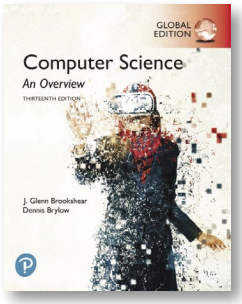
Computer Science

Introduction to Computer Science



Computer Science: An Overview, 13e

Glenn Brookshear & Dennis Brylow

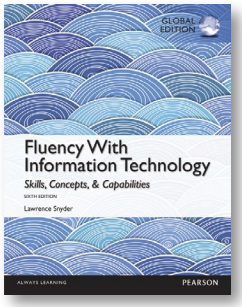
9781292263427 • ©2019
736pp • Paperback

eBook version available

Pearson Horizon available

Course: Introduction to Computer Science

Computer Science: An Overview uses broad coverage and clear exposition to present a complete picture of the dynamic computer science field. Accessible to students from all backgrounds, Glenn Brookshear uses a language-independent context to encourage the development of a practical, realistic understanding of the field.



Fluency With Information Technology: Skills, Concepts and Capabilities, 6e

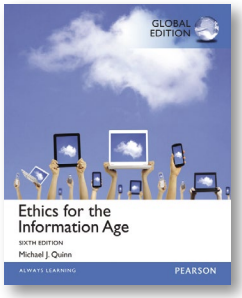
Lawrence Snyder

9781292061245 • ©2014
784pp • Paperback

eBook version available

Course: Introduction to Computer Science

This textbook equips readers who are already familiar with computers, the Internet and the World Wide Web with a deeper understanding of the broad capabilities of technology. Through a project-oriented learning approach that uses examples and realistic problem-solving scenarios, Larry Snyder teaches readers to navigate information technology independently and become effective users of today's resources, forming a foundation of skills they can adapt to their personal and career goals as future technologies emerge.



Ethics for the Information Age, 6e

Michael J. Quinn

9781292061238 • ©2015
552pp • Paperback

eBook version available

Course: Computer Ethics

In an era where information technology changes constantly, a thoughtful response to these rapid changes requires a basic understanding of IT history, an awareness of current issues and a familiarity with ethics. *Ethics for the Information Age* is unique in its balanced coverage of ethical theories used to analyze problems encountered by computer professionals in today's environment.

A Gift of Fire: Social, Legal and Ethical Issues for Computing and the Internet, 4e

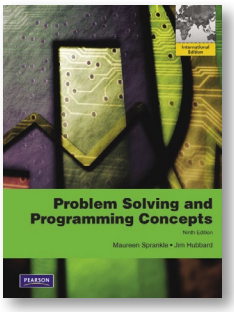
Sara Baase

9780273768593 • ©2012
496pp • Paperback

eBook version available

Course: Computer Ethics

The textbook is ideal for courses in Computer Ethics and Computers and Society. Sara Baase explores the social, legal, philosophical, ethical, political, constitutional and economic implications of computing and the controversies they raise. With a computer scientist's perspective and with historical context for many issues, she covers the issues students will face both as members of a technological society and as professionals in computer-related fields.



Problem Solving and Programming Concepts, 9e

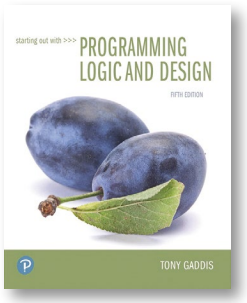
Maureen Sprankle & Jim Hubbard

9780273752219 • ©2011
528pp • Paperback

eBook version available

Course: Problem Solving

Revised to reflect the most current issues in the programming industry, this widely adopted text emphasizes that problem solving is the same in all computer languages, regardless of syntax. Sprankle and Hubbard use a generic, non-language-specific approach to present the tools and concepts required when using any programming language to develop computer applications.



Starting Out with Programming Logic and Design, 5e

Tony Gaddis

9780134801155 • ©2018
832pp • Paperback

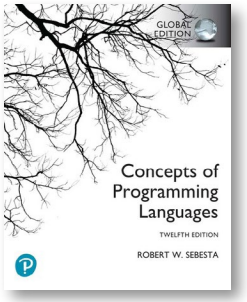
eBook version available

Course: Problem Solving

Starting Out with Programming Logic and Design is a language-independent introductory programming book, teaching students programming concepts and logic without assuming any previous programming experience. The text is clear and approachable, making the complex concepts accessible to every student. In this new edition, Gaddis focuses on current languages providing code snippet examples and complete programs for each.

Title available on demand

Programming – General



Concepts of Programming Languages, 12e

Robert W. Sebesta

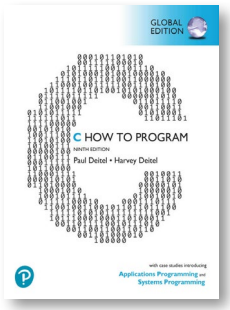
9781292436821 • ©2022
776pp • Paperback

eBook version available

Course: Programming Languages/Comparative Languages

Concepts of Computer Programming Languages introduces students to the fundamental concepts of computer programming languages and provides them with the tools necessary to evaluate contemporary and future languages. Through a critical analysis of design issues, the text teaches students the essential differences between computing with specific languages, while the in-depth discussion of programming language structures also prepares them to study compiler design. With new material on contemporary languages like Swift and Python.

Programming – Introduction



C How to Program, 9e

Paul Deitel & Harvey Deitel

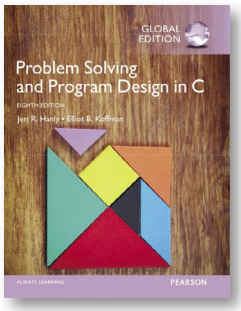
9781292437071 • ©2022
832pp • Paperback

eBook version available

Available with MyLab Programming

Course: C – Intro to Programming/CS1

C How to Program is a user-friendly,code-intensive text with case studies introducing applications and system programming. Its modular presentation serves as a detailed source of information for college students looking to embark on a career in coding, or instructors and software-development professionals wanting to learn how to program with C. With case studies and exercises that highlight security, data science, ethics, privacy and performance concepts.



Problem Solving and Program Design in C, 8e

Jeri R. Hanly & Elliot B. Koffman

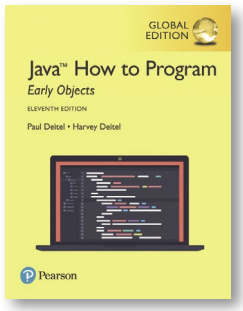
9781292098814 • ©2015
840pp • Paperback

eBook version available

Available with MyLab Programming

Course: C – Intro to Programming/CS1

Problem Solving and Program Design in C teaches introductory students to program with ANSI-C, a standardized, industrial-strength programming language known for its power and probability. The text uses widely accepted software engineering methods to teach students to design cohesive, adaptable and reusable program solution modules with ANSI-C. Through case studies and real world examples, students are able to envision a professional career in programming.



Java How to Program, Early Objects, 11e

Harvey Deitel & Paul J. Deitel

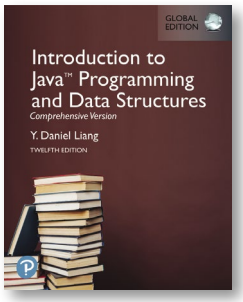
9781292223858 • ©2018
1296pp • Paperback

eBook version available

Available with MyLab Programming

Course: Java – Intro to Programming/CS1

The Deitels' groundbreaking *How to Program* series offers unparalleled breadth and depth of programming fundamentals, object-oriented programming concepts and intermediate-level topics for further study. *Java How to Program, Early Objects* presents leading-edge computing technologies using the Deitel signature live-code approach, which demonstrates concepts in hundreds of complete working programs. This new edition presents updated coverage of Java SE 8 and new Java SE 9 capabilities, including JShell, the Java Module System and other key Java 9 topics.



Introduction to Java Programming and Data Structures, Comprehensive Version, 12e

Y. Daniel Liang

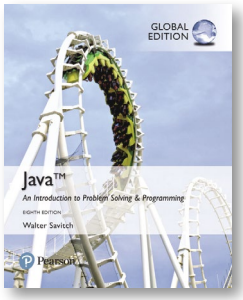
9781292402079 • ©2022
Paperback

eBook version available

Available with MyLab Programming

Course: Java – Intro to Programming/CS1

This text seamlessly integrates programming, data structures,and algorithms. With a fundamentals-first approach, the text builds a strong foundation of basic programming concepts and techniques before teaching object-oriented programming and advanced Java programming. Liang explains programming in a problem-driven way that focuses on problem solving rather than syntax, illustrating basic concepts by example and providing a large number of exercises with various levels of difficulty for students to practice.



Java: An Introduction to Problem Solving and Programming, 8e

Walter Savitch

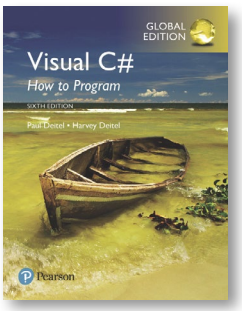
9781292247472 • ©2019
1056pp • Paperback

eBook version available

Available with MyLab Programming

Course: Java – Intro to Programming/CS1

Ideal for a wide range of introductory computer science courses, Java: An Introduction to Problem Solving and Programming, 8th Edition introduces students to object-oriented programming and important concepts such as design, testing and debugging, programming style, interfaces and inheritance and exception handling. A concise, accessible introduction to Java, the text covers key Java language features in a manner that resonates with introductory programmers. Objects are covered early and thoroughly in the text.



Visual C# How to Program, 6e

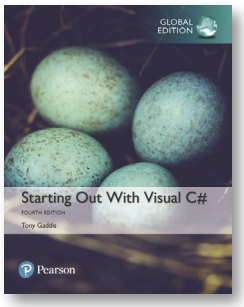
Harvey Deitel & Paul J. Deitel

9781292153469 • ©2017
1056pp • Paperback

eBook version available

Course: C# Programming – Introductory

Created by world-renowned programming instructors Paul and Harvey Deitel, *Visual C# How to Program, Sixth Edition* introduces students to the world of desktop, mobile and web app development with Microsoft's® Visual C#® programming language. Students will use the .NET platform and the Visual Studio® Integrated Development Environment to write, test and debug applications and run them on a wide variety of Windows® devices.



Starting out with Visual C#, 4e

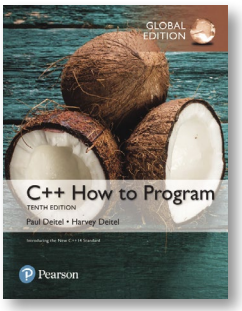
Tony Gaddis

9781292163215 • ©2017
792pp • Paperback

eBook version available

Course: C# Programming – Introductory

Clear, friendly and approachable, *Starting Out With Visual C#* is an ideal beginning text for students with no programming experience. Detailed walk-throughs and a readable, comprehensible style make the text inviting to new programmers, while numerous practical example programs highlight the most important programming topics. Gaddis's detailed, step-by-step instructions teach a GUI-based approach that motivates students with familiar graphical elements. Topics are examined progressively in each chapter, with objects taught before classes.



C++ How to Program (Early Objects Version), 10e

Paul J. Deitel & Harvey Deitel

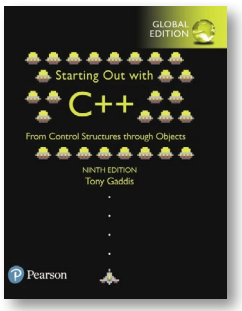
9781292153346 • ©2016
1080pp • Paperback

eBook version available

Available with MyLab Programming

Course: C++ – Intro to Programming/CS1

The best-selling *C++ How to Program* is accessible to readers with little or no programming experience, yet comprehensive enough for the professional programmer. The Deitels' signature live-code approach presents the concepts in the context of full working programs followed by sample executions. The early objects approach gets readers thinking about objects immediately – allowing them to more thoroughly master the concepts. Emphasis is placed on achieving program clarity and building well-engineered software.



Starting Out with C++: From Control Structures through Objects, 9e

Tony Gaddis

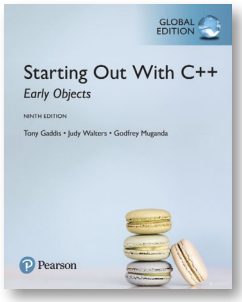
9781292222332 • ©2019
1344pp • Paperback

eBook version available

Available with MyLab Programming

Course: C++ – Intro to Programming/CS1

Starting Out with C++: From Control Structures through Objects covers control structures, functions, arrays and pointers before objects and classes in Tony Gaddis's hallmark accessible, step-by-step presentation. His books help beginning students understand the important details necessary to become skilled programmers at an introductory level. Gaddis motivates the study of both programming skills and the C++ programming language by presenting all the details needed to understand the "how" and the "why" – but never losing sight of the fact that most beginners struggle with this material.



Starting Out with C++: Early Objects, 9e

Tony Gaddis, Judy Walters & Godfrey Muganda

9781292157276 • ©2016
1272pp • Paperback

Available with MyLab Programming

Course: C++ – Intro to Programming/CS1

Intended for use in a two-term, three-term, or accelerated one-term C++ programming sequence, *Starting Out with C++: Early Objects* introduces the fundamentals of C++ to novices and experienced students alike. In clear, easy-to-understand terms, the text introduces all of the necessary topics for beginning C++ programmers. Real-world examples allow students to apply their knowledge in understanding how, why and when to implement the features of C++.

Programming – Intermediate

Absolute C++, 6e

Walter Savitch & Kenrick Mock

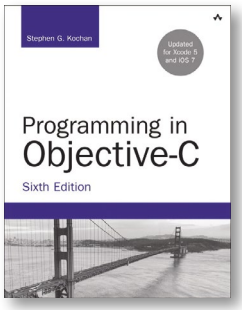
9781292098593 • ©2016
1008pp • Paperback

eBook version available

Available with MyLab Programming

Course: C++ – Intermediate Programming

Absolute C++ is a comprehensive introduction to the C++ programming language. The text is organized around the specific use of C++, providing students with an opportunity to master the language completely. Adaptable to a wide range of users, the text is appropriate for beginner to advanced programmers familiar with the C++ language.



Programming in Objective-C, 6e

Stephen G. Kochan

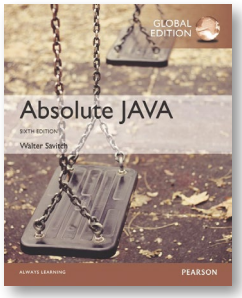
9780321967602 • 2013
576pp • Paperback

eBook version available

Course: C – Intermediate Programming

Programming in Objective-C is a concise, carefully written tutorial on the basics of Objective-C and object-oriented programming for Apple's iOS and OS X platforms. This unique approach to learning, combined with many small program examples and exercises at the end of each chapter, makes Programming in Objective-C ideally suited for classroom use.

Title available on demand



Absolute Java, 6e

Walter Savitch & Kenrick Mock

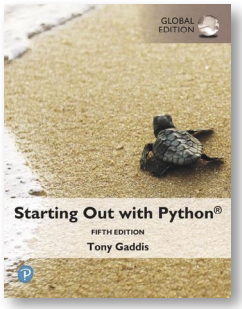
9781292109220 • ©2015
1296pp • Paperback

eBook version available

Available with MyLab Programming

Course: Java – Intermediate Programming

This book is designed to serve as a textbook and reference for programming in the Java language. Although it does include programming techniques, it is organized around the features of the Java language rather than any particular curriculum of programming techniques. The main audience is undergraduate students who have not had extensive programming experience with the Java language.



Starting Out with Python, 5e

Tony Gaddis

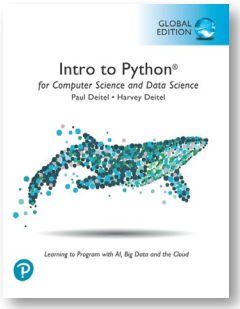
9781292408637 • ©2022
896pp • Paperback

eBook version available

Available with MyLab Programming

Course: Python

Tony Gaddis' accessible coverage introduces students to the basics of programming in a high-level language. Python, an easy-to-learn and increasingly popular object-oriented language, allows readers to become comfortable with the fundamentals of programming without the troublesome syntax that can be challenging for novices. Updates to this edition include a new chapter on database programming, and new coverage of GUI programming, string processing and formatting, and turtle graphics topics.



Intro to Python for Computer Science and Data Science: Learning to Program with AI, Big Data and The Cloud

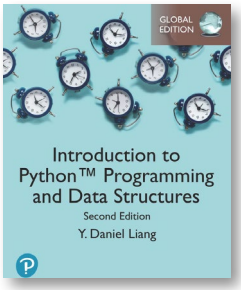
Paul J. Deitel & Harvey Deitel

9781292364902 • ©2021
Paperback

eBook version available

Course: Algorithms

This new text is suitable for introductory-level Python programming and/or data-science courses. Real-world datasets and AI technologies allow students to work on projects making a difference in business, industry, government and academia. There are chapters on Data mining Twitter, Natural Language Processing (usage bar charts and word clouds), IBM Watson and IoT, along with hundreds of examples, exercises, projects (EEPs) and implementation case studies.



Introduction to Python Programming and Data Structures, 1e

Y. Daniel Liang

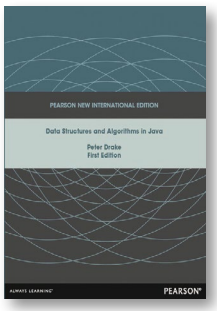
9781292424125 • ©2022
592pp • Paperback

eBook version available

Available with Revel

Course: Java – Data Structures/CS2

Introduce students to basic programming concepts with *Introduction to Python Programming and Data Structures*. The text uses a fundamentals-first approach that prepares students to learn object-oriented programming and advanced Python programming. It presents programming concepts and techniques that include control statements, loops, functions and arrays before designing custom classes. The content incorporates a wide variety of problems with various levels of difficulty and covers many application areas to engage and motivate students.



Data Structures and Algorithms in Java

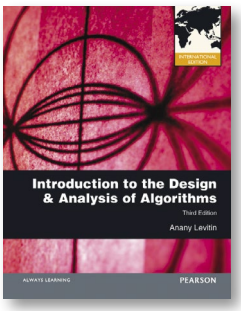
Peter Drake

9781292040097 • ©2013
512pp • Paperback

eBook version available

Course: Java – Data Structures/CS2

An abundance of unique, interesting examples, use of the Unified Modeling Language throughout and the newest Java 1.5 features characterize this text. Drake provides a concise and engaging introduction to Java and object-oriented programming, assuming familiarity with the basic control structures of Java or C and only a pre-calculus level of mathematics.



Introduction to the Design and Analysis of Algorithms, 3e

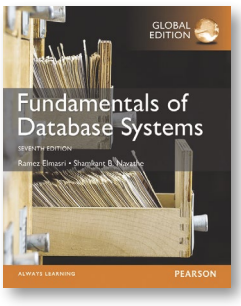
Anany Levitin

9780273764113 • ©2011
592pp • Paperback

eBook version available

Course: Algorithms

Based on a new classification of algorithm design techniques and a clear delineation of analysis methods, *Introduction to the Design and Analysis of Algorithms* presents the subject in a coherent and innovative manner. Written in a student-friendly style, the book emphasizes the understanding of ideas over excessively formal treatment while thoroughly covering the material required in an introductory algorithms course. Popular puzzles are used to motivate students' interest and strengthen their skills in algorithmic problem solving.



Fundamentals of Database Systems, 7e

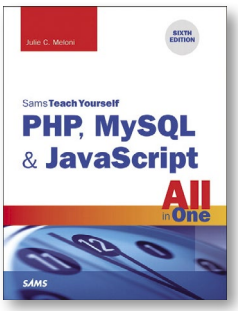
Ramez Elmasri
& Shamkant B. Navathe

9781292097619 • ©2016
1272pp • Paperback

Pearson Horizon available

Course: Database Systems

This book introduces the fundamental concepts necessary for designing, using and implementing database systems and database applications. Our presentation stresses the fundamentals of database modeling and design, the languages and models provided by the database management systems and database system implementation techniques.



PHP, MySQL & JavaScript All in One, Sams Teach Yourself, 6e

Julie C. Meloni

9780672337703 • ©2017
704pp • Paperback

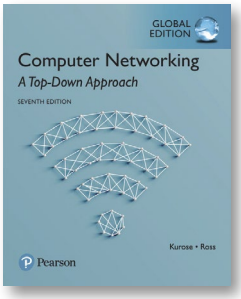
eBook version available

Course: SQL – Programming

In just a short time, students can learn how to use PHP, MySQL and Apache together to create dynamic, interactive websites and applications using the three leading open-source web development technologies. Using a straightforward, step-by-step approach, each lesson in this book builds on the previous ones, enabling readers to learn the essentials of PHP scripting, MySQL databases and the Apache web server from the ground up.

Title available on demand

Computer Networking



Computer Networking: A Top-Down Approach, 7e

James Kurose & Keith Ross

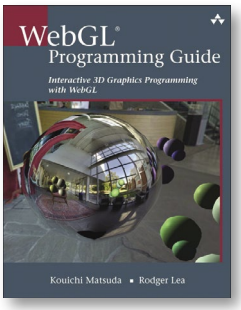
9781292153599 • ©2017
856pp • Paperback

Pearson Horizon available

Course: Computer Networking

Unique among computer networking texts, this popular book builds on the author's long tradition of teaching this complex subject through a layered approach in a "top-down manner." By working its way from the application layer down toward the physical layer, it motivates students by exposing them to important concepts early in their study of networking. This text provides an excellent foundation for students in computer science and electrical engineering, without requiring extensive knowledge of programming or mathematics.

Computer Graphics



WebGL Programming Guide: Interactive 3D Graphics Programming with WebGL

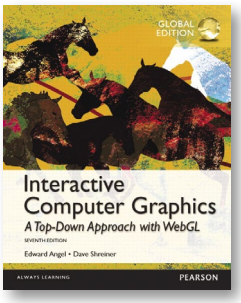
Kouichi Matsuda & Rodger Lea

9780321902924 • ©2013
600pp • Paperback

eBook version available

Course: Advanced Topics in Computer Graphics

With this book, students will learn step-by-step, through realistic examples, building their skills as they move from simple to complex solutions for building visually appealing web pages and 3D applications with WebGL. Media, 3D graphics and WebGL pioneers Dr. Kouichi Matsuda and Dr. Rodger Lea offer easy-to-understand tutorials on key aspects of WebGL, plus 100 downloadable sample programs, each demonstrating a specific WebGL topic.



Interactive Computer Graphics: A Top-Down Approach with WebGL, 7e

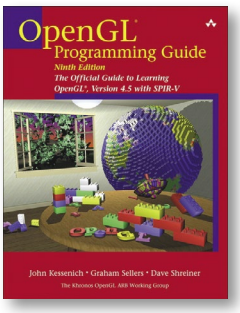
Edward Angel & Dave Shreiner

9781292019345 • ©2014
752pp • Paperback

eBook version available

Course: Computer Graphics – Intro

This is the only introduction to computer graphics text for undergraduates that fully integrates WebGL and emphasizes application-based programming. The top-down, programming-oriented approach allows for coverage of engaging 3D material early in the course so students immediately begin to create their own 3D graphics.



OpenGL Programming Guide: The Official Guide to Learning OpenGL, Version 4.5 with SPIR-V, 9e

John Kessenich, Graham Sellers & Dave Shreiner

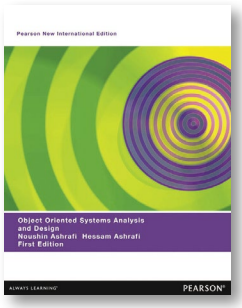
9780134495491 • ©2016
976pp • Paperback

eBook version available

Course: Computer Graphics - Intermediate

OpenGL® Programming Guide provides clear explanations of OpenGL functionality and techniques, including processing geometric objects with vertex, tessellation and geometry shaders using geometric transformations and viewing matrices; working with pixels and texture maps through fragment shaders; and advanced data techniques using framebuffer objects and compute shaders.

Systems Analysis & Design



Object Oriented Systems Analysis and Design

Noushin Ashrafi & Hessam Ashrafi

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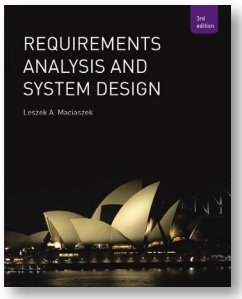
Course: Object-oriented Systems Analysis and Design

This text teaches students object-oriented systems analysis and design in a highly practical and accessible way.



Requirements Analysis and Systems Design, 3e

Leszek Maciaszek

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Course: Systems Analysis and Design

An examination of the methods and techniques used in the analysis and design phases of Information System development. Emphasis is placed upon the application of object technology in enterprise information systems (EIS) with UML being used throughout. Through its excellent balance of practical explanation and theoretical insight, the book manages to avoid unnecessary, complicating details without sacrificing rigor.

Software Engineering

Software Engineering, 10e

Ian Sommerville

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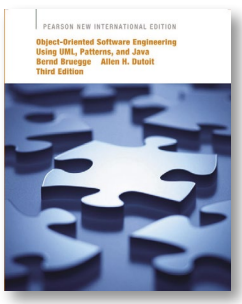
Course: Software Engineering (SE)

Software Engineering introduces students to the overwhelmingly important subject of software programming and development. In the past few years, computer systems have come to dominate not just our technological growth, but the foundations of our world's major industries. This text seeks to lay out the fundamental concepts of this huge and continually growing subject area in a clear and comprehensive manner.



Object-Oriented Software Engineering Using UML, Patterns and Java, 3e

Bernd Bruegge & Allen H. Dutoit

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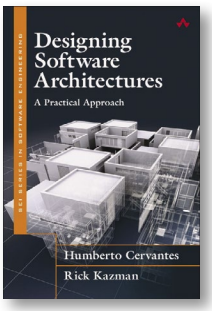
Course: Software Engineering (SE)

Shows students how to use both the principles of software engineering and the practices of various object-oriented tools, processes and products. Using a step-by-step case study to illustrate the concepts and topics in each chapter, Bruegge and Dutoit emphasize learning object-oriented software engineering through practical experience: students can apply the techniques learned in class by implementing a real-world software project.



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Humberto Cervantes & Rick Kazman

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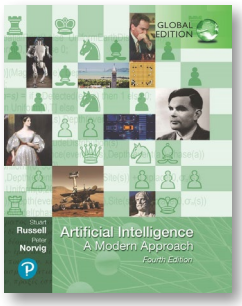
Designing Software Architectures is the first step-by-step guide to making the crucial design decisions that can make or break your software architecture. SEI expert Rick Kazman and Dr. Humberto Cervantes provide comprehensive guidance for ensuring that your architectural design decisions are consistently rational and evidence-based.

Title available on demand

Artificial Intelligence



Artificial Intelligence: A Modern Approach, 4e

Stuart Russell & Peter Norvig

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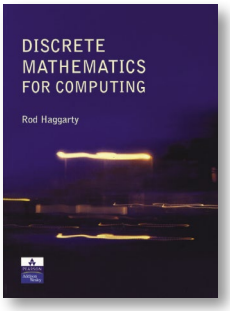
Course: Artificial Intelligence (AI)

A comprehensive approach to AI, suited for two-semester undergraduate courses, adaptable to single-semester programs and also useful for graduates. This eagerly awaited revision presents the most recent developments in the field with expansion of topics in robotics, NLP and more.

Mathematics & Logic



Discrete Mathematics for Computing

Rod Haggarty

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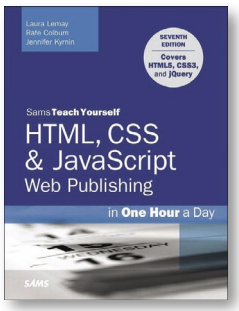
Course: Discrete Mathematics

This book is a concise introduction to the key mathematical ideas that underpin computer science, continually stressing the application of discrete mathematics to computing. It is suitable for students with little or no knowledge of mathematics and covers the key concepts in a simple and straightforward way. The theoretical ideas are reinforced by worked examples and each chapter concludes with a mini case study.



HTML, CSS & JavaScript Web Publishing in One Hour a Day, Sams Teach Yourself, 7e

Laura Lemay, Rafe Colburn & Jennifer Kyrnin

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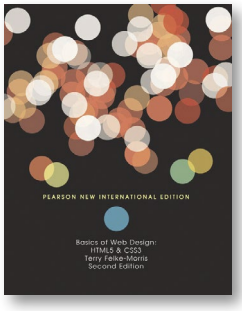
Course: Javascript

Completely revamped to teach HTML5 and CSS3 from the very beginning, this is the newest edition of the worldwide best-seller that has helped 500,000+ people learn the foundational skills of modern web development. Laura Lemay and Rafe Colburn have thoroughly revamped their in-depth tutorial to cover the latest web skills and technologies and walk the reader through creating interactive, dynamic web sites using today's JavaScript libraries, services and social web technologies. Covers HTML5, CSS3 and jQuery.



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Terry Felke-Morris

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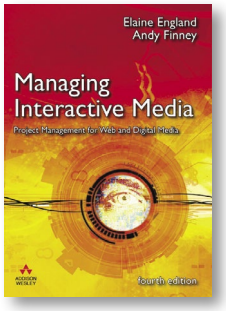
The *Basics of Web Design: HTML5 & CSS3* takes a unique approach to preparing students to design web pages that work today in addition to being ready to take advantage of HTML5 coding techniques of the future.



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Elaine England & Andy Finney

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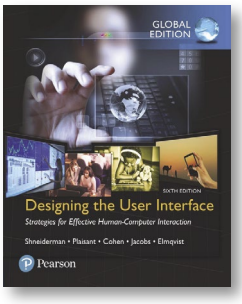
Course: Multimedia Systems

This updated and expanded Fourth Edition includes new material relevant for the changing work environment. The book describes the latest industry trends and incorporates them into a project management framework. By developing practical skills it aids the project manager's own development and provides a coherent overview of the issues that affect all in the converging industries of communications, media and computing.

Human Computer Interaction



Designing the User Interface: Strategies for Effective Human-Computer Interaction, 6e

Ben Shneiderman, Catherine Plaisant, Maxine Cohen, Steven Jacobs, Niklas Elmqvist & Nicholas Diakopoulos

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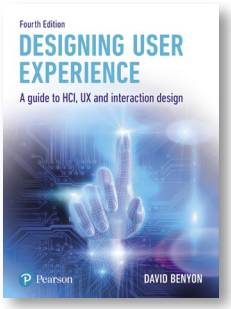
Course: Human-Computer Interaction (HCI)

The Sixth Edition of *Designing the User Interface* provides a comprehensive, authoritative and up-to-date introduction to the dynamic field of human-computer interaction (HCI) and user experience (UX) design. This classic book has defined and charted the astonishing evolution of user interfaces for three decades. Students and professionals learn practical principles and guidelines needed to develop high quality interface designs that users can understand, predict and control. The book covers theoretical foundations and design processes such as expert reviews and usability testing.



Designing User Experience: A guide to HCI, UX and interaction design, 4e

David Benyon

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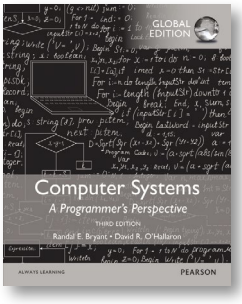
Course: Human-Computer Interaction (HCI)

Designing User Experience presents a comprehensive introduction to the practical issue of creating interactive systems, services and products from a human-centred perspective. It develops the principles and methods of human–computer interaction (HCI) and Interaction Design (ID) to deal with the design of twenty-first-century computing and the demands for improved user experience (UX). It brings together the key theoretical foundations of human experiences when people interact with and through technologies. It explores UX in a wide variety of environments and contexts.

Computer Organization / Architecture



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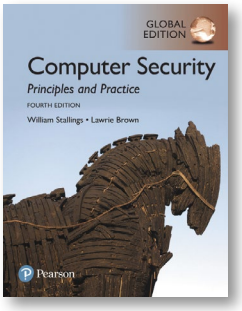

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William Stallings & Lawrie Brown

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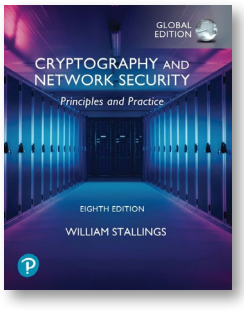
Course: Computer Security

The need for education in computer security and related topics continues to grow at a dramatic rate and is essential for anyone studying Computer Science or Computer Engineering. Written for both an academic and professional audience, the book continues to set the standard for computer security with a balanced presentation of principles and practice. The new edition captures the most up-to-date innovations and improvements while maintaining broad and comprehensive coverage of the entire field.



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William Stallings

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Course: Computer Security

Keep pace with the fast-moving field of cryptography and network security with *Cryptography and Network Security: Principles and Practice*. In an age of viruses and hackers, electronic eavesdropping, and electronic fraud on a global scale, security is paramount. This text explores the basic issues and practices of a network security capability and provides a tutorial and survey of cryptography and network security technology.