goals to those of earlier material.

❖ New Problems The fourth edition features approximately 40% new problems.

❖ Companion Website contains Instructor Solutions Manual and COSMOS is available with this title -- Complete Online Solutions Manual Organization System. Instructors can learn more about the system by clicking here. and register for the system at the following link http://cosmos.mhhe.com.

CONTENTS

Part I Semiconductor Material Properties
Chapter 1: The Crystal Structure of Solids
Chapter 2: Introduction to Quantum Mechanics
Chapter 3: Introduction to the Quantum Theory of Solids
Chapter 4: The Semiconductor in Equilibrium
Chapter 5: Carrier Transport Phenomena
Chapter 6: Nonequilibrium Excess Carriers in Semiconductors
Part II Fundamental Semiconductor Devices
Chapter 7: The pn Junction
Chapter 8: The pn Junction Diode
Chapter 9: Metal-Semiconductor and Semiconductor Heterojunctions
Chapter 10: Fundamentals of the Metal-Oxide-Semiconductor Field-Effect Transistor
Chapter 11: Metal-Oxide-Semiconductor Field-Effect Transistor: Additional Concepts
Chapter 12: The Bipolar Transistor
Chapter 13: The Junction Field-Effect Transistor
Part III Specialized Semiconductor Devices
Chapter 14: Optical Devices
Chapter 15: Semiconductor Microwave and Power Devices
Appendix A: Selected List of Symbols
Appendix B: System of Units, Conversion Factors, and General Constants
Appendix C: The Periodic Table
Appendix D: Unit of Energy-The Electron-Volt
Appendix E: "Derivation" of Schrodinger's Wave Equation
Appendix F: Effective Mass Concepts
Appendix G: The Error Function
Appendix H: Answers to Selected Problems

INTERNATIONAL EDITION

AN INTRODUCTION TO SEMICONDUCTOR DEVICES

by Donald Neamen, University of New Mexico - Albuquerque

2006 / Hardcover / 720 pages
ISBN: 9780072987560
ISBN: 9780071254472 [IE]

www.mhhe.com/neamen

An Introduction to Semiconductor Devices by Donald Neamen provides an understanding of the characteristics, operations and limitations of semiconductor devices. In order to provide this understanding, the book brings together the fundamental physics of the semiconductor material and the semiconductor device physics.

This new text provides an accessible and modern presentation of material. Quantum mechanic material is minimal, and the most advanced material is designated with an icon. This modern approach meands that coverage of the MOS transistor preceeds the material on the bipolar transitor, which reflects the dominance of MOS technology in today's world.

Excellent pedagogy is present throughout the book in the form of interesting chapters openers, worked examples, a variety of exercises, key terms, and end of chapter problems.

CONTENTS

Chapter 1 The Crystal Structure of Solids.
Chapter 2 Theory of Solids.
Chapter 3 The Semiconductor in Equilibrium.
Chapter 4 Carrier Transport Phenomena.
Chapter 5 The pn Junction.
Chapter 6 Fundamentals of the MOS Transistor.
Chapter 7 The MOSFET: Additional Concepts.
Chapter 8 Non-equilibrium Excess Carriers in Semiconductors.
Chapter 9 The pn Junction Diode.
Chapter 10 The Bipolar Transistor.
Chapter 11 Additional Semiconductor Devices and Device Concepts.
Chapter 12 Optical Devices.
Appendix A Selected List of Symbols.
Appendix B System of Units, Conversion Factors, and General Constants.
Appendix C The Periodic Table.
Appendix D “Derivation” of Schrodinger’s Wave Equation.
Appendix E Units of Energy-The Electron-Volt.
Appendix F Derivation of Density of States Function.

Appendix G Derivation of Shockley-Read-Hall Recombination Rates.
Appendix H Answers to Selected Problems

Solid State/Electronic Materials

INTERNATIONAL EDITION

FUNDAMENTALS OF SEMICONDUCTOR DEVICES

by Betty Lise Anderson, Ohio State University and Richard L Anderson

2005 /816 pages / Hardcover
ISBN: 9780072369779
ISBN: 9780071241526 [IE]

www.mhhe.com/andersonanderson

Fundamentals of Semiconductor Devices provides a realistic and practical treatment of modern semiconductor devices. A solid understanding of the physical processes responsible for the electronic properties of semiconductor materials and devices is emphasized. With this emphasis, the reader will appreciate the underlying physics behind the equations derived and their range of applicability. The author's clear writing style, comprehensive coverage of the core material, and attention to current topics are key strengths of this book.

CONTENTS

Part 1 Electronic Properties of Materials:
1 Electron Energy and States in Semiconductors.
2 Homogeneous Semiconductors.
3 Current Flow in Homogeneous Semiconductors.
4 Non-Homogeneous Semiconductors.
Part 2 Diodes:
5 Prototype pn Homojunctions.
6 Additional Considerations for Diodes.
Part 3 Field Effect Transistors:
7 The MOSFET.
8 Additional Considerations for FETs.
Part 4 Bipolar Transistors:
9 Bipolar Junction Devices: Statics.
10 Time-Dependent Analysis of BJTs.
Part 5 Optoelectronic Devices:
11 Optoelectronic Devices.
Appendix A Physical Constants.
Appendix B List of Symbols.
Appendix C Fabrication.
Appendix D Density of States Function, Density of States Effective Mass, Conductivity Effective Mass.
Appendix E Useful Integrals.
Appendix F Useful Equations.
Appendix G: List of Suggested Readings

INTERNATIONAL EDITION

PRINCIPLES OF ELECTRONIC MATERIALS AND DEVICE

3rd Edition

by S.O. Kasap, University of Saskatchewan

2006 / 768 pages / Hardcover
ISBN: 9780073104645 (with CD-ROM)
ISBN: 9780071244589 [IE with CD]

www.mhhe.com/kasap3

Principles of Electronic Materials and Devices, Third Edition, is a greatly enhanced version of the highly successful text Principles of Electronic Materials and Devices, Second Edition. It is designed for a first course on electronic materials given in Materials Science and Engineering, Electrical Engineering, and Physics and Engineering Physics Departments at the undergraduate level.

The third edition has numerous revisions that include more beautiful illustrations and photographs, additional sections, more solved problems, worked examples, and end-of-chapter problems with direct engineering applications. The revisions have improved the rigor without sacrificing the original semiquantitative approach that both the students and instructors liked and valued. Some of the new end-of-chapter problems have been especially selected to satisfy various professional engineering design requirements for accreditation across international borders. Advanced topics have been collected under Additional Topics, which are not necessary in a short introductory treatment.

CONTENTS

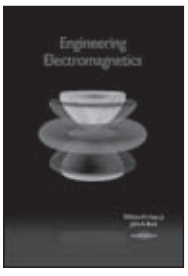
1 Elementary Materials Science Concepts.
2 Electrical and Thermal Conduction in Solids.
3 Elementary Quantum Physics.
4 Modern Theory of Solids.
5 Semiconductors.
6 Semiconductor Devices.
7 Dielectric Materials and Insulation.
8 Magnetic Properties and Superconductivity.
9 Optical Properties of Materials.
Appendix A: Major Symbols and Abbreviations.
B Elements to Uranium
C Constants and Useful Information

Fields and Waves

Electromagnetics

INTERNATIONAL EDITION

NEW



ENGINEERING ELECTROMAGNETICS
8th Edition

by William H. Hayt (deceased), and John A. Buck, Georgia Institute Of Technology

2012 (February 2011) / Hardcover / 608 pages
ISBN: 9780073380667
ISBN: 9780071089012 [IE]

www.mhhe.com/haytbuck8

First published just over 50 years ago and now in its Eighth Edition, Bill Hayt and John Buck's Engineering Electromagnetics is a classic text that has been updated for electromagnetics education today. This widely-respected book stresses fundamental concepts and problem solving, and discusses the material in an understandable and readable way. Numerous illustrations and analogies are provided to aid the reader in grasping the difficult concepts. In addition, independent learning is facilitated by the presence of many examples and problems. Important updates and revisions have been included in this edition. One of the most significant is a new chapter on electromagnetic radiation and antennas. This chapter covers the basic principles of radiation, wire antennas, simple arrays, and transmit-receive systems.

NEW TO THIS EDITION

❖ New Problems and Pedagogy. New end-of-chapter problems are added throughout the text, and 130 problems are all new. A "thermometer" icon is included throughout the problem sets to help the instructor select the preferred level of difficulty of homework assignments. Practice problems are also updated and revised.

❖ New Coverage--Antennas. Chapter 14, Antennas, covers important changes in antennas brought upon by the rapid advances in wireless communications.

❖ New Coverage -- Rectangular Waves. The rectangular waveguides coverage has been expanded.

❖ Careful Learning Approach. The book is written to make it easy and possible for the student to learn independently. By applying a carefully graduated scale of difficulty within each chapter, providing numerical examples, a large number of drill problems with answers, and a graduated set of end-of-chapter problems, it is possible for the student to easily learn and absorb the material.

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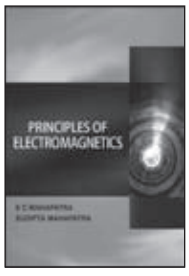
Chapter 1: Vector Analysis
Chapter 2: Coulomb's Law and Electric Field Intensity
Chapter 3: Electric Flux Density, Gauss' Law, and Divergence
Chapter 4: Energy and Potential
Chapter 5: Conductors and Dielectrics
Chapter 6: Capacitance
Chapter 7: The Steady Magnetic Field
Chapter 8: Magnetic Forces, Materials and Inductance
Chapter 9: Time-Varying Fields and Maxwell's Equations
Chapter 10: Transmission Lines
Chapter 11: The Uniform Plane Wave
Chapter 12: Plane Wave Reflection and Dispersion
Chapter 13: Guided Waves
Chapter 14: Electromagnetic Radiation and Antennas
Appendix A Vector Analysis
Appendix B Units
Appendix C Material Constants
Appendix D The Uniqueness Theorem
Appendix E Origins of the Complex Primitivity
Appendix F Answers to Odd-Numbered Problems

NEW



PRINCIPLES OF ELECTROMAGNETICS

by S C Mahapatra, Former Professor, University College of Engineering, Sambalpur University, Orissa, and Sudipta Mahapatra, Associate Professor, Department of Electronics and Electrical Communication Engineering, Indian Institute of Technology, Kharagpur

2011 (April 2011) / Softcover / 728 pages
ISBN: 9780071072601

(McGraw-Hill India Title)

Principles of Electromagnetics has been primarily developed to elucidate the study of electromagnetics in a simple and systematic manner. Basis the aforesaid rationale, this text adheres to precise explanations of topics to help students grasp concepts better. Each chapter starts with an introduction, followed by theory and applications. The text is supported by a number of two-dimensional and three-dimensional illustrations for easy comprehension. Mathematical steps have been explained stepwise, leaving the final step such as differentiation or integration, for the students to work out.

FEATURES

❖ Focused coverage of a one-semester course on Electromagnetics, written in unique 'one topic, one chapter' approach

❖ Holistic discussion of concepts based on the following format:

❖ Statement—> Proof —> Explanation / Interpretation —> Applications

❖ Dedicated chapter on 'Solution of Boundary-Value Problems' for both static electric and magnetic fields

❖ Pedagogy comprises 282 Diagrams, 287 Solved Examples, 168 Objective Questions, 248 Test Questions and 363 Problems with challenge levels, making this text an interactive and engrossing read

CONTENTS

Chapter 1. Introductory Topics
Chapter 2. Static Electric Fields
Chapter 3. The Steady Conduction Current
Chapter 4. The Magnetic Fields of Stationary Currents
Chapter 5. Solution of Boundary - Value Problems
Chapter 6. Time-Varying Electric and Magnetic Fields
Chapter 7. The Uniform Plane Electromagnetic Wave
Chapter 8. Two-Conductor Transmission Lines
Chapter 9. Wave Propagation between Parallel Plates in Rectangular Waveguides
Chapter 10. Radiation from Antennas

Appendix A Mutual Inductance (Neumann's Form)
Appendix B Internal Impedance of Round Conductors
Appendix C The Smith Chart
Appendix D Material Constants
Appendix E List of Symbols
Appendix F References
Appendix G Answers

INTERNATIONAL EDITION

ELECTROMAGNETICS
5th Edition

by John Kraus, Ohio State University (Emeritus) and Daniel A Fleisch, Aeroflex-Lintele Corp, and Wittenburg University

1999 / 800 pages / Hardcover

ISBN: 9780071164290 [IE]

This book is a classic and has been one of the traditional market leaders since its first publication in 1953. In this revision, the authors have made some drastic changes to keep pace with the transformation that has been going on in the curriculum over the past few years. In many schools this course has gone from a two-semester course to a one-semester course. In the fifth edition, transmission lines and other practical applications are addressed early in the text and the coverage of electrostatics is reduced to make this book suitable for a one-semester course. This text provides flexibility in that the core material is provided in the first five chapters with supplementary material that may be used as desired in the remaining chapters.

This text is unique in having hundreds of real-world examples accompanied by problems of varying difficulty. Additionally, this book covers numerical techniques and contains useful computer programs and projects to afford students the opportunity to gain direct experience in the use of electromagnetic software and hardware. This text is accompanied by a website containing projects, recent developments in the field, and demonstrations of electromagnetic principles.

CONTENTS

1 Introduction.
2 Electric and Magnetic Fields.
3 Transmission Lines.
4 Wave Propagation, Attenuation, Polarization, Reflection, Refraction and Diffraction.
5 Antennas, Radiation, Radar and Wireless.
6 Electrodynamics.
7 Dielectric and Magnetic Materials.
8 Waveguides, Resonators and Fiber Optics.
9 Bio-Electromagnetics.
10 Electromagnetic Effects in High-Speed Digital Systems.
11 Numerical Techniques

SCHAUM'S OUTLINE OF ELECTROMAGNETICS
3rd Edition

by Joseph Edminister, Cornell University

2011 (October 2010) / Softcover / 360 pages

ISBN: 9780071632355

(A Schaum's Publication)

Modified to conform to the current curriculum, Schaum's Outline of Electromagnetics complements these courses in scope and sequence to help you understand its basic concepts. The book offers extra practice on topics such as current density, capacitance, magnetic fields, inductance, electromagnetic waves, transmission lines, and antennas. Appropriate for the following course: Electromagnetics

CONTENTS

1. Vector Analysis
2. Coulomb Forces and Electric Field Intensity
3. Electric Flux and Gauss' Law
4. Divergence and the Divergence Theorem
5. The Electrostatic Field: Work, Energy, and Potential
6. Current, Current Density, and Conductors
7. Capacitance and Dielectric Materials
8. Laplace's Equation
9. Ampere's Law and the Magnetic Field
10. Forces and Torques in Magnetic Fields
11. Inductance and Magnetic Circuits
12. Displacement Current and Induced EMF
13. Maxwell's Equations and Boundary Conditions
14. Electromagnetic Waves
15. Transmission Lines
16. Waveguides
17. Antennas

Microwaves

MICROWAVE ENGINEERING
2nd Edition

by Annapurna Das, Head, EMC Division, Sameer Centre for Electromagnetics, and Sisir K. Das, Dean-Research, GN Institute of Technology, Kolkata, India

2009 / Softcover / 580 pages

ISBN: 9780070667389

(McGraw-Hill India Title)

www.mhhe.com/das/me2e

This edition has been revised extensively to provide a comprehensive coverage of all major topics in Microwave Engineering. It thoroughly covers the basic principles, analysis, design and measurement techniques with the help of simple explanations and a large number of solved and unsolved problems.

CONTENTS

Chapter 1. Introduction
Chapter 2. Propagation of Electromagnetic Waves
Chapter 3. RF and Microwave Transmission Lines
Chapter 4. Microwave Integrated Circuits Design and Manufacturing
Chapter 5. Impedance Transformations for Matching
Chapter 6. Microwave Network Theory and Passive Devices
Chapter 7. Microwave Resonators
Chapter 8. Microwave Filters
Chapter 9. Microwave Vacuum Tube Devices
Chapter 10. Microwave Solid State Devices and Circuits
Chapter 11. Applications of Microwaves
Chapter 12. Microwave Radiation Hazards
Chapter 13. Microwave Measurements

Antennas & Radar

INTERNATIONAL EDITION

ANTENNAS
3rd Edition

by John Kraus, Professor Emeritus, Ohio State University and Ronald J Marhefka, Ohio State University

2002 / 960 pages
ISBN: 9780072321036 (Out-of-Print)
ISBN: 9780071232012 [IE]

www.mhhe.com/kraus

This is an exciting revision of John Kraus' classic book Antennas, which has been long known as the "Antenna Bible". A new co-author, Ronald Marhefka has joined the author team for this revison. Many new, modern applications have been added-thus the title change to Antennas with All Applications. As well, the references have been updated to include recent additons to the literature.

Additionally, the book has been reorganized to make it more user-friendly for both students and professionals. The book now covers the fundamentals of various antennas and concepts in the first half of the book and then gets into more details on those same topics later in the book. This allows a one-semester course to just cover the fundamentals if desired, and a professional to focus on advanced topics if he or she wants.

CONTENTS

1 Introduction.
2 Antenna Basics.
3 The Antenna Family.
4 Point Sources.
5 Arrays of Point Sources.
6 The Electric Dipole and Thin Linear Antennas.
7 The Loop Antenna.
8 End Fire Antennas: The Helical Beam Antenna and the Yagi-Uda Array.
9 Slot, Patch and Horn Antennas.
9 II Slot and Horn Antennas II.
10 Flat Sheet, Corner and Parabolic Reflector Antennas.
11 Broadband and Frequency-Independent Antennas.
12 Antenna Temperature, Remote Sensing and Radar Cross-Section.
13 Self and Mutual Impedances.
14 The Cylindrical Antenna and the Moment Method (MM).
15 The Fourier Transform Relation Between Aperture Distribution and Far-Field Pattern.
16 Arrays of Dipoles and of Apertures.
17 Lens Antennas.
18 Frequency-Selective Surfaces and Periodic Structures by Ben A. Munk.
19 Practical Design Considerations of Large Aperture Antennas.
20 Some Examples of Large or Unique Antennas.
21 Antennas for Special Applications.
22 Terahertz Antennas.
23 Baluns, etc. By Ben A. Munk.
24 Antenna Measurements. By Arto Lehto and Pertti Vainikainen.
Appendix A Tables for Reference.
Appendix B Books and Video Tapes.
Appendix C Computer Programs (Codes).
Appendix D Absorbing Materials.
Appendix E Measurement Error

INTERNATIONAL EDITION

INTRODUCTION TO RADAR SYSTEMS
3rd Edition

by Merrill I. Skolnik

2001 / 784 pages / Hardcover
ISBN: 9780072881387
ISBN: 9780071181891 [IE]

Since the publication of the second edition of "Introduction to Radar Systems," there has been continual development of new radar capabilities and continual improvements to the technology and practice of radar. This growth has necessitated the addition and updating of the following topics for the third edition: digital technology, automatic detection and tracking, doppler technology, airborne radar, and target recognition. The topic coverage is one of the great strengths of the text. In addition to a thorough revision of topics, and deletion of obsolete material, the author has added end-of-chapter problems to enhance the "teachability" of this classic book in the classroom, as well as for self-study for practicing engineers.

CONTENTS

1 An Introduction to Radar.
2 The Radar Equation.
3 MTI and Pulse Doppler Radar.
4 Tracking Radar.
5 Detection of Signals in Noise.
6 Information from Radar Signals.
7 Radar Clutter.
8 Propogation of Radar Waves .
9 The Radar Antenna.
10 Radar Transmitters.
11 Radar Receiver

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Digital

Digital Electronics

MODERN DIGITAL ELECTRONICS
4th Edition

by R P. Jain, Director, B.M. Institute of Engineering & Technology

2009 / Softcover / 670 pages
ISBN: 9780070669116
(McGraw-Hill India Title)
www.mhhe.com/jain/mde4e

The 4th edition of the text book focuses on rigorous coverage of design and analysis of complex digital circuits and systems through expansion of topics like Sequential Logic Design, PLDs, Memories and VHDL implementation codes. The book begins with the fundamental concepts of digital electronics and covers digital design using VHDL supported with numerous examples. This book caters well to both CSE and Electronics courses requirements.

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DIGITAL ELECTRONICS
Principals and Applications

by Soumitra Kumar Mandal, Asst. Professor, Dept of Electrical Engg, National Technical Teachers' Training and Research, Kolkata

2009 / Softcover / 650 pages
ISBN: 9780070153820
(McGraw-Hill India Title)

www.mhhe.com/mandal/de

This book on Digital Electronics is an introductory level text on the subject . It has been designed to primarily target the Undergraduate students of Engineering Streams (like CS, IT, EEE, ECE, EI, etc.), of B & C category colleges. It can also be used by BSc./MSc., BCA/MCA, Diploma and Polytechnic level courses. The book begins with discussion on the fundamental concepts of digital electronics such as number systems, Boolean algebra, logic families followed by topics (like combinational and sequential logic, multivibrators, A/D conversion and Memories) related to design and analysis of digital systems and finally covers fundamentals of digital design using VHDL and Verilog HDL. The concepts are concisely explained and supported with numerous examples, illustrations and circuit diagrams. The book provides objective, theoretical and numerical problems for testing and enhancing one's subject related knowledge and understandings. The objective questions would be also helpful in the preparation for competitive examinations.

CONTENTS

1. Number System
2. Boolean Algebra And Logic Gates
3. Digital Logic Family
4. Combinational Logic
5. Combinational Logic Design
6. Arithmetic Logic Circuits
7. Flip-Flops
8. Sequential Circuits
9. Sequential Circuits Design
10. Multivibrators
11. Analog Digital Conversion
12. Semiconductor Memories

13. Programmable Logic Devices
14. Computer Aided Digital System Design
15. Laboratory Experiments

INTERNATIONAL EDITION

DIGITAL ELECTRONICS: PRINCIPLES AND APPLICATIONS
7th Edition

by Roger L. Tokheim

2008 (February 2007) / Softcover / 552 pages
ISBN: 9780073222752 (Student Text with MultiSIM CD)
ISBN: 9780071108508 [IE with MultiSIM CD]

(A Glencoe Trade & Technical Title)

www.mhhe.com/tokheim7e

Digital Electronics: Principles and Applications is a concise and practical text that prepares students for entry-level electronics jobs. Its level and approach are ideal for both electronics and electricity programs looking for a relatively short, applied book. The seventh edition has been updated, with new coverage of microcontrollers, memory, and interfacing. Optional simulation work with MultiSim is included in the text and accompanying Experiments Manual, with circuit files included on a bound-in CD ROM. Additional student and instructor resources are included on a new Online Learning Center website.

CONTENTS

1 Digital Electronics.
2 Numbers We Use in Digital Electronics.
3 Logic Gates.
4 Combining Logic Gates.
5 IC Specifications and Simple Interfacing.
6 Encoding, Decoding, and Seven-Segment Displays.
7 Flip-Flops.
8 Counters.
9 Shift Registers.
10 Arithmetic circuits.
11 Memory and Storage.
12 Digital Systems.
13 Computer Systems.
14 Connecting with Analog Devices

Digital Design/Logic

INTERNATIONAL EDITION

NEW

FUNDAMENTALS OF DIGITAL AND COMPUTER DESIGN WITH VHDL

by Richard S. Sandige, Calif ornia Polytechnic State University, and Michael L. Sandige

2012 (September 2011) / Hardcover / 736 pages
ISBN: 9780073380698
ISBN: 9780071316392 [IE]

www.mhhe.com/sandige

This text is intended for an introductory digital design course for students at the freshman level; it also is intended for an introductory computer design course with assembly language programming for students at the sophomore level. This text uses a spiral teaching approach by introducing a design problem and then, in the same chapter or a later chapter, either (1) reemphasizing the same concepts when a different design is presented, or (2) working the same problem using a different technique. This is done to increase the likelihood of retention.

FEATURES

❖ VHDL is introduced in the first chapter using just Boolean functions. This prepares students to use VHDL early in their laboratory experiments.

❖ Helpful information is provided following Figures, Tables, Listings (for VHDL code), and Waveforms in a bulleted section starting with "Things you should notice about..."

❖ Homework problems are keys to each section, for instructor and student convenience. Homework solutions will be made available to instructors via the web.

❖ Laboratory experiments are included in Appendix A, to connect the theory presented in the book with the real world of modern digital programmable logic devices. Experiment solutions will be made available to instructors via the web. For reviewers: to see examples of Experiments for Chapters 1 (Experiment 1) and Chapter 9 (Experiment 11), go to the author's website at http://www.ee.calpoly.edu/faculty/rsandige/.

❖ A Karnaugh Map Explorer program is provided to help students learn K-maps. The Karnaugh Map Explorer program will be made available to instructors via the web. For reviewers: to see the program and use it, go to the author's website at http://www.ee.calpoly.edu/faculty/rsandige/

❖ A special program called EASY1 (Editor/Assembler/Simulator for VBC1 (Very Basic Computer 1)) is provided to help students learn how to write and test assembly language for VBC1. EASY1 will be made available to instructors via the web. VBC1 is a very simple 4-bit Harvard type computer for students to design and learn how to program, since it only has 8 instructions with 22 variations. For reviewers: to see the program and use it, go to the author's website at http://www.ee.calpoly.edu/faculty/rsandige/

❖ Beginning in Chapter 12, Designing Input/Output Circuits, VHDL is used as a tool to teach students how to design VBC1.

❖ The popular Xilinx ISE WebPACK software is use as the design tool for VHDL. This tool contains the ISE synthesizer and built-in ISE simulator to allow students to verify that their designs work prior to downloading them in the Spartan 3E on the Nexys 2 board. Xilinx ISE WebPACK is a free download from Xilinx via their web site.

❖ In Chapter 18, VBC1-E is introduced. VBC1-E is an enhanced version of VBC1 with 25 instructions with 71 variations.

CONTENTS

Chapter 1: Boolean Algebra, Boolean Functions, VHDL, and Gates
Chapter 2: Number Conversions, Codes, and Function Minimization
Chapter 3: Introduction to Logic Circuit Analysis and Design
Chapter 4: Combinational Logic Circuit Design with VHDL
Chapter 5: Bistable Memory Device Design with VHDL
Chapter 6: Simple Finite State Machine Design with VHDL
Chapter 7: Computer Circuits
Chapter 8: Circuit Implementation Techniques
Chapter 9: Complex Finite State Machine Design with VHDL
Chapter 10: Basic Computer Architectures
Chapter 11: Assembly Language Programming for VBC1
Chapter 12: Designing Input/Output Circuits
Chapter 13: Designing Instruction Memory, Loading Program Counter, and Debounced Circuit
Chapter 14: Designing Multiplexed Display Systems
Chapter 15: Designing Instruction Decoders
Chapter 16: Designing Arithmetic Logic Units
Chapter 17: Completing the Design for VBC1
Chapter 18: Assembly Language Programming for VBC1-E
Chapter 19: Designing Input/Output Circuits for VBC1-E
Chapter 20: Designing the Data Memory Circuit for VBC1-E
Chapter 21: Designing the Arithmetic, Logic, Shift, Rotate, and Unconditional Jump Circuits for VBC1-E
Chapter 22: Designing a Circuit to Prevent Program Execution During Manual Loading for VBC1-E
Chapter 23: Designing Extented Instruction Memory for VBC1-E
Chapter 24: Designing the Software Interrupt Circuits for VBC1-E
Chapter 25: Completing the Design for VBC1-E
Appendices

International edition

INTRODUCTION TO LOGIC DESIGN
3rd Edition

by Alan B. Marcovitz, Florida Atlantic University-Boca Raton

2010 (January 2009) / Hardcover / 656 pages
ISBN: 9780073191645
ISBN: 9780070164901 [IE]

www.mhhe.com/marcovitz

Introduction to Logic Design by Alan Marcovitz is intended for the first course in logic design, taken by computer science, computer engineering, and electrical engineering students. As with the previous editions, this edition has a clear presentation of fundamentals and an exceptional collection of examples, solved problems and exercises.

The text integrates laboratory experiences, both hardware and computer simulation, while not making them mandatory for following the main flow of the chapters. Design is emphasized throughout, and switching algebra is developed as a tool for analyzing and implementing digital systems. The presentation includes excellent coverage of minimization of combinational circuits, including multiple output ones, using the Karnaugh map and iterated consensus. There are a number of examples of the design of larger systems, both combinational and sequential, using medium scale integrated circuits and programmable logic devices.

The third edition features two chapters on sequential systems. The first chapter covers analysis of sequential systems and the second covers design. Complete coverage of the analysis and design of synchronous sequential systems adds to the comprehensive nature of the text. The derivation of state tables from word problems further emphasizes the practical implementation of the material being presented.

CONTENTS

1 Introduction
2 Combinational Systems
3 The Karnaugh Map
4 Function Minimization Algorithms
5 Designing Combinational Systems
6 Analysis of Sequential Systems
7 The Design of Sequential Systems
8 Solving Larger Sequential Problems
9 Simplification of Sequential Circuits
Appendix A Relating the Algebra to the Karnaugh Map
Appendix B Answers to Selected Exercises
Appendix C Chapter Tests Answers
Appendix D Laboratory Experiments
Appendix E Complete Examples

INTERNATIONAL EDITION

FUNDAMENTALS OF DIGITAL LOGIC WITH VHDL DESIGN WITH CD-ROM
3rd Edition

by Stephen Brown, University of Toronto, Canada, and Zvonko Vranesic, University of Toronto, Canada

2009 (March 2008) / 960 pages
ISBN: 9780077221430
ISBN: 9780071268806 [IE]

www.mhhe.com/brownvranesic

Fundamentals of Digital Logic with VHDL Design teaches the basic design techniques for logic circuits. It emphasizes the synthesis of circuits and explains how circuits are implemented in real chips. Fundamental concepts are illustrated by using small examples, which are easy to understand. Then, a modular approach is used to show how larger circuits are designed.

VHDL is used to demonstrate how the basic building blocks and larger systems are defined in a hardware description language, producing designs that can be implemented with modern CAD tools. The book emphasizes CAD through the use of Altera's Quartus II CAD software, a state-of-the-art digital circuit design package. This software produces automatic mapping of designs written in VHDL into Field Programmable Gate Arrays (FPGAs) and Complex Programmable Logic Devices (CPLDs).

CONTENTS

Chapter 1: Design Concepts
Chapter 2: Introduction to Logic Circuits
Chapter 3: Implementation Technology
Chapter 4: Optimized Implementation of Logic Functions
Chapter 5: Number Representation and Arithmetic Circuits
Chapter 6: Combinational-Circuit Building Blocks
Chapter 7: Flip-Flops, Registers, Counters, and a Simple Processor
Chapter 8: Synchronous Sequential Circuits
Chapter 9: Asynchronous Sequential Circuits
Chapter 10: Digital System Design
Chapter 11: Testing of Logic Circuits
Chapter 12: Computer Aided Design Tools
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Appendix B Tutorial 1--Using Quartus II CAD Software
Appendix C Tutorial 2--Implementing Circuits in Altera Devices
Appendix D Tutorial 3--Physical Implementations in a PLD
Appendix E Commercial Devices
Answers

INTERNATIONAL EDITION

FUNDAMENTALS OF DIGITAL LOGIC WITH VERILOG DESIGN
2nd Edition

by Stephen Brown, University of Toronto, Canada, and Zvonko Vranesic, University of Toronto, Canada

2008 (May 2007) / Hardcover / 960 pages
ISBN: 9780077211646
ISBN: 9780071265980 [IE, with CD]

www.mhhe.com/brown

Fundamentals of Digital Logic With Verilog Design teaches the basic design techniques for logic circuits. It emphasizes the synthesis of circuits and explains how circuits are implemented in real chips. Fundamental concepts are illustrated by using small examples.

Use of CAD software is well integrated into the book. A CD-ROM that contains Altera's MAX+plusII CAD software comes free with every copy of the text. The CAD software provides automatic mapping of a design written in Verilog into Field Programmable Gate Arrays (FPGAs) and Complex Programmable Logic Devices (CPLDs). Students will be able to try, firsthand, the book's Verilog examples (over 140) and homework problems.

Engineers use MAX+plusII for designing, simulating, testing and implementing logic circuits. The version included with this text supports all major features of the commercial product and comes with a compiler for the IEEE standard Verilog language. Students will be able to:

- ❖ enter a design into the CAD system
- ❖ compile the design into a selected device
- ❖ simulate the functionality and timing of the resulting circuit
- ❖ implement the designs in actual devices (using the school's laboratory facilities)

Verilog is a complex language, so it is introduced gradually in the book. Each Verilog feature is presented as it becomes pertinent for the circuits being discussed. To teach the student to use the MAX+plusII, the book includes three tutorials.

CONTENTS

Chapter 1 Design Concepts
Chapter 2 Introduction to Logic Circuits
Chapter 3 Implementation Technology
Chapter 4 Optimized Implementation of Logic Functions
Chapter 5 Number Representation and Arithmetic Circuits
Chapter 6 Combinational-Circuit Building Blocks
Chapter 7 Flip-Flop, Registers, Counters, and a Simple Processor
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Chapter 10 Digital System Design
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Appendix A Verilog Reference
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Appendix C Tutorial 2-Implementing Circuits in Altera Devices
Appendix D Tutorial 3-Physical Implementation in a FPGA
Appendix E Commercial Devices
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International edition

INTRODUCTION TO LOGIC AND COMPUTER DESIGN WITH CD

by Alan B. Marcovitz, Florida Atlantic University-Boca Raton

2008 (February 2007) / Hardcover with disk
ISBN: 9780073314174
ISBN: 9780071276115 [IE, with CD]

www.mhhe.com/marcovitz

Introduction to Logic and Computer Design by Alan Marcovitz takes the successful formula realized in the author's previous books and makes it even better. With the inclusion of several chapters on computer design, Marcovitz now offers everything a fundamentals-oriented logic design course might include. Further, this new book is supported by an ARIS site - McGraw-Hill's electronic homework management systems -- including 350 algorithmic problems and a host of new media supplements to make both the instructor's and the student's tasks easier. As with Marcovitz's previous books, the clear presentation of concepts and well-paced writing style make Introduction to Logic and Computer Design the ideal companion to any first course in digital logic. Users rave about the book's extensive set of examples — well integrated into the body of the text and included at the end of each chapter in sections of solved problems — that give students multiple opportunities to understand the topics being presented.

CONTENTS

1 Introduction
Part I Logic Design
2 Combinational Systems
3 The Karnaugh Map
4 Designing Combinational Systems
5 Analysis of Sequential Systems
6 The Design of Sequential Systems
7 Solving Larger Sequential Problems
Part II Computer Design
8 Computer Organization
9 Computer Design Fundamentals
10 The Design of a Central Processing Unit
11 Beyond the Central Processing Unit

International edition

DIGITAL PRINCIPLES AND DESIGN WITH CD-ROM

by Donald Givone, SUNY – Buffalo

2003 / 832 pages
ISBN: 9780072551327
ISBN: 9780071230056 [IE]

www.mhhe.com/givone

This exciting first edition provides more depth than existing digital design books, using a traditional approach to the subject. Digital Principles and Design contains introductory material in digital principles with emphasis on logic design, as well as more advanced material. With the exception of the digital circuits appendix, it assumes no background on the part of the reader. The text can be used by readers in computer science, computer engineering and electrical engineering.

The emphasis in the book is on the thorough presentation of basic principles of logic design and the illustration of these principles. While many introductory texts only provide the mechanics of classical logic design, Givone provides justifications behind these procedures to give students the understanding they need for the advanced topics they will learn about in subsequent courses. Some of the topics that the book thoroughly presents include: the simplification of Boolean expressions with Karnaugh maps, variable-entered Karnaugh maps, and the analysis and design of both clocked synchronous sequential networks and asynchronous sequential networks.

CONTENTS

1 Introduction.
2 Number Systems, Arithmetic, and Codes.
3 Boolean Algebra and Combinational Networks.
4 Simplification of Boolean Expressions.
5 Logic Design with MSI Components and Programmable Logic Devices.
6 Flip-Flops and Simple Flip-Flop Applications.
7 Synchronous Sequential Networks.
8 Algorithmic State Machines.
9 Asnynchronous Sequential Networks.
Appendix A: Digital Circuits.
Appendix B: TBD

INTERNATIONAL EDITION

COMPUTER ARCHITECTURE AND LOGIC DESIGN

by Thomas C. Bartee, IDA

1991 / 640 pages

ISBN: 9780071125543 [IE]

Thomas Bartee has succeeded in offering easy-to-understand coverage of the basics of computer organization and logic design--focusing on the most common microcomputers as examples. Written in Bartee's excellent style, the book accurately reflects the current state of the art in its coverage of important topics, some of which include the Quine-McLuskey reduction technique, the 386-486 family, the 68030-68040 family, cache and virtual memory, and much more. The material integrates the principles of organization and architecture--clearly showing how they are interrelated. Starting from logical functions and moving to composite functions and structures, the book allows readers to easily place new material in context.

CONTENTS

1. Introduction.
2. Number Systems.
3. Boolean Algebra and Gate Networks.
4. Logic Design.
5. The Arithmetic-Logic Unit.
6. The Memory Element.
7. Input-Output.
8. Buses and Interfaces.
9. The Control Unit.
10. Computer Architecture.
11. Selected Architectures.
12. Logic Circuits Overview.

SCHAUM'S OUTLINE OF INTRODUCTION TO DIGITAL SYSTEMS

by James Palmer, Rochester Institute of Technology; David Perlman, Rochester Institute of Technology

1993 / 400 pages

ISBN: 9780070484399

(A Schaum's Publications)

CONTENTS

1 Numbers and the Binary System
2 Design of Combinational Logic I
3 Design of Combinational Logic II-Manipulation
4 Hardware and the Mixed-Logic Convention
5 MSI and LSI Elements
6 Timing Diagrams
7 The Flip-Flop/8 Combinations of Flip-Flops
9 Application Specific Devices
10 Design of Simple State Machines
11 Electronically Programmable Functions
Appendixes
A: Basic Boolean Theorems and Identities
B: Standard Logic Symbols
C: Some Comments on Digital Logic Simulation

Programmable Logic Controller

INTERNATIONAL EDITION

PROGRAMMABLE LOGIC CONTROLLERS 4th Edition

by Frank D. Petruzella

2011 (September 2010) / Softcover / 416 pages

ISBN: 9780073510880
ISBN: 9780071221351 [IE]

(A Trade & Technical Title)

www.mhhe.com/plc4e

This fourth edition of Programmable Logic Controllers continues to provide an up-to-date introduction to all aspects of PLC programming, installation, and maintaining procedures. No previous knowledge of PLC systems or programming is assumed. As one reviewer of this edition put it "I honestly believe that someone with little or no background to PLC systems could take this book and teach themselves PLCs".

CONTENTS

Chapter 1 Programmable Logic Controllers (PLCs): An Overview
Chapter 2 PLC Hardware Components
Chapter 3 Number Systems and Codes
Chapter 4 Fundamentals of Logic
Chapter 5 Basics of PLC Programming
Chapter 6 Developing Fundamental PLC Wiring Diagrams and Ladder Logic Programs
Chapter 7 Programming Timers
Chapter 8 Programming Counters
Chapter 9 Program Control Instructions
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Move Instructions
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Function Block Diagram (FBD)
FBD Programming
Review Questions
Problems

Controls

Control Systems

CONTROL SYSTEMS
Problems and Solutions

by Varmah K R, Department of Electrical & Electronics Engineering, Rajagiri School Of Engineering & Technology, Cochin, Kerala

2010 (May 2010) / Softcover / 793 pages
ISBN: 9780070678750

(McGraw-Hill India Title)

Targeted at the undergraduate level, this text is specially crafted to make the study of Control Systems easy. The theory is brief, to-the-point, the presentation is clear, user-friendly. Each topic is fortified by large pool of pedagogy. As many as 700 graded, fully solved examples have been presented in easy, step-by-step method. There are plenty of practice questions, numerical problems, short answer type questions and objective type problems available for self-assessment.

CONTENTS

1.Basic Concepts of Control Systems
2 Modelling of Physical Systems
3.Block Diagram Reduction
4.Signal Flow Graphs
5.Transient Response Specifications
6.Stability
7.Steady State Response Specifications
8.Frequency Response
9.Basic Control Actions
10.Root Locus Technique
11.Nyquist Diagram
12.Bode Plots
13.Compensation
14.State Variable Models

CONTROL SYSTEMS ENGINEERING

by S Palani, Dean and Professor, Department of Electronics and Communication Engineering Sudharsan Engineering. College, Pudukkottai

2009 / Softcover
ISBN: 9780070671935

(McGraw-Hill India Title)

Control Engineering is a multi-disciplinary subject and finds widespread application in the guidance, navigation, control of missiles, and spacecrafts, aeroplanes, ships, as well as in the process control industry. This book presents clear theoretical concepts supplemented/reinforced by worked out numerical examples. The book includes topics on Nyquist Stability Criterion, Signal Flow Graph, Root Locus Technique and comprehensive coverage on Control system components.

CONTENTS

Chapter 1. Introduction
Chapter 2. Mathematical Modeling of Physical Systems
Chapter 3. Electrical Analogue
Chapter 4. Block Diagram Reduction Technique and Signal Flow Graph
Chapter 5. Time Response of Feedback Control Systems
Chapter 6. Frequency Domain Analysis of Control Systems
Chapter 7. Stability of Linear Control Systems
Chapter 8. Root Locus Technique
Chapter 9. Design of Control Systems in Time and Frequency Domains
Chapter 10. Control System Components

SCHAUM'S OUTLINE OF FEEDBACK AND CONTROL SYSTEMS
2nd Edition

by Joseph DiStefano, University of California, Los Angeles; Allen Stubberud, UCLA; Ivan William, TRW Space and Technology

2012 (September 2011) / 512 pages
ISBN: 9780071635127
(A Schaum's Publication)

Schaum's Outline of Feedback and Control Systems, 2nd edition mirrors the courses in scope and sequence to help enrolled students understand basic concepts and offer extra practice on topics such as differential equations and linear systems, transfer functions, block diagram algebra and transfer functions of systems, signal flow graphs, and many more.

CONTENTS

Introduction
Control Systems Terminology
Differential Equations, Difference Equations, and Linear Systems
The LaPlace Transform and The Z-Transform
Stability
Transfer Functions
Block Diagram Algebra and Transfer Functions of Systems
Signal Flow Graphs
System Sensitivity Measures and Classification of Feedback Systems
Analysis and Design of Feedback Control Systems: Objectives and Methods
Nyquist Analysis
Nyquist Design
Root-Locus Design
Bode Analysis
Bode Design
Nichols Chart Analysis
Nichols Chart Design
Introduction to Nonlinear Control Systems
Introduction to Advanced Topics in Control Systems Analysis and Design

Digital Control

INTERNATIONAL EDITION

DIGITAL CONTROL AND STATE VARIABLE METHODS
3rd Edition

by M Gopal

2008 / Softcover / 800 pages
ISBN: 9780070668805
ISBN: 9780071078894 [IE]
(McGraw-Hill India Title)

www.mhhe.com/gopal/dc3e

The third edition of Digital Control and State Variable Methods presents control theory relevant to the analysis and design of computer-control systems. Meant for the undergraduate and postgraduate courses on advanced control systems, this text provides an up-to-date treatment of digital control, state variable analysis and design, and nonlinear control.

CONTENTS

Digital Control: Principles and Design in Transform Domain
1. Introduction
2. Signal Processing in Digital Control
3. Models of Digital Control Devices and Systems
4. Design of Digital Control Algorithms
State Variable Methods in Automatic Control: Continuous-Time and Sampled-Data Systems
5. Control System Analysis using state variable methods
6. State variable Analysis of Digital Control System
7. Pole-Placement Design and State Observers
8. The Concept of Lyapunov Stability and Lyapunov Function Approach to Optimal Control. Nonlinear Control Systems: Conventional and Intelligent
9. Nonlinear Systems Analysis
10. Non-linear control structure
11. Neural Networks
12. Fuzzy logic models

Generators, Motors, Compressors

INTERNATIONAL EDITION

ELECTRIC MOTORS AND CONTROL SYSTEMS

by Frank D. Petruzella

2010 (May 2009) / Softcover / 296 pages
ISBN: 9780073521824
ISBN: 9780071220330 [IE]
(A Glencoe Trade & Technical Title)

www.mhhe.com/emcs1e

This book has been written for a course of study that will introduce the reader to a broad range of motor types and control systems. It provides an overview of electric motor operation, selection, installation, control and maintenance. Every effort has been made in this first edition text to present the most up-to-date information which reflects the current needs of the industry.

The broad based approach taken makes this text viable for a variety of motors and control systems courses. Content is suitable for colleges, technical institutions, vocational/technical schools as well as apprenticeship and journeymen training. Electrical apprentices and journeymen will find this book to be invaluable due to Electrical Code references applicable to the installation of new control systems and motors, as well as information on maintenance and troubleshooting techniques. Personnel involved in the motor maintenance and repair will find this book to be a useful reference text.

The text is comprehensive! It includes coverage of how motors operate in conjunction with their associated control circuitry. Both older and newer motor technologies are examined. Topics covered range from motor types and controls to installing and maintaining conventional controllers, electronic motor drives and programmable logic controllers.

CONTENTS

Chapter 1 – Safety in the Workplace
PART 1 PROTECTING AGAINST ELECTRIC SHOCK
PART 2 GROUNDING – LOCKOUT– CODES
Chapter 2 – Understanding Electrical Drawings
PART 1 SYMBOLS – ABBREVIATIONS – LADDER DIAGRAMS
PART 2 WIRING-SINGLE LINE- BLOCK DIAGRAMS
PART 3 MOTOR TERMINAL CONNECTIONS
PART 4 MOTOR NAMEPLATE AND TERMINOLOGY
PART 5 MANUAL AND MAGNETIC STARTERS
Chapter 3 – Motor Transformers and Distribution Systems
PART 1 POWER DISTRIBUTION SYSTEMS
PART 2 TRANSFORMER PRINCIPLES
PART 3 TRANSFORMER CONNECTIONS AND SYSTEMS
Chapter 4 – Motor Control Devices
PART 1 MANUALLY OPERTED SWITCHES
PART – 2 MECHANICALLY OPERTED SWITCHES
PART – 3 SENSORS
PART – 4 ACTUATORS
Chapter 5 – Electric Motors
PART – 1 MOTOR PRINCIPLE
PART – 2 DIRECT CURRENT MOTORS
PART – 3 THREE-PHASE ALTERNATING CURRENT MOTORS
PART--4 SINGLE-PHASE ALTERNATING CURRENT MOTORS
PART – 5 ALTERNATING CURRENT MOTOR DRIVES
PART – 6 MOTOR SELECTION
PART – 7 MOTOR INSTALLATION
PART – 8 MOTOR MAINTENANCE AND TROUBLESHOOTING
Chapter 6 – Contactors and Motor Starters
PART – 1 MAGNETIC CONTACTOR
PART – 2 CONTACTOR RATINGS, ENCLOSRES AND SOLID-STATE TYPES
PART – 3 MOTOR STARTERS
Chapter 7 – Relays
PART – 1 ELECTROMECHANICAL CONTROL RELAYS
PART – 2 SOLID-STATE RELAYS
PART – 3 TIMING RELAYS
PART – 4 LATCHING RELAYS
PART – 5 RELAY CONTROL LOGIC
Chapter 8--Motor Control Circuits
PART – 1 NEC MOTOR INSTALLATION REQUIREMENTS
PART – 2 MOTOR STARTING
PART – 3 MOTOR REVERSING AND JOGGING
PART – 4 MOTOR STOPPING
PART – 5 MOTOR SPEED
Chapter 9--Motor Control Electronics
PART – 1 SEMICOMDUCTOR DIODES
PART – 2 TRANSISTORS
PART – 3 THYRISTORS
PART – 4 INTEGRATED CIRCUITS (ICs)
Chapter 10--Adjustable Speed Drives and PLC Installations
PART – 1 AC MOTOR DRIVE FUNDAMENTALS
PART – 2 VFD INSTALLATION AND PROGRAMMING PARAMETERS
PART – 3 DC MOTOR DRIVE FUNDAMENTALS
PART – 4 PROGRAMMABLE LOGIC CONTROLLERS (PLCs)

Neural Networks/Fuzzy Systems

INTERNATIONAL EDITION

NEURAL NETWORKS: A CLASSROOM APPROACH

by Satish Kumar, Reader in Computer Science and Applications, Dayalbagh Educational Institute, Agra

2004 / 768 pages
ISBN: 9780070482920
ISBN: 9780071246729 [IE]
(McGraw-Hill India Title)

http://highered.mcgraw-hill.com/sites/0070482926

Neural Networks is an integral component fo the ubiquitous soft computing paradigm. An in-depth understanding of this field requires some background of the principles of neuroscience, mathematics and computer programming. Neural Networks: A Classroom Approach, achieves a balanced blend of these areas to weave an appropriate fabric for the exposition of the diversity of neural network models.

This book is unique, in the sense that it stresses on an intuitive and geometric understanding of the subject and on the heuristic explanation of the theoretical results.

CONTENTS

I. Traces of History and A Neuroscience Briefer:
1 Brain Style Computing: Origins and Issues.
2 Lessons from Neuroscience.
II. Feedforward Neural Networks and Supervised Learning:
3 Artificial Neurons, Neural Networks and Architectures
4 Geometry of Binary Threshold Neurons and Their Networks.
5 Supervised Learning I: Perceptrons and LMS.
6 Supervised Learning II: Backpropagation and Beyond.
7 Neural Network: A Statistical Pattern Recognition Perspective.
8 Focussing on Generalization: Support Vector Machines and Radial Basis Function Networks.

III. Recurrent Neurodynamical Systems:
9 Dynamical Systems Review.
10 Attractor Neural Networks.
11 Adaptive Resonance Theory.
12 Towards the Self Organizing Feature Map. IV. Contemporary Topics:
13 Pulsed Neuron Models: The New Generation.
14 Fuzzy Sets, Fuzzy Systems and Applications.
15 Neural Networks and the Soft Computing Paradigm

Electrical Instrumentation

ELECTRONIC INSTRUMENTATION
3rd Edition

by ***H S Kalsi****, St. Xavier's Technical Institute, Mumbai.*
2010 (May 2010) / Softcover / 824 pages
ISBN: 9780070702066
(McGraw-Hill India Title)

www.mhhe.com/kalsi/ei3

This revised and up-to date edition provides essential understanding of the working principles, operation and limitations of the electronic instruments. Lucid explanation of the concepts supported by a plethora of solved examples makes this an indispensable text on this subject. The step-by-step problem solving methodology used in the examples is a highlight of this new edition.

CONTENTS

1. Qualities of Measurements
2. Indicators and Display Devices
3. Ammeters
4. Voltmeters and Multimeters
5. Digital Voltmeters
6. Digital Instruments
7. Oscilloscope
8. Signal Generators
9. Wave Analyzers and Harmonic Distortion
10. Measuring Instruments
11. Bridges
12. Recorders
13. Transducers
14. Signal Conditioning
15. Filters
16. Measurement Set-up
17. Data Acquisition System (DAS)
18. Data Transmission
19. Frequency Standards
20. Measurement of Power
21. Control Systems

Mechatronics

INTERNATIONAL EDITION

NEW

INTRODUCTION TO MECHATRONICS AND MEASUREMENT SYSTEMS
4th Edition

by David G. Alciatore, Colorado State University

2012 (March 2011) / Hardcover / 576 pages
ISBN: 9780073380230
ISBN: 9780071086042 [IE]

www.mhhe.com/alciatore

INTRODUCTION TO MECHATRONICS AND MEASUREMENT SYSTEMS provides comprehensive and accessible coverage of the evolving field of mechatronics for mechanical, electrical and aerospace engineering majors. The author presents a concise review of electrical circuits, solid-state devices, digital circuits, and motors- all of which are fundamental to understanding mechatronic systems.

Mechatronics design considerations are presented throughout the text, and in "Design Example" features. The text's numerous illustrations, examples, class discussion items, and chapter questions & exercises provide an opportunity to understand and apply mechatronics concepts to actual problems encountered in engineering practice. This text has been tested over several years to ensure accuracy.

A text web site is available at www.mechatronics.colostate.edu and contains numerous supplemental resources.

NEW TO THIS EDITION

❖ Coverage of New Measurement Technologies including rapidly changing subjects like MEMS, cutting edge sensor technology, and micromachines are represented in this edition.

CONTENTS

1 Introduction
2 Electric Circuits and Components
3 Semiconductor Electronics
4 System Response
5 Analog Signal Processing Using Operational Amplifiers
6 Digital Circuits
7 Microcontroller Programming and Interfacing
8 Data Acquisition
9 Sensors
10 Actuators
11 Mechatronic Systems-Control Architectures and Case Studies
Appendixes
A Measurement Fundamentals
B Physical Principles
C Mechanics of Materials

Advanced Systems

INTERNATIONAL EDITION

THE FOURIER TRANSFORM AND ITS APPLICATIONS
3rd Edition

by Ronald Bracewell, Stanford University

1999 / 624 pages / Hardcover
ISBN: 9780073039381 (Out-of-Print)
ISBN: 9780071160438 [IE]

This text is designed for use in a senior undergraduate or graduate level course in Fourier Transforms. This text differs from many other fourier transform books in its emphasis on applications. Bracewell applies mathematical concepts to the physical world throughout this text, equipping students to think about the world and physics in terms of transforms. The pedagogy in this classic text is excellent. The author has included such tools as the pictorial dictionary of transforms and bibliographic references. In addition, there are many excellent problems throughout this book, which are more than mathematical exercises, often requiring students to think in terms of specific situations or asking for educated opinions. To aid students further, discussions of many of the problems can be found at the end of the book.

CONTENTS

1 Introduction.
2 Groundwork.
3 Convolution.
4 Notation for Some Useful Functions.
5 The Impulse Symbol.
6 The Basic Theorems.
7 Obtaining Transforms.
8 The Two Domains.
9 Waveforms, Spectra, Filters and Linearity.
10 Sampling and Series.
11 The Discrete Fourier Transform and the FFT.
12 The Hartley Transform.
13 Relatives of the Fourier Transform.
14 The Laplace Transform.
15 Antennas and Optics.
16 Applications in Statistics.
17 Random Waveforms and Noise.
18 Heat Conduction and Diffusion.
19 Dynamic Power Spectra. 20 Tables of sinc x, sinc2x and exp(-?x)2.
21 Solutions to Selected Problems. 22 Pictorial Dictionary of Fourier Transforms. 23 The Life of Joseph Fourier

Power and Machines

Electric Machines

INTERNATIONAL EDITION

NEW

ELECTRIC MACHINERY FUNDAMENTALS
5th Edition

by Stephen J. Chapman, BAE Systems, Australia

2012 (February 2011)/ Softcover / 704 pages
ISBN: 9780073529547
ISBN: 9780071325813 [IE]

www.mhhe.com/chapman

Electric Machinery Fundamentals continues to be a best-selling machinery text due to its accessible, student-friendly coverage of the important topics in the field.

In the fifth edition, the use of MATLAB® continues to be incorporated in examples and problems, where applicable. The targeted and thought-provoking problems you've come to appreciate have been retained in this edition.

Chapman continues to share his up-to-date knowledge and experiences in the field in an engaging and understandable style.

NEW TO THIS EDITION

- Updated Coverage of major topics and increased coverage of induction motors in this edition.
- Revised Problems and Examples are included in the fifth edition.
- More Student-Friendly Style Learning objectives have been added to each chapter.
- Companion Website includes COSMOS the Complete Online Solutions Manual Organization System, an online tool that will help professors easily build assignments.

CONTENTS

1 Introduction to Machinery Principles
2 Transformers
3 AC Machinery Fundamentals
4 Synchronous Generators
5 Synchronous Motors
6 Induction Motors
7 DC Machinery Fundamentals
8 DC Motors and Generators
9 Single-Phase and Special-Purpose Motors
Appendix A Three-Phase Circuits
Appendix B Coil Pitch and Distributed Windings
Appendix C Salient-Pole Theory of Synchronous Machines
Appendix D Tables of Contents and Conversion Factors

ELECTRIC MACHINES
4th Edition

by D P Kothari, Centre for Energy Studies, Indian Institute of Technology, Delhi and I J Nagrath, Adjunct Professor, BITS Pilani

2010 (June 2010) / Softcover / 932 pages
ISBN: 9780070699670

(McGraw-Hill India Title)

www.mhhe.com/electmach4e

This new edition provides an excellent foundation to the theory of electromechanical devices with emphasis on rotating electric machines. The theory and applications of various machines are treated at appropriate places in the book. Extensive coverage on the systematic development of circuit model equivalent of both transformers and machines is given in the text. A number of solved examples and practice problems along with MATLAB examples are given in the book to facilitate problem solving skills.

CONTENTS

1. Introduction
2. Magnetic Circuits & Induction
3. Transformers
4. Principles of Electromagnetic Energy Conversion
5. Basic Concepts in Rotating Machines
6. Armature Windings
7. DC Machines
8. Synchronous Machines
9. Induction Machines
10. Fractional Kilowatt Motors
11. Generalized Theory of Electric Machines
12. Motor Control by Static Power Converters

International edition

ELECTRIC MACHINERY
6th Edition

by A. E. Fitzgerald, deceased; Charles Kingsley, Massachusetts Institute of Technology; Stephen Umans, Sc.D., Massachusetts Institute of Technology

2003 / 608 pages
ISBN: 9780073660097
ISBN: 9780071230100 [IE]

www.mhhe.com/fitzgerald6e

The exciting new sixth edition of Electric Machinery has been extensively updated while retaining the emphasis on fundamental principles and physical understanding that has been the outstanding feature of this classic book.

This book covers fundamental concepts in detail as well as advanced topics for readers who wish to cover the material in more depth.

Several new chapters have been added, including a chapter on power electronics, as well as one on speed and torque control of dc and ac motors. This edition has also been expanded with additional examples and practice problems. The use of MATLAB has been introduced to the new edition, both in examples within the text as well as in the chapter problems.

CONTENTS

1. Magnetic Circuits and Magnetic Materials.
2. Transformers. 3. Multi-Winding Transformers.
4. Introduction to Rotating Machines.
5. Synchronous Machines.
6. Polyphase Induction Machines.
7. DC Machines.
8. Variable-Reluctance Machines and Stepping Motors.
9. Single- and Two-Phase Motors.
10. Introduction to Power Electronics.
11. Speed and Torque Control.
Appendix A. Three-phase circuits.
Appendix B. Voltages, Magnetic Fields and Inductances of Distributed AC Windings.
Appendix C. Engineering Aspects of Practical Electric-Machine Performance and Operation.
Appendix D. The dq0 Transformation.
Appendix E. Table of Constants and Conversion Factors for SI Units

International edition

ELECTRIC MACHINERY AND POWER SYSTEMS FUNDAMENTALS

by Stephen J. Chapman, BAE Systems Australia

2002 / 696 pages / Hardcover
ISBN: 9780072291353
ISBN: 9780071226202 [IE]

www.mhhe.com/chapman

Stephen J. Chapman is a leading author in the area of machines. He brings his expertise to the table again in An "Introduction to Electric Machinery and Power Systems." This text is designed to be used in a course that combines machinery and power systems into one semester. Chapman's new book is designed to be flexible and allow instructors to choose chapters "a la carte", sot he instructor controls the emphasis.

Chapman has written a book that give students what they need to know to be real-world engineers. It focuses on principles and teaches students how to use information as opposed to do a lot of calculations that would rarely be done by a practicing engineer. He compresses the material by focusing on its essence, underlying principles. Matlab is used throughout the book in examples and problems.

CONTENTS

Part 1 Introduction.
1 Mechanical and Electro-magnetic Fundamentals.
2 Three-Phase Circuits.
Part 2 Power Systems Components.
3 Transformers.
4 AC Machinery Fundamentals.
5 Synchronous Generators.
6 Synchronous Motors.
7 Induction Motors.
8 Transmission Lines.
Part 3 Power Systems.
9 Power System Representation and Equations.
10 Introduction to Power-Flow Studies.
11 Symmetrical Faults.
12 Asymmetrical Faults

SCHAUM'S OUTLINE OF ELECTRIC MACHINES AND ELECTROMECHANICS
2nd Edition

by Syed A. Nasar, University of Kentucky

1998 / 208 pages
ISBN: 9780070459946
(A Schaum's Publication)

More than 50,000 copies of this powerful study guide sold in the first edition! Covering a broad range of topics, from simple DC magnetic circuits to electronic control of DC and AC motors, all the concepts and their applications are clearly explained and illustrated. Includes hundreds of problems with detailed solutions to help students learn quickly and reaise test scores without investing unnecessary time. Ideal for undergraduate students of electrical engineering, for solo study, and as a refresher.

Power Electronics

INTERNATIONAL EDITION

POWER ELECTRONICS

by Daniel W. Hart, Valparaiso University

2011 (January 2010) / Hardcover / 512 pages
ISBN: 9780073380674
ISBN: 9780071289306 [IE]

www.mhhe.com/hart

Power Electronics is intended to be an introductory text in power electronics, primarily for the undergraduate electrical engineering student. The text is written for some flexibility in the order of the topics. Much of the text includes computer simulation using PSpice as a supplement to analytical circuit solution techniques.

CONTENTS

Chapter 1 Introduction
Chapter 2 Power Computations
Chapter 3 Half-Wave Rectifiers
Chapter 4 Full-Wave Rectifiers
Chapter 5 AC Voltage Controllers
Chapter 6 DC-DC Converters
Chapter 7 DC Power Supplies
Chapter 8 Inverters
Chapter 9 Resonant Converters
Chapter 10 Drive Circuits, Snubber Circuits, and Heatsinks
Appendix A Fourier Series for Some Common Waveforms
Appendix B State-Space Averaging
Index

INTERNATIONAL EDITION

POWER ELECTRONICS
3rd Edition

by Cyril W Lander

1994 / 496 pages
ISBN: 9780077077143
ISBN: 9780071134453 [IE]
(McGraw-Hill UK Title)

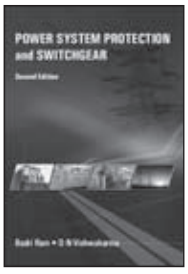
This Third Edition brings Lander's successful text completely up to date, retaining the original material but adding important new information. In particular, a whole new section on EMC (electromagnetic compatibility) is incorporated into the chapter on harmonics. Recently emerged semiconductor devices, such as IGBTs and MCTs are covered, as are other new topics, including active filters for harmonic elimination. The control sections are considerably expanded to take into account pulse-width modulated converters for power factor control, vector control of cage induction motor drives and resonant converters. The balanced and broad structure of coverage from the previous editions remain and is augmented by many new worked examples and an updated bibliography.

CONTENTS

Rectifying Devices.
Rectifying Circuits.
Converter Operation.
DC Line Commutation.
Frequency Conversion.
Some Applications.
Harmonics.
DC Machine Control.
AC Machine Control.
Protection.
Glossary of Terms.
References and Bibliography.

Power Systems

NEW



POWER SYSTEM PROTECTION AND SWITCHGEAR
2nd Edition

by Badri Ram, Former Professor and Head, PG Dept of Electrical Engineering, Bihar College of Engineering, Patna, and D N. Vishwakarma , Institute of Technology, Banaras Hindu University, Varanasi

2011 (July 2011) / Softcover / 684 pages
ISBN: 9780071077743

(McGraw-Hill India Title)

The functioning of a power system depends significantly on efficient and reliable protection schemes. With enhanced course coverage and refreshed pedagogy, the revised edition of Power System Protection and Switchgear discusses the contemporary protection system, now infused with new and innovative technology.

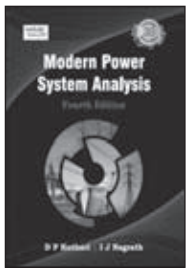
NEW TO THIS EDITION

- ❖ Current and Voltage Transformers
- ❖ Fault Analysis
- ❖ Differential Protection
- ❖ Modern Trends in Power System Protection
- ❖ Gas Actuated Relays
- ❖ Motor Protection

CONTENTS

1. Introduction
2. Relay Construction and Operating
3. Current and Voltage Transformers
4. Fault Analysis
5. Overcurrent Protection
6. Distance Protection
7. Pilot Relaying Schemes
8. Differential Protection
9. Rotating Machines Protection
10. Transformer and Buszone Protection
11. Numerical Protection
12. Microprocessor-Based Numerical Protective Relays
13. Artificial Intelligence Based Numerical Protection
14. Circuit Breakers
15. Fuses
16. Protection Against Overvoltages
17. Modern Trends in Power System Protection

NEW



MODERN POWER SYSTEM ANALYSIS
4th Edition

by D.P. Kothari, Vice Chancellor, VIT University, Vellore, Tamil Nadu and I J. Nagrath, Adjunct professor, BITS, Professor of Electrical Engineering & Deputy , Director (Retd.) BITS Pilani

2011 (June 2011) / Softcover / 792 pages
ISBN: 9780071077750

(McGraw-Hill India Title)

The carefully crafted fourth edition of Modern Power System Analysis guides the reader from the basics of the power sector through its innumerable developments, which then very logically exposes the state of the art. The book provides for an in-depth study of Power Systems Analysis, Power Systems Stability, and Power Systems Operation and Control courses as offered at the undergraduate level across Indian universities. The rich and robust content caters to the requirements of a related postgraduate course and will also greatly benefit practicing engineers.

FEATURES

- ❖ Chapters on Power System Transients, HVDC
- ❖ Topical enhancements made to meet changing curriculum requirements—Influences of environmental constraints on power systems, Magnetic field and electrostatic induction, Control by midline boosters, Maintenance scheduling, Power system reliability
- ❖ Important technological advancements discussed—AGC of restructured power systems, smart grid, power system communication etc
- ❖ Teaching appendices considerably enhanced and elaborated to serve as rich sources of knowledge
- ❖ MCQs developed and other pedagogical features refreshed as per examination patterns

CONTENTS

1. Introduction
2. Inductance and Resistance of Transmission Lines
3. Capacitance of Transmission Lines
4. Representation of Power System Components
5. Characteristics and Performance of Power Transmission Lines
6. Load Flow Studies
7. Optimal System Operation
8. Automatic Generation and Voltage Control
9. Symmetrical Fault Analysis
10. Symmetrical Components
11. Unsymmetrical Fault Analysis
12. Power System Stability
13. Power System Transients
14. High Voltage DC (HVDC) Transmission
15. Power System Security
16. Voltage Stability
17. An Introduction to State Estimation of Power Systems
18. Compensation in Power Systems
19. Load Forecasting Technique

Appendix A: Introduction to Vector and Matrix Algebra
Appendix B: Generalised Circuit Constants
Appendix C: Triangular Factorisation and Optimal Ordering
Appendix D: Elements of Power System Jacobian Matrix
Appendix E: Kuhn-Tucker Theorem
Appendix F: Real-time Computer Control of Power Systems

Appendix G: Some Aspects of Smart Grid
Appendix H: Introduction to MATLAB and SIMULINK
Appendix I: Substations
Appendix J: Convergence of Load Flow Methods
Appendix K: Power Quality: An Overview
Appendix L: Recent Trends in Power System Communication
Appendix M: Restructured and Deregulated Power System
Appendix N: Power System Reliability Studies
Appendix O: Emission Control
Appendix P: Generator Maintenance Scheduling

POWER SYSTEM PROTECTION AND SWITCHGEAR

by Bhuvanesh A. Oza, BVM Engineering College, Nirmal-Kumar C. Nair, University of Auckland, New Zealand, Rashesh P. Mehta, BVM Engineering College, Vallabh Vidyanagar, and Vijay H. Makwana, G H Patel College of Engg. and Technology

2010 (January 2010) / Softcover / 504 pages
ISBN: 9780070671188
(McGraw-Hill India Title)
www.mhhe.com/oza/psp

This book offers a comprehensive treatment of Power System Protection and Switchgear with a detailed coverage on recent developments in numerical/digital relaying. Through the mixed and attractive blend of detailed theoretical explanations and intensive application practices, It enables the learner learn the subject in professional manner.

CONTENTS

1. Introduction and Philosophy of a Protective Relaying System
2. Electromagnetic Relays
3. Static Relays
4. Microprocessor-Based Digital Protection
5. Generator Protection
6. Transformer Protection
7. Protection of Transmission Lines by Overcurrent Relays
8. Protection of Transmission Lines by Distance Relays
9. Carrier Current Protection of Transmission Lines
10. Buszone Protection
11. Induction Motor Protection
12. Testing, Commissioning and Maintenance of Relays
13. Protective Current and Potential Transformers
14. Circuit Breaking Fundamentals
15. Electrical Switchgear
16. Short-Circuit Testing of Circuit Breakers
17. Lightning Overvoltage Protection

INTERNATIONAL EDITION

MODERN POWER SYSTEM ANALYSIS 3rd Edition

by L. S. Kothari, University of Delhi, and I J Nagrath

2003 / Softcover / 708 pages
ISBN: 9780070494893
ISBN: 9780071241113 [IE]
(McGraw-Hill India Title)
http://highered.mcgraw-hill.com/sites/0070494894

In simple language, the book provides a modern introduction to power system operation, control and analysis.

CONTENTS

1. Introduction.
2. Inductance and Resistance of Transmission Lines.
3. Capacitance of Transmission Lines.
4. Representation of Power System Components.
5. Characteristics and Performance of Power Transmission Lines.
6. Load Flow Studies.
7. Optional System Operation.
8. Automatic Generation and Voltage Control.
9. Symmetrical Fault Analysis.
10. Symmetrical Components.
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14. An Introduction to State Estimation of Power Systems.
15. Compensation in Power Systems.
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Appendix A : Introduction to Vector and Matrix Algebra.
Appendix B : General Circuit Constants.
Appendix C : Triangular Factorization and Optimal Ordering.
Appendix D : Elements of Power System Jacobian Matrix.
Appendix E : Kuhn-Tucker Theorem.
Appendix F : Real-Time Computer Control of Power Systems.
Appendix G : Introduction to MATLAB and SIMULINK.
Answers to Problems.
Index.

INTERNATIONAL EDITION

POWER SYSTEM ANALYSIS

by John Grainger, North Carolina State University; William Stevenson, Jr., late professor, North Carolina State University

1994 / 784 pages
ISBN: 9780070612938
ISBN: 9780071133388 [IE]

Based on William Stevenson's classic, Elements of Power System Analysis, this new senior/graduate text offers a completely modern update of this popular textbook. Covering such topics as power flow, power-system stability and transmission lines, the book teaches the fundamental topics of power system analysis accompanied by logical discussions and numerous examples.

CONTENTS

1 Basic Concepts
2 Transformers
3 The Synchronous Machine
4 Series Impedance of Transmission Lines
5 Capacitance of Transmission Lines
6 Current and Voltage Relations on a Transmission Line
7 The Admittance Model and Network Calculations
8 The Impedance Model and Network Calculations
9 Power Flow Solutions
10 Symmetrical Faults
11 Symmetrical Components and Sequence Networks
12 Unsymmetrical Faults
13 Economic Operation of Power Systems
14 Zbus Methods in Contingency Analysis
15 State Estimation of Power Systems
16 Power System Stability

INTERNATIONAL EDITION

ELEMENTS OF POWER SYSTEM ANALYSIS 4th Edition

by William Stevenson, Jr., North Carolina State University

1982 / 436 pages
ISBN: 9780070665842 [IE]

CONTENTS

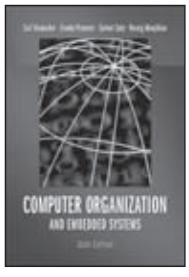
Chapter 1 General Background
Chapter 2 Basic Concepts
Chapter 3 Series Impedance of Transmission Lines
Chapter 4 Capacitance of Transmission Lines
Chapter 5 Current and Voltage Relations on a Transmission Line
Chapter 6 System Modeling
Chapter 7 Network Calculations
Chapter 8 Load-Flow Solutions and Control
Chapter 9 Economic Operation of Power Systems
Chapter 10 Symmetrical Three-Phase Faults
Chapter 11 Symmetrical Components
Chapter 12 Unsymmetrical Faults
Chapter 13 System Protection
Chapter 14 Power System Stability

Computer Engineering

Computer Organization & Architecture

INTERNATIONAL EDITION

NEW



COMPUTER ORGANIZATION AND EMBEDDED SYSTEMS 6th Edition

by V. Carl Hamacher, Queen's University; Zvonko Vranesic, University of Toronto; Safwat Zaky, University of Toronto, and Naraig Manjikian, Queen's University

2012 (January 2011) / Hardcover / 736 pages
ISBN: 9780073380650
ISBN: 9780071089005 [IE]

www.mhhe.com/hamacher

The sixth edition of this book covers the key topics in computer organization and embedded systems. It presents hardware design principles and shows how hardware design is influenced by the requirements of software. The book is suitable for undergraduate electrical and computer engineering majors and computer science specialists. It is intended for a first course in computer organization and embedded systems.

NEW TO THIS EDITION

❖ Four Popular Processors are represented in the book. While the main explanations are generic, Altera's Nios II, Freescale's ColdFire, ARM, and Intels IA-32 are covered in detail in separate appendices.

❖ More Coverage of Embedded Systems reflects the reality that many devices not thought of as computers do have computers in them. Microcontrollers and system-on-a-chip implementations are discussed and demonstrated.

❖ Graduated Difficulty Problems at the end of each chapter are classified as Easy, Medium, or Difficult. This allows instructors to easily assign problems based upon difficulty level.

CONTENTS

1 Basic Structure of Computers
2 Instruction Set Architecture
3 Basic Input/Output
4 Software
5 Basic Processing Unit
6 Pipelining
7 Input/output Organization
8 The Memory System
9 Arithmetic
10 Embedded Systems
11 System-On-A-Chip--A Case Study
Appendix A Logic Circuits
Appendix B The Altera Nios II Processor
Appendix C The ColdFire Processor
Appendix D The ARM Processor
Appendix E The Intel IA-32 Architecture

NEW

COMPUTER ARCHITECTURE
An Embedded Approach

by Ian Vince McLoughlin

2011 (January 2011) / Softcover / 544 pages
ISBN: 9780071311182

(An Asian Publication)

www.mheducation.asia/olc/mcloughlin

This textbook presents the subject of computer architecture in a modern light to match the needs of educational institutions and graduates for modern industry. The book reflects the fact that there are around 40 times as many embedded systems sold as desktop computers each year, and many more graduates will end up designing embedded systems hardware than will ever design a traditional desktop computer.

Without overlooking the historical perspective of computers, or the traditional topics in computer architecture, Computer Architecture: an embedded approach presents the subject in a readable and interesting format, and above all, provides the background and places emphasis on the increasingly important embedded systems that we all rely upon for our day-to-day living.

Whilst traditional computer engineering textbooks were fine resources for students needing to learn about computers, work on desktop or mainframe systems of the 1980s and 1990s, these older approaches are looking increasingly dated as technological progress marches on. Students of today tend to be more inspired by the iPod than by ENIAC, and working with such tiny, low power embedded devices is precisely what Computer Architecture: an embedded approach aims towards. This means that modern and interesting topics for embedded systems are included in this book. An embedded systems-relevant approach, this book addresses the needs of industry, inspires students in their studies, and interlinks with neighbouring electronics, computer engineering or computer science course within a typical curriculum. It is not just a computer architecture book with an extra chapter on embedded system, it looks at the computer architecture of today, which is built upon the foundation and history of bigger and older machines and drives toward greater levels of integration within embedded systems.

FEATURES

❖ A comprehensive textbook covering the main "Computer Architecture" sections of the IEEE Body of Knowledge in Computer Engineering.

❖ An embedded systems-relevant approach, the book includes topics that are current in industry, and issues and technologies that embedded systems engineers face these days, which is what industry increasingly demands and tomorrow's graduates will need to be conversant in. Some of these topics, which are not found in traditional texts, are:

1. Programming of memory in embedded systems, especially JTAG

2. Overlays and pages in code contexts

3. The different types of memory available, including parallel and serial flash (NOR/NAND)

4. Power supply issues, how clocking and system design relates to low power

5. System reset, testing and error checking (detection and correction)

6. General purpose I/O and pin configuration, especially in system-on-chip processors

7. Modern buses including I2C, SPI, LVDS etc... Evolved PC/104 systems

8. The use of memory management unit (MMU) in diskless embedded systems

9. Soft core processors – including an entire chapter in which we design and build our own

10. System-on-chip processors, application-specific ICs and field programmable gate arrays (FPGAs)

❖ Apart of the main items in the typical computer architecture theory curriculum relevant to embedded engineers, the book offers a wealth of practical information including the opportunity to build and test out a custom soft-core processor.

❖ Topics are placed into an academic framework that not only discusses the how and what, but also the why. Plenty of diagrams are given to explain tricky concepts and many explanatory boxes (containing extra worked examples, interesting snippets of information and additional explanations) are provided throughout to augment the main text.

❖ SI units are used throughout, including the newer "kibibyte" and "mebibyte" measures for computer memory.

❖ Each chapter ends with a set of 20 problems (with answers provided in the instructors' manual).

❖ Supplementary materials:

Solution manuals (with detail explanations to end-of-chapter problems in the textbook), powerpoint slides, diagrams, extra teaching material (including recommendations for further reading), ready-made laboratory sessions are available for instructors on the instructors' website. These supplement materials are available only to instructors using the textbook for their teaching purposes. Please contact your local McGraw-Hill sales representatives if you require further assistance.

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- *submit online at www.mheducation.asia*

Embedded Systems

EMBEDDED SYSTEMS
Architecture, Programming and Design
2nd Edition

by Raj Kamal, Devi Ahilya University, Indore

2008 / Softcover / 700 pages
ISBN: 9780070667648

McGraw-Hill India Title)

www.mhhe.com/kamal/emb2

This book, equally applicable for a CSE or ECE course, gives an extensive account of Embedded Systems, keeping a balanced coverage of hardware and software concepts. Adhering to syllabus needs, this title is 'microprocessor' and 'software design methodology' specific, giving due weightage to architecture, programming and design aspects.

CONTENTS

1. Introduction to The Embedded Systems
2. 8051 And Advanced Processor Architectures, Memory organization, and Real World Interfacing
3. Devices and Communication Buses For Devices Network
4. Device Drivers And Interrupts Servicing Mechanism
5. Programming Concepts And Embedded Programming In C, C++ and Java
6. Program Modeling Concepts In Single And Multiprocessor Systems Software-Development Process
7. Real Time Operating Systems- I: Inter Process Communication And Synchronization Of Processes, Task And Threads
8. Real Time Operating Systems
9. RTOS Programming--I: MicroC/OS-II and VxWorks
10. RTOS PROGRAMMING--II: Windows CE, OSEK, RTLinux and Others
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12. Design Examples And Case Studies Of Program Modeling And Programming With RTOS--1
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Advanced Computer Architecture

INTERNATIONAL EDITION

ADVANCED COMPUTER ARCHITECTURE PARALLELISM, SCALABILITY, PROGRAMMABILITY

by Kai Hwang, University of Southern California

1993 / 672 pages
ISBN: 9780071247139 [IE]

This book deals with advanced computer architecture and parallel programming techniques. The material is suitable for use as a textbook in a one-semester graduate or senior course, offered by Computer Science, Computer Engineering, Electrical Engineering, or Industrial Engineering programs.

CONTENTS

Part One•Theory of Parallelism
1 Parallel Computer Models
2 Program and Network Properties
3 Principles of Performance and Scalability
Part Two•Hardware Technologies
4 Processors and Memory Hierarchy
5 Bus/Cache and Shared-Memory
6 Pipelining and Superscalar Techniques
Part Three•Parallel and Scalable Architectures
7 Multiprocessors and Multi-computers
8 Multivector and SIMD Supercomputers
9 Scalable, Multithreaded, and Dataflow Architectures
Part Four•Software for Paralle Programming
10 Parallel Models, Languages and Compilers
11 Development of Parallel Programs
12 Unix Extensions for Parallel Computers
Bibliography

SCHAUM'S OUTLINE OF COMPUTER ARCHITECTURE

by Nick Carter, University of Illinois - Champaign

2002 / 304 pages
ISBN: 9780071362078

(A Schaum's Publication)

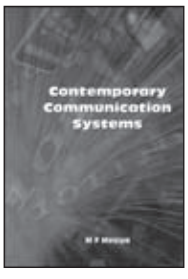
Schaum's Outline of Computer Architecture is intended for use as a problem-solved approach text in an undergraduate course called Computer Architecture, which is taken in the second to fourth years in Computer Science and Engineering Departments. The book follows the syllabus for this course. More advanced courses that this text could supplement include: Parallel Computer.

Networking and Communications

Communication Systems

INTERNATIONAL EDITION

NEW



CONTEMPORARY COMMUNICATION SYSTEMS

by M F Mesiya

2013 (January 2012) / Hardcover / 896 pages
ISBN: 9780073380360
ISBN: 9780071086615 [IE]

www.mhhe.com/mesiya

Contemporary Communication Systems provides a comprehensive introduction to analog and digital communication systems. In addition to a logical and easy-to-understand presentation of fundamental principles, the book engages students in the issues relevant to system and product implementation by integrating a discussion of theoretical concepts with extensive hands-on visual and simulation resources that reinforce learning. A unique feature of the book is sufficient coverage of important topics in digital communications including compression, multiplexing and synchronization techniques. The book also explores the impact of semiconductor revolution (Moore's law) and software technologies in the realization of modern digital communication systems.

FEATURES

❖ Simple, step-by-step presentation in sufficient detail to allow students to master the fundamental concepts in communication systems.

❖ The use of Simulink® as a key pedagogical tool to help students develop appreciation of theoretical models in the design and analysis of communication systems.

❖ Numerous examples, including MATLAB exercises, to reinforce the key concepts and mathematical results.

❖ Chapter introductions that preview the material covered in the chapter and its relevance in practice.

❖ Chapter summaries that reiterate the chapter's most important concepts.

❖ Historical sidebars that chronicle milestone events in the history of communication technologies and systems.

❖ Interviews with renowned contributors in the field of communications that should inspire and motivate students.

❖ References that point to more advanced materials.

❖ Extensive resources for instructors and students on the book's website including PowerPoint slides, additional worked out problems and MATLAB exercises, Simulink files for the problems in the book and student exercises.

CONTENTS

Chapter 1: Introduction
Chapter 2: Review of Signals and Linear Systems
Chapter 3: Simulation of Communication Systems Using MATLAB/ Simulink
Chapter 4: Amplitude Modulation (AM)
Chapter 5: Angle Modulation
Chapter 6: Probability and Random Processes
Chapter 7: Noise Performance of Analog Communication Systems
Chapter 8: Conversion of Analog Signals to Digital Format
Chapter 9: Digital Baseband Modulation
Chapter 10: Detection of Baseband Signals in Noise
Chapter 11: Transmission of Digital Information via Carrier Modulation
Chapter 12: Digital Signal Transmission Through Band-Limited Channels
Chapter 13: Digital Multiplexing and Synchronization
Chapter 14: Information Theory and Compression Techniques
Chapter 15: Channel Coding Techniques
Problems-Matlab Problems

NEW

ANALOG COMMUNICATION

by P. Ramakrishna Rao, Advisor, Raghu Engineering College, Visakhapatnam

2011 (May 2011) / Softcover / 488 pages
ISBN: 9780070704800
(McGraw-Hill India Title)

Analog Communication is a core subject for all Electronics and Communication Engineering students at the undergraduate level. The contents of the book are designed to cover the prescribed syllabus for a one-semester course on the subject of almost all Indian universities. The concepts in this book are explained thoroughly using simple and lucid language; mathematical analysis is used wherever necessary, and the results and their implications elucidated clearly. The book also reemphasizes the importance of our predominantly analog world steeped in digital technologies.

FEATURES

❖ Clear explanation of concepts in simple language and style using examples of practical systems

❖ Covers essentials of the pre-requisites like signals and systems as well as probability and random processes

❖ A full chapter devoted to coverage of transmitters and receivers

❖ In-depth coverage of Noise and Noise Performance of various analog communication systems, including analog pulse communication systems

❖ Inclusion of relevant MATLAB examples

❖ Rich Pedagogy

❖ 165 worked-out examples to reinforce the understanding of concepts and to illustrate the way the tools developed can be used for solving problems

❖ 150 problems to enable the student to apply the techniques learnt

❖ Over 190 Review Questions to test the student's understanding

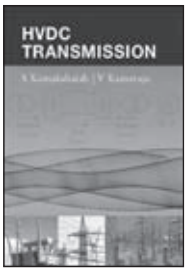
of the key concepts

❖ Over 360 Objective Questions and Multiple Choice Questions (with key) to drill in the concepts and tools

CONTENTS

Chapter 1. Introduction
Chapter 2. Signals, Transforms and Spectral Analysis
Chapter 3 . Signal Transmission through Systems
Chapter 4. Amplitude Modulation
Chapter 5. Angle Modulation
Chapter 6. AM and FM Transmitters and Receivers
Chapter 7. Probability and Random Processes
Chapter 8. Noise
Chapter 9. Noise Performance of AM & FM Systems
Chapter 10. Sampling and Analog Modulation
Appendices
Matlab Programs
Mathematical Formulae
Values of Useful Mathematical and Physical Constants
Hilbert Transform Pairs
Fourier Transform Pairs
Error Functions and Q- Functions

NEW



HVDC TRANSMISSION

by S Kamakshaiah, Professor of Electrical Engineering, JNTU Engineering College,Hyderabad, Andhra Pradesh, and V. Kamaraju, Formerly Principal and Professor of Electrical Engineering JNTU College of Engineering Kakinada, Andhra Pradesh

2011 (February 2011) / Softcover / 428 pages
ISBN: 9780071072533
(McGraw-Hill India Title)
www.mhhe.com/kamakshaiah/hvdct1

HVDC Transmission is a comprehensive text that facilitates in-depth study of HVDC transmission, including inception, working principles, advantages and disadvantages, and state-of-the-art HVDC transmission systems. Topics associated with DC transmission have been included, in detail, to support this study.

This text is useful for undergraduate students of electrical or electrical and electronics engineering, postgraduate students of the same subjects who have opted for an elective course on HVDC engineering, and field engineers and professionals connected with HVDC systems.

FEATURES

❖ Contents aligned as per the latest course in engineering colleges across India

❖ Details of HVDC projects implemented in India and abroad along with description and assessment of changing trends in power transmission, such as

❖ VSC converters being used to connect nonconventional energy sources

❖ Interaction of AC and DC systems

❖ Multiterminal HVDC systems

❖ FACTS controllers

❖ A dedicated chapter on Grounding and Ground Electrodes

❖ Pedagogy includes

- o 40 Worked Examples
- o 35 Problems
- o 125 Questions
- o 150 Multiple Choice Questions

CONTENTS

1. HVDC Transmission: Developments
2. HVDC Converters
3. 6-pulse Converter Operation and Analysis
4. Control of HVDC Converter and Systems
5. Harmonics in HVDC Systems
6. Harmonic Suppression in HVDC System—Filters
7. Grounding and Ground Electrodes for HVDC Systems
8. Faults and Protection Schemes in HVDC Systems
9. Overvoltages and Insulation Co-ordination for HVDC Systems
10. Multiterminal HVDC Systems
11. Parallel AC and DC Systems
Appendix: Some HVDC Projects implemented in India

INTERNATIONAL EDITION

COMMUNICATION SYSTEMS
5th Edition

by A. Bruce Carlson, Rensselaer Polytech Institute, Paul B. Crilly, University Of Tennessee-Knoxville, Janet Rutledge, University of Maryland at Baltimore

2010 (February 2009) / Hardcover / 944 pages
ISBN: 9780073380407
ISBN: 9780071263320 [IE]
www.mhhe.com/carlsoncrilly

This exciting revision of Communication Systems, a classic text in the communications field, presents an introduction to electrical communication systems, including analysis methods, design principles, and hardware considerations. The fifth edition has been updated to reflect current technology in this ever-evolving field.

The text covers both analog and digital communications. It features worked examples and exercises for students to solve within chapters, helping them to master new concepts as they are introduced.

CONTENTS

1 Introduction
2 Signals and Spectra
3 Signal Transmission and Filtering
4 Linear CW Modulation
5 Exponential CW Modulation
6 Sampling and Pulse Modulation
7 Analog Communication Systems
8 Probability and Random Variables
9 Random Signals and Noise
10 Noise in Analog Modulation Systems
11 Baseband Digital Transmission
12 Digitization Techniques for Analog Messages and Computer Networks
13 Channel Coding and Encryption
14 Bandpass Digital Transmission
15 Spread Spectrum Systems
16 Information and Detection Theory
Appendix: Circuit and System Noise

INTERNATIONAL EDITION

COMMUNICATION THEORY

by Thomas

2005 / Softcover
ISBN: 9780070590915 (Out-of-Print)
ISBN: 9780071278782 [IE]
(McGraw-Hill India Title)

CONTENTS

1 A Quick Review of Signal Analysis and Introduction to Modulation
2 Amplitude Modulation—Double-Sideband Suppressed-Carrier Modulation
3 Conventional Amplitude Modulation—Double-Sideband Full-Carrier Modulation
4 Single-Sideband Modulation and Vestigial-Sideband Modulation
5 Introduction to Angle Modulation
6 Generation and Detection of Angle-Modulated Signals
7 Random Variables and Random Processes
8 Effect of Noise on Amplitude Modulation System Performance
9 Effect of Noise on Angle Modulation System Performance
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Appendix 2 An Introduction to Radio Receivers
Appendix 3 Justification for Approximate Linear Analysis in FM Receivers
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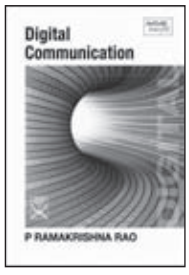
Digital Communications

NEW



DIGITAL COMMUNICATION

by P. Ramakrishna Rao, Advisor, Raghu Engineering College, Visakhapatnam

2011 (July 2011) / Softcover / 572 pages
ISBN: 9780070707764
(McGraw-Hill India Title)

Digital Communication is a core subject for all Electronics and Communication Engineering (ECE) students at the undergraduate level. The contents of the book are designed to cover the prescribed syllabus for a one-semester course on the subject as offered by Indian universities. This book adopts an approach best suited at the undergraduate level—concepts are explained thoroughly using simple and lucid language; mathematical analysis used wherever necessary and the results and their implications elucidated clearly. It provides an in-depth discussion of the various issues related to baseband and bandpass transmission and reception of digital signals, including source and channel coding.

FEATURES

- Clear explanation of concepts in simple language and style using examples of practical systems
- Covers essentials of the pre-requisites like signal-space concepts as well as probability and random processes
- Elaborate discussion on both baseband and bandpass signalling and effect of noise
- Transmission and reception of digital signals covered comprehensively
- Inclusion of relevant MATLAB examples

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Chapter 1: Introduction to Digital Communication
Chapter 2: Signals, Probability and Random Processes
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Chapter 4: Digital Baseband Signalling
Chapter 5: Bandpass Digital Signalling
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Chapter 7: Error - Control Coding
Chapter 8: Spread-Spectrum Systems
APPENDIX-A: MATLAB Programs
APPENDIX-B: Some useful Mathematical Formulae
APPENDIX-C: Fourier Transform Pairs
APPENDIX-D: Error Functions & Q- Function
APPENDIX-E: Constrained Optimization using Lagrange Multipliers

International edition

DIGITAL COMMUNICATIONS
5th Edition

by John Proakis, Northeastern University, and Massoud Salehi, Northeastern University

2008 (November 2007) / Hardcover / 1024 pages
ISBN: 9780072957167
ISBN: 9780071263788 [IE]

www.mhhe.com/proakis

Digital Communications is a classic book in the area that is designed to be used as a senior or graduate level text. The text is flexible and can easily be used in a one semester course or there is enough depth to cover two semesters. Its comprehensive nature makes it a great book for students to keep for reference in their professional careers.

This all-inclusive guide delivers an outstanding introduction to the analysis and design of digital communication systems. Includes expert coverage of new topics: Turbocodes, Turboequalization, Antenna Arrays, Digital Cellular Systems, and Iterative Detection. Convenient, sequential organization begins with a look at the history and classification of channel models and builds from there.

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Chapter 16: Multi-user Communications
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SCHAUM'S OUTLINE OF ANALOG AND DIGITAL COMMUNICATIONS
2nd Edition

by Hwei Hsu, Fairleigh Dickinson University

2003 / 336 pages / Softcover
ISBN: 9780071402286

(A Schaum's Publication)

This study guide acts as an excellent tutor in this subject. It offers clear explanations of the mathematics behind signal and linear system analysis, fully covering communications theory, and provides an introduction to information theory and coding. Also included are more than 400 solved problems and hundreds more with answers, so students can test themselves and track theor own progress as they master various concepts and their applications.

Electronic Communications

International edition

PRINCIPLES OF ELECTRONIC COMMUNICATION SYSTEMS
3rd Edition

by Louis E. Frenzel

2008 (January 2007) / Hardcover
ISBN: 9780073222783
ISBN: 9780071106078 [IE, with OLC]

(A Glencoe Title)

www.mhhe.com/frenzel3e

Principles of Electronic Communication Systems is designed for an introductory course in communication electronics for Electronics Technology and Electrical Engineering Technology students who have a background in basic electronics, algebra and trigonometry. The text covers current, state-of-the-art technologies used in all forms of modern electronic communications, using a systems approach to best reflect current industry practice. This edition contains greatly expanded and updated material on the Internet, cell phones and wireless technologies. Practical skills like testing and troubleshooting are included throughout the new edition. As before, Frenzel's book is notable for its readability, which is augmented by numerous four-color line drawings, photographs, examples and learning features. A brand-new Laboratory & Activities Manual provides both hands-on experiments and a variety of other activities, reflecting the variety of skills now needed in the electronic communications world. A new Online Learning Center web site is available, with a wealth of learning resources for students, and teaching materials for instructors.

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INTERNATIONAL EDITION

COMMUNICATION ELECTRONICS 3rd Edition

by Louis E Frenzel, Jr.,

2000 / 448 pages
ISBN: 9780028048376 (Out-of-Print)
ISBN: 9780071183048 [IE]

Communication Electronics 3/e is a comprehensive introduction to communication circuits and systems for students with a background in basic electronics. All of the chapters have been revised and updated to include the latest circuitry systems and applications.

CONTENTS

Introduction to Communication.
Amplitude Modulation and Single-Side Band.
Modulation. Amplitude Modulation Circuits.
Frequency Modulation.
Frequency Modulation Circuits.
Radio Transmitters. Communications Receivers.
Multiplexing. Antennas, Transmission Lines, and Radio Wave Propogation.
Microwave Techniques.
Introduction to Satellite Communications.
Data Communication.
Fiber-Optic Telecommunica-tions.
Television.
The Telephone Systems and its Applications.

INTERNATIONAL EDITION

ELECTRONIC COMMUNICATION
6th Edition

by Robert L Shrader

1993 / 864 pages
ISBN: 9780070571570 (Out of Print)
ISBN: 9780071136655 [IE]

Electronic Communication has been one of the most popular textbooks in its field for many years. This expanded Sixth Edition utilizes the same user friendly format to prepare students for the operation, installation, and maintenance of most modern electronic and radio communication systems. Performance objectives have been added to each chapter to guide student focus. Electronic Communication provides information on the interrelationship of voltage, current, resistance, inductance, and capacitance as well as discussions of various active devices currently in use. While the text emphasizes semiconductor devices and circuitry, it still retains an adequate amount of vacuum tube theory. In addition, this edition features up-to-date coverage of digital communications and fiber optics, topics that are critical to the skills development of today's communication student. To reinforce understanding of subjects just covered, check-up quizzes are inserted every few pages in most chapters, with answers on the next turned page. End-of-chapter questions, which include number references to the section or figure where the answer can be found, check comprehension of the entire chapter's material. Bold letters prefixing many end-of-chapter questions indicate that a similar question may appear in one of the specific certification license tests.

CONTENTS

Current, Voltage, and Resistance
Direct-Current Circuits
Magnetism.
Alternating Current
Inductance and Transformers
Capacitance
Alternating-Current Circuits
Resonance and LC Filters
Active Devices
Power Supplies
Oscillators
Digital Fundamentals
Measuring Devices
Audio-Frequency Amplifiers
Radio-Frequency Amplifiers
Basic Trans-mitters
Amplitude Modulation and SSB
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Two-Way Communications
Microwaves
Fiber Optics
Broadcast Stations
Television
Maritime Radio
Radar
Sources of Electricity
Operating Fundamentals

Fiber Optic Communications

INTERNATIONAL EDITION

OPTICAL FIBER COMMUNICATIONS
4th Edition

by Gerd Keiser, Boston University & National Taiwan University of Science & Technology

2008 (October 2007) / Softcover / 580 pages
ISBN: 9780071088084 [IE]
(McGraw-Hill India Title)

www.mhhe.com/keiser/ofc4e

This book on Optical Fiber Communication presents the fundamental principles for understanding and applying optical fiber technology to sophisticated modern telecommunication system.

CONTENTS

Chapter 1 Overview of Optical Fiber Communications
Chapter 2 Optical Fibers: Structures, Waveguiding, and Fabrication
Chapter 3 Attenuation and Dispersion
Chapter 4 Optical Sources
Chapter 5 Power Launching and Coupling
Chapter 6 Photodetectors
Chapter 7 Optical Receiver Operation
Chapter 8 Digital Links
Chapter 9 Analog Links
Chapter 10 WDM Concepts and Components
Chapter 11 Optical Amplifiers
Chapter 12 Non-linear Effect
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Appendix A International System of Units
Appendix B Useful Mathematical Relations
Appendix C Bessel Functions
Appendix D Decibels
Appendix E Acronyms
Appendix F List of Important Roman Symbols
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OPTICAL FIBER COMMUNICATIONS
4th Edition

by Gerd Keiser, Boston University & National Taiwan University of Science & Technology

2011 (September 2010) / Hardcover / 688 pages
ISBN: 9780073380711 [US Edition]

www.mhhe.com/KeiserOFC

The fourth edition of this popular text and reference book presents the fundamental principles for understanding and applying optical fiber technology to sophisticated modern telecommunication systems.

Optical-fiber-based telecommunication networks have become a major information-transmission-system, with high capacity links encircling the globe in both terrestrial and undersea installations. Numerous passive and active optical devices within these links perform complex transmission and networking functions in the optical domain, such as signal amplification, restoration, routing, and switching. Along with the need to understand the functions of these devices comes the necessity to measure both component and network performance, and to model and stimulate the complex behavior of reliable high-capacity networks.

CONTENTS

Chapter 1 Overview of Optical Fiber Communications
Chapter 2 Optical Fibers: Structures, Waveguiding, and Fabrication
Chapter 3 Attenuation and Dispersion
Chapter 4 Optical Sources
Chapter 5 Power Launching and Coupling
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Appendix E Acronyms
Appendix F List of Important Roman Symbols
Appendix G List of Important Greek Symbols

Wireless Communications

WIRELESS COMMUNICATIONS

by Singal T L, Professor, Department of Electronics & Communication Engineering, Chitkara Institute of Engineering & Technology, Rajpura, Punjab

2010 (February 2010) / Softcover / 680 pages
ISBN: 9780070681781
(McGraw-Hill India Title)

www.mhhe.com/singal/wc

The book presents detailed understanding on fundamentals of Wireless Communication. The topics are written in simple language covering important aspects of wireless communication and networks. Emerging trends like WLAN, Bluetooth, Fixed Broadband and Wireless WAN communications are aptly covered. Technical concepts which are at the core of design, planning and evaluation of wireless communication are presented in detail. The mathematical derivations are given in step by step manner for easy understanding. The book has excellent pedagogy with numerous solved examples and practice questions. Plenty of short answer type questions and objective type questions are included in the text extensively for exam preparation. Some real life figures of wireless devices are also provided in the book to invoke student's interest.

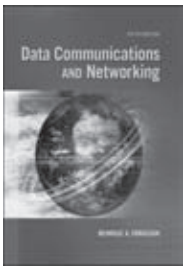
CONTENTS

1. Evolution of Wireless Communication System
2. Mobile Communication Engineering
3. The Propagation Models
4. Principles of Cellular Communication
5. Cellular Antenna Design Considerations
6. Frequency Management and Channel Assignment
7. Cellular System Design & Modulation Techniques
8. Multiple Access Techniques
9. Basic Cellular Systems
10. Wireless Communication Systems
11. Global System for Mobile (GSM)
12. CDMA Digital Cellular Standards (IS-95)
13. 3G Digital Cellular Technology
14. Emerging Wireless Network Technologies

Computer Networks

GLOBAL EDITION

NEW



DATA COMMUNICATIONS AND NETWORKING
5th Edition

by Behrouz A. Forouzan, Deanza College

2013 (February 2012) / Hardcover / 1184 pages
ISBN: 9780073376226
ISBN: 9780071326285 [GE]

www.mhhe.com/forouzan

Data Communications and Networking is designed to help students understand the basics of data communications and networking, and the protocols used in the Internet in particular by using the protocol layering of the Internet and TCP/IP protocol suite. Technologies related to data communication and networking may be the fastest growing in today's culture. The appearance of some new social networking applications is a testimony to this claim. In this Internet-oriented society, specialists need to be trained to run and manage the Internet, part of the Internet, or an organization's network that is connected to the Internet. As both the number and types of students are increasing, it is essential to have a textbook that provides coverage of the latest advances, while presenting the material in a way that is accessible to students with little or no background in the field.

Using a bottom-up approach, Data Communications and Networking presents this highly technical subject matter without relying on complex formulas by using a strong pedagogical approach supported by more than 830 figures. Now in its Fifth Edition, this textbook brings the beginning student right to the forefront of the latest advances in the field, while presenting the fundamentals in a clear, straightforward manner. Students will find better coverage, improved figures and better explanations on cutting-edge material. The "bottom-up" approach allows instructors to cover the material in one course, rather than having separate courses on data communications and networking.

NEW TO THIS EDITION

❖ Changes is the End-of-Chapter Materials. Lab assignments have been added to some chapters. Applets have been posted in the book website to allow students to see some problems and protocols in action.

CONTENTS

Part I: Overview
Chapter 1 Introduction
Chapter 2 Network Models
Part 2: Physical Layer
Chapter 3 Introduction to Physical Layer
Chapter 4 Digital Transmission
Chapter 5 Analog Transmission
Chapter 6 Bandwidth Utilization: Multiplexing and Spreading Chapter 7 Transmission Media
Chapter 8 Switching
Part 3: Data Link Layer
Chapter 9 Introduction to Data-Link Layer
Chapter 10 Error Detection and Correction
Chapter 11 Data Link Control (DLC)
Chapter 12 Media Access Control (MAC)
Chapter 13 Wired LANs: Ethernet
Chapter 14 Other Wired Networks
Chapter 15 Wireless LANs
Chapter 16 Other Wireless Networks
Chapter 17 Connecting Devices and Virtual LANs
Part 4: Network Layer
Chapter 18 Introduction to Network Layer
Chapter 19 Network-Layer Protocols
Chapter 20 Unicast Routing
Chapter 21 Multicast Routing
Chapter 22 Next Generation IP
Part 5: Transport Layer
Chapter 23 Introduction to Transport Layer
Chapter 24 Internet Transport-Layer Protocols
Part 6: Application Layer
Chapter 25 Introduction to Application Layer
Chapter 26 Standard Client-Server Protocols
Chapter 27 Network Management
Chapter 28 Multimedia
Chapter 29 Peer-to-Peer Paradigm
Part 7: Topics Related to All Layers
Chapter 30 Quality of Service
Chapter 31 Cryptography and Network Security
Chapter 32 Internet Security
Appendices
Appendix A Unicode
Appendix B Positioning Numbering System
Appendix C HTML, CSS, XML, and XSL
Appendix D A Touch of Probability
Appendix E Mathematical Review
Appendix F Miscellaneous Information
Appendix G 8B/6T Code
Appendix H Telephone History

All Global Editions are adapted to better meet the needs of courses outside the United States. Please contact your local sales representative for more details.

INTERNATIONAL EDITION

DATA COMMUNICATIONS NETWORKING
4th Edition

By Behrouz A. Forouzan, Deanza College

2007 / Hardcover
ISBN: 9780073250328
ISBN: 9780071254427 [IE]

www.mhhe.com/forouzan

As one of the fastest growing technologies in our culture today, data communications and networking presents a unique challenge for instructors. As both the number and types of students are increasing, it is essential to have a textbook that provides coverage of the latest advances, while presenting the material in a way that is accessible to students with little or no background in the field. Using a bottom-up approach, Data Communications and Networking presents this highly technical subject matter without relying on complex formulas by using a strong pedagogical approach supported by more than 700 figures.

Now in its Fourth Edition, this textbook brings the beginning student right to the forefront of the latest advances in the field, while presenting the fundamentals in a clear, straightforward manner. Students will find better coverage, improved figures and better explanations on cutting-edge material. The "bottom-up" approach allows instructors to cover the material in one course, rather than having separate courses on data communications and networking.

CONTENTS

Part 1 Overview of Data Communications and Networking.
1 Introduction
2 Network Models
Part 2 Physical Layer
3 Signals
4 Digital Transmission
5 Analog Transmission
6 Multiplexing
7 Transmission Media
8 Circuit Switching and Telephone Network
9 High-Speed Digital Access: DSL, Cable Modems, and SONET
Part 3 Data Link Layer
10 Error Detection and Correction
11 Data Link Control and Protocols
12 Point-to-Point Access: PPP
13 Multiple Access
14 Local Area Networks: Ethernet
15 Wireless LANs
16 Connecting LANs, Backbone Networks, and Virtual LANs
17 Cellular Telephone and Satellite Networks
18 Virtual Circuit Switching: Frame Relay and ATM
Part 4 Network Layer
19 Host-to-Host Delivery: Internetworking, Addressing, and Routing
20 Network Layer Protocols: ARP, IPv4, ICMP, IPv6, and ICMPv6
21 Unicast and Multicast Routing: Routing Protocols
Part 5 Transport Layer.
22 Process-to-Process Delivery: UDP and TCP
23 Congestion Control and Quality of Service.
Part 6 Application Layer
24 Client-Server Model: Socket Interface
25 Domain Name System (DNS)
26 Electronic Mail (SMTP) and File Transfer (FTP) 27 HTTP and WWW 28 Multimedia
Part 7 Security
29 Cryptography
30 Message Security, User Authentication, and Key Management
31 Security Protocols in the Internet
Appendix A ASCII Code.
Appendix B Numbering Systems and Transformation.
Appendix C The OSI Model
Appendix D 8B/6T Code.
Appendix E Checksum Calculation.
Appendix F Structure of a Router.
Appendix G ATM LANs.
Appendix H Client-Server Programs.
Appendix I RFCs. Appendix J UDP and TCP Ports.
Appendix K Contact Addresses

INTERNATIONAL EDITION

COMMUNICATION NETWORK
2nd Edition

by Alberto Leon-Garcia, University of Toronto and Indra Widjaja

2004 / 848 pages
ISBN: 9780072463521
ISBN: 9780071257091 [IE]

http://highered.mcgraw-hill.com/sites/007246352X

This book is designed for introductory one-semester or one-year courses in communications networks in upper-level undergraduate programs. The second half of the book can be used in more advanced courses. As pre-requisites the book assumes a general knowledge of computer systems and programming, and elementary calculus. The second edition expands on the success of the first edition by updating on technological changes in networks and responding to comprehensive market feedback.

CONTENTS

Preface. 1 Communication Networks and Services.
2 Application and Layered Architectures.
3 Digital Transmission Fundamentals.
4 Transmission Systems and Circuit Switching Networks.
5 ARQ and Flow Control.
6 Local Area Networks and Medium Access Control.
7 Packet-Switching Networks.
8 TCP/IP.
9 ATM Networks.
10 Advanced Network Architectures.
11 Network Security.
12 Multi-Media Information and Networking.
Epilogue.
Appendixes.
A Delay and Loss Performance.
B Network Management

Local Area Networks

INTERNATIONAL EDITION

LOCAL AREA NETWORKS WITH CD-ROM
2nd Edition

by Gerd Keiser, PhotonicsComm Solutions, Inc.

2002 / 552 pages / Hardcover
ISBN: 9780071226509 [IE with CD-ROM]

www.mhhe.com/engcs/electrical/keiser2

The second edition of Keiser's Local Area Networks has been updated extensively with the latest LANs technology. The book has been written with the purpose of providing the basic material for an introductory senior or first-year graduate course in the analysis and modeling of local area networks. The book will also serve as a working reference for practicing engineers dealing with local area network design and applications. The book is organized to give a clear and logical sequence of key LAN topics.

CONTENTS

1 Overview of LANs.
2 Network Architectures and Protocols.
3 Data Communication Concepts.
4 LAN Access Techniques.
5 Ethernet.
6 Token-Passing LANs.
7 ATM LANs.
8 Wireless LANs.
9 Fibre Channel and SANSs.
10 Internetworking.
11 Network Management.
12 Network Security

Circuits and Networks

CIRCUITS AND NETWORKS
4th Edition

by A Sudhakar, and Shyammohan S Palli

May 2010 / Softcover / 972 pages
ISBN: 9780070699724

(A McGraw-Hill India Title)

Designed for the course on circuit analysis and synthesis, this book enables the student to have a firm grasp on the basic principles of electric circuits. It lays emphasis on the basic laws, theorems and techniques of analysis which helps to develop the ability to design practical circuits that perform the desired operations.

CONTENTS

1. Circuit Elements and Kirchoff's Laws
2. Methods of Analyzing Circuits
3. Useful Theorems in Circuit Analysis
4. Introduction to Alternating Currents and Voltages
5. Complex Impedance
6. Power and Power Factor
7. Steady State AC Analysis
8. Resonance
9. Polyphase Circuits
10. Coupled Circuits
11. Transients
12. Fourier Method of Waveform Analysis
13. Introduction to the Laplace Transform
14. Application of the Laplace Transform in Circuit Analysis
15. S-Domain Analysis
16. Two-Port Networks
17. Filters and Attenuators
18. Elements of Realizability and Synthesis of One-Port Networks
19. An introduction to PSpice

NETWORK ANALYSIS & SYNTHESIS

by S P. Ghosh, Department of Electrical Engineering, College of Engineering & Management Kolaghat, West Bengal, and A. K. Chakraborty , College of Engineering and Management, Kolaghat, West Bengal

2009 / Softcover
ISBN: 9780070144781

(A McGraw-Hill India Title)

This text is designed to provide an easy understanding of the subject with the brief theory and large pool of problems which helps the students hone their problem-solving skills and develop an intuitive grasp of the contents. Covering analysis and synthesis of networks, this text also gives an account on PSPICE and its applications in circuits and networks.

CONTENTS

Chapter 1. Introduction to Different Types of Systems
Chapter 2. Introduction to Circuit-Theory Concepts
Chapter 3. Network Topology (Graph Theory)
Chapter 4. Network Theorems
Chapter 5. Laplace Transform and Its Applications
Chapter 6. Two-Port Network
Chapter 7. Fourier Series and Fourier Transform
Chapter 8. Sinusoidal Steady State Analysis
Chapter 9. Magnetically Coupled Circuits
Chapter 10. Three Phase Circuits
Chapter 11. Resonance
Chapter 12. Network Functions and Their Time-Domain and Frequency-Domain Response
Chapter 13. Elements of Realizability and Network Synthesis
Chapter 14. Operational Amplifier and Active Filter

Chapter 15. Introduction To Software SPICE
Chapter 16. Indefinite Admittance Matrix (IAM)
Chapter 17. Symmetrical Components

Signals and Systems

Signals and Systems

INTERNATIONAL EDITION

NEW

SIGNALS AND SYSTEMS Analysis Using Transform Methods & MATLAB 2nd Edition

by M.J. Roberts, University Of Tennessee-Knoxville

2012 (February 2011) / Hardcover / 816 pages
ISBN: 9780073380681
ISBN: 9780071086738 [IE]

www.mhhe.com/roberts

The second edition of Signals and Systems: Analysis Using Transform Methods and MATLAB® has been extensively updated while retaining the emphasis on fundamental applications and theory that has been the hallmark of this popular text. The text includes a wealth of exercises, including drill exercises, and more challenging conceptual problems. The book is intended to cover a two-semester course sequence in the basics of signals and systems analysis during the junior or senior year.

NEW TO THIS EDITION

❖ Increased emphasis of the Discrete Fourier Transform to approximate other types of transforms and some common signal-processing techniques using numerical methods.

❖ Revised Organization in this edition streamlines the presentation and adds extra emphasis on these topics:

❖ Frequency Response Analysis

❖ Communication System Analysis

❖ Filter Analysis and Design

❖ State-Space Analysis

❖ More End of Chapter Problems in this edition. More than 500 exercises, including drill exercises with answers, and more challenging problems without answers are featured throughout the text.

❖ COSMOS is an online solutions manual organization system. It has all the exercises and solutions available in an online tool that will help professors easily build assignments. Learn more: http://cosmos.mhhe.com

FEATURES

❖ Increased Coverage of Mathematical Models Mathematical models of systems, the bilateral Laplace and z transforms, and many more topics are more prominent and thoroughly explored.

❖ Modular and Flexible Approach allows the professor to focus on either continuous or discrete-time coverage.

❖ Companion Website contains solutions, pdf files of figures, concept simulations, PPT lecture slides, and more.

❖ Extensive MATLAB Examples and a comprehensive appendix on the important MATLAB operations and functions used in signal and system analysis.

CONTENTS

Chapter 1 Introduction
Chapter 2 Mathematical Description of Continuous-Time Signals
Chapter 3 Discrete-Time Signal Description
Chapter 4 Description of Systems
Chapter 5 Time-Domain System Analysis
Chapter 6 Continuous-Time Fourier Methods
Chapter 7 Discrete-Time Fourier Methods
Chapter 8 The Laplace Transform
Chapter 9 The z Transform
Chapter 10 Sampling and Signal Processing
Chapter 11 Frequency Response Analysis
Chapter 12 Communication System Analysis
Chapter 13 Laplace System Analysis
Chapter 14 z-Transform System Analysis
Chapter 15 Filter Analysis and Design
Chapter 16 State-Space Analysis
Appendices
A-Useful Mathematical Relations
B-CTFS Pairs
C-DFT Pairs
D-CTFT Pairs
E-DTFT Pairs
F-Laplace Transform
G-z Transform

SIGNALS AND SYSTEMS

by A Nagoorkani, RBA Educational Group Chennai

2010 (March 2010) / Softcover / 768 pages
ISBN: 9780070151390

(McGraw-Hill India Title)

Designed for the undergraduate course on Signals and Systems, this text provides a comprehensive overview of fundamental concepts and their practical implications. Supported by crisp and concise theory, plethora of numerical problems and MATLAB exercises, this book helps reader learn this important subject in the easiest manner.

CONTENTS

1. Introduction
2. Continuous Time Signals & Systems
3. Laplace Transform
4. Fourier Series and Fourier transform of Analog Signals
5. State Space Analysis of Continuous Time Systems
6. Discrete Time Signals and Systems
7. Z Transform
8. Fourier Series and Fourier Transform of Discrete Time Signals
9. Discrete Fourier Transform & Fast Fourier Transform
10. Structures for Realization of IIR & FIR Systems
11. State Space Analysis of Discrete Time Systems

SIGNALS & SYSTEMS
2nd Edition

by I J. Nagrath, Adjunct professor, BITS, Professor of Electrical Engineering & Deputy , Director (Retd.) BITS Pilani

2009 / Softcover / 656 pages
ISBN: 9780070141094
(McGraw-Hill India Title)

www.mhhe.com/nagrath/ss2e

This thoroughly revised and updated edition provides a comprehensive treatment of continuous and discrete-time signals and linear-time invariant systems.

CONTENTS

Chapter 1. Introduction to Signals and Systems
Chapter 2. Analysis of Continuous-Time Systems Time Domain and Frequency Domain
Chapter 3. Analysis of LTI Discrete-Time Systems Time Domain and Frequency Domain
Chapter 4. Discrete Fourier Transform and Fast Fourier Transform
Chapter 5. Sampling
Chapter 6. Transformed Networks; Frequency Response and Topological Models
Chapter 7. State Space Analysis
Chapter 8. Stability Analysis of LTI Systems
Chapter 9. Analog and Digital Filter Design
Chapter 10. Matlab Tools for Design and Analysis of Digital Filters

SIGNALS AND SYSTEMS
2nd Edition

by S Poornachandra, RMD Engineering College, and B Sasikala, Crescent Engineering College, Chennai

July 2009 / Softcover / 564 pages
ISBN: 9780070672857
(McGraw-Hill India Title)

The understanding of Signals and Systems is a pre-requisite to learning Digital Signal Processing and Communication Systems. This book, designed as a fundamental textbook on the subject, has its emphasis on clear concepts and appropriate solved examples and problems. Now in its second edition, the book provides detailed coverage of topics like FFT, Structure Realization and State Variables.

CONTENTS

1. Signals
2. Systems
3. Continuous-time Linear Time-invariant (LTI) System
4. Discrete-time Linear Time-invariant (LTI) Systems
5. Continuous-time Fourier Series
6. Discrete-time Fourier Series
7. Continuous-time Fourier Transform
8. Discrete-time Fourier Transform
9. Discrete Fourier Transform and Fast Fourier Transform
10. Laplace Transform
11. Z-Transform
12. Structure Realization
13. State Variables
14. Sampling Theorem

INTERNATIONAL EDITION

FUNDAMENTALS SIGNALS SYSTEMS

by M.J. Roberts, University Of Tennessee-Knoxville

2008 (January 2007) / Hardcover / 800 pages
ISBN: 9780073309507 (with Bind-in card)
ISBN: 9780071259378 [IE]

http://highered.mcgraw-hill.com/sites/0073404543

As in most areas of science and engineering, the most important and useful theories are the ones that capture the essence, and therefore the beauty, of physical phenomena. This is true of signals and systems. Signals and Systems: Analysis Using Transform Methods and MATLAB captures the mathematical beauty of signals and systems and offers a student-centered, pedagogically driven approach. The author has a clear understanding of the issues students face in learning the material and does a superior job of addressing these issues. The book is intended to cover a one-semester sequence in Signals and Systems for juniors in engineering. This text is created in modular format, so instructors can select chapters within the framework that they teach this course.

CONTENTS

1 Introduction.
2 Mathematical Description of Continuous-Time Signals.
3 Mathematical Description of Discrete-Time Signals.
4 Properties of Continuous-Time Systems.
5 Properties of Discrete-Time Systems.
6 Time-Domain Analysis of Continuous-Time Systems.
7 Time-Domain Analysis of Discrete-Time Systems
8 The Continuous-Time Fourier Series.
9 The Discrete-Time Fourier Series.
10 The Continuous-Time Fourier Transform.
11 The Discrete-Time Fourier Transform
12 Continuous-Time Fourier Transform Analysis of Signals and Systems.
13 Discrete-Time Fourier Transform Analysis of Signals and Systems.
14 Sampling and the Discrete Fourier Transform.
15 The Laplace Transform.
16 The z Transform
Appendix A: Useful Mathematical Relations.
Appendix B: The Continuous-Time Fourier Series Pairs.
Appendix C: Discrete-Time Fourier Series Pairs.
Appendix D: Continuous-Time Fourier Transform Pairs.
Appendix E: Discrete-Time Fourier Transform Pairs.
Appendix F: Laplace Transform Pairs.
Appendix G: z Transform Pairs.

SCHAUM'S OUTLINE OF SIGNALS AND SYSTEMS
2nd Edition

by Hwei Hsu, Fairleigh Dickinson University

2011 (August 2010) / 480 pages / Softcover
ISBN: 9780071634724

(A Schaum's Publications)

Modified to conform to the current curriculum, Schaum's Outline of Signals and Systems complements these courses in scope and sequence to help you understand its basic concepts. The book offers practice on topics such as transform techniques for the analysis of LTI systems, the LaPlace transform and its application to continuous-time and discrete-time LTI systems, Fourier analysis of signals and systems, and the state space or state variable concept and analysis for both discrete-time and continuous-time systems. Appropriate for the following courses: Basic Circuit Analysis, Electrical Circuits, Electrical Engineering and Circuit Analysis, Introduction to Circuit Analysis, AC and DC Circuits.

CONTENTS

1. Signals and Systems
2. Linear Time-Invariant Systems
3. LaPlace Transform and Continuous-Time LTI Systems
4. The z-Transform and Discrete-Time LTI Systems
5. Fourier Analysis of Continuous-Time Signals and Systems
6. Fourier Analysis of Discrete-Time
7. State Space Analysis
8. Review of Matrix Theory
9. Properties of Linear Time-Invariant Systems and Various Transforms
10. Review of Complex Numbers
11. Useful Mathematical Formulas

Digital Signal Processing

NEW

DIGITAL SIGNAL PROCESSING
2nd Edition

by Salivahanan, S. S S N College of Engineering, Chennai, Vallavaraj, A. Caledonian College of Engineering, Sultanate of Oman, and Gnanapriya, C., Infosys Technologies Limited, Bangalore

2011 (April 2011) / Softcover / 936 pages
ISBN: 9780071329149

(McGraw-Hill India Title)

www.mhhe.com/salivahanan/dsp2e

This text helps students develop an understanding of digital signal processing concepts. Throughout the text, the exposition of topics is delivered in a simple way. The key topics of Digital Filter design (FIR & IIR Filters) and Fourier Transforms (DFT & FFT) are clearly defined and explained for easy learning. Important topics like Z transforms, Multirate Digital Signal Processing and DSP Applications are given due weight age. The topic of DSP Processors is added in the book for better coverage. Numerous solved examples and practice questions appear throughout the book for students to self assess their progress.

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1. Classification of Signals & Systems
2. Fourier Analysis of Periodic and Aperiodic Continuous Time Signals & Systems
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7. Finite Impulse Response (FIR) Filters
8. Infinite Impulse Response (IIR) Filters
9. Realisation of Digital Linear Systems
10. Effects of Finite Word Length in Digital Filters
11. Multirate Digital Signal Processing
12. Multirate Digital Signal Processing
13. Spectral Estimation
14. Adaptive Filters
15. Applications of Digital Signal Processing
16. DSP Processors
17. MATLAB Programs

INTERNATIONAL EDITION

DIGITAL SIGNAL PROCESSING WITH STUDENT CD ROM
4th Edition

by Sanjit K. Mitra, University Of California-Santa Barbara

2011 (September 2010) / Hardcover
ISBN: 9780077366766
ISBN: 9780071289467 [IE]

www.mhhe.com/mitra

Based on Sanjit Mitra's extensive teaching and research experience, Digital Signal Processing, A Computer Based Approach, fourth edition, is written with the reader in mind. A key feature of this book is the extensive use of MATLAB-based examples that illustrate the program's powerful capability to solve signal processing problems. The book is intended for a course on digital signal processing for seniors or first-year graduate students. This highly popular book introduces the tools used in the analysis and design of discrete-time systems for signal processing. A number of changes have been made to the book's content, based on reviewer and student comments.

CONTENTS

1 Signals and Signal Processing
2 Discrete-Time Signals in the Time Domain
3 Discrete-Time Signals in the Frequency Domain
4 Discrete-Time Systems
5 Finite-Length Discrete Transforms
6 z-Transform
7 LTI Discrete-Time Systems in the Transform Domain
8 Digital Filter Structures
9 IIR Digital Filter Design
10 FIR Digital Filter Design
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12 Analysis of Finite Wordlength Effects
13 Multirate Digital Signal Processing Fundamentals
14 Multirate Filter Banks and Wavelets
Appendix A: Analog Lowpass Filter Design
Appendix B: Design of Analog Highpass, Bandpass, and Bandstop Filters
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DIGITAL SIGNAL PROCESSORS: ARCHITECTURE, PROGRAMMING AND APPLICATIONS
2nd Edition

by B. Venkataramani, and M. Bhaskar, Regional Engineering College, Tiruchirappalli, India

2010 (July 2010) / Softcover / 570 pages
ISBN: 9780070702561

(McGraw-Hill India Title)

www.mhhe.com/venkataramani/dsp2

The text provides a thorough understanding of the architecture and programming of Digital Signal Processors. It blends the concepts of digital signal processing with its applications on systems using digital signal processors. This revised edition offers an enhanced coverage of TMS320C6X series of processors and FPGA based system design-emerging trends of Digital Signal Processors.

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1. An Overview of Digital Signal Processing and Its Applications
2. Introduction to Programmable DSPs
3. Architecture of TMS320C5X
4. TMS320C5X Assemble Language Instructions
5. Instruction Pipelining in C5X
6. Applications Programs in C5X
7. Architecture of TMS320C3X
8. Addressing Modes and Assembly Language Instructions of C3X
9. Application Programs in C3X
10. An Overview of TMS320C54X
11. TMS320C54X Assembly Language Instructions
12. Application Programs in C54X
13. Architecture of TMS320C6X
14. TMS320C6X Assembly Language Instructions
15. TMS320C6X Application Programs & Peripherals
16. Architecture of TMS320C55X Processors
17. Recent Trends in DSP System Design
18. FPGAs in Telecommunication Applications

DIGITAL SIGNAL PROCESSING
2nd Edition

by S Poornachandra, RMD Engineering College, and B Sasikala
Crescent Engineering College, Chennai

July 2009 / Softcover with CD / 792 pages
ISBN: 9780070672796

(McGraw-Hill India Title)

Designed for a first course in digital signal processing, this book covers major topics like Discrete Fourier Transform Fast Fourier Transform), design of digital filters, effect of finite word length and multirate signal processing. Written in a clear style, the book provides lot of solved problems, illustrations and flow graphs that will facilitate easy learning of the subject.

CONTENTS

1. Introduction to Digital Signal Processing
2. Introduction to Signals and Systems
3. Linear Time Invariant Systems
4. Fourier Series
5. Fourier Transforms
6. Z-Transforms
7. Finite Impulse Response (FIR) Filter
8. Infinite Impulse Response (IIR) Filter
9. Analysis of Finite Word Length Effect
10. Random Signal Processing
11. Multirate Digital Signal Processing
12. Introduction to Speech Processing
13. Digital Signal Processors

INTERNATIONAL EDITION

DIGITAL SIGNAL PROCESSING

by Charles A Schuler, and Mahesh Chugani

2005 / 352 pages
ISBN: 9780078297441
ISBN: 9780071113311 [IE]
(A Glencoe/McGraw-Hill Title)

www.mhhe.com/dsp

This new book is intended for two-year and four-year electronics students, as well as industry practitioners who need to learn about applied Digital Signal Processing. The text has a very practical "hands-on" approach, appropriate for those students who will apply and troubleshoot modern electronic systems. The authors present critical ideas and then apply them to real-world technician work via software simulations and examples. These activities will clearly illustrate core concepts to increase understanding and aid retention. The CD-ROM included with the text contains five programs that support the hands-on activities. Three of the programs were specially prepared for beginners just learning DSP; two present demo versions of professional software used by DSP designers.

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Chapter 2 Converting Analog Signals to Digital Signals.
Chapter 3 Correlation and Convolution.
Chapter 4 Periodic Functions and Fourier Synthesis.
Chapter 5 Discrete Fourier Transform.
Chapter 6 Windows.
Chapter 7 Digital Filters.
Chapter 8 Practical Implementation of Filters.
Chapter 9 Digital Signal Processing Systems.
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SCHAUMS OUTLINE OF DIGITAL SIGNAL PROCESSING
2nd Edition

by Monson H. Hayes, Professor of Electrical and Computer Engineering, Georgia Institute of Technology in Atlanta, Georgia

2012 (September 2011) / Softcover / 456 pages
ISBN: 9780071635097
(A Schaum's Publication)

Schaum's Outline of Digital Signal Processing mirrors the standard course in scope and sequence. It helps students understand basic concepts and offers problem-solving practice in topics such as the discrete-time Fourier transform, sampling continuous-time signals, aliasing, the z-Transform, and the design and implementation of discrete-time systems.

Digital Image Processing

DIGITAL IMAGE PROCESSING USING MATLAB
2nd Edition

by Rafael C. Gonzalez, Richard E. Woods and Steven L. Eddins

2010 (September 2010) / Softcover / 760 pages
ISBN: 9780071084789
(An Asian Publication)

Digital Image Processing Using MATLAB® is the first book to offer a balanced treatment of image processing fundamentals and the software principles used in their implementation. The book integrates material from the leading text, Digital Image Processing by Gonzalez and Woods, and the Image Processing Toolbox from The MathWorks, Inc., a leader in scientific computing. The Image Processing Toolbox provides a stable, well-supported software environment for addressing a broad range of applications in digital image processing. A unique feature of the book is its emphasis on showing how to enhance those tools by developing new code. This is important in image processing, an area that normally requires extensive experimental work in order to arrive at acceptable application solutions.

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DIGITAL IMAGE PROCESSING

by Jayaraman S, Professor & Head, Dept of Electronics & Communication Engineering, Veerakumar T, Lecturer, Dept of Electronics & Communication Engineering, Esakkirajan S, Lecturer, Dept of Instrumentation & Control Engineering

2009 / Softcover / 747 pages
ISBN: 9780070144798
(McGraw-Hill India Title)
www.mhhe.com/jayaraman/dip

Meant for students and practicing engineers, this book provides a clear, comprehensive and up-to-date introduction to Digital Image Processing in a pragmatic style. Illustrative approach, practical examples and MATLAB applications given in the book help in bringing theory to life.

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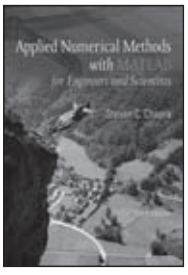
Numerical Methods

Numerical Methods

INTERNATIONAL EDITION

NEW



APPLIED NUMERICAL METHODS WITH MATLAB FOR ENGINEERS AND SCIENTISTS
3rd Edition

by Steven C. Chapra, Tufts University

2012 (February 2011) / Hardcover / 640 pages
ISBN: 9780073401102
ISBN: 9780071086189 [IE]

www.mhhe.com/chapra

Steven Chapra's Applied Numerical Methods with MATLAB, third edition, is written for engineering and science students who need to learn numerical problem solving. Theory is introduced to inform key concepts which are framed in applications and demonstrated using MATLAB. The book is designed for a one-semester or one-quarter course in numerical methods typically taken by undergraduates.

The third edition feature new chapters on Numerical Differentiation, Optimization, and Boundary-Value Problems (ODEs) and is accompanied by an extensive set of m-files and instrutor materials.

NEW TO THIS EDITION

❖ Updated Coverage Many new problems and examples have been added, and there are new explanations for certain MATLAB functions including: fzero, fminbnd, quad, & ODE23.

❖ Two New Chapters Chapter 13-Eigenvalues, and Chapter 16-Fast Fourier Transform have been added in response to instructor requests.

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INTERNATIONAL EDITION

NUMERICAL METHODS FOR ENGINEERS
6th Edition

by Steven C. Chapra, Tufts University, and Raymond P. Canale, Emeritus University of Michigan

2010 (April 2009) / Hardcover / 960 pages
ISBN: 9780073401065
ISBN: 9780071267595 [IE]

www.mhhe.com/chapra

Instructors love Numerical Methods for Engineers because it makes teaching easy! Students love it because it is written for them--with clear explanations and examples throughout. The text features a broad array of applications that span all engineering disciplines. The sixth edition retains the successful instructional techniques of earlier editions. Chapra and Canale's unique approach opens each part of the text with sections called Motivation, Mathematical Background, and Orientation. This prepares the student for upcoming problems in a motivating and engaging manner. Each part closes with an Epilogue containing Trade-Offs, Important Relationships and Formulas, and Advanced Methods and Additional References. Much more than a summary, the Epilogue deepens understanding of what has been learned and provides a peek into more advanced methods.

Approximately 20% of the problems are new or revised in this edition. The expanded breadth of engineering disciplines covered is especially evident in the problems, which now cover such areas as biotechnology and biomedical engineering.

Users will find use of software packages, specifically MATLAB®, Excel® with VBA and Mathcad®. This includes material on developing MATLAB® m-files and VBA macros.

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Probability & Random Processes

International edition

PROBABILITY, RANDOM VARIABLES AND STOCHASTIC PROCESSES WITH ERRATA SHEET
4th Edition

by Athansious Papoulis and S Unnikrishna Pillai, both of Polytechnic University

2002 / 864 pages
ISBN: 9780072817256 (with Errata Sheet) - (Out of Print)
ISBN: 9780071226615 [IE] (with Errata Sheet)

www.mhhe.com/engcs/electrical/papoulis

The fourth edition of Probability, Random Variables and Stochastic Processes has been updated significantly from the previous edition, and it now includes co-author S. Unnikrishna Pillai of Polytechnic University. The book is intended for a senior/graduate level course in probability and is aimed at students in electrical engineering, math, and physics departments. The authors' approach is to develop the subject of probability theory and stochastic processes as a deductive discipline and to illustrate the theory with basic applications of engineering interest. Approximately 1/3 of the text is new material--this material maintains the style and spirit of previous editions. In order to bridge the gap between concepts and applications, a number of additional examples have been added for further clarity, as well as several new topics.

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10 Random Walk and Other Applications.
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13 Mean Square Estimation.
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15 Markov Chains.
16 Markov Processes and Queueing Theory

International edition

PROBABILITY, RANDOM VARIABLES AND RANDOM SIGNAL PRINCIPLES
4th Edition

by Peyton Peebles, University of Florida, Gainesville

2001 / 480 pages
ISBN: 9780073660073 (Out of Print)
ISBN: 9780071181815 [IE]

www.mhhe.com/peebles

The fourth edition of "Probability, Random Variables and Random Signal Principles" continues the success of previous editions with its concise introduction to probability theory for the junior-senior level course in electrical engineering. The book offers a careful, logical organization which stresses fundamentals and includes almost 900 student exercises and abundant practical applications for engineers to understand probability concepts.

The most important new material in this edition relates to discrete-time random processes and sequences, and other topics in the general area of digital signal processing, such as the DT linear system.

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Appendix G Some Mathematical Topics of Interest.

Microcomputers, Microprocessors and Chips

Advanced Microprocessor

INTERNATIONAL EDITION

MICROPROCESSORS PRINCIPLES AND APPLICATIONS
2nd Edition

by Charles M Gilmore

1995 / 544 pages
ISBN: 9780071139656 [IE]

(A Glencoe/McGraw-Hill Title)

Designed for use in one-semester courses, this Second Edition provides thorough coverage of 8-bit processor architecture, instructions, and applications as well as an introduction to 16-bit and 32-bit processors. To add to the text's realism and practiality, three 8-bit and 16-bit processors are used as examples. Topics covered include interfacing, troubleshooting, development systems and developing technologies, making this one of the most complete introductions available. Plenty of examples, illustrations, exercises, and problems are provided to reinforce students' understanding of the material. This new edition also includes performance objectives and critical thinking questions for every chapter.

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Advanced Microprocessors
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Microprocessor I/o
An Introduction To Programming
Operating Systems And System Software
Servicing Microprocessor-based Products
Developing Microprocessor-based Products
New Developments In Microprocessor Technology

General Reference

Design in Electrical Engineering

INTERNATIONAL EDITION

DESIGN FOR ELECTRICAL AND COMPUTER ENGINEERS

by Ralph Ford, Penn State Erie Behrend College, and Chris Coulston, Penn State Erie Behrend College

2008 (August 2007) / Softcover / 336 pages
ISBN: 9780073380353
ISBN: 9780071263474 [IE]

www.mhhe.com/fordcoulston

This book is written for students and teachers engaged in electrical and computer engineering (ECE) design projects, primarily in the senior year. It guides students and faculty through the steps necessary for the successful execution of design projects. The objective of the text is to provide a treatment of the design process in ECE with a sound academic basis that is integrated with practical application. It has a strong guiding vision -- that a solid understanding of the Design Process, Design Tools, and the right mix of Professional Skills are critical for project and career success. This text is unique in providing a comprehensive design treatment for ECE.

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Chapter 3: The Requirements Specification
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Professional References

STANDARD HANDBOOK FOR ELECTRICAL ENGINEERS
16th Edition

by H. Wayne Beaty, and Donald G. Fink (deceased)

2013 (September 2012) / Hardcover / 2064 pages
ISBN: 9780071762328

(A Professional Reference Title)

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Section 1. Units, Symbols, Constants, Definitions, and Conversion Factors
Section 2. Electric and Magnetic Circuits
Section 3. Measurements and Instruments
Section 4. Properties of Materials
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Section 26. Illumination
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Section 28. Standards in Electrotechnology, Telecommunications, and Information Technology

MASTER HANDBOOK OF SOUND STUDIO CONSTRUCTION

by Ken C. Pohlmann, and University of Miami

2013 (December 2012) / Softcover / 320 pages
ISBN: 9780071772747

(A Professional Reference Title)

Master Handbook of Sound Studio Construction provides expert advice and detailed examples for anyone contemplating the construction or renovation of an acoustically sensitive room. The first part of the book offers specific details on 10 types of rooms, including recording studios, control rooms, and home theaters. The remainder of the book contains several tutorial chapters on acoustics-related topics, such as wall and floor construction and heating and ventilation. Information on dozens of manufacturers and companies involved in the acoustic and home studio industry is included. This book is the perfect companion to Master Handbook of Acoustics..

CONTENTS

1. Introduction to Room Design
2. Announce Booth
3. Recording Studio for Classical Music
4. Recording Studio for Popular Music
5. Recording Studio with Variable Acoustics
6. Control Rooms
7. Audio/Video/Film Workroom
8. Teleconference Room
9. Home Personal Project Studio
10. Home Media Room
11. Home Theater
12. Site Selection and Noise Control
13. Sound Diffusing Materials
14. Sound Absorbing Materials
15. Sound Reflecting Materials
16. Wall Construction
17. Floor/Ceiling Construction
18. Windows and Doors
19. HVAC System
20. Room Performance and Evaluation

PRACTICAL ELECTRONICS FOR INVENTORS
3rd Edition

by Paul Scherz

2013 (September 2012) / Softcover / 1008 pages
ISBN: 9780071771337

(A Professional Reference Title)

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Chapter 1 Introduction to Electronics
Chapter 2 Theory
Chapter 3 Basic Electronics Components
Chapter 4 Hands-On Electronics
Chapter 5 Analog Circuits
Chapter 6 Digital Circuits
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ELECTRICAL SAFETY HANDBOOK
4th Edition

by John Cadick, Mary Capelli-Schellpfeffer, Dennis K. Neitzel, and Al Winfield

2012 (February 2012) / Hardcover / 640 pages
ISBN: 9780071745130

(A Professional Reference Title)

Electrical Safety Handbook, Fourth Edition is written by experts in electrical construction safety and medicine as a practical guide for electrical workers and others exposed to electrical hazards. This easy-to-use, illustrated guide provides vital safety information for industrial, commercial, and home-office based electrical systems. With its wealth of information on all the major electrical standards, it is the comprehensive reference professionals can trust.

CONTENTS

Ch. 1. Hazards of Electricity
Ch. 2. Basic Physics of Electrical Hazards
Ch. 3. Electrical Safety Equipment
Ch. 4. Safety Procedures and Methods
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Ch. 6. Electrical Maintenance and Engineering and Their Relationship to Safety
Ch. 7. Regulatory and Legal Safety Requirements and Standards
Ch. 8. Accident Prevention, Accident Investigation, Rescue, and First Aid
Ch. 9. Medical Aspects of Electrical Trauma
Ch. 10. Low-Voltage Safety Synopsis
Ch. 11. Medium- and High-Voltage Safety Synopsis
Ch. 12. Human Factors in Electrical Safety
Ch. 13. Safety Management and Organizational Structure
Ch. 14. Safety Training Methods and Systems

BRILLIANT LED PROJECTS

by Nick Dossis

2012 (April 2012) / Softcover / 160 pages
ISBN: 9780071778220

(A Professional Reference Title)

Brilliant LED Projects reveals how to build inventive, affordable, and impressive LED projects using a selection of components that includes single-color LEDs, bi-color and tri-color LEDs, RBG LEDs, 7-segment displays, dot matrix displays, and IR LEDs. The projects use a variety of digital integrated circuits to achieve the desired results. You'll learn to work with CMOS 4000-range ICs, 555 timers, bargraph drivers, and the 16F628 PIC microcontroller.

This hands-on guide opens with a clear explanation of the book's intentions, the tools needed, and the basic concepts. It includes an overview of the various LED components, example clock and driver circuit building blocks, illumination and flashing LED projects, sequencers (strings of flashing LEDs), and multiplexers. Every chapter illuminates important concepts and techniques that produce fascinating electronic displays. Programming code, when needed, is available for download.

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Acknowledgements
1. Before we get started
Part I. Illumination & Flasher Projects
2. Basic LED Circuits--How to make an LED flashlight
3. 'Green' Pocket LED Flashlight
4. Basic Single LED Flasher
5. LED Bike Flasher
6. Color Changing Light Box
7. Mini-Digital Display Score Board
Part II. Sequencer Projects
8. Experimental LED Sequencer Circuit
9. Color Changing Disco Lights
10. Binary Ripple Counter--Mainframe Computer Simulator
11. Flickering LED Candle
12. LED Scanner
13. LED Light Sword
14. Invisible Secret Code Display
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15. Basic LED Matrix/POV Concepts--How to build a 3-Digit Counter
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17. Digital Oscilloscope Screen
18. Experimental Low-Res Shadow Camera
19. Groovy Light Stick
20. Dot Matrix Counter
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Appendix 1--Useful Resources

ELECTRICAL POWER SYSTEMS QUALITY
3rd Edition

by Roger C. Dugan, Senior Consultant with Electrotek Concepts Inc, Knoxville Tn, Mark F. F. McGranaghan, Surya Santoso, and H. Wayne Beaty

2012 (February 2012) / Hardcover / 592 pages
ISBN: 9780071761550

(A Professional Reference Title)

Electrical Power Systems Quality, Third Edition addresses the causes of power quality problems and explains how to prevent these problems in the clearest and most complete manner. The information is presented without the inclusion of heavy-duty equations, making it easily readable and accessible to utility engineers, industrial plan technicians, and power quality consultants.

CONTENTS

Ch. 1. Introduction
Ch. 2. Terms and Definitions
Ch. 3. Voltage Sags
Ch. 4. Interruptions
Ch. 5. Transient Overvoltages
Ch. 6. Fundamentals of Harmonics
Ch. 7. Applied Harmonics
Ch. 8. Long-Duration Voltage Variations
Ch. 9. Power Quality Benchmarking
Ch. 10. Distributed Generation and Power Quality
Ch. 11. Wiring and Grounding
Ch. 12. Power Quality Monitoring
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SEMICONDUCTOR PROCESS RELIABILITY IN PRACTICE

by Zhenghao Gan, Waisum Wong, and Juin J. Liou

2012 (April 2012) / Hardcover / 528 pages
ISBN: 9780071754279

(A Professional Reference Title)

Featuring detailed descriptions and analyses of reliability and qualification for semiconductor device manufacturing, Semiconductor Process Reliability in Practice contains numerous practical examples and discusses verifying test structures and underlying physics and theory. With continuous scaling down of semiconductor technology, process reliability has become one of the key factors limiting further scaling down; therefore, emerging reliability challenges as technology evolves make this book a timely, essential resource.

ELECTRICITY DEMYSTIFIED 2nd Edition

by Stan Gibilisco

2012 (January 2012) / Softcover / 400 pages
ISBN: 9780071775342

(A Professional Reference Title)

Written in a step-by-step format, this practical guide begins by covering direct current (DC), voltage, resistance, circuits, cells, and batteries. The book goes on to discuss alternating current (AC), power supplies, wire, and cable. Magnetism and electromagnetic effects are also addressed. Detailed examples and concise explanations make it easy to understand the material. End-of-chapter quizzes and a final exam help reinforce key concepts.

Simple enough for a beginner, but challenging enough for an advanced student, Electricity DeMYSTiFieD, Second Edition, powers up your understanding of this essential subject.

CONTENTS

How to Use This Book
PART I: DIRECT CURRENT
1. A Circuit Diagram Sampler
2. Charge, Current, Voltage, and Resistance
3. Ohm's Law, Power, and Energy
4. Simple DC Circuits
5. Cells and Batteries
Test: Part I
PART II: ALTERNATING CURRENT
6. What is Alternating Current?
7. Electricity in the Home
8. Power Supplies
9. Wire and Cable
Test: Part II
PART III: MAGNETISM
10. What is Magnetism?
11. Electromagnetic Effects
12. Practical Magnetism
Test: Part III
FINAL EXAM
Appendix 1: Answers to Quiz, Test, and Exam Questions
Appendix 2: Symbols used in Schematic Diagrams
Suggested Additional References

SMART GRID NETWORKING AND COMMUNICATIONS

by Krzysztof Iniewski

2012 (April 2012) / Hardcover / 320 pages
ISBN: 9780071787741

(A Professional Reference Title)

CONTENTS

Ch 1. Historical & Future Developments in the Energy Sector
Ch 2. Smart Grid Communications & Standardization
Ch 3. Smart Grid Applications in Energy Generation and Transmission
Ch 4. Smart Grid Applications from Energy Distribution to Customer
Ch 5. Sensing, Automation, and Control Protocols
Ch 6. Wireless Communications for Smart Grids
Ch 7. Wireline Communications for Smart Grids
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Ch 9. Interoperability and Routing between Communications Technologies
Ch 10. Smart Grid Management and Architecture (Cyber Security)
Ch 11. Next-Generation Smart Grid Control Centers
Ch 12. Smart Grid Case Studies and Field Trials

ADVANCED COPPER-GOLD WIRE-STUD INTERCONNECTION TECHNOLOGIES

by John H. Lau, and Hong Meng Ho

2012 (April 2012) / Hardcover / 480 pages
ISBN: 9780071785167

(A Professional Reference Title)

Advanced Copper-Gold Wire-Stud Interconnection Technologies covers the latest advances in using low-cost copper wire, copper stud, and gold stud bonding techniques for the semiconductor chips used in today's electronic products.

Take advantage of the cost effectiveness and performance efficiency of copper and gold studs and maximize their use in 2D and 3D IC packaging and 3D IC integration system-in-package (SiP) using the cutting-edge bonding techniques in this professional guide.

CONTENTS

1. Introduction to Semiconductor and Packaging Technologies
2. Conventional Au Wire Bonding
3. Conventional Au Stud Bumps
4. Cu Wire Bonding Problems
5. Ultrasonic Bonding Systems and Technologies of Cu Wire Bonding
6. Bonding Wire Metallurgy and Characteristics that can Affect Bonding, Reliability, or Testing of Cu Wire Bonding
7. Process Technology Affecting Cu Wire Bonding
8. Cu Wire Bond Testing
9. Cu-Al Intermetallic Compounds and Other Metallic Interface Reactions in Cu Wire Bonding
10. The Effect of Plating, Bond Pad Technology and Reliability on Cu Wire Bonding
11. Cleaning to Improve Bondability and Reliability of Cu Wire Bonding
12. Mechanical Problems in Cu Wire Bonding
13. Advanced and Specialized Wire Bonding Technologies when using Cu Wire Bonding
14. Overview of Materials and Material Science of Cu/Low K Devices that Affect Cu Wire Bonding and Packaging
15. Overview of Process Modeling and Simulation on Cu Wire Bonding
16. Package Level Reliability of Cu Wire Bonded Device
17. Cu Stud Bonding

THROUGH-SILICON VIAS (TSVS) FOR 3D INTEGRATION

by John H. Lau

2012 (May 2012) / Hardcover / 480 pages

ISBN: 9780071785143

(A Professional Reference Title)

Through-Silicon Vias (TSVs) for 3D Integration covers cutting-edge developments in 3D ICs—essential for the development of low-cost, high-performance electronic and optoelectronic products. The book proposes that every chip or interposer could have two surfaces with circuits. This detailed guide discusses TSV manufacturing yield and hidden costs and includes characterization and reliability data for 3D IC integration. The in-depth information in the book provides context for choosing robust, reliable, high-performance, cost-effective packaging and 3D IC/Si integration techniques for high-density electronic products.

CONTENTS

1. Introduction to Microelectronics and Nanoelectronics
2. Origin and Evolution of 3D Integration
3. Trends and Outlook of 3D IC Packaging
4. Through-Silicon Vias (TSVs) Technology
5. Challenges and Outlook of 3D Si Integration
6. Challenges and Outlook of 3D IC Integration
7. Thin-Wafer Strength Measurements
8. Thin-Wafer Handling
9. Low-Cost Microbumping
10. C2C and C2W Bonding with Microbumps
11. Low Temperature Bonding
12. Electromigration of Microbump Assemblies
13. Memory Stacking Methods
14. Active TSV Interposers
15. Passive TSV Interposers
16. Thermal Management of 3D IC Integration
17. 3D IC and CIS Integration
18. 3D IC and MEMS Integration
19. 3D IC and LED Integration
20. Embedded 3D Hybrid IC and Opto-electronic Integration in Organic Substrates

ARDUINO ROBOT BONANZA

by Gordon McComb

2012 (February 2012) / Softcover / 464 pages

ISBN: 9780071782777

(A Professional Reference Title)

Arduino Robot Bonanza explains how to build a wide variety of robots that roll, walk, talk, crawl, slither—and even sling insults—with the Arduino microcontroller platform. From the author of the bestselling Robot Builder's Bonanza, this book teaches embedded microcontroller programming and reveals the world of robotics. The book guides you, step by step, through the construction of seven rewarding and educational robot projects. Each robot is designed to explore multiple facets of the growing fields of embedded hardware, microcontroller programming, real-world sensory systems, and human-machine interaction. All of the projects are affordable and all are reproducible using parts available from a wide variety of sources.

CONTENTS

Ch 1. Ins and Outs of the Arduino Microcontroller
Ch 2. Arduino as a Robot Brain
Ch 3. Connecting Things to the Arduino
Ch 4. Enhancing Your Robot with Sensors
Ch 5. Expanding the Arduino
Ch 6. Layout and Design
Ch 7. The TestBot Test Platform
Ch 8. Mini Kissing Bug
Ch 9. Animatronic Parrot
Ch 10. Your Robot Avatar
Ch 11. Slithering Snake
Ch 12. 18-Servo WalkerBot
Ch 13. PC-based Autonomous Robot
Ch 14. Crash Course in Electronics
Ch 15. Learning the Arduino Programming Language
Ch 16. Setting Up Your Robotics Laboratory

HANDBOOK OF ULTRA-SHORT PULSE LASERS FOR BIOMEDICAL AND MEDICAL APPLICATIONS

by Joseph Neev, Femto-Sec Tech, Inc.

2012 (May 2012) / Hardcover / 800 pages

ISBN: 9780071627320

(A Professional Reference Title)

Handbook of Ultra-Short Pulse Lasers for Biomedical and Medical Applications is written for biophotonics scientists and engineers who are collaborating with medical professions in developing the medical tools which utilizes ultra-short pulse lasers. The book illustrates fundamental physics of USPLs and how they interact with human tissues through ample examples of practical applications. Medical professionals who are interested in the latest updates of laser surgery and diagnosis through laser imaging will also benefit from this book.

CONTENTS

Part I. USPL (Ultra-short Pulse Lasers) Technology Review;
Chapter 1. Physics of USPL;
Chapter 2. USPL Delivery I;
Chapter 3. USPL Delivery II;
Chapter 4. USPL Pulse Analysis;
Part II. Biomedical Applications Overview;
Chatper 5. Interaction of USPL with Cell and Organelles;
Chapter 6. Surgery with Femto Second Pulses on Cell and Organelles;
Chapter 7. Ultrashort Laser Light to Visualize and Manipulate the Structure and Dynamics of Neurovascular Tissue;
Part III. Surgical and Medical Applications;
Chapter 8. Applications of USPL Pulse Lasers to Skin and Dermatology;
Chapter 9. Ophthalmic Applications of Femtosecond Lasers;
Chapter 10. Surgical Applications of Femtosecond Lasers Surgery;
Chapter 11. Dental Applications of Femtosecond Lasers;
Chapter 12. Applications of USP Lasers to Spinal Cord Surgery and Neurology;
Part IV. Imaging and Diagnostics;
Chapter 13. USPL and Optical Coherent Tomography (OCT);
Chapter 14. Terahertz Imaging;
Chapter 15. User of USPL for 3rd Harmonic and nonlinear Microscopy;
Chapter 16. Confocal 3 Photon / Multiphoton Imaging

HIGH PERFORMANCE INTEGRATED CIRCUIT DESIGN

by Emre Salman, and Eby G. Friedman

2012 (June 2012) / Hardcover / 704 pages

ISBN: 9780071635769

(A Professional Reference Title)

High Performance Integrated Circuit Design introduces a step-by-step approach offering in-depth coverage for each step of circuit design. This book is for the mixed-signal integrated circuit (IC) designer. Seamless interconnect circuit designs are the key for the mixed signal System-on-Chip (SoC) circuit designs. The challenges are how to synchronize the time domain or the frequency domain clock among the highly populated components on a chip in high speed. This book addresses those challenges.

HOW TO BUILD A SMALL BUDGET RECORDING STUDIO FROM SCRATCH

4th Edition

by Mike Shea

2012 (April 2012) / Softcover / 416 pages

ISBN: 9780071782715

(A Professional Reference Title)

How to Build a Small Budget Recording Studio from Scratch, Fourth Edition provides detailed plans for constructing real-world recording studios, all built, tested, and acoustically adjusted for optimal sound. Learn how to construct everything from the ground up, including the floor, ceilings, walls, and equipment; what materials to use; and how to test the finished structure for frequency response and reverberation time. Mathematical processes are discussed, but without confusing technical aspects. No detail is left out, as coverage includes silencing HVAC duct work, doors, electrical wiring, and lighting.

CONTENTS

PART I : Introduction
Acoustics; Reverb; Standards; Test
Part II: Brick and Mortar
My Studio--How Big and What Shape; Elements Common to All Studios; Audiovisual Budget Recording Studio; Studio Built in a Residence; A Small Studio for Instruction and Campus Radio; Small Ad Studio for A/Vs and Radio Jingles; Multitrack in a Two-Car Garage; Building a Studio from Scratch for Radio Production; Studios for a Commercial Radio Station; One Control Room for Two Studios; A Video Mini-Studio; A Video and Multitrack Studio; A Screening Facility for Film and Video; Multiple Studios
Part III: Modern, Pre-Manufactured Acoustics
Assemble/Renovate/Correct/Rectify/Grow/Polish/Rejuvenate/Recondition/Ennhance/Revise; Acoustic Products and Remedies; New Acoustic Panels; New Acoustic Developments; Importance of Checking Specs; Diffusion Confusion; Bits and Pieces of Acoustic Lore; Dual Room Functions; Control Room Monitors
Part IV: How Music Instruments Produce and Propagate Sound
Resonance; Note Duration; Attack; Wolf Tones; Impedance; Sound Radiation; Sound Transmission; Radiators and Resonators; Some Specific Sound Producing Mechanisms; Tines, Rods, and Tongues; Strings and Tubes; Reeds and Brass; Bows; Hollow Bodied Instruments; Drums; Tambourines; Microphone Placement.
On the Web:
Acoustic Equations; Reading Blueprints; List of Manufacturers of Acoustic Materials; Metal Wall Stud Update; Update to Acoustic Ratings of Duct Silencers.

AN INTRODUCTION TO CONTEMPORARY REMOTE SENSING EARTH FROM SPACE

by Qihao Weng

2012 (March 2012) / Hardcover / 336 pages

ISBN: 9780071740111

(A Professional Reference Title)

An Introduction to Contemporary Remote Sensing Earth from Space covers the latest developments in remote sensing and imaging science, especially those relevant to undergraduate students. Remote sensing is the technology behind revolutionary applications such as Google Earth. The information in this book will help you to optimize portable equipment design by understanding and selecting most ideal spatial imagery technique. This versatile book serves lower-division undergraduate students as a textbook and may also be used as a reference tool for various remote sensing workshops as well as for professionals and researchers in academia, government, and industries to acquire updated information on the newest developments in the field.

HIGH FREQUENCY OVER THE HORIZON RADAR

Dr. Giuseppe Aureliano Fabrizio

2011 / Hardcover / 688 pages

ISBN: 9780071621274

(A Professional Reference Title)

High Frequency Over-the-Horizon Radar provides comprehensive details on modern developments in high frequency over-the-horizon (OTH) radar by capturing significant advances made in this area over the past two decades. This authoritative text offers a thorough and accurate treatment of essential aspects, ranging from the physical principles of operation and system design issues, through to signal processing methods, and their practical application to live data recorded by actual OTH radar systems. The strength of the book is its clear explanation of the signal processing aspects, including mathematical descriptions of adaptive processing techniques, an area that has become a cornerstone for the effective operation of OTH radar.

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Chapter 1 Introduction
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Chapter 12 GLRT-Based Detection
Chapter 13 Blind Waveform Estimation
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Appendix A Complex Sample ACS Distribution
Appendix B Space-Time Separability
Appendix C Modal Decomposition

TRANSIENTS IN ELECTRICAL SYSTEMS
Analysis, Recognition, and Mitigation

by J.C. Das

2010 (April 2010) / Hardcover / 928 pages
ISBN: 9780071622486

(A Professional Reference Title)

Written by a senior consultant for a major power utility corporation, this professional reference explains how to identify the origin of disturbances in electrical systems and analyze them for effective mitigation and control. The book contains case studies of simulations on EMTP, a globally recognized software used to analyze transients. Solved examples and problems are included at the end of each chapter. This comprehensive reference will help power electrical engineers create stable system operations.

CONTENTS

Chapter 1: Introduction to Transients in Electrical Systems
Chapter 2: Transients in Lumped Circuits
Chapter 3: Control Systems-Analysis, Operation and Stability
Chapter 4: Transmission Lines, Wave Propagation
Chapter 5: Lighting Strokes on Transmission Lines, Shielding
Chapter 6: Capacitor Switching Transients
Chapter 7: Transmission Lines, Switching Transients
Chapter 8: Interruption of AC Currents
Chapter 9: Short-Circuit Transients
Chapter 10: Transient Behavior of Synchronous Generators
Chapter 11: Transient behavior of Synchronous and Induction Motors
Chapter 12: Power System Stability
Chapter 13: Excitation Systems and Power System Stabilizers
Chapter 14: transient Response of Transformers and Windings
Chapter 15: Very Fast Transients-Gas Insulated Substations
Chapter 16: Transients in Power Electronic Equipment
Chapter 17: Flicker, Auto Bus Transfer and Other Transients
Chapter 18: Insulation Coordination
Chapter 19: Surge Protection of Low Voltage Systems
Chapter 20: Application of Surge Arresters
Chapter 21: Grounding Systems and Transients
Chapter 22: Lightning Protection of Structures
Chapter 23: Transients in DC Systems

CHALCOGENIDE GLASSES FOR INFRARED OPTICS

by A. Ray Hilton

2010 (January 2010) / Hardcover / 304 pages
ISBN: 9780071596978

(A Professional Reference Title)

An essential resource for infrared optical system engineers, this volume shows how to master hands-on techniques to yield high-quality chalcogenide glasses. Important details on their applications is also included. The book contains proprietary fabrication techniques of chalcogenide glasses from Amorphous Materials, Inc., and Texas Instruments.

CONTENTS

Ch 1. Transmission of Light by Solids
Ch 2. Chalcogenide Glasses
Ch 3. Glass Production
Ch 4. Careful Characterization of Glass Properties
Ch 5. Conventional Lens Fabrication, Spherical Surfaces
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A. Extrusion
B. Fiber Drawing
C. Fiber Applications
D. Infrared Fiber Imaging Bundles
Ch 8. Crystal Materials Produced at AMI
Ch 9. Other Infrared Optical Materials

NANOSCALE CMOS VLSI CIRCUITS
Design for Manufacturability

by Sandip Kundu, and Aswin Sreedhar

2010 (June 2010) / Hardcover / 256 pages
ISBN: 9780071635196

(A Professional Reference Title)

Covering defect analysis, equipment, and lithographic control evaluations, this book offers a holistic approach for VLSI circuit designers to evaluate and analyze IC circuit designs from the manufacturability point of view. This practical guide is ideal for design engineers, managers, students, and academics interested in understanding the sources of semiconductor chip failures and how these problems can be mitigated through design.

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1. Introduction
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3.5. Interconnect linewidth variation
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4.2.1. The end of Boolean Rule-based checks
4.2.2. Model-based design rule checks
4.2.3. Cost vs accuracy of model-based checks
4.3. Resolution Enhancement Techniques (RET)
4.3.1. Proximity Correction & SRAFs
4.3.2. Phase shift Masking
4.3.3. Off-Axis Illumination

MICROWAVE TRANSMISSION NETWORKS
2nd Edition

by Harvey Lehpamer

2010 (April 2010) / Hardcover / 400 pages
ISBN: 9780071701228

(A Professional Reference Title)

Microwave Transmission Networks, Second Edition covers all stages of microwave network build-out from initial planning and feasibility studies to real system deployment. Emphasis is given to practical guidelines. The book discusses planning and creating the business case for microwave networks, including advantages and disadvantages—essential for decision makers.

The second edition will contain all new diagrams and tables to reflect new and updated standards and information. New sections include new technologies implemented in microwave point-to-point radios (Ethernet), as well as Adaptive Modulation. Newly opened millimeter-wave bands and their applications in licensed and license-exempt broadband microwave radios will be discussed. Based on customer feedback on the Project Management chapter, a new FAQ section has been added regarding microwave links. Information on regulatory and ethical issues and conflicts of interests during international projects is included, content that is not provided in other microwave engineering texts.

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Chapter 1 Transmission Network Fundamentals
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Chapter 6 Microwave Deployment
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Appendix B Quick RF Reference Sheet
Appendix C Useful Physical Quantities and Units of Measurement
Glossary

PHOTONICS ESSENTIALS
2nd Edition

by Thomas P. Pearsall

2010 (October 2009) / Hardcover / 320 pages
ISBN: 9780071629355

(A Professional Reference Title)

This unique book teaches photonics through the hands-on measurement techniques common to all photonic devices. Perfect for students and engineers looking for practical expertise rather than abstract theory, this tutorial does more than explain the workings of photonic applications in standard devices like lasers and photodetectors--it offers worked examples of measurement and characterization problems. Filled with these real-world examples that feature commercially available instruments, this practice-based book enables you to analyze, characterize, and handle any kind of photonic device.

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Part I: Introductory Concepts;
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Chapter 2. Electrons and Photons;
Part II: Photonic Devices;
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Chapter 6. Light-Emitting Diodes;
Chapter 7. Organic Light-Emitting Diodes;
Chapter 8. Lasers;
Part III: Advanced Topics;
Chapter 9. Direct Modulation of Laser Diodes;
Chapter 10. Optical Fibers and Optical Fiber Amplifiers;
Part V: Characterizing Photonic Devices in the Laboratory;
Chapter 11. Measurements in Photonics;
Chapter 12. Experimental Photonics: Device Characterization in the Laboratory;
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PHOTONICS AND LASER ENGINEERING
Principles, Devices, and Applications

by Alphan Sennaroglu

2010 (May 2010) / Hardcover / 704 pages
ISBN: 9780071606080

(A Professional Reference Title)

Written by an internationally acclaimed expert, this comprehensive volume provides the background in theoretical physics necessary to understand practical applications of lasers and optics. Photonics and Laser Engineering Principles, Devices, and Applications discusses theories of electromagnetism, geometrical optics, quantum mechanics, and laser physics and connects them to relevant implementations in areas such as fiber optics, optical detection, laser resonator design, and semiconductor lasers. Each chapter contains detailed equations, sample problems, and solutions to reinforce the concepts presented.

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Chapter 1. Electromagnetic Wave Theory of Light with Applications;
Chapter 2. Geometrical Optics;
Chapter 3. Laser Beams and Resonators;
Chapter 4. Light-Matter Interactions;
Chapter 5. Quantum Theory of Light-Matter Interactions;
Chapter 6. Lasers;
Chapter 7. Semiconductor Lasers;
Chapter 8. Anisotropic Media and Modulation of Light;
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SMALL ANTENNAS
Modern Miniaturization Techniques & Applications

by John Volakis, Chi-Chih Chen, and Kyohei Fujimoto

2010 (June 2010) / Hardcover / 400 pages
ISBN: 9780071625531

(A Professional Reference Title)

As the world of wireless applications continues to explode, the need for smaller, more powerful antennas increases exponentially. This authoritative guide provides the most up-to-date techniques for designing and building antennas of the future. Written by experts at the forefront of research in this area, this book details the newest antenna design, miniaturization and wideband methods, vial material loading, wave slow down techniques, and shaping. For the first time in any publication, the new class of metamaterial antennas are also covered. The book combines theory and basic design techniques with numerous practical applications for narrowband and wideband antennas.

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