General Engineering ~ Contents

2007 New Titles

- **GOTTFRIED**
  Spreadsheet Tools for Engineers Using Excel, 3e 173
  ISBN-13: 978-0-07-297184-2 / MHID: 0-07-297184-3
- **SMITH**
  Teamwork and Project Management, 3e 173,175
  ISBN-13: 978-0-07-310367-9 / MHID: 0-07-310367-5

2008 New Titles

- **CHAPMAN**
  Fortran 95/2003 for Scientists & Engineers, 3e.....172
  ISBN-13: 978-0-07-319157-7 / MHID: 0-07-319157-4
- **CHAPRA**
  Applied Numerical Methods with Matlab for Engineers and Scientists, 2e.....169
  ISBN-13: 978-0-07-313290-7 / MHID: 0-07-313290-X
- **DORF**
  Technology Ventures: From Idea to Enterprise, 2e 176
  ISBN-13: 978-0-07-329442-1 / MHID: 0-07-329442-X
- **EIDE**
  Engineering Fundamentals and Problem Solving, 5e.....163
  ISBN-13: 978-0-07-319158-4 / MHID: 0-07-319158-2
- **FINKLESTEIN**
  Pocket Book of Technical Writing for Engineers & Scientists, 3e.....168
  ISBN-13: 978-0-07-319159-1 / MHID: 0-07-319159-0
- **FORD**
  Design for Electrical and Computer Engineers.....162
  ISBN-13: 978-0-07-338035-3 / MHID: 0-07-338035-0
- **HOLTZAPPLE**
  Concepts in Engineering, 2e 163
  ISBN-13: 978-0-07-319162-1 / MHID: 0-07-319162-0
- **PRITCHARD**
  Mathcad: A Tool for Engineers and Scientists (BEST Series), 2e 165,172
  ISBN-13: 978-0-07-319185-0 / MHID: 0-07-319185-X

Engineering Design

NEW

DESIGN FOR ELECTRICAL AND COMPUTER ENGINEERS

by Ralph Ford, Penn State Erie Behrend College, and Chris Coulston, Penn State Erie Behrend College

2008 (January 2007) / Softcover / 320 pages
ISBN-13: 978-0-07-338035-3 / MHID: 0-07-338035-0

FEATURES

- 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
- Ford does a good job at providing comprehensive design treatment for ECE.
- A text at the right level for senior design--based on reviewer feedback we have heard that no books existed that were at the level needed. Ford seems to now bridge that gap and will be the book of choice.

International Edition

I-DEAS STUDENT GUIDE

Second Edition

by Structural Dynamics Research Corporation

2004 / 480 pages
ISBN-13: 978-0-07-252544-1 / MHID: 0-07-252544-4
ISBN-13: 978-0-07-121632-6 / MHID: 0-07-121632-4 [IE]

SDRC's I-DEAS Student Guide Revised Edition—created by Mark Lawry—provides the "big picture" of I-DEAS, and shows how it fits together as an integrated Mechanical Computer Aided Engineering environment. It provides a quick technical introduction to I-DEAS, including I-DEAS versions 9 and 10, and is ideal for users who want to learn other capabilities of the software. Numerous screen captures provide a visual parallel to the explanations given in the text. The Student Guide covers basic commands and procedures, in a format that makes for convenient reference. The chapter-ending section includes a series of Tutorials that demonstrate basic concepts in a hands-on way. Workshop section follow the Tutorials, and allow users to apply their knowledge in a design context. The Appendix of the book includes an Icon Summary list, a section on Advanced Features and Interfaces, and a practical Troubleshooting Reference. The index is set up to further increase the reference value of the Student Guide

CONTENTS

International Edition

THE MECHANICAL DESIGN PROCESS

Third Edition

by David G. Ullman, Oregon State University

2003 / 416 pages / Hardcover
ISBN-13: 978-0-07-237338-7 / MHID: 0-07-237338-5
ISBN-13: 978-0-07-124059-8 / MHID: 0-07-124059-4 [IE]

CONTENTS

International Edition

INTRODUCTION TO ENGINEERING DESIGN AND PROBLEM SOLVING

(B.E.S.T Series)

by David M Burghardt, Hofstra University

1999 / 240 pages / Softcover
ISBN-13: 978-0-07-116100-8 / MHID: 0-07-116100-7 [IE]

CONTENTS

International Edition

INTRODUCTION TO ENGINEERING DESIGN

by Arvid Eide, Roland Jenison, Lane Mashaw, and Larry Northup, all of Iowa State University

1998 / 168 pages / Softcover
ISBN-13: 978-0-07-115692-9 / MHID: 0-07-115692-5 [IE]

CONTENTS

Introduction/Problem Solving

International Edition

NEW

ENGINEERING FUNDAMENTALS AND PROBLEM SOLVING

Fifth Edition

by Arvid R. Eide. Iowa State University, Roland Jenison, Iowa State University, Larry L. Northup, Iowa State University, and Steven Mickelson, Iowa State University

2008 (January 2007) / Softcover / 576 pages
ISBN-13: 978-0-07-319158-4 / MHID: 0-07-319158-2
ISBN-13: 978-0-07-110190-5 / MHID: 0-07-110190-X

Browse http://www.mhhe.com/best

The fifth edition of Engineering Fundamentals & Problem Solving is written to motivate engineering students during their first year. Students will develop the skills in solving open-ended problems, this text will provide students with experience in solving problems in SI and customary units while presenting solutions in a logical manner. Eide introduces students to subject areas that are common to engineering disciplines that require the application of fundamental engineering concepts. For those instructors who desire a shorter text to complement other application specific texts, McGraw-Hill offers cutomization through our Primis-Build a Book, or the BEST version of this text. Please see Eide's Introduction to Engineering Design and Problem Solving, 2nd edition, from the BEST series. Getting familiar to what engineering is and what you need to be a successful engineer.

NEW TO THIS EDITION

- Shows engineering students what engineering is and what it's like to become an engineer. Deals with problems that students would be expecting to see within an engineering curriculmn.
- Updated to include coverage of bioengineering, nanotechnology, and engineering materials.
- Focus on assessment.
- Updated to include a discussion of workplace competencies, key actions, and self-assessment to help prepare students for the workplace and to help develop learning portfolios.

FEATURES

- Focus on open-ended problems.
- Focus on problem solving.

CONTENTS

1 The Engineering Profession. 2 Engineering Design--A Process. 3 Engineering Solutions. 4 Representation of Technical Information. 5 Engineering Estimations and Approximations. 6 Dimensions, Units, and Conversions. 7 Preparation for Computer Solutions. 8 Statistics. 9 Mechanics. 10 Material Balance. 11 Electrical Theory. 12 Energy. 13 Engineering Economics. Appendix A Selected Topics from Algebra. Appendix B Trigonometry. Appendix C Graphics. Appendix D General. Appendix E Plane Surfaces.

NEW

CONCEPTS IN ENGINEERING

Second Edition

by Mark T. Holtzapple, Texas A & M University, and W. Dan Reece, Texas A & M University

2008 (January 2007) / Hardcover / 288 pages
ISBN-13: 978-0-07-319162-1 / MHID: 0-07-319162-0

Browse http://www.mhhe.com/best

The second edition of Holtzapple and Reece's widely popular text, Concepts in Engineering, introduces fundamental engineering concepts to freshman engineering students. Its central focus is to positively motivate students for the rest of their engineering education, as well as their future engineering. Due to the book's concise, yet comprehensive coverage, it can be used in a wide variety of introductory courses. Text is for students who are not sure if they want to be engineers and the book almost acts as a "hook". Holtzapple's approach is different than Eide's text which expects students to go into engineering.

NEW TO THIS EDITION

- Addition of new chapter, Preparing to Be an Engineer.
- The text gives students a well-rounded approach to engineering in addition to meeting ABET requirements for engineering students.

FEATURES

- Focuses on problem solving. A consistent method of problem solving is integrated into the book.
- Emphasizes design by including a design project.
- Excites students about engineering through providing interesting problems and focusing on the creative process of being an engineer.
- Focuses on the fundamentals and includes information that students are unlikely to find elsewhere. This text focuses on basic information- such as grammatical rules for the SI system and graphing rules- that starts engineering students off with just the right amount of "hard" content.

CONTENTS

1. Preparing to Be an Engineer. 2. The Engineer. 3. Engineering Ethics. 4. Problem Solving. 5. Introduction to Design. 6. Engineering Communications. 7. Numbers. 8. Tables and Graphs. 9. SI System of Units. 10. Unit Conversions. Appendices. Topic Index. Biographical Index

International Edition

FOUNDATIONS OF ENGINEERING
Second Edition
by Mark T Holtzapple and W Dan Reece, both of Texas A&M University, College station
2003 / 720 pages
ISBN-13: 978-0-07-248082-5 / MHID: 0-07-248082-3
ISBN-13: 978-0-07-119561-4 / MHID: 0-07-119561-0 [IE]

http://www.mhhe.com/holtzapple

This book gives freshman engineering students a solid foundation for all their future coursework. It provides an overview to the engineering profession and of the skills they will need to develop, as well as an introduction to fundamental engineering topics such as thermodynamics, rate processes, and Newton's laws. An important aspect of the book's approach is the method of Engineering Accounting, which casts the basic conservation laws (e.g., of energy or mass) as simple "accounting" procedures. This is a unifying concept that facilitates problem-solving across all engineering disciplines.

CONTENTS
Section I Introduction to Engineering: 1 The Engineer. 2 Engineering Ethics. 3 Problem Solving. 4 Understanding and Using Computers. 5 Introduction to Design. 6 Engineering Communications. **Section II Mathematics:** 7 Numbers. 8 Tables and Graphs. 9 Statistics. **Section III Engineering Fundamentals:** 10 Newton's Laws. 11 Introduction to Thermodynamics. 12 Introduction to Rate Processes. 13 SI System of Units. 14 Unit Conversions. 15 Introduction to Statics and Dynamics. 16 Introduction to Electricity. **Section IV Engineering Accounting:** 17 Accounting. 18 Accounting for Mass. 19 Accounting for Charge. 20 Accounting for Linear Momentum. 21 Accounting for Angular Momentum. 22 Accounting for Energy. 23 Accounting for Entropy. 24 Accounting for Money. Appendix A Unit Conversion Factors. Appendix B NSPE Code of Ethics for Engineers. Appendix C z Table. Appendix D Summary of Some Engineering Milestones

International Edition

INTRODUCTION TO ENGINEERING DESIGN AND PROBLEM SOLVING
(B.E.S.T Series)
by David M Burghardt, Hofstra University
1999 / 240 pages / Softcover
ISBN-13: 978-0-07-116100-8 / MHID: 0-07-116100-7 [IE]

CONTENTS
1 Understanding the Human-Made World. 2 The Design Process. 3 Design Documentation. 4 Engineering Analysis and Design. 5 Discussions with Engineers. Appendix.

Engineering Graphics & Drawing

INTRODUCTION TO GRAPHICS COMMUNICATIONS FOR ENGINEERS
(B.E.S.T Series), Third Edition
by Gary R Bertoline, Purdue University, West Lafayette
2006 / 256 pages / Softcover
ISBN-13: 978-0-07-304836-9 / MHID: 0-07-304836-4
(with OLC)

http://www.mhhe.com/engcs/general/best

Introduction to Graphics Communication for Engineers is a short introductory technical drawing text intended for use in technical drawing or drafting courses at two and four year schools or other technology programs. Powerful computers and CAD software are of little use to engineers who do not fully understand the fundamentals of graphics communication principles and 3-D modeling strategies, or do not possess a level of visualization ability. Because of this, Bertoline concentrates on the concepts and skills necessary to sketch and create 2-D drawings and 3-D CAD models in this text. New to the third edition are "Design in Industry Boxes" that cover an aspect of design as practiced in industry. Quotes and interesting stories from practicing engineers make the boxes motivating and informative for students. Also new are practice sketching problems included throughout each chapter, which allow students a chance to practice what they are learning. This book is part of the B.E.S.T. (Basic Engineering Series and Tools), which consists of modularized textbooks offering virtually every topic and specialty likely to be of interest to engineers.

NEW TO THIS EDITION
- New "Design in Industry" boxes have been added to the fourth edition. Each of these boxes cover some aspect of design as practiced in industry. Students will learn how design is done in the real world from these interesting stories presented by practicing engineers and technologists.
- New to this edition are practice problems located throughout each chapter. This new feature gives students drawing practice as they learn new concepts. Through immediate hands-on practice, students can more readily grasp chapter material.
- New end-of-chapter sketching problems have been added, reinforcing what students have learned in the chapter.

FEATURES
- Pedagogically sound, this book provides a list of objectives at the beginning of each chapter, step-by-step instructions on how to draw, and a wide assortment of problems that can be assigned to reinforce topics covered.
- Sketching worksheets are integrated into the end of each chapter. These worksheets are excellent for sketching assignments, used to augment CAD work.
- As part of the McGraw-Hill B.E.S.T. (Basic Engineering Series and Tools), this book can be customized on-line and combined with other BEST titles to be sold to students either in an eletronic form or traditional book form.

CONTENTS
Chapter 1 Introduction to Graphics Communication. **Chapter 2** Sketching and Text. **Chapter 3** Section and Auxiliary Views. **Chapter 4** Dimensioning and Tolerancing Practices. **Chapter 5** Reading and Constructing Working Drawings. **Chapter 6** Design and 3-D Modeling

Computer/Programming

NEW

MATHCAD: A TOOL FOR ENGINEERS AND SCIENTISTS (B.E.S.T. SERIES)

Second Edition

by Philip J. Pritchard, Manhattan College

2008 (January 2007) / Softcover / 352 pages
ISBN-13: 978-0-07-319185-0 / MHID: 0-07-319185-X

Browse http://www.mhhe.com/best

Mathcad: A Tool for Engineering Problem Solving explains how to use Mathcad 13(Student and Standard), >This book is current with the latest release of mathcad, with the focus on the fundamentals, is enriched with great motivating applications, solid homework problems, appealing to both engineers and scientists.

NEW TO THIS EDITION

- Examples updated to Mathcad 13, which is the most current version.
- Examples and homework problems updated to account for a broader range of engineering disciplines, in addition to mechanical and electrical, to include: civil, chemical, and environmental engineering.
- Pedagogy updated to be more student-friendly, including new beginning sections at the start of each chapter that spell out specific features to be covered, new end-of-chapter summaries, and the addition of tables and boxes where appropriate that will reduce the amount of math theory in the text.
- Examples and applications related to the sciences.

FEATURES

- Features of Mathcad are immediately followed by engineering examples.

CONTENTS

1 What Is Mathcad and Why Use It? 2 The Basics of Mathcad. 3 How to Graph Functions. 4 Symbolic and Numeric Calculus. 5 How to Solve Equations. 6 Vectors, Matrices, and More. 7 Solving Ordinary Differential Equations. 8 Doing Statistics with Mathcad. 9 Importing and Exporting, the Web, and Some Advanced Concepts.

International Edition

INTRODUCTION TO MATLAB 7 FOR ENGINEERS

by William Palm, University of Rhode Island—Kingston

2005 / 752 pages
ISBN-13: 978-0-07-292242-4 / MHID: 0-07-292242-7
(with Bind-In Card)
ISBN-13: 978-0-07-123262-3 / MHID: 0-07-123262-1 [IE]

This site contains power point slides, Appendix E: Some Project Suggestions, and complete solutions to all of the Test Your Understanding exercises and all the chapter problems. (Browse http://www.mhhe.com/palm)

This is a simple, concise book designed to be useful for beginners and to be kept as a reference. MATLAB is presently a globally available standard computational tool for engineers and scientists. The terminology, syntax, and the use of the programming language are well defined and the organization of the material makes it easy to locate information and navigate through the textbook. The text covers all the major capabilities of MATLAB that are useful for beginning students. An instructor's manual and other web resources are available.

NEW TO THIS EDITION

- Expanded coverage of programming now includes structured programming and logical variables.
- Function handles, anonymous functions, subfunctions, and nested functions are now treated.
- Coverage of Simulink® has been expanded to a separate chapter in light of its growing popularity.
- A new Appendix B contains an introduction to producing animation and sound with MATLAB.

FEATURES

- The text is written for freshman engineering students and uses mathematics appropriate for this level.
- Numerous examples and homework problems drawn from all the fields of engineering.
- Students can use the text as a reference in later courses because it contains many tables that summarize the MATLAB commands.

CONTENTS

1 An Overview of MATLAB. 2 Numeric, Cell, and Structure Arrays. 3 Functions and Files. 4 Programming with MATLAB. 5 Advanced Plotting and Model Building. 6 Linear Algebraic Equations. 7 Probability, Statistics, and Interpolation. 8 Numerical Calculus and Differential Equations. 9 Simulink. 10 Symbolic Processing with MATLAB. **Appendix A** Guide to Commands and Functions in this Text. **Appendix B** Animation and Sound in MATLAB. **Appendix C** Formatted Output in MATLAB. **Appendix D** References. **Appendix E** Some Project Suggestions (Online). Answers to Selected Problems

International Edition

FORTRAN 90/95 FOR SCIENTISTS AND ENGINEERS
Second Edition

by Stephen Chapman, BAE Systems, Australia
2004 / 700 pages
ISBN-13: 978-0-07-282575-6 / MHID: 0-07-282575-8
ISBN-13: 978-0-07-123233-3 / MHID: 0-07-123233-8 [IE]
http://www.mhhe.com/engcs/general/best/

Chapman's Fortran for Scientists and Engineers is intended for both first year engineering students and practicing engineers. It simultaneously teaches the Fortran 90/95 programming language, structured programming techniques, and good programming practice. Among its strengths are its concise, clear explanations of Fortran syntax and programming procedures, the inclusion of a wealth of examples and exercises to help students grasp difficult concepts, and its explanations about how to understand code written for older versions of Fortran.

CONTENTS

International Edition

APPLIED C
An Introduction and More

by Alice Fischer and Stephen M Ross, University of New Haven
2000 / 224 pages / Softcover
ISBN-13: 978-0-07-021748-5 / MHID: 0-07-021748-3
ISBN-13: 978-0-07-118459-5 / MHID: 0-07-118459-7 [IE]

CONTENTS

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-13: 978-0-07-913678-7 / MHID: 0-07-913678-8
ISBN-13: 978-0-07-116788-8 / MHID: 0-07-116788-9
[IE with 3.5″ Disk]

CONTENTS

International Edition

A C++ PRIMER FOR ENGINEERS
An Object-Oriented Approach

by Kumaraswamy Ponnambalam, University of Waterloo; and Tivley Algvindigve, Chief Software Engineer for Engsoft
1997 / 293 pages / Softcover
ISBN-13: 978-0-07-115807-7 / MHID: 0-07-115807-3
[IE with 3.5″ disk]

CONTENTS

International Edition

LEARNING C++
by Neill Graham
1991 / 304 pages / Softcover
ISBN-13: 978-0-07-100849-5 / MHID: 0-07-100849-7 [IE]

Environmental Engineering

International Edition

CHEMISTRY FOR ENVIRONMENTAL ENGINEERING AND SCIENCE
Fifth Edition
by Clair N. Sawyer (deceased), Perry McCarty, Stanford University; Gene F. Parkin, University of Iowa, Iowa City
2003 / 768 pages
ISBN-13: 978-0-07-248066-5 / MHID: 0-07-248066-1
ISBN-13: 978-0-07-119888-2 / MHID: 0-07-119888-1 [IE]
http://www.mhhe.com/sawyer/

CONTENTS
I Fundamentals of Chemistry for Environmental Engineering and Science: 1 Introduction. 2 Basic Concepts from General Chemistry. 3 Basic Concepts from Physical Chemistry. 4 Basic Concepts from Equilibrium Chemistry. 5 Basic Concepts from Organic Chemistry. 6 Basic Concepts from Biochemistry. 7 Basic Concepts from Colloid Chemistry. 8 Basic Concepts from Nuclear Chemistry. **II Water and Wastewater Analysis:** 9 Introduction. 10 Statistical Analysis of Analytical Data. 11 Basic Concepts from Quantitative Chemistry. 12 Instrumental Methods of Analysis. 13 Turbidity. 14 Color. 15 Standard Solutions. 16 pH. 17 Acidity. 18 Alkalinity. 19 Hardness. 20 Residual Chlorine and Chlorine Demand. 21 Chloride. 22 Dissolved Oxygen. 23 Biochemical Oxygen Demand. 24 Chemical Oxygen Demand. 25 Nitrogen. 26 Solids. 27 Iron and Manganese. 28 Fluoride. 29 Sulfate. 30 Phosphorus and Phosphate. 31 Oil and Grease. 32 Volatile Acids. 33 Gas Analysis. 34 Trace Contaminants. **Appendix A:** Thermodynamic Properties (25 degrees C). **Appendix B:** Acronyms, Roman Symbols, and Greek Symbols

International Edition

INTRODUCTION TO ENGINEERING AND THE ENVIRONMENT
by Edward S Rubin and Cliff Davidson, both of the Carnegie Mellon University
2001 / 576 pages
ISBN-13: 978-0-07-235467-6 / MHID: 0-07-235467-4
ISBN-13: 978-0-07-118185-3 / MHID: 0-07-118185-7 [IE]

CONTENTS
I: Motivation and Framework. 1 Engineering and the Environment. 2 Overview of Environmental Issues. II: Case Studies in Design for the Environment. 3 Automobiles and the Environment. 4 Batteries and the Environment . 5 Power Plants and the Environment. 6 Refrigeration and the Environment. 7 Environmental Life Cycle Assessments. III: Case Studies in Environmental Modeling. 8 Controlling Urban Smog. 9 CFCs and the Ozone Layer. 10 Global Warming and Climate Change. 11 Toxic Metals in the Environment. 12 PCBs in the Aquatic Environment. IV: Topics in Engineering and Environmental Policy. 13 Economic Analysis. 14 Environmental Risk and Decision Analysis. Appendices

International Edition

INTRODUCTION TO ENVIRONMENTAL ENGINEERING
Third Edition
by Mackenzie L. Davis, Michigan State University; and David A. Corwell, Environmental Engineering and Technology, Inc.
1998 / 750 pages / Hardcover
ISBN-13: 978-0-07-238777-3 / MHID: 0-07-238777-7
(with Unit Conversion Booklet)
ISBN-13: 978-0-07-115234-1 / MHID: 0-07-115234-2 [IE]

CONTENTS
1 Introduction/2 Hydrology/3 Water Treatment/4 Water Quality Management/5 Wastewater Treatment/6 Air Pollution/7 Noise Pollution/8 Solid Waste Management/9 Hazardous Waste/10 Ionizing Radiation/Appendixes/A Properties of Air, Water, and Selected Chemicals/B Noise Computation Tables and Nomographs/C EPA Hazardous Waste Code Descriptions

International Edition

ENVIRONMENTAL IMPACT ASSESSMENT
Second Edition
by Larry Canter, University of Oklahoma
1996 / 480 pages
ISBN-13: 978-0-07-009767-4 / MHID: 0-07-009767-4
ISBN-13: 978-0-07-114103-1 / MHID: 0-07-114103-0 [IE]

CONTENTS
1 National Environmental Policy Act and Its Implementation/2 Planning and Management of Impact Studies/3 Simple Methods for Impact Identification Matrices, Networks and Checklists/4 Description of Environmental Setting/5 Environmental Indices and Indicators for Describing the Affected Environment/6 Prediction and Assessment of Impacts on the Air Environment/7 Prediction and Assessment of Impacts on the Surface Water Environment/8 Prediction and Assessment of Impacts on the Soil and Ground Water Environment/9 Prediction and Assessment of Impacts on the Noise Environment/10 Prediction and Assessment of Impacts on the Biological Environment/11 Habitat Methods for Biological Impact Prediction and Assessment/12 Prediction and Assessment of Impacts on the Cultural (Historical/Archaeological) Environment/13 Prediction and Assessment of Visual Impacts/14 Prediction and Assessment of Impacts on the Socioeconomic Environment/15 Decision Methods for Evaluation of Alternatives/16 Public Participation in Environmental Decision Making/17 Environmental Monitoring/Appendixes

Engineering Ethics

International Edition

ETHICS IN ENGINEERING
Fourth Edition
by Mike Martin, Chapman College; and Roland Schinzinger, University of California, Irvine
2005 / 350 pages
ISBN-13: 978-0-07-283115-3 / MHID: 0-07-283115-4
ISBN-13: 978-0-07-111293-2 / MHID: 0-07-111293-6 [IE]

The B.E.S.T. website includes links to additional discussion topics, information on recent cases, links, and more. (Browse http://www.mhhe.com/engineering/general/best)

Now in its fourth edition, Martin and Schinzinger's Ethics in Engineering provides an introduction to the key issues in engineering ethics, taking account of both specific organizational contexts and broader technological trends. Current and thorough, it promotes critical thinking and discussion about moral and ethical issues that engineers face. The up-to-date content provides real world examples and cases and, by offering a framework for understanding ethical dilemmas within engineering, prepares readers for issues they will confront in their careers.

NEW TO THIS EDITION
- Chapters 1-3, and 6-10 have either been extensively updated or are entirely new. Fuller discussion is provided on moral reasoning, codes of ethics, personal commitments in engineering, environmental ethics, honesty and research ethics, as well as the philosophy of technology.
- The book provides the important connections between the choices made by individuals and corporations with broader social concerns. This helps the reader get a better sense of the "big picture."
- Each chapter ends with a list of "Key Concepts" to help reinforce the preceding material. The appendix contains additional pedagogical resources, as well as sample codes of ethics, to give additional real-world perspective to the reader. In addition, ample Study Questions are provided at the end of each section.
- Updated case studies are provided throughout the book to further support the concepts presented.

FEATURES
- Most competing texts consist of readings only. This text contains more textbook material, making the text relevant to both students and professionals.

CONTENTS

Technical Writing

NEW

POCKET BOOK OF TECHNICAL WRITING FOR ENGINEERS & SCIENTISTS
Third Edition
by Leo Finkelstein, Wright State University-Dayton
2008 (January 2007) / Softcover / 336 pages
ISBN-13: 978-0-07-319159-1 / MHID: 0-07-319159-0

Browse http://www.mhhe.com/best

The focus of this text is to teach engineering students the skill of technical writing. The book is unique in that it gets to the point, uses practical outlines throughout, and shows students how to produce the most common technical documents step-by-step, in a manner that is fun and interesting to students. With ABET increasing the emphasis on technical writing, this affordable, straightforward, easy-to-understand text with flexible coverage, would be a perfect fit for your technical writing course. Each chapter has an end of chapter critique, which allows students to implement what they have learned in the chapter. This is new!

NEW TO THIS EDITION
- New chapter on Business Communications.
- Updated information in the Electronic Publishing chapter.
- Updated grammar chapter with new exercises; a new section on punctuation errors, including a useful table on punctuation.
- Exercises that encourage students to apply what they've learned in a chapter, along with the chapter's checklist, to critique an example document.
- Added discussion of equations and formulas, including examples, and added discussion of Gantt charts, including illustrations, in the Visuals chapter.
- Updated examples of technical documents, touching on a broad range of engineering disciples and interest.
- Updated Visuals chapter along with new exercises.

CONTENTS

Numerical Methods

International Edition

NEW

APPLIED NUMERICAL METHODS WITH MATLAB FOR ENGINEERS AND SCIENTISTS

Second Edition

by Steven C. Chapra, Tufts University
2008 (November 2006) / Hardcover / 544 pages
ISBN-13: 978-0-07-313290-7 / MHID: 0-07-313290-X
ISBN-13: 978-0-07-125921-7 / MHID: 0-07-125921-X [IE]

The web site features student and instructor resources such as an image bank, lecture slides, helpful web links, study objectives, and more! (Browse http://www.mhhe.com/chapra)

Steven Chapra's second edition, Applied Numerical Methods with MATLAB for Engineers and Scientists, is written for engineers and scientists who want to learn numerical problem solving. This text focuses on problem-solving (applications) rather than theory, using MATLAB, and is intended for Numerical Methods users; hence theory is included only to inform key concepts. The second edition feature new material such as Numerical Differentiation and ODE's: Boundary-Value Problems.
For those who require a more theoretical approach, see Chapra's best-selling Numerical Methods for Engineers, 5/e (2006), also by McGraw-Hill.

NEW TO THIS EDITION

- Based on response from users and reviewers, 4 New Chapters have been added to the second edition to provide a more accessible presentation, while maintaining its student-friendly flavor.
  ~Optimization
  ~Numerical Differentiation
  ~ODES: Boundary-Value Problems
  ~Fast Fourier Transform. This appendix chapter is presented in an introductory fashion to illustrate the power of MATLAB and to let students go away recognizing that although they have just scratched the surface, they might want to pursue the topic in greater depth in future courses.
- 50% new or revised chapter and homework problems

FEATURES

- Explanations are straight-forward and practically oriented. The math level is considered, just to be at the right level--not too easy or rigorous, just right.
- Extensive use of engineering examples, case studies, and applications are given throughout the text.
- Each chapter is well integrated with MATLAB M-files. In addition, relevant MATLAB functions are introduced in each chapter.
- MATLAB is used as the primary computing environment. All algorithms are presented as m-files.
- A text Web site is available at http://www.mhhe.com/chapra

CONTENTS

Part One Modeling, Computers, and Error Analysis. 1. Mathematical Modeling Numerical Methods and Problem Solving. 2. MATLAB Fundamentals. 3. Programming with MATLAB. 4. Roundoff and Trunication Errors. Part Two Roots and Optimization. 5. Roots: Bracketing Methods. 6. Roots: Open Methods. 7. Optimization. Part Three Linear Systems. 8. Linear Algebraic Equations and Matrices. 9. Gauss Elimination. 10. LU Factorization. 11. Matrix Inverse and Condition. 12. Iterative Methods. Part Four Curve Fitting. 13. Linear Regression. 14. General Linear Least-Squares and Non-Linear Regression. 15. Polynomial Interpolation. 16. Splines and Piecewise Interpolation. Part Five Integration and Differentiation. 17. Numerical Integration Formulas. 18. Numerical Integration of Functions. 19. Numerical Differentiation. Part Six Ordinary Differential Equations. 20. Initial-Value Problems. 21. Adaptive Methods and Stiff Systems. 22. Boundary-Value Problems Appendix A: Eigenvalues Appendix B: MATLAB Built-in Functions Appendix C: MATLAB M-File Functions Bibliography Index

International Edition

NUMERICAL METHODS FOR ENGINEERS

Fifth Edition

by Steven C. Chapra, Tufts University, Raymond Canale
2006 / 960 pages / Hardcover
ISBN-13: 978-0-07-310156-9 / MHID: 0-07-310156-7
(with Engg Sub Card)
ISBN-13: 978-0-07-124429-9 / MHID: 0-07-124429-8 [IE]

The Online Learning Center will contain general textbook information, helpful Web links, MATLAB resources, and more! (Browse http://www.mhhe.com/chapra)

The fifth edition of Numerical Methods for Engineers with Software and Programming Applications continues its tradition of excellence. Instructors love this text because it is a comprehensive text that is easy to teach from. Students love it because it is written for them—with great pedagogy and clear explanations and examples throughout. The text features a broad array of applications, including all engineering disciplines. The revision retains the successful pedagogy of the prior editions. Chapra and Canale's unique approach opens each part of the text with sections called Motivation, Mathematical Background, and Orientation, preparing the student for what is to come in a motivating and engaging manner. Each part closes with an Epilogue containing sections called 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. Users will find use of software packages, specifically MATLAB and Excel with VBA. This includes material on developing MATLAB m-files and VBA macros. Also, many, many more challenging problems are included. The expanded breadth of engineering disciplines covered is especially evident in the problems, which now cover such areas as biotechnology and biomedical engineering.

NEW TO THIS EDITION

- Approximately 150 new, challenging problems drawn from all engineering disciplines.
- The higher level material has been streamlined and some has been eliminated completely.
- Completely new sections on a number of topics including multiple integrals and the modified false position method.

Features

- Challenging problems drawn from all engineering disciplines are included in the text.
- Chapra is know for his clear explanations and elegantly rendered examples.
- The text includes a helpful appendix chapter, Getting Started with MATLAB.

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. 6 Open Methods. 8 Engineering Applications: Roots of Equations. **Part 3 Linear Algebraic Equations:** 9 Gauss Elimination. 10 LU Decomposition and Matrix Inversion. 11 Special Matrices and Gauss-Seidel. 12 Engineering Applications: Linear Algebraic Equations. **Part 4 Optimization:** 13 One-Dimensional Unconstrained Optimization. 14 Multidimensional Unconstrained Optimization. 15 Constrained Optimization. 16 Engineering Applications: Optimization. **Part 5 Curve Fitting:** 17 Least-Squares Regression. 18 Interpolation. 19 Fourier Approximation. 20 Engineering Applications: Curve Fitting. **Part 6 Numerical Differentiation and Integration:** 21 Newton-Cotes Integration Formulas. 22 Integration of Equations. 23 Numerical Differentiation. 24 Engineering Applications: Numerical Integration and Differentiation. **Part 7 Ordinary Differential Equations:** 25 Runge-Kutta Methods. 26 Stiffness and Multistep Methods. 27 Boundary-Value and Eigenvalue Problems. 28 Engineering Applications: Ordinary Differential Equations. **Part 8 Partial Differential Equations:** 29 Finite Difference: Elliptic Equations. 30 Finite Difference: Parabolic Equations. 31 Finite-Element Method. 32 Engineering Applications: Partial Differential Equations. **Appendix A** The Fourier Series. **Appendix B** Getting Started with Matlab. Bibliography. Index

International Edition

SCIENTIFIC COMPUTING
Second Edition
by Michael T Heath, University of Illinois, Computer Science
2002 / 576 pages
ISBN-13: 978-0-07-239910-3 / MHID: 0-07-239910-4
ISBN-13: 978-0-07-124489-3 / MHID: 0-07-124489-1 [IE]

http://www.mhhe.com/engcs/compsci/heath

CONTENTS
1 Scientific Computing. 2 Systems of Linear Equations. 3 Linear Least Squares. 4 Eigenvalues Problems. 5 Nonlinear Equations. 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

Engineering Math/Statistics

International Edition

STATISTICS FOR ENGINEERS AND SCIENTISTS
by William C Navidi, Colorado School of Mines
2006 / 672 pages / Hardcover
ISBN-13: 978-0-07-255160-0 / MHID: 0-07-255160-7
ISBN-13: 978-0-07-121492-6 / MHID: 0-07-121492-5 [IE]
ISBN-13: 978-0-07-310767-7 / MHID: 0-07-310767-0
(with CD-Rom)
ISBN-13: 978-0-07-111723-4 / MHID: 0-07-111723-7
[IE with CD-Rom]

http://www.mhhe.com/navidi

Statistics for Engineers and Scientists stands out for its crystal clear presentation of applied statistics. Suitable for a one or two semester course, the book takes a practical approach to methods of statistical modeling and data analysis that are most often used in scientific work. The presentation is oriented toward engineering and the natural sciences, but since the basic methods and ideas of statistics are applicable to all subjects, this book will benefit students in business and the social sciences as well.

FEATURES
- Readable style explains difficult concepts clearly. While including the mathematics necessary for clear understanding, the text makes extensive use of examples to motivate fundamental concepts and to develop intuition.
- Contemporary, real-world data sets.
- Extensive coverage of simulation methods. At a level appropriate for introductory students, the text presents a solid introduction to simulation methods, including the bootstrap and applications to estimating Probabilities, estimating bias, computing confidence intervals, and testing hypotheses.
- Extensive coverage of propagation of error. This topic, important to engineers and scientists, is not covered in many other books in this category.
- Computer output integrated in examples and problems. In line with modern trends, the text includes numerous examples of computer output and contains exercises suitable for solving with computer software. The student edition of MINITAB, the widely used statistics software package, is available bundled with the book.
- Flexible presentation of probability. The text allows instructors wide latitude in choosing the depth and extent of their coverage of this topic.
- Extensive coverage of linear model diagnostic procedures. This coverage includes examination of residual plots, transformations of variables, and principles of variable selection in multivariate models.
- Extensive coverage of the impact of outliers on various statistical procedures.
- P-value approach to hypothesis is emphasized. While fixed-level testing and power calculations are also covered, the text includes extensive coverage of the P-value approach.
- Computer Software results emphasized over matrices. The chapter on multiple regression emphasizes the use of computer software and interpretation of results, rather than computational formulas involving matrices.
- Multiple testing is discussed extensively.

CONTENTS
1 Sampling and Descriptive Statistics. 2 Probability. 3 Propagation of Error. 4 Commonly Used Distributions. 5 Confidence Intervals. 6 Hypothesis Testing. 7 Correlation and Simple Linear Regression. 8 Multiple Regression. 9 Factorial Experiments. 10 Statistical Quality Control. Appendix A Tables. Appendix B Partial Derivatives. Appendix C Bibliography

International Edition

INTRODUCTION TO PROBABILITY AND STATISTICS
Principles and Applications for Engineering and The Computing Sciences, Fourth Edition
by J. Susan Milton, Radford University and Jesse C. Arnold, Virginia Polytechnic Institute
2003 / 816 pages
ISBN-13: 978-0-07-246836-6 / MHID: 0-07-246836-X
ISBN-13: 978-0-07-124248-6 / MHID: 0-07-124248-1
[IE, 2 Color Text]

http://www.mhhe.com/miltonarnold

CONTENTS
1 Introduction to Probability and Counting: Interpreting Probabilities. Sample Spaces and Events. Permutations and Combinations. **2 Some Probability Laws:** Axioms of Probability. Conditional Probability. Independence and the Multiplication Rule. Bayes' Theorem. **3 Discrete Distributions:** Random Variables. Discrete Probablility Densities. Expectation and Distribution Parameters. Geometric Distribution and the Moment Generating Function. Binomial Distribution. Negative Binomial Distribution. Hypergeometric Distribution. Poisson Distribution. **4 Continuous Distributions:** Con-tinuous Densities. Expectation and Distribution Parameters. Gamma Distribution. Normal Distri-bution. Normal Probability Rule and Chebyshev's Inequality. Normal Approximation to the Binomial Distribution. Weibull Distribution and Reliability. Transformation of Variables. Simulating a Continuous Distribution. **5 Joint Distributions:** Joint Densities and Independence. Expectation and Covariance. Correlation. Conditional Densities and Regression. Transformation of Variables. **6 Descriptive Statistics:** Random Sampling. Picturing the Distribution. Sample Statistics. Boxplots. **7 Estimation:** Point Estimation. The Method of Moments and Maximum Likelihood. Functions of Random Variables—Distribution of X. Interval Estimation and the Central Limit Theorem. **8 Inferences on the Mean and Variance of a Distribution:** Interval Estimation of Variability. Estimating the Mean and the Student-t Distribution. Hypothesis Testing. Significance Testing. Hypothesis and Significance Tests on the Mean. Hypothesis Tests. Alternative Nonparametric Methods. **9 Inferences on Proportions:** Estimating Proportions. Testing Hypothesis on a Proportion. Comparing Two Proportions: Estimation. Coparing Two Proportions: Hypothesis Testing. **10 Comparing Two Means and Two Variances:** Point Estimation. Comparing Variances: The F Distribution. Comparing Means: Variances Equal (Pooled Test). Comparing Means: Variances Unequal. Compairing Means: Paried Data. Alternative Nonparametric Methods. A Note on Technology. **11 Sample Linear Regression and Correlation:** Model and Parameter Estimation. Properties of Least-Squares Estimators. Confidence Interval Estimation and Hypothesis Testing. Repeated Measurements and Lack of Fit. Residual Analysis. Correlation. **12 Multiple Linear Regression Models:** Least-Squares Procedures for Model Fitting. A Matrix Approach to Least Squares. Properties of the Least-Squares Estimators. Interval Estimation. Testing Hypotheses about Model Parameters. Use of Indicator or "Dummy" Variables. Criteria for Variable Selection. Model Transformation and Concluding Remarks. **13 Analysis of Variance:** One-Way Classification Fixed-Effects Model. Comparing

Variances. Pairwise Comparison. Testing Contrasts. Randomized Complete Block Design. Latin Squares. Random-Effects Models. Design Models in Matrix Form. Alternative Nonparametric Methods. **14 Factorial Experiments:** Two-Factor Analysis of Variance. Extension to Three Factors. Random and Mixed Model Factorial Experiments. 2^k Factorial Experiments. 2^k Factorial Experiments in an Incomplete Block Design. Fractional Factorial Experiments. **15 Categorical Data:** Multinomial Distribution. Chi-Squared Goodness of Fit Tests. Testing for Independence. Comparing Proportions. **16 Statistical Quality Control:** Properties of Control Charts. Shewart Control Charts for Measurements. Shewart Control Charts for Attributes. Tolerance Limits. Acceptance Sampling. Two-Stage Acceptance Sampling. Extensions in Quality Control. Appendix A Statistical Tables. Appendix B Answers to Selected Problems. Appendix C Selected Derivations

International Edition

INTRODUCTION TO PROBABILITY AND STATISTICS FOR SCIENTISTS AND ENGINEERS

by Walter A. Rosenkrantz, University of Massachusetts at Amherst
1997 / 576 pages / Hardcover
ISBN-13: 978-0-07-116897-7 / MHID: 0-07-116897-4 [IE]

CONTENTS

1 Data Analysis/2 Probability Theory/3 Discrete Random Variables and their Distribution Functions/4 Continuous Random Variables and their Distribution Functions/5 Multivariate Probability Distributions/6 Sampling Distribution Theory/7 Point and Interval Estimation/8 Inferences about Population Means/9 Inferences about Population Proportions/10 Linear Regression and Correlation/11 Multiple Linear Regression/12 Single Factor Experiments Analysis of Variance/13 Design and Analysis of Multifactor Experiments/14 Statistical Quality Control/ Appendix A Tables/Answers to Odd-Numbered Problems

Finite Element Methods

AN INTRODUCTION TO THE FINITE ELEMENT METHOD

by Wahyu Kuntjoro
2006 / Softcover / 256 pages
ISBN-13: 978-0-07-124144-1 / MHID: 0-07-124144-2

(An Asian Publication)

An Introduction to the Finite Element Method is organized and written in such a way that students should not find it difficult to understand the concepts and applications discussed in the book. Rigorous mathematical treatments and derivations are kept to a minimum. A consistent approach of finite element formulation and solution is used for every domain analysis described in the book. Plenty of simple examples are given to show students how to solve related problems. The exercises at the end of some chapters are within students' capability and can be done without using a computer. Although this book is intended primarily for undergraduate students, it is also suitable for the early part of finite element courses in postgraduate programme. The basic and conceptual approaches which are used also make this book appropriate for practising engineers who want to know and learn the finite element method.

CONTENTS

Preface. 1-- Introduction. 2--Linear Spring Elements and the Direct Equilibrium Method. 3--Bar Element. 4--Truss Elements. 5--Beam and Frame Elements. 6--The Minimum Potential Energy Method. 7--Constant Strain Triangular Elements. 8--Higher-Order Elements and Isoparametric Formulation. 9-- Solid Elements - Tetrahedral. 10--Analysis of Structural Dynamics. 11--Analysis of Heat Transfer. 12--Finite Element Applications and Computer Programming. Appendix A. Appendix B. Index

International Edition

AN INTRODUCTION TO THE FINITE ELEMENT METHOD

Third Edition

by JN Reddy, Texas A&M University
2006 / 912 pages
ISBN-13: 978-0-07-246685-0 / MHID: 0-07-246685-5
ISBN-13: 978-0-07-124473-2 / MHID: 0-07-124473-5 [IE]

The Instructor and Student Resource Web site contains general textbook information, solutions to end-of-chapter problems, executables and supplementary chapters on the FEM1D and FEM2D computer programs. (Browse http://www.mhhe.com/reddy3e)

J.N. Reddy's, An Introduction to the Finite Element Method, third edition is an update of one of the most popular FEM textbooks available. The book retains its strong conceptual approach, clearly examining the mathematical underpinnings of FEM, and providing a general approach of engineering application areas. Known for its detailed, carefully selected example problems and extensive selection of homework problems, the author has comprehensively covered a wide range of engineering areas making the book approriate for all engineering majors, and underscores the wide range of use FEM has in the professional world. A supplementary text Web site located at http://www.mhhe.com/reddy3e contains password-protected solutions to end-of-chapter problems, general textbook information, supplementary chapters on the FEM1D and FEM2D computer programs, and more!

NEW TO THIS EDITION

- Approximately 30% of the problems have been revised or are new to this edition.
- The previous Chapter 3, Second-Order Boundary Value Problems, has been split into two chapters for the third edition. Chapter 3 is now Second-Order Differential Equations in One-Dimension: Finite Element Models, and Chapter 4 is now Second-Order Differential Equations in One-Dimension: Applications.
- A text Web site located at http://www.mhhe.com/reddy3e hosts solutions to end-of-chapter problems, executables, supplementary chapter on FEM1D and FEM2D computer programs and general textbook information.

FEATURES

- Worked examples are said to be one of the best features of this text. The examples are detailed, carefully selected and a number of examples that show FEM applications are included in this text.
- Strong coverage of FEM's mathematical foundations. Comprehensive coverage of material from general field problems as well heat transfer, fluid mechanics, and solid and structural mechanics (bars, beams, frames, plane elasticity and plate bending).
- The author's writing style is clear and his explanation plenty.
- The text includes a variety of problems including some for hand calculation, some to be solved using the computer, and others of the class project variety, which can be done with commercial FEM packages if the professor so chooses. The problems are a major feature of this text.

CONTENTS

1 Introduction. 2 Mathematical Preliminaries, Integral Formulations, and Variational Methods. 3 Second-order Differential Equations in One Dimension: Finite Element Models. 4 Second-order Differential Equations in One Dimension: Applications. 5 Beams and Frames. 6 Eigenvalue and Time-Dependent Problems. 7 Computer Implementation. 8 Single-Variable Problems in Two Dimensions. 9 Interpolation Functions, Numerical Integration, and Modeling Considerations. 10 Flows of Viscous Incompressible Fluids. 11 Plane Elasticity. 12 Bending of Elastic Plates. 13 Computer Implementation of Two-Dimensional Problems. 14 Prelude to Advanced Topics

International Edition

FUNDAMENTALS OF FINITE ELEMENT ANALYSIS

by David Hutton, Washington State University, Pullman
2004 / 512 pages / Hardcover
ISBN-13: 978-0-07-292236-3 / MHID: 0-07-292236-2 (with Bind-In SubCard)
ISBN-13: 978-0-07-124160-1 / MHID: 0-07-124160-4 [IE]

This new text, intended for the senior undergraduate finite element course in civil or mechanical engineering departments, gives students a solid basis in the mechanical principles of the finite element method and provides a theoretical foundation for applying available software analysis packages and evaluating the results obtained. Dr. Hutton discusses basic theory of the finite element method while avoiding variational calculus, instead focusing upon the engineering mechanics and mathematical background that may be expected of a senior undergraduate engineering student. The text relies upon basic equilibrium principles, introduction of the principle of minimum potential energy, and the Galerkin finite element method, which readily allows application of the FEM to nonstructural problems.

CONTENTS

B.E.S.T

International Edition

NEW

FORTRAN 95/2003 FOR SCIENTISTS & ENGINEERS

Third Edition

by Stephen J. Chapman, BAE SYSTEMS Australia
2008 (January 2007) / Softcover / 864 pages
ISBN-13: 978-0-07-319157-7 / MHID: 0-07-319157-4
ISBN-13: 978-0-07-128578-0 / MHID: 0-07-128578-4

Browse http://www.mhhe.com/chapman3e

Chapman's Fortran for Scientists and Engineers is intended for both first year engineering students and practicing engineers. It simultaneously teaches the Fortran 95/2003 programming language, structured programming techniques, and good programming practice. Among its strengths are its concise, clear explanations of Fortran syntax and programming procedures, the inclusion of a wealth of examples and exercises to help students grasp difficult concepts, and its explanations about how to understand code written for older versions of Fortran. We are the most current Fortran book in the market.

NEW TO THIS EDITION

- Text has been revised to include the latest updates in response to the release of FORTRAN 2003.
- A new chapter, Object-Oriented Programming in Fortran has been added.

FEATURES

- Clear explanations of FORTRAN syntax and programming procedures
- Discusses changes that have been implemented since FORTRAN 77
- Top-Down design methodology and procedures
- Good programming practice summaries and FORTRAN statement summaries at the end of each chapter

CONTENTS

NEW

MATHCAD: A TOOL FOR ENGINEERS AND SCIENTISTS (B.E.S.T. SERIES)

Second Edition

by Philip J. Pritchard, Manhattan College
2008 (January 2007) / Softcover / 352 pages
ISBN-13: 978-0-07-319185-0 / MHID: 0-07-319185-X

Browse http://www.mhhe.com/best

Mathcad: A Tool for Engineering Problem Solving explains how to use Mathcad 13(Student and Standard), >This book is current with the latest release of mathcad, with the focus on the fundamentals, is enriched with great motivating applications, solid homework problems, appealing to both engineers and scientists.

NEW TO THIS EDITION

- Examples updated to Mathcad 13, which is the most current version.
- Examples and homework problems updated to account for a broader range of engineering disciplines, in addition to mechanical and electrical, to include: civil, chemical, and environmental engineering.
- Pedagogy updated to be more student-friendly, including new beginning sections at the start of each chapter that spell out specific features to be covered, new end-of-chapter summaries, and the addition of tables and boxes where appropriate that will reduce the amount of math theory in the text.
- Examples and applications related to the sciences.

FEATURES

- Features of Mathcad are immediately followed by engineering examples.

CONTENTS

International Edition

NEW

SPREADSHEET TOOLS FOR ENGINEERS USING EXCEL

Third Edition

by Byron S Gottfried, University of Pittsburgh-Pittsburgh
2007 / Softcover / 512 pages
ISBN-13: 978-0-07-297184-2 / MHID: 0-07-297184-3
ISBN-13: 978-0-07-110663-4 / MHID: 0-07-110663-4 [IE]

This best-selling Spreadsheet book provides excellent coverage of all versions of Excel including the latest version, Excel 2002. It discusses how to use Excel to solve a variety of problems in introductory engineering analysis, such as graphing data, unit conversions, simple statistical analysis, sorting, searching and analyzing data, curve fitting, interpolation, solving algebraic equations, logical decisions, evaluating integrals, comparing economic alternatives, and finding optimum solutions. Numerous examples are included illustrating both traditional and spreadsheet solutions to a variety of problems. The underlying mathematical solution procedures are also discussed, so that the reader is provided with an understanding of what the spreadsheet does and how it does it.

NEW TO THIS EDITION

- Material on select new features found in Excel 2003.

FEATURES

- Successfully combines an introduction to the fundamentals of Excel with a clear presentation of Engineering problem solving methodology.
- Abundant problems and examples.
- Chapters 2-14 cover the most common analytical techniques used by engineers.
- Material on select new features found in Excel 2002 (included in Office XP).
- New material including coverage of line graphs and pie charts, a discussion of the problems associated with circular references (particularly in regard to the solution of algebraic equations), a discussion of convergence problems when solving algebraic equations and new material on pivot tables.
- The author has rewritten the material on semi-log graphs, log-log graphs, and curve fitting and has changed the order of the material in response to reviewer feedback.
- Contains a wealth of technical analysis geared toward introductory-level students and plenty of background information on what the technical terms mean or are based upon.

NEW

TEAMWORK AND PROJECT MANAGEMENT

Third Edition

by Karl A Smith, University of Minnesota-Minneapolis
2007 / Softcover / 160 pages
ISBN-13: 978-0-07-310367-9 / MHID: 0-07-310367-5

Smith has been convinced through personal experience in the classroom that the potential for extraordinary work from teams makes it worth the effort. The goals for the text are: ● understand the dynamics of team development and interpersonal problem solving, ● to identify strategies for accelerating the development of true team effectiveness, ● to understand the critical dimensions of project scope, time, and cost management ● to understand critical technical competencies in project management ● to explore a variety of "best practices" including anticipating, preventing, and overcoming barriers to project success.

FEATURES

- This unique text will enhance a student's understanding of critical technical competencies in project management, the dynamics of team development and interpersonal problem solving, and the critical dimensions of project scope, time, and cost management.
- Cases and vignettes from actual student group projects and problems provide a context for text material and provoke critical thinking.
- This title is available as a customized title on the McGraw-Hill Primis Database. Build the perfect book for your course via Primis.

INTRODUCTION TO GRAPHICS COMMUNICATIONS FOR ENGINEERS

(B.E.S.T Series), Third Edition

by Gary R Bertoline, Purdue University, West Lafayette
2006 / 256 pages / Softcover
ISBN-13: 978-0-07-304836-9 / MHID: 0-07-304836-4

http://www.mhhe.com/engcs/general/best

Introduction to Graphics Communication for Engineers is a short introductory technical drawing text intended for use in technical drawing or drafting courses at two and four year schools or other technology programs. Powerful computers and CAD software are of little use to engineers who do not fully understand the fundamentals of graphics communication principles and 3-D modeling strategies, or do not possess a level of visualization ability. Because of this, Bertoline concentrates on the concepts and skills necessary to sketch and create 2-D drawings and 3-D CAD models in this text. New to the third edition are "Design in Industry Boxes" that cover an aspect of design as practiced in industry. Quotes and interesting stories from practicing engineers make the boxes motivating and informative for students. Also new are practice sketching problems included throughout each chapter, which allow students a chance to practice what they are learning. This book is part of the B.E.S.T. (Basic Engineering Series and Tools), which consists of modularized textbooks offering virtually every topic and specialty likely to be of interest to engineers.

NEW TO THIS EDITION

- New "Design in Industry" boxes have been added to the fourth edition. Each of these boxes cover some aspect of design as practiced in industry. Students will learn how design is done in the real world from these interesting stories presented by practicing engineers and technologists.
- New to this edition are practice problems located throughout each chapter. This new feature gives students drawing practice as they learn new concepts. Through immediate hands-on practice, students can more readily grasp chapter material.
- New end-of-chapter sketching problems have been added, reinforcing what students have learned in the chapter.

FEATURES

- Pedagogically sound, this book provides a list of objectives at the beginning of each chapter, step-by-step instructions on how to draw, and a wide assortment of problems that can be assigned to reinforce topics covered.
- Sketching worksheets are integrated into the end of each chapter. These worksheets are excellent for sketching assignments, used to augment CAD work.
- As part of the McGraw-Hill B.E.S.T. (Basic Engineering Series and Tools), this book can be customized on-line and combined with other BEST titles to be sold to students either in an eletronic form or traditional book form.

CONTENTS

Chapter 1 Introduction to Graphics Communication. **Chapter 2** Sketching and Text. **Chapter 3** Section and Auxiliary Views. **Chapter 4** Dimensioning and Tolerancing Practices. **Chapter 5** Reading and Constructing Working Drawings. **Chapter 6** Design and 3-D Modeling

POCKET BOOK OF ENGLISH GRAMMAR FOR ENGINEERS AND SCIENTISTS

by Leo Finkelstein, Wright State University-Dayton
2006 / 144 pages / Softcover
ISBN-13: 978-0-07-352946-2 / MHID: 0-07-352946-X

Pocket Book of English Grammar for Engineers and Scientists is geared specifically to the needs of engineering and science practitioners and students, although it is also appropriate for anyone doing technical or business writing. The book is unique among grammar manuals not only because of its straightforward, simplified organizational structure, but also because of its use of innovative tools and examples.

FEATURES

- Sensible Organization. An overall structure organized around the eight parts of speech–which is exactly how the English language is organized.
- Focus on Fundamentals. A comprehensive treatment of the most important fundamentals of English grammar in a condensed, usable form–it has the quick answers that time-challenged people need.
- Engineering and Science Related Examples. A rich collection of examples and illustrations that relate directly to engineering and science topics.
- Innovative Learning Tools. Clear models and explanations keyed to diagrams, tables, and flow charts, which provide a very effective, visual approach.
- Accessible Format. Extensive indexing and cross-referencing throughout the book to provide easy access to the information required.
- Standalone Glossary. A comprehensive glossary with its own dedicated examples and explanations apart from the rest of the book. The glossary is the perfect starting point for those who are seeking quick explanations for pressing grammar issues.
- For expanded coverage of technical writing, take a look at Leo Finkelstein, Jr.'s other book, Pocket Book of Technical Writing for Engineers and Scientists, 2e, ISBN 0-07-297683-7.

CONTENTS

1 Introduction. 1.1 Importance of grammar. 1.2 Parts of speech. 1.3 Grammar and English as a second language. 1.4 Sentence structure. 2 Nouns. 2.1 Definition and functions. 2.2 Number. 2.3 Type. 2.4 Case. 2.5 Gender. 2.6 Offensive nouns. 2.7 Appositives. 2.8 Noun clauses. 3 Pronouns. 3.1 Definition and functions. 3.2 Types of pronouns. 4 Adjectives. 4.1 Definition and functions. 4.2 Classes of adjectives. 4.3 Articles and other determiners. 4.4 Adjectival clauses. 4.5 Levels of comparison for adjectives. 5 Verbs. 5.1 Definition and function. 5.2 Tense. 5.3 Person and number. 5.4 Irregular verbs. 5.5 Form and voice. 5.6 Mood. 6 Adverbs. 6.1 Adverbials. 6.2 Levels of comparison for adverbs. 6.3 Compound and absolute verbs. 6.4 Placement of adverbs. 6.5 Transitional phrases and adverbial conjuctions. 7 Prepositions. 7.1 Uses of prepositional phrases. 7.2 Prepositions as a part of two-word verbs. 8 Conjunctions. 8.1 Coordinating conjunctions. 8.2 Correlative conjunctions. 8.3 Subordinating conjunctions. 8.4 Adverbial conjunctions. 9 Interjections. 10 Punctuation. 10.1 Apostrophe. 10.2 Brackets. 10.3 Colon. 10.4 Comma. 10.5 Dash. 10.6 Ellipsis. 10.7 Exclamation point. 10.8 Hyphen. 10.9 Parentheses. 10.10 Period. 10.11 Question mark. 10.12 Quotation marks. 10.13 Semicolon. 10.14 Slash. 11 Final Thoughts. 12 Glossary

International Edition

INTRODUCTION TO MATLAB 7 FOR ENGINEERS

by William Palm, University of Rhode Island—Kingston
2005 / 752 pages
ISBN-13: 978-0-07-292242-4 / MHID: 0-07-292242-7
(with Bind-In Card
ISBN-13: 978-0-07-123262-3 / MHID: 0-07-123262-1 [IE]

This site contains power point slides, Appendix E: Some Project Suggestions, and complete solutions to all of the Test Your Understanding exercises and all the chapter problems. (Browse http://www.mhhe.com/palm)

This is a simple, concise book designed to be useful for beginners and to be kept as a reference. MATLAB is presently a globally available standard computational tool for engineers and scientists. The terminology, syntax, and the use of the programming language are well defined and the organization of the material makes it easy to locate information and navigate through the textbook. The text covers all the major capabilities of MATLAB that are useful for beginning students. An instructor's manual and other web resources are available.

NEW TO THIS EDITION

- Expanded coverage of programming now includes structured programming and logical variables.
- Function handles, anonymous functions, subfunctions, and nested functions are now treated.
- Coverage of Simulink® has been expanded to a separate chapter in light of its growing popularity.
- A new Appendix B contains an introduction to producing animation and sound with MATLAB.

FEATURES

- The text is written for freshman engineering students and uses mathematics appropriate for this level.
- Numerous examples and homework problems drawn from all the fields of engineering.
- Students can use the text as a reference in later courses because it contains many tables that summarize the MATLAB commands.

CONTENTS

1 An Overview of MATLAB. 2 Numeric, Cell, and Structure Arrays. 3 Functions and Files. 4 Programming with MATLAB. 5 Advanced Plotting and Model Building. 6 Linear Algebraic Equations. 7 Probability, Statistics, and Interpolation. 8 Numerical Calculus and Differential Equations. 9 Simulink. 10 Symbolic Processing with MATLAB. **Appendix A** Guide to Commands and Functions in this Text. **Appendix B** Animation and Sound in MATLAB. **Appendix C** Formatted Output in MATLAB. **Appendix D** References. **Appendix E** Some Project Suggestions (Online). Answers to Selected Problems

International Edition

INTRODUCTION TO ENGINEERING DESIGN AND PROBLEM SOLVING

(B.E.S.T Series)

by David M Burghardt, Hofstra University
1999 / 240 pages / Softcover
ISBN-13: 978-0-07-116100-8 / MHID: 0-07-116100-7 [IE]

CONTENTS

1 Understanding the Human-Made World. 2 The Design Process. 3 Design Documentation. 4 Engineering Analysis and Design. 5 Discussions with Engineers. Appendix.

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-13: 978-0-07-913678-7 / MHID: 0-07-913678-8
ISBN-13: 978-0-07-116788-8 / MHID: 0-07-116788-9
[IE with 3.5" Disk]

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++

Internet

International Edition

INLINE/ONLINE
Fundamentals of the Internet and the World Wide Web
Second Edition

by Raymond Greenlaw, Armstrong Atlantic State University
2002 / 720 pages / Softcover
ISBN-13: 978-0-07-251715-6 / MHID: 0-07-251715-8
(with Passcode Card)
ISBN-13: 978-0-07-113113-1 / MHID: 0-07-113113-2 [IE]

http://www.mhhe.com/greenlaw

CONTENTS
1 Fundamentals of Electronic Mail. 2 Jump Start: Browsing and Publishing. 3 The Internet. 4 The World Wide Web. 5 Searching the World Wide Web. 6 Telnet and FTP. 7 Basic HTML. 8 Web Graphics. 9 Advanced HTML. 10 Newsgroups and Mailing Lists, Chat Rooms, and MUDs. 11 Electronic Publishing. 12 Web Programming Material. 13 Multimedia . 14 Privacy and Security Topics. Appendix A Internet Service Providers. Appendix B Text Editing. Appendix C Pine Mail Program. Appendix D Basic UNIX. Appendix E HTML Tags. Appendix F Acronyms. Appendix G My URLs

Project Management: Engineering

NEW

TEAMWORK AND PROJECT MANAGEMENT
Third Edition

by Karl A Smith, University of Minnesota-Minneapolis
2007 / Softcover / 160 pages
ISBN-13: 978-0-07-310367-9 / MHID: 0-07-310367-5

Smith has been convinced through personal experience in the classroom that the potential for extraordinary work from teams makes it worth the effort. The goals for the text are: ● understand the dynamics of team development and interpersonal problem solving, ● to identify strategies for accelerating the development of true team effectiveness, ● to understand the critical dimensions of project scope, time, and cost management ● to understand critical technical competencies in project management ● to explore a variety of "best practices" including anticipating, preventing, and overcoming barriers to project success.

FEATURES
- This unique text will enhance a student's understanding of critical technical competencies in project management, the dynamics of team development and interpersonal problem solving, and the critical dimensions of project scope, time, and cost management.
- Cases and vignettes from actual student group projects and problems provide a context for text material and provoke critical thinking.
- This title is available as a customized title on the McGraw-Hill Primis Database. Build the perfect book for your course via Primis.

International Edition

PROJECT MANAGEMENT

Third Edition

by Clifford F. Gray, and Erik W. Larson
2006 / Hardcover with CD-ROM
ISBN-13: 978-0-07-312699-9 / MHID: 0-07-312699-3
ISBN-13: 978-0-07-124446-6 / MHID: 0-07-124446-8
[IE with Student CD and MS Project CD]

http://www.mhhe.com/graylarson3e

This text approaches Project Management from a holistic, balanced perspective. The text is developed around a philosophy of a project-driven organization committed to continuous improvement and organizational learning. The text is holistic--it directs attention to the needed linkage between projects and organizational strategy. Many project management textbooks emphasize the technical aspects of the subject, while providing scant attention to the human element in projects. This text succeeds in redressing the balance by treating both the technical and the behavioral aspects of the subject in nearly equal parts. Such a balance is possible because of the complementary backgrounds of the authors: Gray, a specialist in project management systems with an operations background, provides strong technical coverage of project management. Larson, whose professional background is in organizational behavior, brings a distinctive behavioral perspective to the subject.

NEW TO THIS EDITION

- Many new and updated "Snapshots from Practice" and "Research Highlights" boxes; many new charts and figures.
- Thoroughly revised chapters on strategy (Chapter 2) and performance measurement and evaluation (Chapter 13). These new chapters give students an understanding of how project management needs to be tied to the fundamental bottom line concerns of business, i.e., an organization's overall mission and the strategies designed to accomplish its goals, as well as the application of measurements for assessing the accomplishment of those goals.
- Chapter 3 on structure and culture has been revised to incorporate steps organizations are taking to work within current structures and bureaucracies. This acknowledges the importance of structure and culture and its challenges and shows how flexibility and introducing change can have a positive effect on project work.

CONTENTS

Entrepreneurship

NEW

TECHNOLOGY VENTURES: FROM IDEA TO ENTERPRISE

Second Edition

by Richard C. Dorf, University Of California Davis, and Thomas H. Byers, Stanford University
2008 (October 2006) / Hardcover
ISBN-13: 978-0-07-329442-1 / MHID: 0-07-329442-X
(with Student DVD)

Technology Ventures is the first textbook to thoroughly examine a global phenomenon known as "technology entrepreneurship". Now in its second edition, this book integrates the most valuable entrepreneurship and technology management theories from some of the world's leading scholars and educators with current examples of new technologies and an extensive suite of media resources.
Dorf and Byers's comprehensive collection of action-oriented concepts and applications provides both students and professionals with the tools necessary for success in starting and growing a technology enterprise. Technology Ventures details the critical differences between scientific ideas and true business opportunities.

NEW TO THIS EDITION

- Concise case studies and boxed examples throughout the book have been updated and expanded to highlight the most current technologies and include international ventures.
- A new chapter focused on the business plan includes a business planning "roadmap" and is supplemented by numerous online resources.
- A new student DVD is packaged with the text and features video anecdotes from well-known technology entrepreneurs. "See DVD" icons are marked in the text to allow for easy referencing between print and virtual resources.
- An updated suite of web resources includes a book-specific website featuring additional videos, case studies, and sample syllabi as well as a password-protected instructor's site with lecture powerpoints and a solutions manual
- An updated design and art program give the text a more engaging look and feel.

FEATURES

- A running case study (on AGRAQUEST, a bio-technology firm) is blended into all chapters of the text.
- The book focuses specifically on technology-based ventures (both start-ups and initiatives within existing companies), and emphasizes the role of the team in the entrepreneurial process.

CONTENTS

Professional References

PROJECT MANAGEMENT
Fifth Edition
by David L. Cleland, University Of Pittsburgh-Pittsburgh, and Lewis R. Ireland
2007 (August 2006) / Hardcover / 688 pages
ISBN-13: 978-0-07-147160-2 / MHID: 0-07-147160-X

Professional Book

CONTENTS
Preface. Acknowledgments. Introduction. Part 1: Introduction. Chapter 1: The Evolution of Project Management. Chapter 2: Why Project Management? Chapter 3: The Project Management Process. Part 2: The Strategic Context of Projects. Chapter 4: When to Use Project Management. Chapter 5: The Strategic Context of Projects. Chapter 6: The Board of Directors and Major Projects. Chapter 7: Project Stakeholder Management. Chapter 8: Strategic Issues in Project Management. Part 3: Organizational Design for Project Management. Chapter 9: Organizing for Project Management. Chapter 10: Project Portfolio Management. Chapter 11: Project Authority. Chapter 12: Project Management Maturity. Part 4: Project Operations. Chapter 13: Project Planning. Chapter 14: Project Management Information System. Chapter 15: Project Monitoring. Evaluation, and Control. Chapter 16: The Project Earned Value Management System. Chapter 17: Project Termination. Part 5: Interpersonal Dynamics in the Management of Projects. Chapter 18: Project Leadership. Chapter 19: Project Communications. Chapter 20: Successful Project Teams. Part 6: The Cultural Elements. Chapter 21: Continuous Improvement Through Projects. Chapter 22: Cultural Considerations in Project Management. Part 7: New Prospects. Chapter 23: Alternative Project Teams. INDEX

ENGINEERING STATISTICS DEMYSTIFIED
by Larry J. Stephens, University of Nebraska, Omaha
2007 (November 2006) / Softcover / 448 pgs
ISBN-13: 978-0-07-146272-3 / MHID: 0-07-146272-4

Professional Book

Clueless? Feel Like a Dummy? Get Demystified!
This versatile reference offers solid coverage of the basics of traditional engineering statistics and also incorporates examples from the most popular statistical software programs, making it equally valuable to professionals.

CONTENTS
1. Treatment of data. 1.1 Pareto Diagrams, Dot Diagrams, Stem-and-Leaf Displays, Histograms. 1.2 Descriptive measures. 1.3 Quartiles and other Percentiles. 1.4 The Calculation of . 2. Probability. 2.1 Sample Spaces and Events. 2.2 Counting 2.3 Probability. 2.4 The Axioms of Probability. 2.5 Some Elementary Theorems. 2.6 Conditional Probability. 2.7 Bayes' Theorem. 2.8 Mathematical Expectation and Decision Making. 3. Probability Distributions. 3.1 Random Variables. 3.2 The Binomial Distribution. 3.3 The Hypergeometric Distribution. 3.4 The Mean and Variance of a Probability Distribution. 3.5 Chebyshev's Theorem. 3.6 The Geometric Distribution. 3.7 The Multinomial Distribution. 3.8 Simulation. 4. Probability Densities. 4.1 Continuous Random Variables. 4.2 The Normal Distribution. 4.3 The Normal Approximation to the Binomial Distribution. 4.4 Other Probability Densities. 4.5 The Uniform Distribution. 4.6 The Log-Normal Distribution. 4.7 The Gamma Distribution. 4.8 The Beta Distribution. 4.9 The Weibull Distribution. 4.10 Joint Distributions – Discrete and Continuous. 4.11 Checking Data for Normality. 4.12 Transforming Observations to Near Normality. 4.13 Simulation. 5. Sampling Distribution. 5.1 Populations and Samples. 5.2 The sampling Distribution of the Mean (s Known). 5.3 The sampling Distribution of the Mean (s Unknown). 5.4 The sampling Distribution of the Proportion. 5.5 The sampling Distribution of the Variance. 6. Inferences Concerning Means. 6.1 Point Estimation. 6.2 Interval Estimation. 6.3 Tests of Hypotheses. 6.4 Null Hypotheses and Tests of Hypotheses. 6.5 Hypotheses Concerning One Mean. 6.6 The Relation Between Tests and Confidence Intervals. 6.7 Operating Characteristic Curves. 6.8 Inferences Concerning Two Means. 6.9 Randomization and Pairing. 7. Inferences Concerning Variances. 7.1 The Estimation of Variances. 7.2 Hypotheses Concerning One Variance. 7.3 Hypotheses Concerning Two Variances. 8. Inferences Concerning Proportions. 8.1 Estimation of Proportions. 8.2 Hypotheses Concerning One Proportion. 8.3 Hypotheses Concerning Two Proportions. 8.4 Hypotheses Concerning Several Proportions. 8.5 The Analysis of r x c Tables 8.6 Goodness of Fit.

GLOBAL PROJECT MANAGEMENT HANDBOOK
Planning, Organizing and Controlling International Projects
Second Edition
by David L. Cleland, University Of Pittsburgh-Pittsburgh, and Roland Gareis, University of Vienna
2006 / Hardcover / 575 pages
ISBN-13: 978-0-07-146045-3 / MHID: 0-07-146045-4

Professional Book

Learn and apply successful international project management techniques. Contributors from 20+ nations reveal how current project management concepts and techniques can be successfully applied in different political, cultural, and geographical settings. Learn how project management is carried out in major countries such as Canada, China, Russia, Germany, France, England--and how these techniques can be applied globally.

- Case histories from around the world provide lessons on the international application of project management
- 16 completely new chapters including ones on the rebuilding of Iraq, project management in outsourcing initiatives, and developing multinational teams

CONTENTS
Part 1: State of the Art Global Project Management. Chapter 1.The Evolution of Project Management. Chapter 2. Project Management: A Business Process of the Project-Oriented Company. Chapter 3. The Future of Project Management: Mapping the Dynamics of Project Management Field in Action. Chapter 4. Total Life-Cycle System Management. Chapter 5. Developing Multinational Project Teams. Chapter 6. Risk Identification and Assessment for International Construction Projects. Chapter 7. Program Management and Project Portfolio Management. Part 2: Competency Factors in Project Management. Chapter 8. Competencies of Project Managers. Chapter 9. Managing Risks and Uncertainty in Major Projects in the New Global Environment. Chapter 10. Managing Human Energy in the Project-Oriented Company. Chapter 11. Managing Project Management Personnel and Their Competencies in the Project-Oriented Company. Chapter 12. Lessons Learned: Rebuilding Iraq in 2004. Chapter 13. Project Critical Success Factors: The Project-Implementation Profile. Part 3: Management of Global Programs and Projects. Chapter 14. Project Management for Outsourcing Decisions. Chapter 15. Project Quality Management in International Projects. Chapter 16. Success Factors in Virtual Global Software Projects. Chapter 17. Managing Global Projects Over a Collaborative Knowledge Framework. Part 4: Management of the Project-Oriented Company. Chapter 18. Management of the Project-Oriented Company; Chapter 19. Project Portfolio Score Card. Chapter 20. Partnering in Projects. Chapter 21. Business Process Management in the Project-Oriented Company. Part 5: National Project Management. Chapter 22. Project Management in Austria: Analysis of the Maturity of Austria as a Project-Oriented Nation. Chapter 23. A Brief Insight of Project Management in the Mainland of China. Chapter 24. Project Management in Australia. Chapter 25. Project Management in Romania. Chapter 26. Japanese Project Management Practices on Global Projects.