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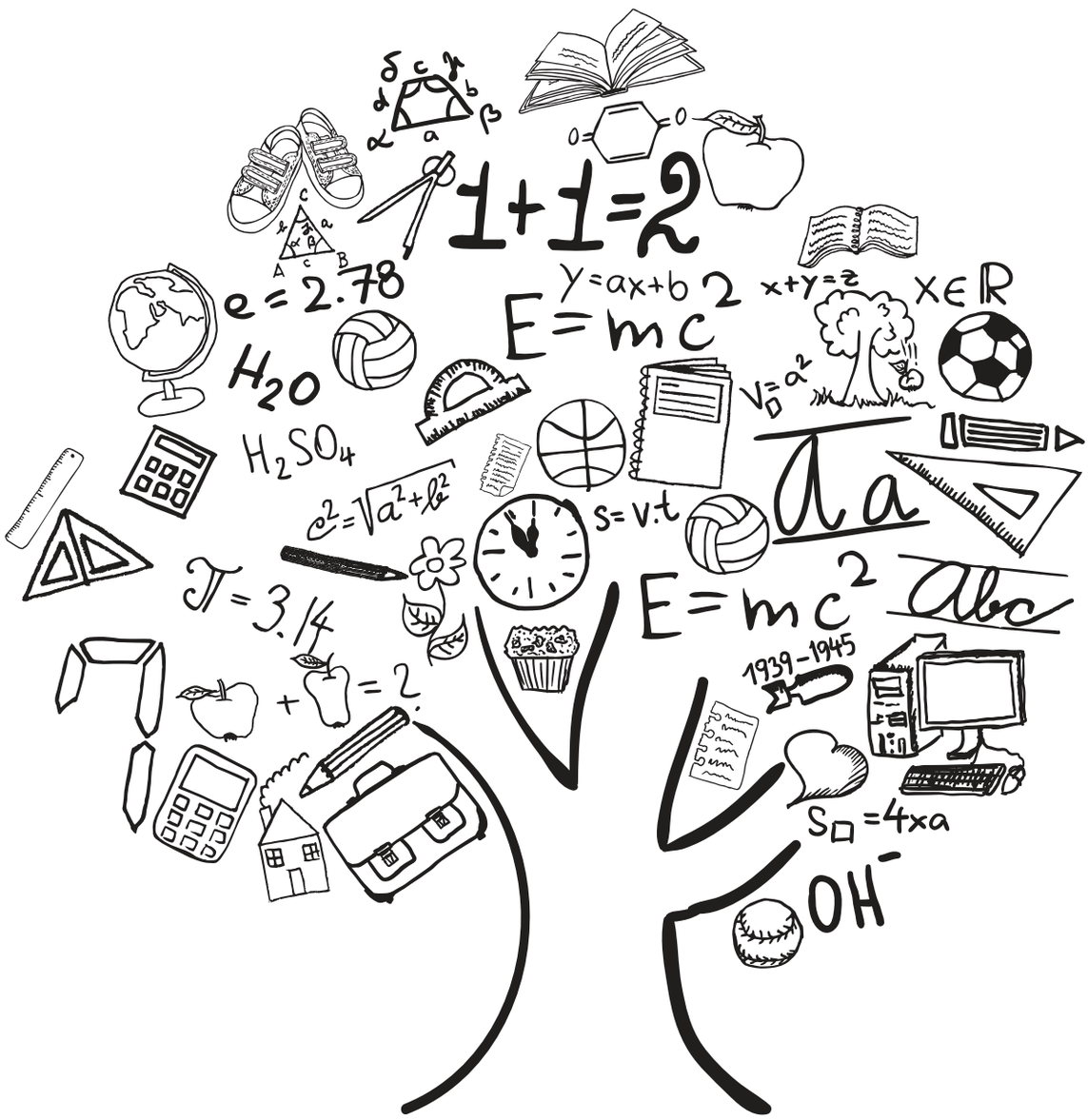
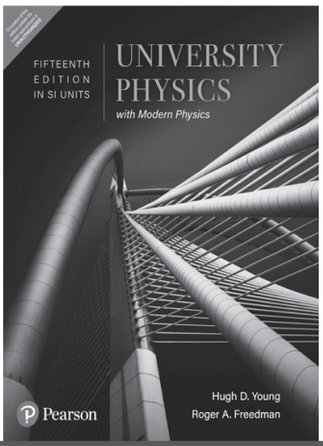


Physics



ISBN: 9789353949297

University Physics with Modern Physics, 15e

HUGH D. YOUNG | ROGER A. FREEDMAN

1505 | © 2021

ABOUT THE BOOK

University Physics has been revered for its emphasis on fundamental principles and its applications since its first edition. The new 15th Edition of University Physics with Modern Physics, now in SI Units, draws on insights from several users to help students see patterns and make connections between problem types. Students learn to recognize when to use similar steps in solving the same problem type and develop an understanding for problem solving approaches, rather than simply plugging values into an equation. This edition addresses students' tendency to focus on the objects and situations posed in a problem, rather than recognizing the underlying principle or the problem type

FEATURES

- New—Key Example Variation Problems in the new Guided Practice section based on worked examples, build in difficulty by changing scenarios, swapping knowns and unknowns, and adding complexity to provide a wide range of related problems that use the same basic approach to solve.
- New—Key Concept statements appear at the end of every example, providing a summary of the key idea used in the solution to consolidate what was most important and what can be broadly applied to other problems.
- A research-based Problem-Solving Approach—Identify, Set Up, Execute, Evaluate—used in every example to teach students to tackle problems thoughtfully rather than cutting straight to the math.
- Expanded—Challenge Problems significantly stretch students by requiring sophisticated reasoning, often involving multiple steps or concepts.
- Expanded—Cumulative Problems promote advanced problem-solving techniques by covering knowledge and skills from previous chapters to be integrated with understanding from the current chapter.

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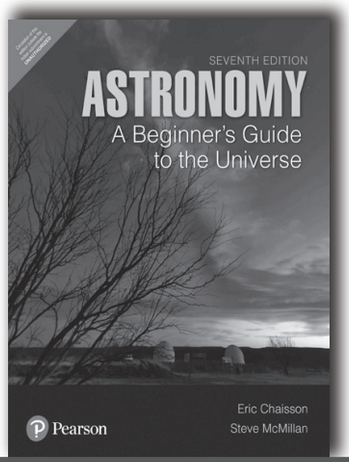
ABOUT THE AUTHOR

Hugh D. Young
Roger A. Freedman
University of California, Santa Barbara



ISBN: 9789332586871

Astronomy: A Beginner's Guide to the Universe, 7/e

HUGH D. YOUNG | ROGER A. FREEDMAN

1505 | © 2021

ABOUT THE BOOK

For one-semester Introduction to Astronomy courses. With Astronomy: A Begin ner's Guide, Seventh Edition, the briefer version of their two seminal textbooks, trusted authors Eric Chaisson and Steve McMillan continue to emphasize three major themes: the process of science, the size and scale of the universe, and the evolution of the cosmos. In the Seventh Edition, Chaisson and McMillan ignite- stu dent interest with increased coverage of the most exciting, current discoveries in

FEATURES

- With Astronomy: A Beginner's Guide, Seventh Edition, the briefer version of their two seminal textbooks, trusted authors Eric Chaisson and Steve McMillan continue to emphasize three major themes: the process of science, the size and scale of the universe, and the evolution of the cosmos.
- In the Seventh Edition, Chaisson and McMillan ignite your interest with increased coverage of the most exciting, current discoveries in astronomy and create a bridge to scientific understanding with student-friendly art and better learning tools.

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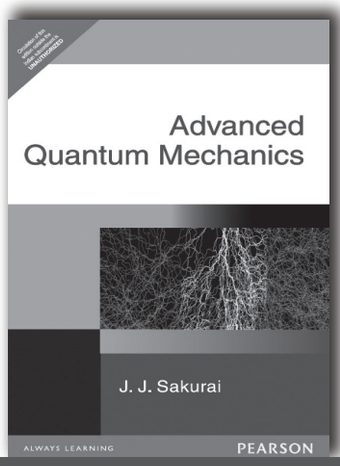
ABOUT THE AUTHOR (S)

Eric Chaisson, Tufts University, **Steve McMillan,** Drexel University



ISBN: 9788177589160

Advanced Quantum Mechanics

J. J. Sakurai

336 | © 2006

Web Supplements

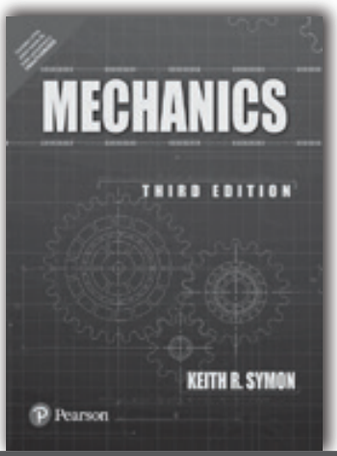
ABOUT THE BOOK

This widely-regarded classic presents the major advances in the fundamentals of quantum physics. No familiarity with relativistic quantum mechanics or quantum field theory is presupposed, but the reader is assumed to be familiar with non-relativistic quantum mechanics, classical thermodynamics and classical mechanics.

CONTENTS

ABOUT THE AUTHOR

The late **J. J. Sakurai,** noted theorist in particle physics, was born in Tokyo, Japan, in 1933. He received his B.A. from Harvard University in 19565, and his Ph. D. from Cornell University in 1958. Appointed assistant professor at the University of Chicago, he worked there until he became a professor at the University of California, Los Angeles in 1970. Sakurai died in 1982 while he was a visiting professor at CERN in Geneva, Switzerland



ISBN: 9789332573918

Mechanics, 3/e

Keith R. Symon

656 | © 2016

ABOUT THE BOOK

This text is intended as the basis for an intermediate course in mechanics at the undergraduate level. Such a course, as essential preparation for advanced work in physics, has several major objectives. It must develop in the student a thorough understanding of the fundamental principles of mechanics. It should treat in detail certain specific problems of primary importance in physics, for example, the harmonic oscillator and the motion of a particle under a central force

FEATURES

- The treatment throughout the book is intended to emphasize the modern point of view with mathematical rigor
- The examples treated in the text have been worked out so as to integrate as far as possible, the mathematical treatment with physical interpretation
- Two chapters on the theory of relativity has been added in this edition.
- The problems at end of each chapter requires more or less physical ingenuity in addition to an understanding of the text.

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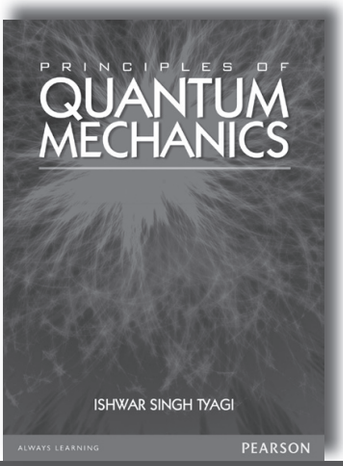
ABOUT THE AUTHOR

Keith R. Symon, University of Wisoconsin



ISBN: 9788131773352

Principles of Quantum Mechanics

Ishwar Singh Tyagi

584 | © 2013

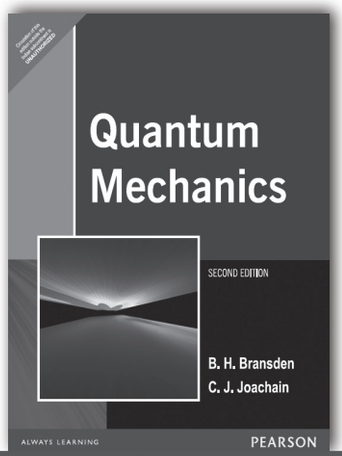
ABOUT THE BOOK

Any course in physics cannot be completed without learning quantum mechanics. This subject helps in understanding the individual behaviour of the subatomic par ticles that constitute all forms of matter. Principles of Quantum Mechanics compre hensive ly covers all relevant topics to meet the requirements of both undergraduate and postgradu ate students of physics. The initial chapters of the book introduce the basic fundamentals of the subject to help the first-time learners and the later chapters cover aspects that will prepare them to apply quantum mechanics to un□derstand the various physical phenomena, for example, the working of micro- and nano-devices. The book includes a detailed discussion on why classical mechanics, which is applicable at macroscopic level, cannot be applicable at microscopic level.

CONTENTS

ABOUT THE AUTHOR

Ishwar Singh Tyagi is Emeritus Fellow at the Physics Dept. of IIT Roorkee. After completing his Ph.D. in 1976 from the University of Roorkee (now IIT Roorkee) he joined the Department of Physics as a faculty member in 1977 and became professor in 1996. His assignments as post-doctoral as well as visiting scientist took him to the New University of Ulster (NUU), Coleraine, in North Ireland and the Freie Universitat Berlin.



ISBN: 9788131708392

Quantum Mechanics, 2/e

B. H. Bransden | C. J. Joachain

808 | © 2006

Web Supplements

ABOUT THE BOOK

This book gives a modern, comprehensive introduction to the principles of quan tum mechanics, to the main approximation methods and to the application of quantum theory to a wide variety of systems. The needs of students having an average mathematical ability are kept very much in mind, with the avoidance of complex mathematical arguments and any undue compression of material.

FEATURES

- Comprehensive coverage of core material in quantum mechanics.
- Full and detailed explanations to help students of average mathematical ability.
- Additional topics covered in this edition include: Feynman's path integrals; the Berry phase; quantum dots; quantum jumps; and Bose-Einstein condensation.
- New chapter on relativistic quantum mechanics.
- Problems set to help students monitor their progress and increase understanding.

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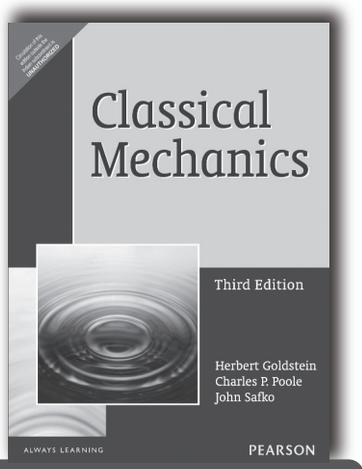
ABOUT THE AUTHOR (S)

B.H. Bransden, Department of Physics, University of Durham
C.J. Joachain, Physique Theorique, Universite Libre de Bruxelles University of Wisoconsin

ISBN: 9788131773734



ISBN: 9788131758915

Classical Mechanics, 3/e

Herbert Goldstein | Charles P. Poole | John Safko

664 | © 2011

ABOUT THE BOOK

For 30 years, this classic text has been the acknowledged standard in classical me chanics courses. Classical Mechanics enables students to make connections between classical and modern physics " an indispensable part of a physicist's education. The authors have updated the topics, applications, and notations to reflect today's physics curriculum. They introduce students to the increasingly important role that nonlinearities play in contemporary applications of classical mechanics. New numerical exercises help students develop skills in the use of computer techniques to solve problems in physics. Mathematical techniques are presented in detail so that the text remains fully accessible to students who have not had an intermediate course in classical mechanics.

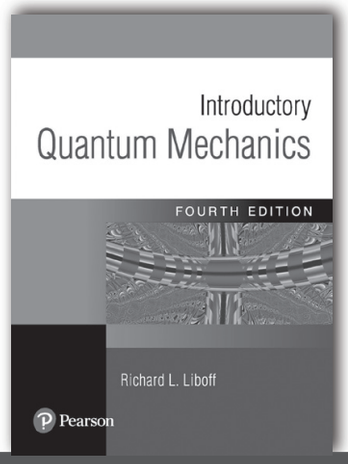
FEATURES

- The classical approach of this leading text book has been revised and updated
- A section on the Euler and Lagrange exact solutions to the three-body problem
- A section on the damped driven oscillator as an example of the workings of the Josephson junction
- Chapter on canonical perturbation theory has been streamlined and the mathematics has been simplified
- Approximately 45 new problems, mostly in Chapters 1–8 and 11.
- Problems sets are now divided into "Derivations" and "Exercises"
- Solutions for 19 select problems have been provided in Appendix C

CONTENTS

ABOUT THE AUTHOR (S)

Herbert Goldstein, Columbia University, **Charles P. Poole Jr.,** University of South Carolina, **John L. Safko,** University of South Carolina



ISBN: 9788131704417

Introductory Quantum Mechanics, 4/e

Richard Liboff

896 | ©2006

Web Supplements

ABOUT THE BOOK

Careful and detailed explanations of challenging concepts, and comprehensive and up-to-date coverage in this best-selling quantum mechanics text, continue to set the standard in physics education. In this new edition, a new chapter on the revolutionary topic of quantum computing (not currently covered in any other text at this level) and thorough updates to the rest of the text bring it up to date.

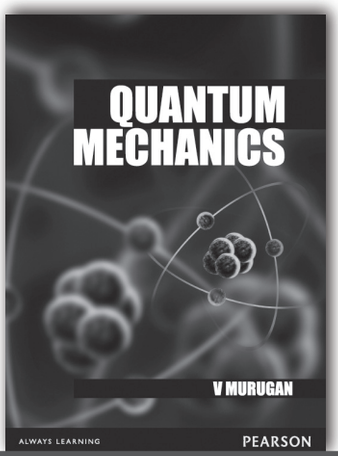
FEATURES

- Introductory Quantum Mechanics, Fourth Edition is well known for its wealth of great problems (869 in total).
- Comprehensive coverage makes the book adaptable to any course.
- The book uses precise presentation and careful use of appropriate math.
- A new chapter on the revolutionary topic of quantum computing and numerous revisions throughout the rest of the book bring it up to date.
- More than 30 new problems have been added.

CONTENTS

ABOUT THE AUTHOR

Richard Liboff is presently a Professor of Applied Physics, Applied Math, and Electrical Engineering at Cornell University. He has served as visiting professor at numerous universities and was awarded a Fulbright Scholarship in 1984 in support of a Visiting Professorship of Physics at Tel Aviv University. He has written over 100 scientific articles and has authored four textbooks. His research specialties include condensed-matter theory, kinetic theory, applied math, and elements of astrophysics.



ISBN: 9788131773628

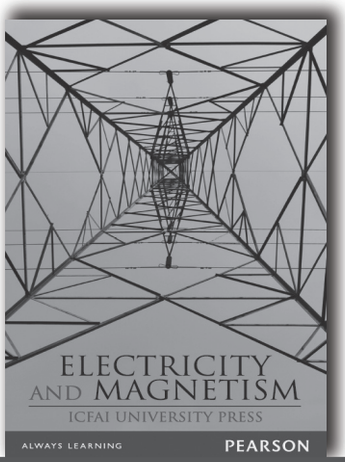
Quantum Mechanics

V. Murugan

728 | © 2014

ABOUT THE BOOK

Spread over 16 chapters, this book gives a comprehensive introduction to the fun damental postulates and the mathematical formalism of quantum mechanics. It spells the rules that facilitate translation of abstract mathematical information into physical terms to enable students understand the emergence of particle property in all quantum objects. With the right balance of theory and problems, this book gives an insight to the conceptual framework of quantum systems, which shaped our understanding of the physical universe and its evolution through the years.



ISBN: 9788131773727

Electricity and Magnetism

Electricity and Magnetism

440 | © **2012**

ABOUT THE BOOK

Electricity and Magnetism is designed for undergraduate courses in Physics. It comprehensively covers the topics of electricity and magnetism and brings out the relationship between the two forces with adequate emphasis on principles, theory and pedagogy. Illustrations are specially made to suit classroom presentation. Written in a simple and lucid language, the book progresses from the basic laws, which help the students to stay focused on the key tenets, without getting lost in the maze of intricate details

FEATURES

- It traces the origin of electromagnetic radiations, starting from the first principles.
- In-depth coverage of Current, Resistance and Electric Circuits, Gauss's Law and Magnetism
- Electric Charge and Electric Field and Electric Potential discussed in detail
- Student centric pedagogy with 90 solved examples and over 120 exercises.

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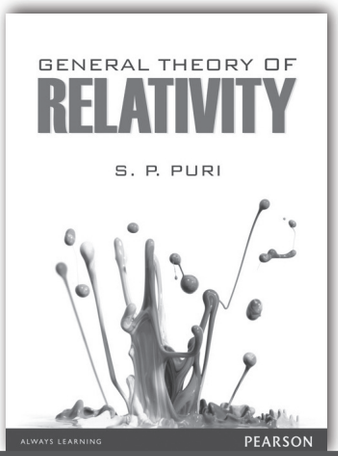
ABOUT THE AUTHOR

ICFAI University Press, Hyderabad



ISBN: 9788131795682

General Theory of Relativity

S P Puri

368 | © 2013

Web Supplements

ABOUT THE BOOK

General Theory of Relativity is the generalization of special relativity to include gravitation. It emphasizes that the law of Physics must be same for all observers and thereby extended it to non-inertial frames.This text is intended as a textbook for the students of Physics at the undergraduate and postgraduate level. It gives equal importance to the mathematical and physical aspects of general theory of relativity and hence strengthening the foregrounds.

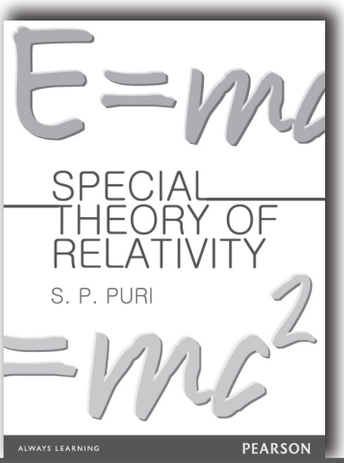
FEATURES

- Detailed study of Tensor analysis
- In-depth coverage on cosmology
- An introductory chapter on Special Theory of Relativity
- 36 figures, 18 solved problems and 82 unsolved problems with answers

CONTENTS

ABOUT THE AUTHOR

SP Puri is a former U.G.C Emeritus Fellow. He was also a Professor and Chairman at Department of Physics in Panjab University, Chandigarh.



ISBN: 9788131785010

Special Theory of Relativity

S P Puri

332 | © 2013

Web Supplements

ABOUT THE BOOK

Special Theory of Relativity is primarily intended as a textbook for the students of physics at the undergraduate level. Examining developments in the field as well as the predictions of special relativity that have taken place since 1959, its comprehensive coverage includes engaging explanations of the mathematical treatment as well as the applications of the special theory of relativity.

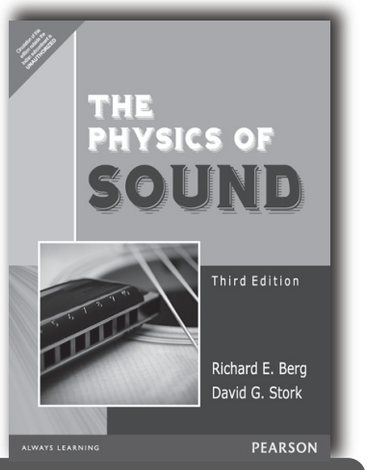
FEATURES

- Includes applications of special theory of relativity in a chapter
- 45 solved problems and 100 unsolved problems for practice
- Answers to unsolved problems included

CONTENTS

ABOUT THE AUTHOR

SP Puri is a former U.G.C Emeritus Fellow. He was also a Professor and Chairman at Department of Physics in Panjab University, Chandigarh.



ISBN: 9788131768587

The Physics of Sound, 3/e

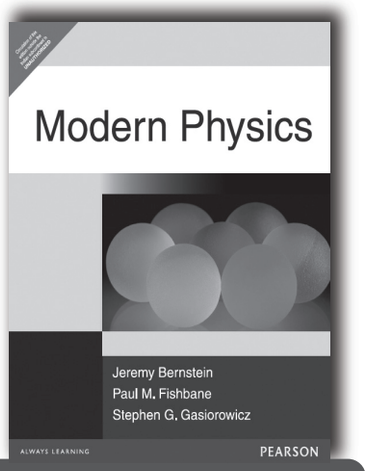
Web Supplements

Richard E Berg | David G. Stork

416 | © **2011**

ABOUT THE BOOK

Using a hands-on and experimental approach, this book incorporates developments in digital audio technology—including consumer products—into a firm foundation of the physics of sound. Selected topics are interesting to a broad audience, with many applications of sound and waves beyond strictly musical applications. No background in physics, mathematics, or music is required.



ISBN: 9788131724668

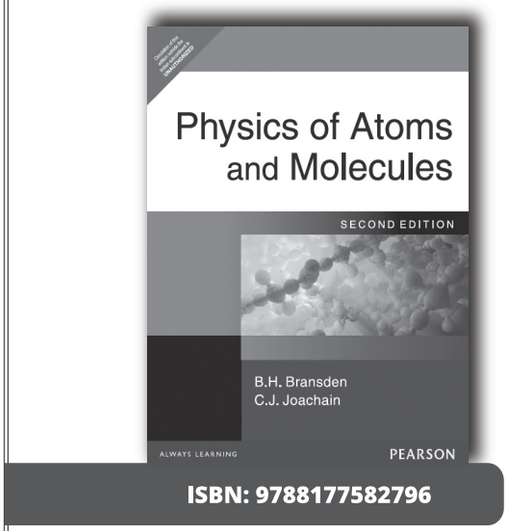
Modern Physics

Jeremy Bernstein | Paul M. Fishbane | Stephen G. Gasiorowicz

624 | © **2008**

ABOUT THE BOOK

This comprehensive text provides a clear, correct, and up-to-date introduction and survey of the topics of importance to tomorrow's engineers and scientists. The presentation includes the description of the history of the topics, to show students how we got to where we are; it stresses the importance of observation and experiment; and it emphasizes numbers, so that students develop a feel for the magnitudes involved and for when different principles become important.



ISBN: 9788177582796

Physics of Atoms and Molecules, 2/e

B.H. Bransden | C. J. Joachain

1128 | © 2005

ABOUT THE BOOK

The study of atomic and molecular physics is a key component of undergraduate courses in physics, because of its fundamental importance to the understanding of many aspects of modern physics. The aim of this new edition is to provide a unified account of the subject within an undergraduate framework, taking the opportunity to make improvements based on the teaching experience of users of the first edition, and cover important new developments in the subject.

FEATURES

- Revised material on molecular structure and spectra.
- Extended material on electronic and atomic collisions.
- A new chapter describing applications based on the use of the maser and the laser, including laser spectroscopy, laser cooling and trapping of atoms, Bose Einstein condensation, atom lasers and atomic systems in intense laser fields.
- A new chapter describing other applications, including magnetic resonance, atom optics, atoms in cavities, ions in traps, atomic clocks and astrophysics.
- Revised appendices include new material on molecules and updated tables of physical constants.
- Solutions of selected problems.

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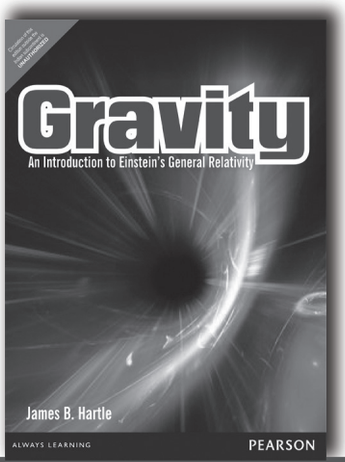
ABOUT THE AUTHOR (S)

B.H. Bransden, Department of Physics, University of Durham

C.J. Joachain, Physique Theorique, Universite Libre de Bruxelles



ISBN: 9789332535084

Gravity: An Introduction to Einstein's General Relativity

James B. Hartle

560 | © 2014

ABOUT THE BOOK

Einstein's theory of general relativity is a cornerstone of modern physics. It also touches upon a wealth of topics that students find fascinating—black holes, warped spacetime, gravitational waves, and cosmology. Until now, it has not been included in the curriculum of many undergraduate physics courses because the required math is too advanced. The aim of this ground-breaking new text is to bring general relativity into the undergraduate curriculum and make this fundamental theory accessible to virtually all physics majors. Using a "physics first" approach to the sub ject, renowned relativist James Hartle provides a fluent and accessible introduction that uses a minimum of new mathematics and illustrates a wealth of applications. Recognizing that there is typically not enough time in a short introductory course for the traditional, math-first, approach to the subject, Hartle presents a physics-first introduction to general relativity that begins with the essential physical applications.

FEATURES

- Examples come first, derivations later. In this "physics first" approach, relevant simple solutions of the Einstein equation are presented first, before introducing the field equations of general relativity and their supporting mathematics. This brings the student to the heart of the physical phenomena as quickly as possible.
- The emphasis is on the exciting phenomena of gravitational physics and the growing connection between theory and observation. Global positioning system, black holes, X-ray sources, pulsars, quasars, gravitational waves, the big bang, and the large scale structure of the universe, for example, are used to illustrate the widespread role of how general relativity describes a wealth of everyday and exotic phenomena.
- Novel and simple examples are presented to keep the presentation concise and accessible: for instance, Schwarzschild black hole, spherical stars, weak gravitational waves in flat spacetime.
- Mathematics, beyond the typical advanced calculus knowledge, is kept to a minimum. Only absolutely essential new mathematical concepts are introduced, and these only when needed.
- The text's layered structure allows the text to be used for a range of courses depending on the length and level of the course—from junior level to introductory graduate level in physics and astronomy. After just the first few chapters, a student will take away a broad introduction to some of the basic phenomena of gravitational physics, and not just mathematical tools.
- Illustrative boxes are interspersed throughout, providing students with applications, experiments, ideas, exa ples, and interesting sidelights that extend and complement concepts presented in the basic text without inter rupting its flow

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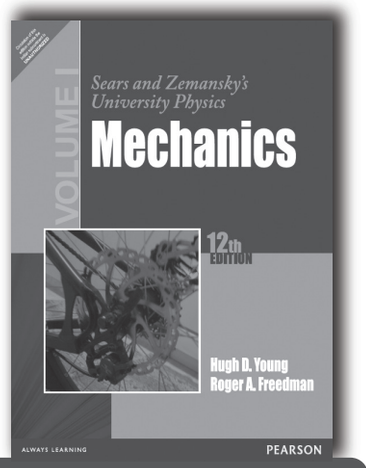
ABOUT THE AUTHOR

James B. Hartle, University of California, Santa Barbara



ISBN: 9788131759851

Sears and Zemansky's University Physics-Volume I: Mechanics

Hugh D. Young | Roger A. Freedman

544 | © 2011

ABOUT THE BOOK

University Physics – Mechanics, encapsulated the chapters relating to Mechanics from Sears and Zemansky's University Physics Twelfth Edition. The book continues an unmatched history of innovation and careful execution that was established by the bestselling eleventh edition. Assimilating the best ideas from education re search, this new edition provides enhanced problem-solving instruction, pioneer ing visual and conceptual pedagogy, the first systematically enhanced problems, and the most pedagogically proven and widely used homework and tutorial sys tems available.

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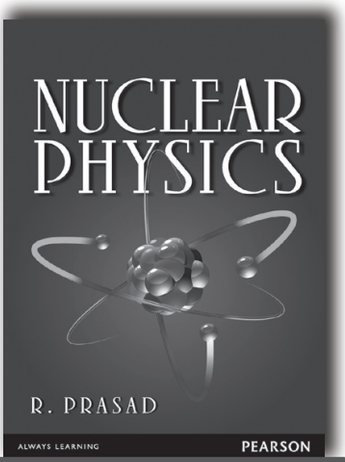
ABOUT THE AUTHOR (S)

Hugh D. Young, Carnegie Mellon University
Roger A. Freedman, University of California, Santa Barbara



ISBN: 9789332522657

Nuclear Physics

R Prasad

504 | © 2014

ABOUT THE BOOK

Nuclear Physics provides a clear and concise introduction to the subject. Fundamentals aside, the book reviews the evolution of the subject from its emergence to its present-day advancements and critically examines the future directions of nuclear and particle physics. The book brings together the essence of nuclear, particle and cosmic ray physics, serving as an ideal text for undergraduate students.

FEATURES

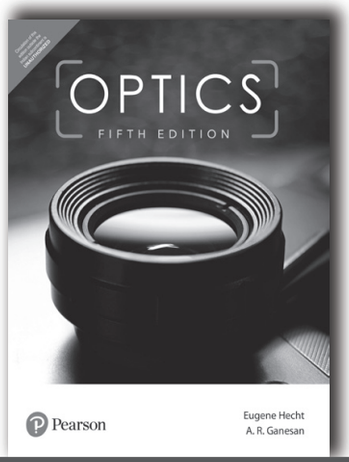
- Exclusive chapters on elementary particles and cosmic rays
- Focus on contemporary developments like heavy ion reactions, in-complete fusion, neutrino oscillations, big accelerators, colliding beam experiments & Higg's particle
- Over 220 illustrations
- Rich pedagogy comprising over 300 multiple choice questions and problems for practice

CONTENTS

ABOUT THE AUTHOR

R. Prasad has more than 40 years experience of teaching physics and nuclear physics to graduate and postgraduate students. He is an ex-professor of nuclear physics at the Aligarh Muslim University, Aligarh, India.

Throughout his career, Prof. Prasad supervised half a dozen Ph.D, about two dozen M.Phil, large number of M.Sc projects, eleven research projects funded by various agencies in India and carried out post doctoral research at many international and national institutes/universities including the First Institute of Experimental Physics, University of Hamburg, Germany and Atom Institute, Technical Universities of Austria, Vienna, Austria among many. He has also attended and chaired sessions of a large number of international and national conferences, seminars and symposia and delivered invited talks. He has published more than 80 research papers in various reputed international and national journals and presented six science-based television films under the UGC higher education programme. He is a recipient of prestigious DAAD (German) Fellowship, Post-doc fellowship of the Government of Austria, and Emeritus fellowship of UGC, India. He is a life member of many academic societies of the country.



ISBN: 9789353439590

Optics, 5/e

Eugene Hecht | A. R. Ganesan

752 | © 2020

Web Supplements

ABOUT THE BOOK

Optics, Fifth Edition is distinguished by three core imperatives: up-to-date content in line with the ever-evolving technological advances in the Optics field a modern approach to discourse including studies on photons, phasors, and theory and im provements and revisions to the previous edition's pedagogy including over one hundred new worked examples. Sustaining market leadership for over twenty years, this edition continues to demonstrate range and balance in subject matter. The text is grounded in traditional methodology, while providing an early introduction to the powerful perspective of the Fourier theory, which is crucial to present-day analysis.

Electron and neutron diffraction patterns are pictured alongside the customary photon images, and every piece of art has been scrutinized for accuracy and altered where appropriate to improve clarity.

FEATURES

New to this edition

- UPDATED! New illustrations, photos, and revised art are included throughout the text, enhancing the already outstanding visual pedagogy of the book.
- UPDATED! Promoting the balance of theory and instrumentation, this comprehensive text provides students with a classical background to ensure success in their field.
- Anon-mathematical introduction sets the stage for traditional presentation in Optics.
- Traditional discussion of interference is extended, using phasors to graphically represent electric-field amplitudes, giving students an alternative way to visualize and understand core elements.
- Graphical analysis is used in addition to the standard, mathematical treatment of Fourier series to conceptually show what the integrals are actually doing to promote student comprehension.
- A complete Wave Motion section includes helical waves and an added section on Twisted Light.
- Divergence and Curl Comprehension ensures students' understanding of the physical correspondence of divergence and curl in simple terms.
- Understanding Negative Refraction is an active area of contemporary research, which is explained in refined yet simple terms along with a brief introduction to the basic physics involved.
- Constructing Refracted Rays highlights the method devised by Huygens Optics and allows a convenient way to appreciate refraction in anisotropic crystals.
- The Geometrical Optics is a collection of new art which clearly illustrates the behavior of lenses and mirrors, along with additional remarks on fiberoptics; including the subsections Virtual Objects, Focal-Plane Ray Tracing, and Holey/Microstructured Fibers.
- Fourier Optics includes a new subsection, Two-Dimensional Images, and contains a remarkable series of illustrations depicting how spatial frequency components combine to create images.
- The Modern Optics contains an enriched and updated treatment of lasers accompanied by tables and illustrations and includes a subsection on Optoelectronic Image Reconstruction.

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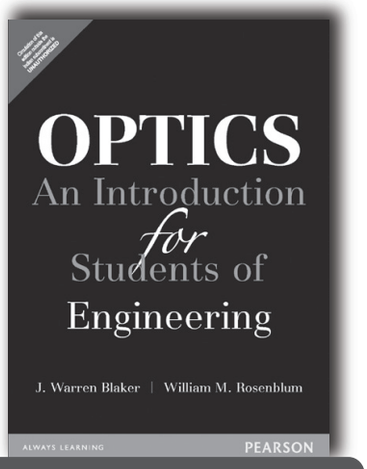
ABOUT THE AUTHOR (S)

Eugene Hecht Adelphi University

A. R. Ganesan Professor, Department of Physics Indian Institute of Technology Madras Chennai



ISBN: 9789332559431

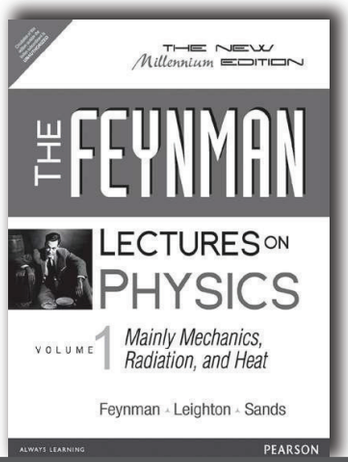
Optics: An Introduction for Students of Engineering

J. Warren Blaker | William M. Rosenblum

336 | © 2015

ABOUT THE BOOK

This book provides a concise overview of optic design and a thorough examination of engineering applications.



ISBN: 9788131792117

The Feynman Lectures on Physics: Volume I: The New Millennium Edition: Mainly Mechanics, Radiation, and Heat

Richard P. Feynman | Robert B. Leighton | Matthew Sands

560 | © **2012**

ABOUT THE BOOK

Timeless and collectible, The Feynman Lectures on Physics are essential reading, not just for students of Physics, but for anyone seeking an insightful introduction to the field from the inimitable Richard P. Feynman.

When I look at The Feynman Lectures on Physics, I feel a very personal sense of closeness to them," said Feynman, looking back at the origins of these books. Ranging from Newton's laws through the special theory of relativity, optics, statistical mechanics, and thermodynamics, the lectures collected in Volume I of ***The Feynman Lectures on Physics*** stand as a monument to clear exposition and deep insightand to Feynman's deep connection with the field.

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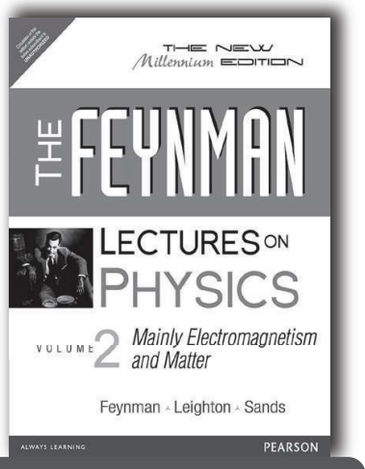
ABOUT THE AUTHOR (S)

Richard P. Feynman was a professor of physics at Caltech from 1959 to 1988. In 1965 he shared a Nobel Prize in Physics for his work on the development of quantum electrodynamics.

Robert B. Leighton was a physicist and astronomer, an esteemed teacher and textbook author, and professor at Caltech for many years.

Matthew Sands has been a professor at Caltech, deputy director of the Stanford Linear Accelerator Centre, and vice chancellor for science at the University of California, Santa Cruz.



ISBN: 9788131792124

The Feynman Lectures on Physics: Volume II: The New Millennium Edition: Mainly Electromagnetism and Matter

Richard P. Feynman | Robert B. Leighton | Matthew Sands

592 | © **2012**

ABOUT THE BOOK

Timeless and collectible, The Feynman Lectures on Physics are essential reading, not just for students of Physics, but for anyone seeking an insightful introduction to the field from the inimitable Richard P. Feynman.

When I look at The Feynman Lectures on Physics, "I feel a very personal sense of closeness to them," said Feynman, looking back at the origins of these books. Ranging from Gauss's law and Maxwell's electrodynamics to waveguides, dielectrics, magnetic materials, and elasticity, the lectures collected in Volume II of ***The Feynman Lectures on Physics*** stand as a monument to clear exposition and deep insightand to Feynman's deep connection with the field.

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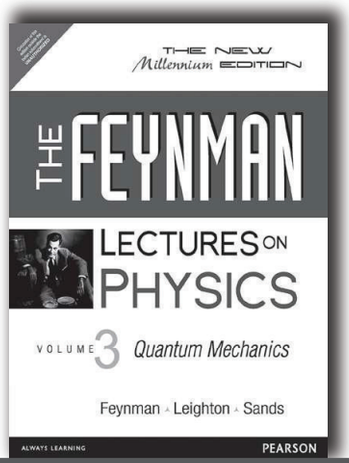
ABOUT THE AUTHOR (S)

Richard P. Feynman was a professor of physics at Caltech from 1959 to 1988. In 1965 he shared a Nobel Prize in Physics for his work on the development of quantum electrodynamics.

Robert B. Leighton was a physicist and astronomer, an esteemed teacher and textbook author, and professor at Caltech for many years.

Matthew Sands has been a professor at Caltech, deputy director of the Stanford Linear Accelerator Centre, and vice chancellor for science at the University of California, Santa Cruz.



ISBN: 9788131792131

The Feynman Lectures on Physics: Volume III: The New Millennium Edition: Quantum Mechanics

Richard P. Feynman | Robert B. Leighton | Matthew Sands

400 | © **2012**

ABOUT THE BOOK

Timeless and collectible, The Feynman Lectures on Physics are essential reading, not just for students of Physics, but for anyone seeking an insightful introduction to the field from the inimitable Richard P. Feynman.

When I look at The Feynman Lectures on Physics, I feel a very personal sense of closeness to them," said Feynman, looking back at the origins of these books. Ranging from probability amplitudes to spin, two-state systems, propagation in a crystal lattice, semiconductors, symmetry, and conservation laws, the lectures collected in Volume III of ***The Feynman Lectures on Physics*** stand as a monument to clear exposition and deep insightand to Feynman's deep connection with the field.

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ABOUT THE AUTHOR (S)

Richard P. Feynman was a professor of physics at Caltech from 1959 to 1988. In 1965 he shared a Nobel Prize in Physics for his work on the development of quantum electrodynamics.

Robert B. Leighton was a physicist and astronomer, an esteemed teacher and textbook author, and professor at Caltech for many years.

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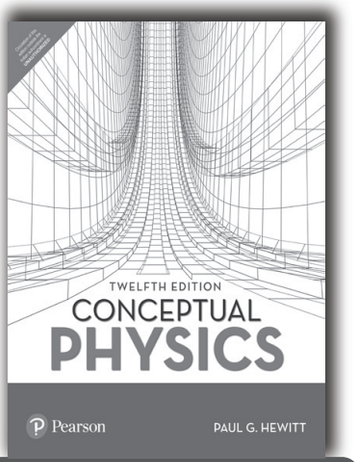

ISBN: 9789352861774

Conceptual Physics, 12/e

Paul G. Hewitt

816 | © **2018**

ABOUT THE BOOK

TIntended for non-science majors Physics Courses, Since defining this course 30 years ago, Paul Hewitt's best-selling text continues as the benchmark by which all others are judged. In Conceptual Physics Twelfth Edition Paul Hewitt makes physics interesting, understandable, and relevant for non-science majors. The Twelfth Edition will delight students with informative and fun Hewitt-Drew-It screencasts, updated content and applications.

Hewitt's text is guided by the principle of "concepts before calculations" and is famous for engaging students with analogies and imagery from the real-world that build a strong conceptual understanding of physical principles ranging from classical mechanics to modern physics. This program presents a better teaching and learning experience-for you and your students.

Prepare for lecture: NEW! 100 Hewitt-Drew-It screencasts, authored and narrated by Paul Hewitt, explain physics concepts through animation and narration. The exciting new Screencasts, accessed through QR codes in the textbook, will enable students to engage with the physics concepts more actively outside of class.

Make physics delightful: Relevant and accessible narrative, analogies from real-world situations, and simple rep resentations of the underlying mathematical relationships make physics more appealing to students.

Build a strong conceptual understanding of physics: Students gain a solid understanding of physics through practice and problem solving in the book.

FEATURES

- Make physics delightful
- Updated applications are available for digital technology, environment, and energy. These topics are at the forefront of everyone's consciousness these days and an intelligent awareness of their scientific foundations will give rise to better decision making in the political arena.
- A new interior design provides an attractive, fresh, and accessible new look, updating a classic text to be even more student friendly.
- An extensive full-color figure and photo program includes the author's hallmark cartoons, which are both approachable and informative.
- Fun and easy-to-perform projects involve students in the scientific process of exploration and observation.
- Insight boxes provide short snippets of information about how topics in the text relate to real-life situations, experiments, and other parts of the book.
- Enhanced coverage of topics in energy and environment are included and help to keep students aware of current events.

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VI. LIGHT

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33. Atomic Nucleus and Radioactivity
34. Nuclear Fission and Fusion

VIII. RELATIVITY

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36. General Theory of Relativity

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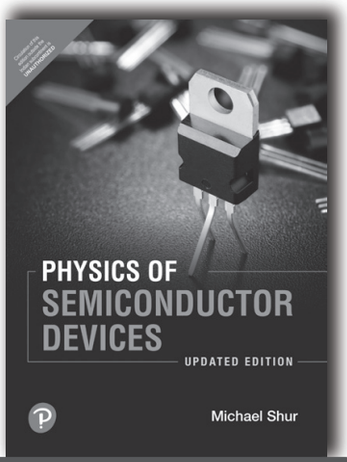
A. Systems of Measurement
B. More About Motion
C. Graphing
D. More About Vectors
E. Exponential Growth and Doubling Time

ABOUT THE AUTHOR

Paul G. Hewitt, former silver-medal boxing champion, sign painter, uranium prospector, and soldier, Paul began college at the age of 27, with the help of the GI Bill. He pioneered the conceptual approach to teaching physics at the City College of San Francisco. He has taught as a guest teacher at various middle schools and high schools, the University of California at both the Berkeley and Santa Cruz campuses, and the University of Hawaii at both the Manoa and Hilo campuses. He also taught for 20 years at the Exploratorium in San Francisco, which honored him with its Outstanding Educator Award in 2000. He is the author of Conceptual Physics and a co-author of Conceptual Physical Science and Conceptual Physical Science Explorations (with John Suchocki and Leslie Hewitt).



ISBN: 9789353430061

Physics of Semiconductor Devices, Updated edition, 1/e

Michael Shur

664 | © 2019

ABOUT THE BOOK

This book provides a practical introduction to the basics of semiconductor physics as well as insights into important developments, such as amorphous silicon, compound semiconductor technologies, and novel heterostructure transistors.

FEATURES

- Implements all theories and models discussed in microcomputer programs
- Providing readers with a useful "toolbox" for the modeling and simulation of semiconductor devices.
- Includes detailed appendices with useful information on semiconductor parameters which help readers to solve practical problems related to the analysis, design, and characterization of different semiconductor devices.
- Includes over 35 microcomputer programs and nearly 150 problems.

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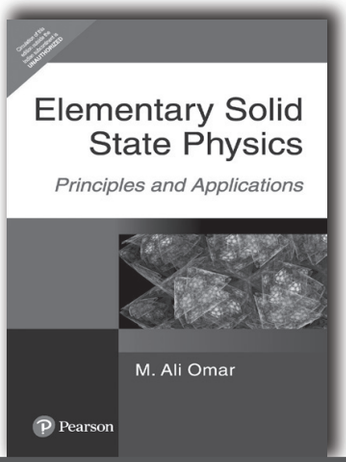
ABOUT THE AUTHOR

Michael Shur, University of Virginia.



ISBN: 9788177583779

Elementary Solid State Physics: Principles and Applications

M. Ali Omar

669 | © 2005

ABOUT THE BOOK

The volume is intended to serve as a general text in solid state physics for undergraduates in physics, applied physics, engineering, and other related scientific disciplines. It covers a wide range of topics with as many practical applications as possible.

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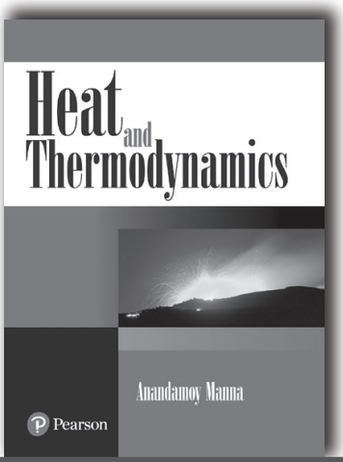
ABOUT THE AUTHOR

M. Ali Omar, Lowell Technological Institute



ISBN: 9788131754009

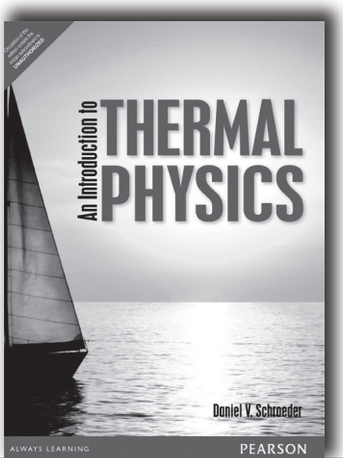
Heat and Thermodynamics

Anandamoy Manna

508 | © **2012**

ABOUT THE BOOK

The book is meant for an introductory course on Heat & Thermodynamics. The book uses variety of diagrams, charts and learning aids to enable easy understanding of the subject.



ISBN: 9789332535077

An Introduction to Thermal Physics

Daniel V. Schroeder

336 | © **2014**

ABOUT THE BOOK

This text provides a balanced, well-organized treatment of thermodynamics and statistical mechanics, making thermal physics interesting and accessible to anyone who has completed a year of calculus-based introductory physics. Part I introduces essential concepts of thermodynamics and statistical mechanics from a unified view, applying concepts in a select number of illustrative examples. Parts II and III explore further applications of classical thermodynamics and statistical mechanics. Throughout, the emphasis is on real-world applications.

FEATURES

- A balanced treatment of both classical thermodynamics and statistical mechanics, showing the relation between them without confusing the student.
- A rich supply of applications capture students' attention and show how thermal physics relates to engineering, chemistry, earth science, condensed matter physics, astrophysics, and everyday life.
- Integrated problems at the ends of sections and subsections encourage students to actively apply what they have been reading and check their understanding.
- The text includes many problems that require the use of the computer; for instance, spreadsheet calculations, plotting, numerical integration, root finding, and Monte Carlo simulation.
- The text is accessible to anyone who has completed a year of calculus-based introductory physics.
- A clear and lively writing style engages readers.

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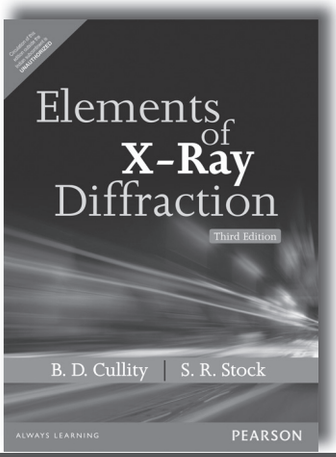
ABOUT THE AUTHOR

Daniel V. Schroeder, Weber State University



ISBN: 9789332535169

Elements of X-Ray Diffraction, 3/e

B. D. Cullity | S.R. Stock

656 | © 2014

ABOUT THE BOOK

This revision of a classical text is intended to acquaint the reader, who has no prior knowledge of the subject, with the theory of x-ray diffraction, the experimental methods involved, and the main applications. The text is a collection of principles and methods designed directly for the student and not a reference tool for the advanced reader

FEATURES

- No metallurgical data are given beyond that necessary to illustrate the diffraction methods involved.
- X-ray diffraction is stressed rather than metallurgy.
- The book is divided into three main parts—Fundamentals; experimental methods; and applications.
- The subject of crystal structure is approached through, and, based on, the concept of the point lattice (Bravais lattice), because the point lattice of a substance is so closely related to its diffraction pattern.
- The book is written entirely in terms of the Bragg law and can be read without any knowledge of the reciprocal lattice.

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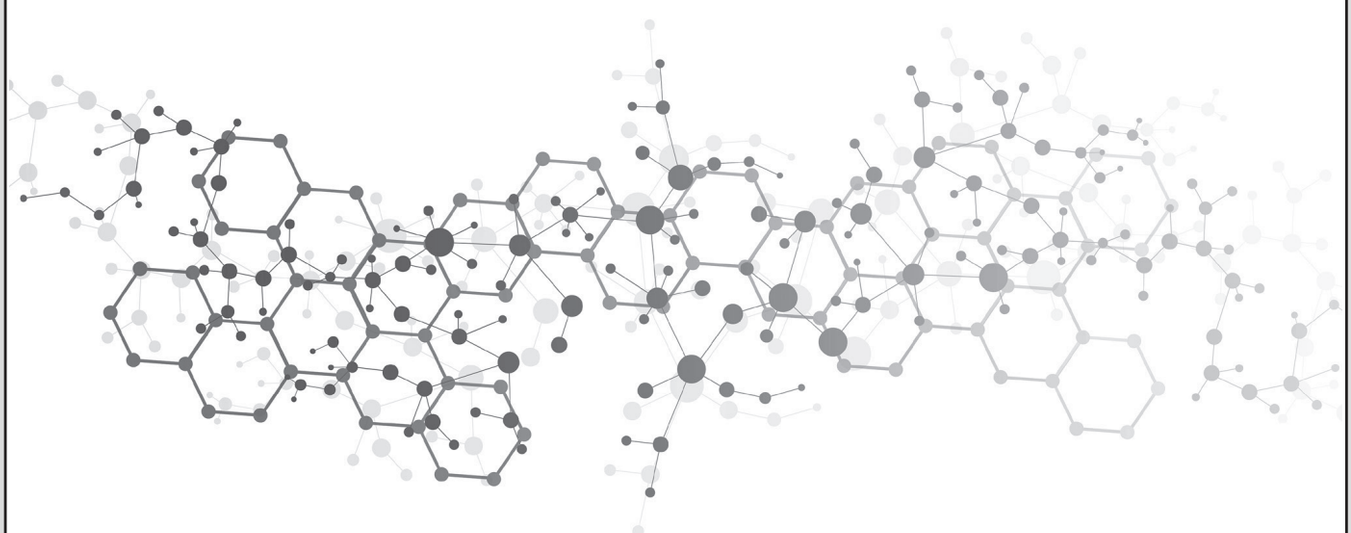
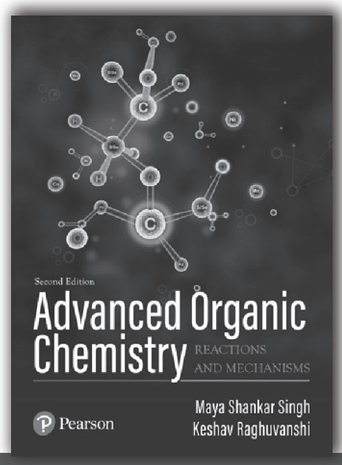
ABOUT THE AUTHOR (S)

B.D. Cullity Deceased, University of Notre Dame
S.R. Stock, Georgia Institute of Technology



Chemistry



ISBN: 9789354490781

Advanced Organic Chemistry-Reactions & Mechanics, 2e

Maya Shankar Singh | KeshavRaghuvanshi

655 | © 2021

ABOUT THE BOOK

Advanced Organic Chemistry – Reactions and Mechanisms, 2e – written in a simple and honest way this book isextremely pleasant to follow the language of chemistry via structures and equations. The book is developed to initiate fundamental ideas rather than on the sequential presentation of facts and is articulated with the two most important sorts of chemistry that exist—the chemistry that is known as life, and the chemistry as practiced by chemists solving real problems in laboratories. Each chapter contains only those topics and reactions that are needed to understand the intellectual roots of organic chemistry as it is currently practiced. All topics covered are either 'fundamental' or 'advanced'. Fundamental sections address the needs of upper-level undergraduates, while the advanced sections are intended for graduate-level/senior audiences. The problems at the end of each chapter represent application of concepts to new structures and circumstances, rather than review of material explicitly presented in the text. These problems are designed in such a way that students can test themselves on the material just covered before proceeding to the next section. Chapters like theory, mechanism, synthesis, structure, and stereochemistry are discussed throughout the book in a qualitative to semi quantitative tone.

FEATURES

- It is written in an informal and honest way that makes it extremely pleasant to follow the language of chemistry via structures and equations
- Examples based on interesting/famous molecules or chemical problems are presented throughout the book Specific examples are included at each stage to illustrate the mechanism under discussion
- Chemists present chemistry in terms of structural diagrams and for this reason all reactions have been drawn using curly arrows—the handwriting of chemistry
- A rich graphic design, which does a great job bringing some of the more abstract concepts of Organic Chemistry closer to the students
- End-of-chapter summaries reinforce/emphasize the student's comprehension of the key point

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ABOUT THE AUTHOR (S)

Maya Shankar Singh (FNA, FASc, FNASc), JC Bose National Fellow, Department of Chemistry, Institute of Science, Banaras Hindu University, Varanasi, India

Keshav Raghuvanshi, Chemical and Biomolecular Engineering, North Carolina State University, Raleigh, NC 27695-7905, USA

ISBN: 9789353438753

Basic Chemistry, 5/e

Karen C Timberlake

724 | © 2020

Web Supplements

ABOUT THE BOOK

Basic Chemistry introduces students to the essential scientific and mathematical concepts of general chemistry. With accessible language and a moderate pace, the text is easy-to-follow for first-time chemistry students, as well as those hoping to renew their studies of the subject. In the Fifth Edition, Bill and Karen Timberlake carefully develop core ideas while relating them to the possibility of future careers. The book guides students through basic chemistry problem solving with engaging visuals and a focus on developing the math skills necessary to be successful in the course. End of chapter questions strategically promote integration of cumulative ideas, allowing students to develop a strong foundation for learning chemistry and encouraging them to continue their studies in the field.

FEATURES

- **Guides to Problem Solving (GPS)** illustrate the steps needed to solve a problem and provide a visual guide for students to use in solving future problems.
- **NEW! "Try It First" feature** precedes the Solution section of each Sample Problem, encouraging students to work on the problem before reading the given Solution and helping them learn to recall new ideas.
- **NEW! Connect features** specify information that relates the Given and Need sections in Analyze the the more abstract concepts of Organic Chemistry closer to the students End-of-chapter summaries reinforce/emphasize the student's comprehension of the key point Problems to help students identify and connect the components within a word problem and set up a solution strategy.
- **NEW! Follow-Up Stories** provide follow-up to the discussion in the chapter opener and include application questions.
- **Analyze the Problems** convert a word problem into components for problem solving.

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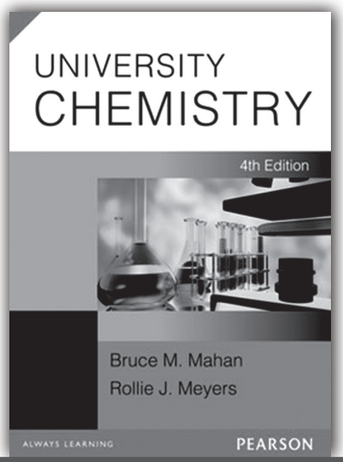
ABOUT THE AUTHOR (S)

Karen C. Timberlake is Professor Emerita of chemistry at Los Angeles Valley College, where she taught chemistry for allied health and preparatory chemistry for 36 years. She received her bachelor's degree in chemistry from the University of Washington and her master's degree in biochemistry from the University of California at Los Angeles. **Professor Timberlake** has been writing chemistry textbooks for 35 years. During that time, her name has become associated with the strategic use of pedagogical tools that promote student success in chemistry and the application of chemistry to real-life situations. More than one million students have learned chemistry using texts, laboratory manuals, and study guides written by Karen Timberlake.



ISBN: 9788131729571

University Chemistry, 4/e

Bruce M. Mahan | Rollie J. Meyers

1076 | © 2009

ABOUT THE BOOK

Designed for use in a course for first-year students, University Chemistry, 4/e con tinues in the tradition of previous editions by being intellectually challenging and using mathematical reasoning where it is appropriate to the subject at hand. Be sides covering topics essential for an introductory university course in chemistry, the textbook concludes with a series of chapters on special topics including: organic chemistry, biochemistry, nuclear chemistry, and solid state chemistry. The SI sys tem of units has been used throughout the text. The book also contains sufficient number of worked-out examples and numerous problems with a range of difficulty.

FEATURES

- SI system of units used throughout the text
- Over 200 worked-out examples, and questions and answers
- Over 600 unsolved problems and exercises
- Key words, chapter summaries and suggestions for further reading in each chapter to aid learning
- Appendices on physical constants, conversion factors, SI units, and Coulomb's Law
- Answers to select problems at the end of the book

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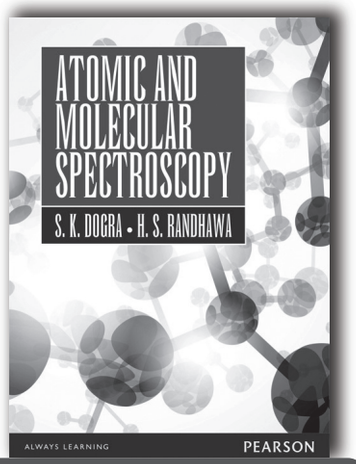
➦ **ALSO AVAILABLE...**



ISBN: 9789332533530

Atomic and Molecular Spectroscopy

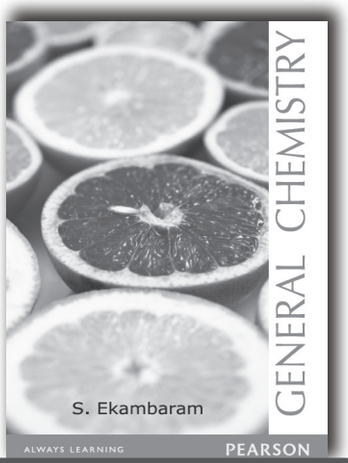
S. K. Dogra

784 | © 2014

Web Supplements

ABOUT THE BOOK

Designed as a textbook for undergraduate and postgraduate students of chemistry and physics, Atomic and Molecular Spectroscopy elucidates the basic principles and applications of spectroscopy. The physical and quantitative aspects of spectroscopic techniques are covered comprehensively in one book.



ISBN: 9788131773789

General Chemistry

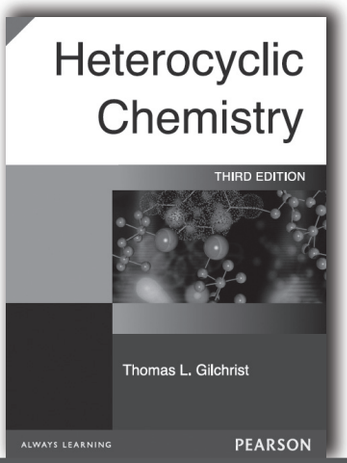
S. Ekambaram

656 | ©2013

Web Supplements

ABOUT THE BOOK

This book presents the fundamental concepts of general chemistry in a precise and comprehensive manner for undergraduate students of chemistry and life science at all Indian universities. Adhering strictly to the UGC curriculum, the contents are written in a simple and lucid language enriched with a large number of examples and illustrations.



ISBN: 9788131707937

Heterocyclic Chemistry, 3/e

Thomas L. Gilchrist

432 | © 2006

ABOUT THE BOOK

This popular text has been completely revised to reflect recent advances in the subject. Deals with the properties of ring systems and general methods of synthesis, providing a unique overview of the subject area. Includes a guide to the naming of the ring systems, invaluable to those unfamiliar with the area.

FEATURES

- Includes recent examples of organometallic reagents which are increasingly used in the synthesis and reactions of heterocyclic compounds.
- New reaction schemes illustrating the use of heterocycles as synthetic intermediates.

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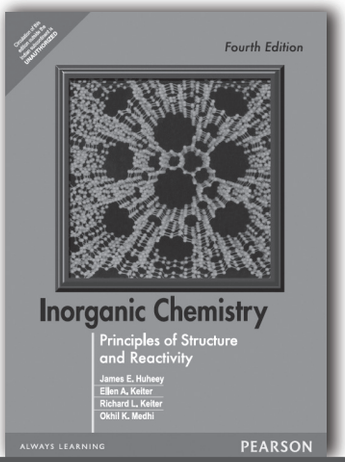
ABOUT THE AUTHOR

Thomas. L. Gilchrist, University of Liverpool



ISBN: 9788177581300

Inorganic Chemistry: Principles of Structure and Reactivity

James E. Huheey | Ellen A. Keiter | Richard L. Keiter | Okhil K. Medhi

826 | ©2005

ABOUT THE BOOK

This classic in its field has been substantially reorganized and includes the latest findings in the discipline

FEATURES

- Substantial rearrangement to suit the requirement of the students and teachers of the Indian subcontinent.
- Thorough re-editing and reorganization of the chapters on chemistry of the main group elements, descriptive chemistry of metals, organometallic chemistry, solid-state chemistry, and bioinorganic chemistry.
- Addition of thermodynamic stability of complex compounds, organometallic chemistry of the main group elements, and Frost diagrams.
- A chapter on symmetry comprising applications of symmetry (including spectroscopy and crystallography) and an introduction to point groups.
- Reorganized and updated chapters on bonding, presenting a modern approach.

CONTENTS

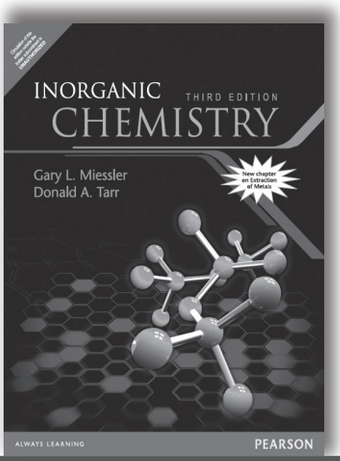
ABOUT THE AUTHOR (S)

James E. Huheey received his Ph.D. from the University of Illinois at Urbana-Champaign and has taught at the University of Maryland since 1965. He has received the Leo Schubert Teaching Award and is a Fellow of the AAAS, the Herpetologists' League, and the United States National Museum.

Ellen A. Keiter received her Ph.D. from the University of Illinois at Urbana-Champaign and is currently the director of the honors program in the chemistry department of Eastern Illinois University, where she has taught since 1977. She has received merit awards from Eastern Illinois University for excellence in teaching, research, and service.

Richard L. Keiter received his Ph.D. from the University of Maryland. He joined the faculty at Eastern Illinois University in 1969 and was named distinguished professor in 1998. He served nine years as a councillor of the Council on Undergraduate Research and most recently received a Camille and Henry Dreyfus Scholar/Fellow Award.

Okhil K. Medhi received his Ph.D. from the Indian Institute of Technology, Kanpur, has taught at the North-Eastern Hill University, Shillong, and presently teaches at Gauhati University, Assam, where he has been a professor of chemistry since 1991.



ISBN: 9788131718858

Inorganic Chemistry, 3/e

Gary Miessler | Donald A. Tarr

720 | © 2008

Web Supplements

ABOUT THE BOOK

This highly readable text provides the essentials of Inorganic Chemistry at a level that is neither too high (for novice students) nor too low (for advanced students). It has been praised for its coverage of theoretical inorganic chemistry. It discusses molecular symmetry earlier than other texts and builds on this foundation in later chapters. Plenty of supporting book references encourage instructors and students to further explore topics of interest.

FEATURES

- NEW - Coverage of oxidation-reduction reactions.
- NEW - Updated and reorganized material throughout Includes recent literature references.
- NEW - Web-based problems.
- NEW - Problems using software for molecular orbital calculations.
- Excellent, balanced coverage of core principles and theory.
- Integration of symmetry arguments throughout Emphasizes symmetry more than other inorganic texts.
- Many problems at the end of each chapter Including some from the recent literature.
- Worked examples in most chapters.
- Exercises in most chapters.
- Strong molecular symmetry/group theory coverage.
- Strong molecular-orbital approach.
- Special topic coverage e.g., organometallic, solid-state chemistry, bioinorganic, and environmental inorganic.

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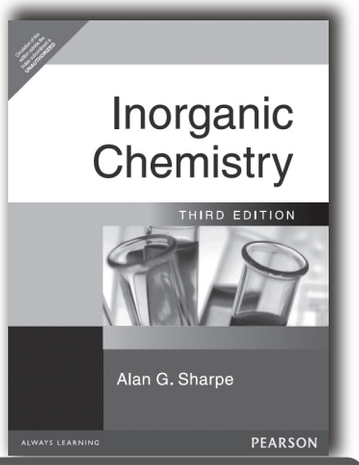
ABOUT THE AUTHOR (S)

Gary L. Miessler, St. Olaf College
Donald A. Tarr, St. Olaf College



ISBN: 9788131706992

Inorganic Chemistry, 3/e

Alan G. Sharpe

702 | © 2006

Web Supplements

ABOUT THE BOOK

The 3rd edition of Inorganic Chemistry provides an excellent introduction to the subject. The fully revised text takes account of important advances, and a new larger format provides accessibility. The exercises have been updated and new outline solutions have been added. In this edition, the author has increased em phasis on solid state chemistry and expanded the treatment of aqueous and non-aqueous solutions.

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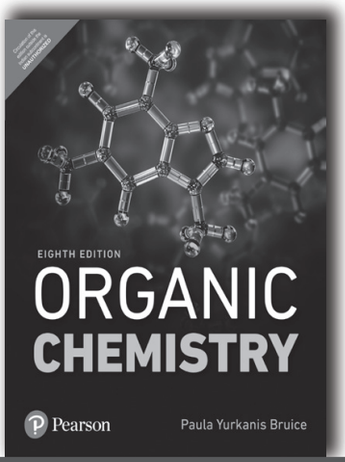


ISBN: 9789353948450

Organic Chemistry, 8e

Paula Yurkanis Bruice

1368 | © 2020

ABOUT THE BOOK

Paula Bruice's presentation in Organic Chemistry, Eighth Edition provides mixed-science majors with the conceptual foundations, chemical logic, and problem solving skills they need to reason their way to solutions for diverse problems in synthetic organic chemistry, biochemistry, and medicine. The Eighth Edition builds a strong framework for thinking about organic chemistry by unifying principles of reactivity that students will apply throughout the course, discouraging memo rization. With more applications than any other textbook, Dr. Bruice consistently relates structure and reactivity to what occurs in our own cells and reinforces the fundamental reason for all chemical reactions–electrophiles react with nucleophiles. New streamlined coverage of substitution and elimination, updated problem-solving strategies, synthesis skill-building applications and tutorials guide students throughout fundamental and complex content in both the first and second semesters of the course.

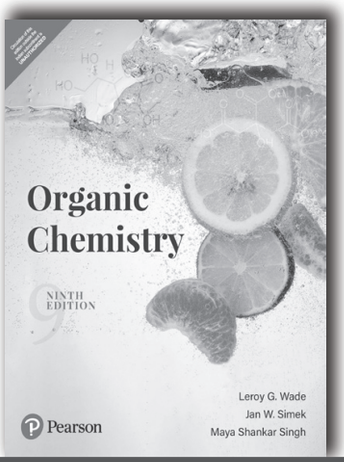
FEATURES

The textbook bridges The gap between organic chemistry and biochemistry. Because bioorganic chemistry is The bridge between organic chemistry and biochemistry, The text emphasizes that The organic reactions that chemists carry out in The laboratory are similar to those performed by nature inside a cell. These connections are especially important to biological science majors. -Revised, accuracy-checked text provides increased exam relevancy. -Improved visuals and organization engage students with difficult subject matter, organizes The chapter content and improves ease of use. -Strengthened emphasis on The strategies needed to solve problems and master The content. -New and restructured features give students additional conceptual and skill building support. -Organizing What We Know about The reactions of organic Compounds Table. -Content Updates and Revisions to The Table of Contents streamline and improve clarity in The presentation.

CONTENTS

ABOUT THE AUTHOR

Paula Yurkanis Bruice is from the University Of California, Santa Barbara. Bruice earned her Ph.D. in chemistry from the University of Virginia. She then received an NIH postdoctoral fellowship for study in the Department of Biochemistry at the University of Virginia Medical School and held a postdoctoral appointment in the Department of Pharmacology at the Yale School of Medicine. Paula has been a member of the faculty at the University of California, Santa Barbara since 1972, where she has received the Associated Students Teacher of the Year Award, the Academic Senate Distinguished Teaching Award, two Mortar Board Professor of the Year Awards, and the UCSB Alumni Association Teaching Award. Her research interests center on the mechanism and catalysis of organic reactions, particularly those of biological significance.



ISBN: 9789389342673

Organic Chemistry, 9/e

Leroy G. Wade, Jr. | Jan William Simek| Maya Shankar Singh

1578 | © 2020

Web Supplements

ABOUT THE BOOK

Organic Chemistry, Ninth Edition gives students a contemporary overview of organic principles and the tools for organizing and understanding reaction mechanisms and synthetic organic chemistry with unparalleled and highly refined pedagogy. This text presents key principles of organic chemistry in the context of fundamental reasoning and problem solving. Authored to complement how students use a textbook today, new Problem Solving Strategies, Partially Solved Problems, Visual Reaction Guides and Reaction Starbursts encourage students to use the text before class as a primary introduction to organic chemistry as well as a comprehensive study tool for working problems and/or preparing for exams.

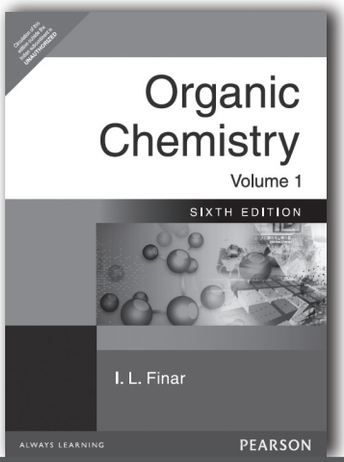
FEATURES

- New chapters on Phenols and Quinones and Asymmetric Synthesis.
- Green Chemistry is emphasized with presentation of less-toxic, and environmentally friendly reagents.
- Enriched and updated treatment of Acid/Base Chemistry, Study of Chemical Reactions, Steriochemistry, Alkyl Halides, Alkenes, Dienes, Alkynes, Thiols, Aromatic Compounds, Amines, and Polymers.
- Over 100 new problems include more synthesis problems and problems based on recent literature.
- Over 80 Mechanism boxes help students understand how specific reactions occur by zooming in on each individual step in detail.
- Updated art throughout to provide consistency and clarity in the text, giving detailed representations of molecular and orbital art.

CONTENTS

ABOUT THE AUTHOR (S)

Leroy G. Wade, Whitman College
Jan W. Simek, Cal Poly State University
Maya Shankar Singh, Department of Chemistry, Institute of Science, Banaras Hindu University



ISBN: 9788177585421

Organic Chemistry, Volume 1, 6/e

I. L. Finar

966 | © **2005**

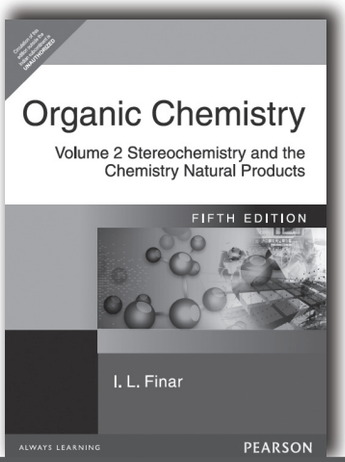
ABOUT THE BOOK

In the sixth edition of Dr. Finar's best-selling student text, a great deal of material has been rewritten and many new topics have been added. The arrangement of the subject matter is based on homologous series and SI units have been used throughout the text.

CONTENTS

ABOUT THE AUTHOR

The late **Dr. Finar** was Principal Lecturer in Organic Chemistry at the Polytechnic of North London.



ISBN: 9788177585414

Organic Chemistry, Volume 2: Stereochemistry and the Chemistry Natural Products, 5/e

I. L. Finar

956 | © **2005**

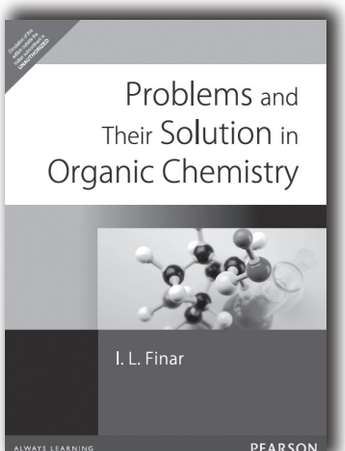
ABOUT THE BOOK

Organic Chemistry is a well-established two-volume textbook for students studying chemistry at degree level. Volume 2 carries the material of Volume 1: Funda mental Principles to a more advanced level. The author provides a comprehensive introduction to the relationship between physical properties and chemical structures, and then proceeds to a detailed account of stereochemistry. The later chapters are devoted to the most typical compounds of natural products and the problems involved. A selected number of reading references are given at the end of each chapter.

CONTENTS

ABOUT THE AUTHORS

The late **Dr. Finar** was Principal Lecturer in Organic Chemistry at the Polytechnic of North London.



ISBN: 9788131700938

Problems and Their Solution in Organic Chemistry

I. L. Finar

360 | © **2006**

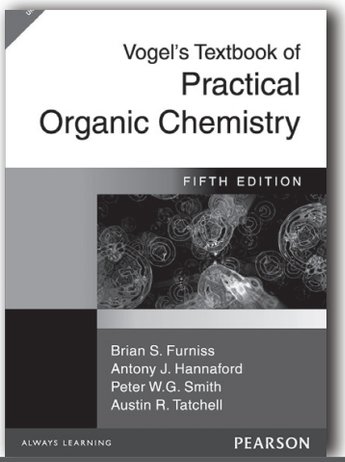
ABOUT THE BOOK

The first part of this book collects together the questions set out at end of each chapter in the authors Textbook of Organic Chemistry, Volume 1 (sixth edition). The second part of this book gives the possible solutions, which are linked with an explanation of the sort of reasoning used in order to arrive at one of the answers. In many cases, several answers are given for one question; and in each set of questions, there is at least one which involves the completion of equations. The result is a book which can be used independently of the main volume. This book helps in acquiring a better understanding of the basic principles of organic chemis try and in revising a large amount of the subject matter quickly.

CONTENTS

ABOUT THE AUTHOR

The late **Dr. Finar** was Principal Lecturer in Organic Chemistry at the Polytechnic of North London.



ISBN: 9788177589573

Vogel's Textbook of Practical Organic Chemistry, 5/e

Brian S. Furniss | Antony J. Hannaford | Peter W.G. Smith | Austin R. Tatchell

1544 | © **2006**

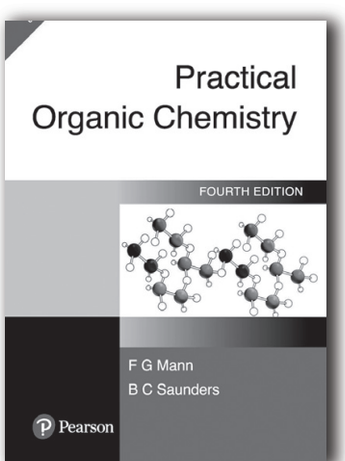
ABOUT THE BOOK

Still recognized as the definitive text on practical topics related to organic chemistry, this text is relied upon by undergraduates, postgraduate students, and professional organic chemists. Topics covered include the structural and theoretical principles required when designing a synthesis; the disconnection or synthon approach; the principles of retrosynthetic analysis applied to relevant aliphatic, aromatic, alicyclic and heterocyclic compounds; and developments in reaction techniques.

FEATURES

- An introductory chapter on the structural and theoretical principles required when designing a synthesis.
- The disconnection on synthon approach now integrated into the text , and the principles of retrosynthetic analysis applied to relevant aliphatic, aromatic, alicyclic and heterocyclic compounds.
- Synthesis methodology is expanded to cover a range of new reagents, including oxidants and reductants; reagents for asymmetric synthesis; and those derived from lithium, boron, silicon, phosphorous and suphur.
- Recent developments in reaction techniques which include: handling of air-sensitive and moisture-sensitive compounds; new chromatographic procedures; phase transfer catalysis; and solid support reagents.
- Over 100 new experiments selected from the literature to illustrate new reagents and techniques, and the operation of protection, selectivity and control in synthesis.
- A more detailed treatment of carbon-13 n.m.r. spectroscopy, and the interpretation of spectroscopic data for many of synthesized compounds.

CONTENTS



ISBN: 9788131727102

Practical Organic Chemistry

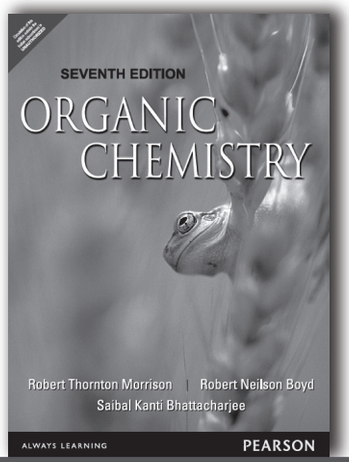
F.G. Mann | B.C. Saunders

600 | © **2009**

ABOUT THE BOOK

This book has proved useful for research as well as for teaching purpose The fourth edition of this book was distinguished from its predecessors by a greater emphasis on semi-micro methods and modern techniques and reactions. While updating the book in several important aspects, namely, chromatography, reaction mechanism, and safety and first-aid measures.

CONTENTS



ISBN: 9788131704813

Organic Chemistry, 7/e

Robert Thornton Morrison | Robert Neilson Boyd | Saibal Kanti Bhattacharjee

Web Supplements

1508 | © 2010

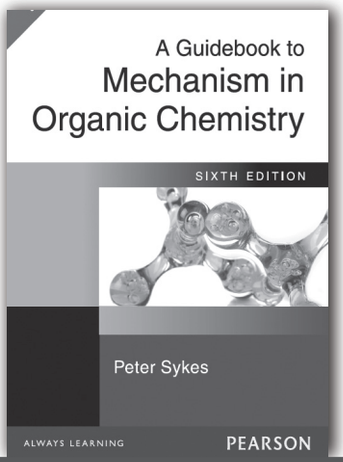
ABOUT THE BOOK

As in the earlier editions, the book conveys the important fundamentals and principles of the subject in a simple and easily understandable manner.

CONTENTS

ABOUT THE AUTHOR (S)

Robert Thornton Morrison, New York University
Robert Neilson Boyd, New York University
Saibal Kanti Bhattacharjee, Gauhati University



ISBN: 9788177584332

A Guidebook to Mechanism in Organic Chemistry, 6/e

Peter Sykes

428 | © **2005**

ABOUT THE BOOK

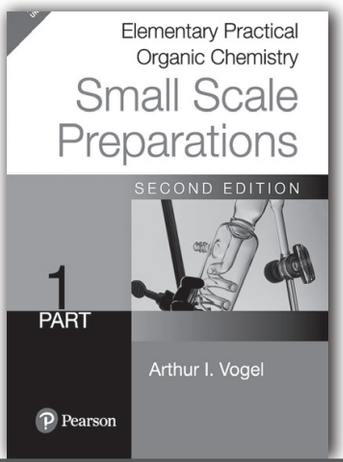
This classic textbook on mechanistic organic chemistry, characterized by its clarity, careful choice of examples, and its general approach designed to lead to a greater understanding of the subject matter. The book is aimed clearly at the needs of the student, with a thorough understanding of, and provision for, the potential conceptual difficulties he or she is likely to encounter. The book's success in achieving these goals is reflected in the opinion of one reviewer who says, "Sykes remains the bible of mechanistic organic chemistry for thousands of undergraduates, and there is certainly no English language publication of which I am aware which comes even close to challenging it in terms of clarity and coverage."

FEATURES

- New – topics introduced in this edition : ipso aromatic substitution; the mechanistic borderline in nucleophilic substitution; more use of activation parameters; Dimorth's ET parameter; Hammett's Ã³x and spectroscopic data; and 13C n.m.r. in biogenesis.
- New – thoroughly revised text with improved explanations, more examples and increased clarity.

CONTENTS

1. Structure, Reactivity, and Mechanism.
2. Energetics, Kinetics, and the Investigation of Mechanism.
3. The Strengths of Acids and Bases.
4. Nucleophilic Substitution at a Saturated Carbon Atom.
5. Carbocations, Electron-deficient N and O Atoms and Their Reactions.
6. Electrophilic and Nucleophilic Substitution in Aromatic Systems.
7. Electrophilic and Nucleophilic Addition to C=C.
8. Nucleophilic Addition to C=O.
9. Elimination Reactions.
10. Carbanions and Their Reactions.
11. Radicals and Their Reactions.
12. Symmetry Controlled Reactions.
13. Linear Free Energy Relationships.



ISBN: 9788131756867

Elementary Practical Organic Chemistry: Small Scale Preparations Part 1, 2/e

Arthur I. Voge

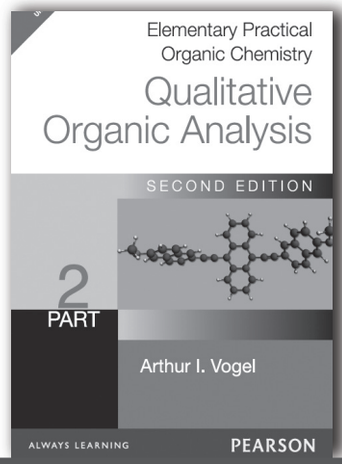
456 | © **2010**

FEATURES

- Experimental Techniques
- Mechanism of all reactions described
- Introduction of a number of reactions and experimental procedures of general interest

CONTENTS

1. Theory of General Technique
2. Experimental Technique
3. Aliphatic Compounds
4. Aromatic Compounds
5. Miscellaneous Compounds and Miscellaneous Reactions



ISBN: 9788131756874

Elementary Practical Organic Chemistry: Qualitative Organic Analysis Part 2, 2/e

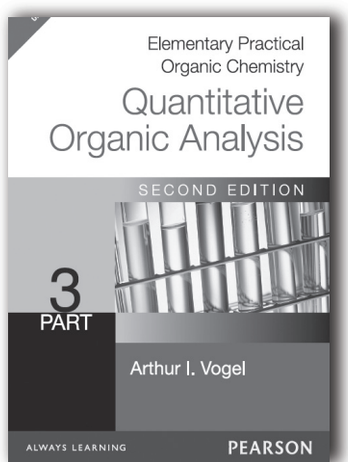
Arthur I. Voge

448 | © **2010**

ABOUT THE BOOK

A dedicated chapter on "The use of spectroscopic methods in qualitative organic analysis" which includes the essentials from a practical viewpoint of ultraviolet and visible spectroscopy and infrared spectroscopy and mass spectroscopy. These spectroscopy techniques are now-days of such great importance that no book on qualitative organic analysis can be regarded complete without their inclusion.

CONTENTS



ISBN: 9788131756881

Elementary Practical Organic Chemistry: Quantitative Organic Analysis Part 3, 2/e

Arthur I. Voge

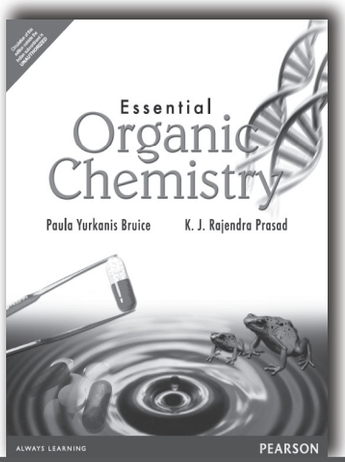
382 | © **2010**

FEATURES

- Numerous Experiments
- Coverage of quantitative organic analysis through the medium of functional groups

CONTENTS

➦ **ALSO AVAILABLE...**



ISBN: 9788131703731

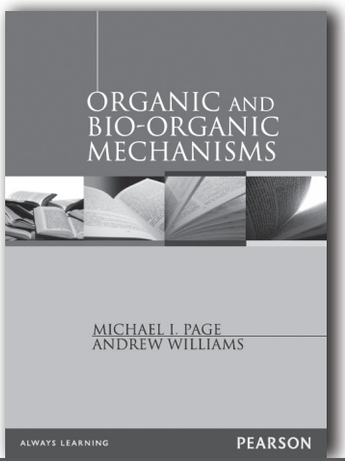
Essential Organic Chemistry

Paula Yurkanis Bruice | Rajendra Prasad

672 | © **2007**

ABOUT THE BOOK

Essential Organic Chemistry is designed to help students see organic chemistry as an interesting and exciting science and to give them an opportunity to develop critical-thinking skills. It engages students through detailed presentation of reactions, providing a solid understanding of reactivity rather than requiring rote memorization. Once students understand the reasons behind the reactivity of organic compounds, they then will be better prepared to understand the reactions involved in such areas as metabolism, PCR and genetic engineering.



ISBN: 9788131729496

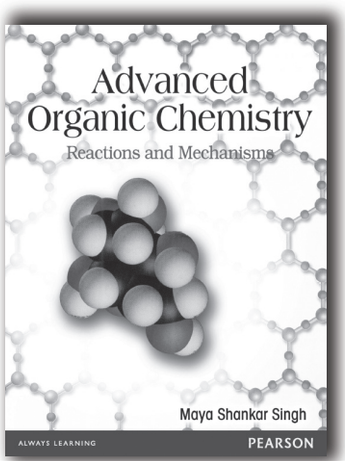
Organic and Bio-Organic Mechanisms

Michael I. Page | Andrew Williams

312 | © **2009**

ABOUT THE BOOK

This text provides a comprehensive and detailed discussion of the investigation of organic and bioorganic reaction mechanisms. It addresses questions such as: 'How are bonds between atoms rearranged?', 'What sort of structural changes take place to cause bond fission and formation?' and 'How do catalysts lower the activation energies of reactions?'



ISBN: 9788131711071

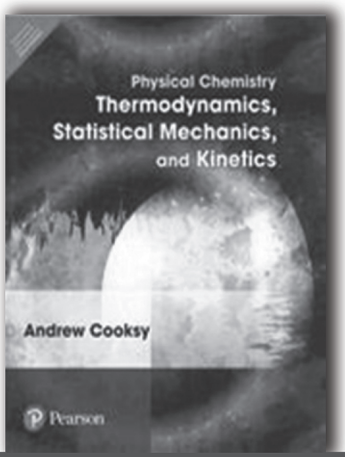
Advanced Organic Chemistry: Reactions and Mechanisms

Maya Shankar Singh

528 | © **2004**

ABOUT THE BOOK

For students of B.Sc./M.Sc. Chemistry. Practising professionals in various chemical, bio-chemical and pharmaceutical industries.



ISBN: 9789353063627

Physical Chemistry
Thermodynamics, Statistical Mechanics, and Kinetics

Andrew Cooksy

576 | © 2018

ABOUT THE BOOK

Andrew Cooksy's clear teaching voice help students connect immediately with the subject matter while defusing some of their initial trepidation about physical chemistry. Through lively narrative and meticulous explanations of mathematical derivations, Physical Chemistry: Thermodynamics, Statistical Mechanics, and Kinetics engages students while fostering a sincere appreciation for the interrelationship between the theoretical and mathematical reasoning that underlies the study of physical chemis□try. The author's engaging presentation style and careful explanations make even the most sophisticated concepts and mathematical details clear and comprehensible.

FEATURES

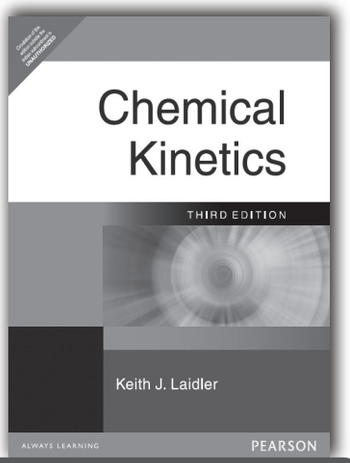
- FLEXIBLE ORGANIZATION ACCOMMODATES THE CONTENT NEEDS AND TEACHING STYLES OF EACH SEMESTER/ QUARTER SEQUENCE.
  Separation of Quantum Chemistry and Thermodynamics into distinct volumes provides the utmost in flexibility, allowing instructors to lead with their choice of Quantum-first or Thermo-first coverage.
- Reflective of popular lecture strategies, chapter opening and closing features ground each topic within the larger framework of physical chemistry and help students stay oriented as they deepen their understanding.
- Opening features including a "Visual Roadmap" and "Context: Where Are We Now" show readers where they are within the text and relative to other physical chemistry topics.
- "Goal: Why Are We Here?" and "Learning Objectives" features prepare students for the work ahead and outline the skills students should expect to acquire from their study of the chapter.
- The concluding "Where Do We Go From Here" section at the end of each chapter reinforces student orientation and illuminates the intrinsic connection between concepts."

CONTENTS

ABOUT THE AUTHOR

Andrew Cooksy is a chemistry professor at San Diego State University, where he teaches courses in physical and general chemistry and carries out research on the spectroscopy, kinetics, and computational chemistry of reactive intermediates in combustion and interstellar processes. He attended the Washington, D.C. public schools before receiving his undergraduate degree in chemistry and physics from Harvard College and his Ph.D. in chemistry from the University of California at Berkeley.

to become a faculty member at the University of Washington. Philip Reid has taught chemistry at the University of Washington since he joined the chemistry faculty in 1995. Professor Reid received his bachelor's degree from the University of Puget Sound in 1986, and his Ph.D. in chemistry from the University of California at Berkeley in 1992. He performed postdoctoral research at the University of Minnesota, Twin Cities, campus before moving to Washington.



ISBN: 9788131709726

Chemical Kinetics, 3/e

Keith J. Laidler

544 | © **2007**

ABOUT THE BOOK

Basic concepts of both experimental and theoretical chemical kinetics are concisely explained for those seeking a general knowledge of the subject from this well-known text, now being totally revised and updated. In addition, the book is an invaluable starting point for those embarking on research in kinetics and physical chemistry. Extensive chapter bibliographies point the way toward more detailed accounts or specialized aspects. Historical background included in both chapter introductions and biographical sketches of important researches in chemical kinetics.

FEATURES

- An invaluable starting point for those embarking on research in kinetics and physical chemistry.
- Extensive chapter bibliographies point the way toward more detailed accounts or specialized aspects.
- Historical background included in both chapter introductions and biographical sketches of important researchers in chemical kinetics.

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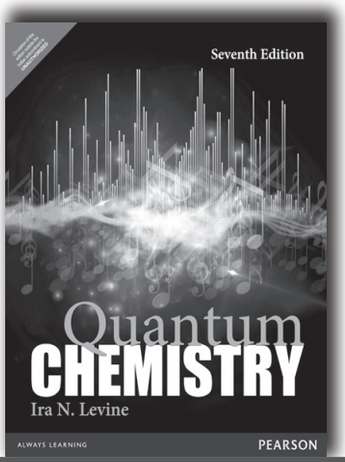


ISBN: 9789332558533

Quantum Chemistry, 7/e

Ira N. Levine

720 | © 2016

Web Supplements

ABOUT THE BOOK

This classic text on quantum chemistry has been extensively updated to include the latest research and developments in the field. With its solid presentation of mathematics, this bestseller provides a great introduction to the fundamentals of quantum chemistry and the math needed to master it.

The seventh edition covers quantum mechanics, atomic structure, and molecular electronic structure and clearly demonstrates the usefulness and limitations of current quantum-mechanical methods for the calculation of molecular properties.

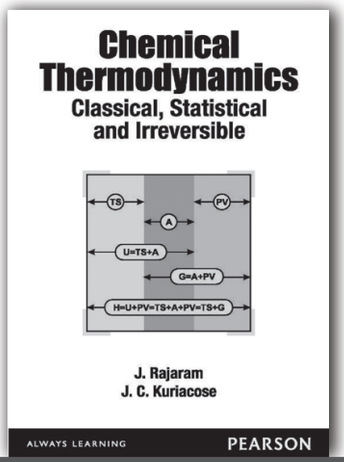
FEATURES

- In-depth treatment of quantum chemistry
- Derivations are presented in full, step-by-step detail
- Comprehensive discussions of the major computational methods of molecular electronic structure (Hartree—Fock, CI, density-functional theory, MP2, coupled cluster, semiempirical, molecular mechanics) are provided.

CONTENTS

ABOUT THE AUTHOR

Ira N. Levine is faculty, Brooklyn College, City University of New York



ISBN: 9788131792155

Chemical Thermodynamics: Classical, Statistical and Irreversible

J. Rajaram | J. C. Kuriacose

696 | © **2013**

ABOUT THE BOOK

Aimed at providing undergraduate and postgraduate students with an understanding of thermodynamics, this book brings out the thermodynamic interrelationships in a succinct break-down of its essential elements. It starts with the fundamentals and progresses to advanced concepts to enable students to appreciate the application of thermodynamics in different areas of chemistry. Conforming to the syllabus framed by the U.G.C. curriculum, this course textbook is written in a simple and lucid language, the discussion and explanations being interspersed with appropriate worked-out examples. Every chapter is accompanied by adequate end-of-chapter exercises.

FEATURES

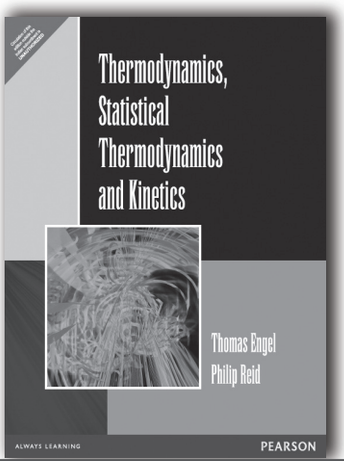
- Covers all introductory concepts in detail with a rich pedagogy for easy understanding
- Clear explanation of important concepts such as partial molar properties, fugacity and activity
- Over 140 solved examples and 100 end-of-chapter exercises

CONTENTS

ABOUT THE AUTHOR (S)

J. Rajaram and J. C. Kuriacose are retired professors of the department of chemistry, Indian Institute of Technology, Madras, Chennai, having devoted over thirty years to teaching chemistry.

➦ **ALSO AVAILABLE...**



ISBN: 9788131712849

Thermodynamics, Statistical Thermodynamics, and Kinetics

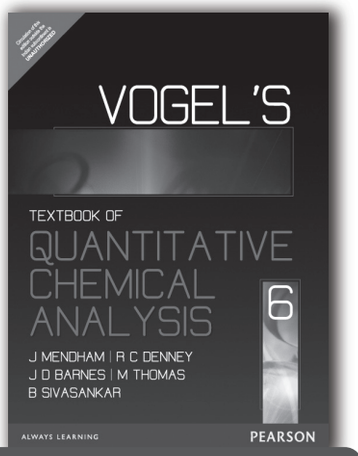
Thomas Engel | Philip Reid

610 | © **2007**

Web Supplements

ABOUT THE BOOK

This book presents the fundamental concepts of general chemistry in a precise and comprehensive manner for undergraduate students of chemistry and life science at all Indian universities. Adhering strictly to the UGC curriculum, the contents are written in a simple and lucid language enriched with a large number of examples and illustrations.



ISBN: 9788131723258

Vogel's Quantitative Chemical Analysis, 6/e

J. Mendham | David J. Barnes | R.C. Denney | M. J. K. Thomas

836 | ©2009

ABOUT THE BOOK

Dr. Vogel's classic introduction to analytical methods has provided generations of chemists worldwide with a basis for teaching, learning and applying analytical chemistry. This 60th anniversary edition - the first for a decade - reflects major changes in the subject. Analysts need to understand the concepts behind methods and Vogel's Quantitative Chemical Analysis provides clear introductions to all the key analytical methods including those involving advanced computerised equipment available in many analytical laboratories. The editors have built further on the work of Dr Vogel, modernising the approach while retaining the analytical concepts and ideas which were built into the original work. This new edition has been extensively revised to take into account developments in instrumental procedures and coupled techniques whilst maintaining the book's focus on quantitative chemical and problem-specific analyses. With excellent cross-referencing this book provides a wealth of examples and tables of data.

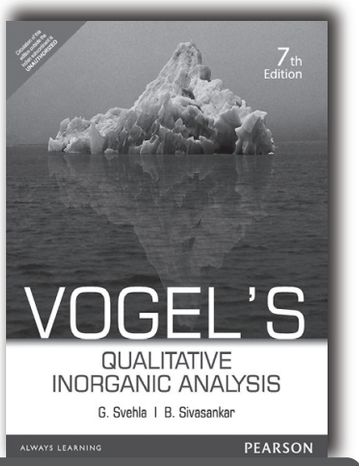
FEATURES

- Comprehensive coverage of methods with detailed easy-to-follow practical experiments.
- Basic analytical theory which is essential for understanding the subject.
- Greatly expanded sections on instrumental analysis including aspects of miniaturisation.
- Increased emphasis on minor/trace component analysis and revised statistical handling of data.
- New chapters on sampling, mass spectrometry and nuclear magnetic resonance.

CONTENTS

ABOUT THE AUTHOR

J. Mendham, Consultant Analytical Chemist
R.C. Denney, Consultant Forensic Scientist
J. D. Barnes, University of Greenwich
M.J.K. Thomas, University of Greenwich



ISBN: 9788131773710

Vogel's Qualitative Inorganic Analysis, 7/e

G. Svehla | B. Sivasankar

384 | © 2013

ABOUT THE BOOK

Vogel's Qualitative Inorganic Analysis (in its seventh edition) follows the current trends and techniques in the field of analytical chemistry. Written for undergraduate and postgraduate students of chemistry, this revised and updated edition treats each concept and principle systematically to make the subject comprehensible to beginners as well as advanced learners.

FEATURES

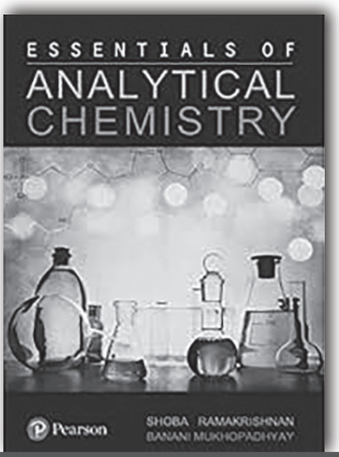
- Updated nomenclature
- Addition of tests for metals based on flame atomic emission and atomic absorption spectrometry
- New classification of mixtures of common and less common ions
- Marginalia highlighting important facts
- Elaborate discussions or
- Health and hazard warnings throughout the text
- Details on the preparation of reagents provided in the appendix

CONTENTS

ABOUT THE AUTHOR (S)

G. Svehla is a formerly professor from the department of chemistry, University College, York, Ireland.

B. Sivasankar is a visiting professor from the department of chemistry, Anna University, Chennai, Tamilnadu.



ISBN: 9789332545076

Essentials of Analytical Chemistry

Shobha Ramakrishnan | Banani Mukhopadhyay

400 | © 2018

ABOUT THE BOOK

The book elucidates the principles of analytical methods such as volumetric analysis, gravimetric analysis, statistical methods of analysis, electro-analytical, and ther moanalytical techniques. It also presents the basic principles and instrumentation of UV, IR, NMR, Mass and ESR spectral methods, accompanied by a discussion on the spectra of a number of molecules, intended to develop the skill of the reader and to interpret the spectra of common organic molecules. This text will benefit those preparing for competitive examinations such as NET, SLET, GATE, and the UPSC Civil Services exam.

FEATURES

- Includes up-to-date developments in the field
- Detailed illustration of AES, AAS, and Flame Photometry
- Numerous review questions, solved problems and end of chapter exercises:

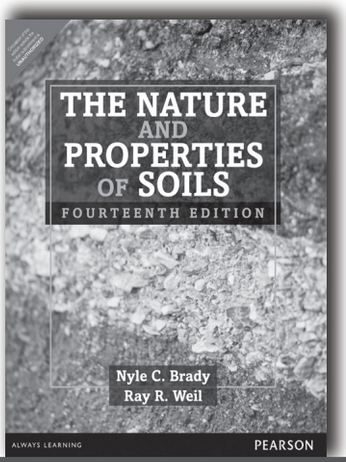
CONTENTS

ABOUT THE AUTHOR (S)

Shoba Ramakrishnan was Former Professor and Head, Department of Chemistry, Women's Christian College, Chennai, Tamil Nadu.

Banani Mukhopadhyay is Assistant Professor, Department of Chemistry, Women's Christian College, Chennai, Tamil Nadu.

Agriculture



ISBN: 9789332519107

The Nature and Properties of Soil, 14/e

Nyle C. Brady

922 | © 2013

ABOUT THE BOOK

The Nature and Properties of Soils, 14e can be used in courses such as Soil Fertility, Land Resources, Earth Science and Soil Geography. Now in its 14th edition, this text is designed to help make students study of soils a fascinating and intellectually satisfying experience. Written for both majors and non-majors, this text highlights the many interactions between the soil and other components of forest, range, agricultural, wetland and constructed ecosystems.

FEATURES

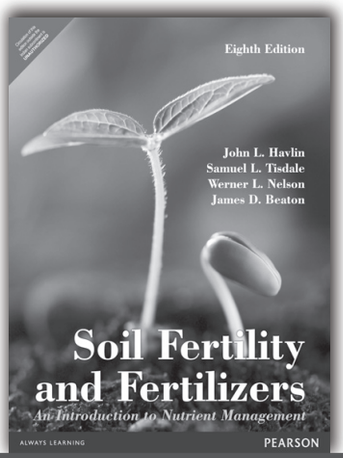
- New section on septic tank drain fields
- Expanded and totally revised section on irrigation management
- Updated section on engineering properties of soils which includes consistence, consistency, soil strength and sudden failure in cohesive and non-cohesive soils
- Text is organized with several cross referencing chapters
- Special topics are treated in boxes
- Study questions have been added to the end of each chapter to help students think and review the topics and their interactions

CONTENTS

ABOUT THE AUTHOR

Nyle C. Brady, Emeritus Professor, Cornell University

Raymond C. Weil, Professor, University of Maryland College Park



ISBN: 9789332570344

Soil Fertility and Fertilizers, 8/e

John L. Havlin | Samuel L. Tisdale | Werner L. Nelson | James D. Beaton

Web Supplements

536 | © 2016

ABOUT THE BOOK

Soil Fertility and Fertilizers: An Introduction to Nutrient Management, Eighth Edition, provides a thorough understanding of the biological, chemical, and physical properties affecting soil fertility and plant nutrition. Covering all aspects of nutrient management for profitable crop production, the text pays particular attention to minimizing the environmental impact of soil and fertilizer management. The eighth edition of this proven text has been substantially revised to reflect rapidly advancing knowledge and technologies in both plant nutrition and nutrient management.

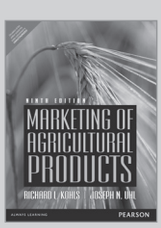
FEATURES

- Illustrates critical quantitative skills essential to professional success in nutrient management and related disciplines.
- Increased number of photographs, diagrams, and other visuals illustrating nutrient response in crops, soil management effects on crop growth, nutrient application equipment, and more.
- Covers a wide diversity of plants and cropping systems.
- Increased emphasis on alternative nutrient sources to the most common fertilizers.
- Substantially enhanced focus on environmental impacts of nutrient use.

CONTENTS

ABOUT THE AUTHOR (S)
John L. Havlin, North Carolina State University
Samuel L. Tisdale
Werner L. Nelson, North Carolina State University
James D. Beaton, Potash and Phosphate Institute of Canada

ALSO AVAILABLE

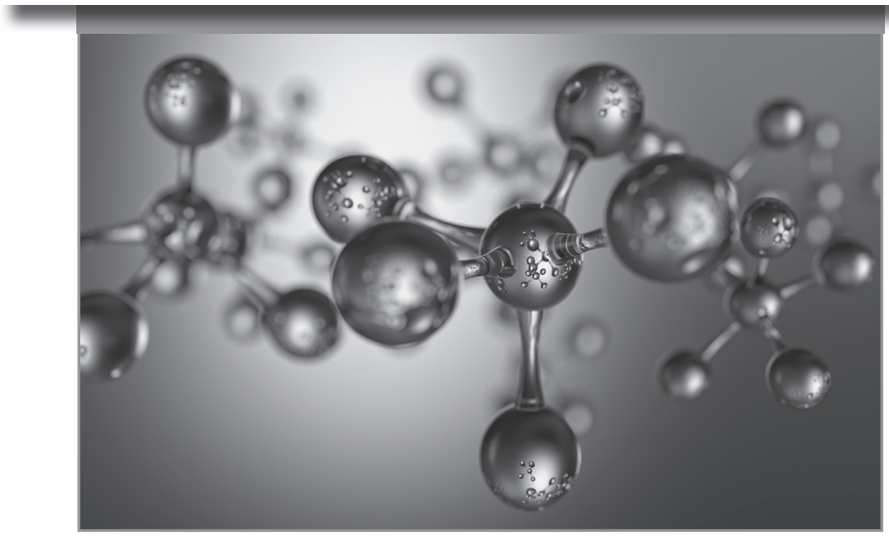


Marketing of Agricultural Products, 9/e

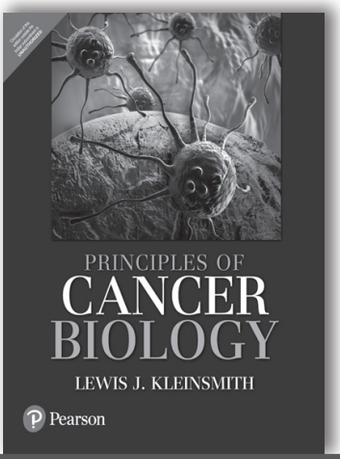
Kohls / Uhl

ISBN: 9789332556966

Pages: 544



Biology



ISBN: 9789332577480

Principles of Cancer Biology

Lewis J. Kleinsmith

320 | © 2016

ABOUT THE BOOK

Principles of Cancer Biology, is an engaging book focused on providing students with a "big picture" view of cancer. Author Lewis Kleinsmith has written an instructional text focusing on key concepts for both students and a general audience. For those instructors who wish to delve into particular aspects of cancer biology in greater depth, each chapter contains a list of suggested readings that expand the detail as needed.

The text also emphasizes the scientific evidence that underlies cancer biology, and teaches students to think critically about this evidence- as there are constantly new "breakthroughs" and reports in this field. For students who need the review, there are brief reviews of several topics related to DNA replication and repair, cell division, cell signaling, and inheritance patterns in chapters where these subjects are relevant. By including these reviews, the text is both accessible and engaging to a broad audience of readers who are studying cancer biology for the first time, as well as an interested general audience.

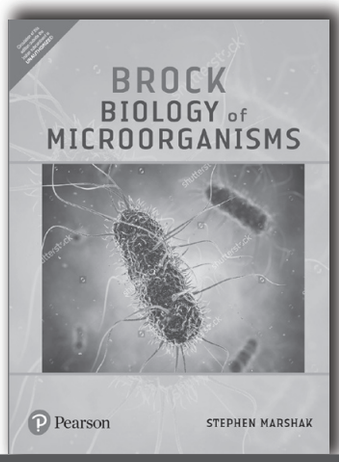
FEATURES

- Focus on the key concepts to help build a foundation for further study.
- Scientifically based. The text teaches students how to read and critically evaluate the current research.
- Every chapter is subdivided into a series of conceptual sections, each introduced by a Sentence Heading that summarizes the Principle being described in that section.
- Art that Teaches. Each piece of art in the text has been carefully considered to ensure that readers can easily absorb the data.
- A bulleted Summary of Main Concepts is found at the end of each chapter helping students review the major principles covered in that chapter.
- Suggested Reading lists are included at the end of each chapter with an emphasis on review articles and carefully selected research publications that students are likely to find especially relevant and understandable.

CONTENTS

ABOUT THE AUTHOR

Lewis J. Kleinsmith, University of Michigan



ISBN: 9789332586864

Brock Biology of Microorganisms, 14/e

Michael T. Madigan | John M. Martinko | Kelly S. Bender | Daniel H. Buckley | David A. Stahl

1040 | © 2017

ABOUT THE BOOK

Helping Today's Students Learn Microbiology.

The authoritative #1 textbook for introductory majors microbiology, ***Brock Biology of Microorganisms, 14e*** continues to set the standard for impeccable scholarship, accuracy, and outstanding illustrations and photos. This book for biology, microbiology, and other science majors balances cutting edge research with the concepts essential for understanding the field of microbiology, including strong coverage of ecology, evolution, and metabolism.

The Fourteenth Edition seamlessly integrates the most current science, paying particular attention to molecular biology and how the genomic revolution has changed and is changing the field. This edition offers a streamlined, modern organization with a consistent level of detail and updated, visually compelling art program.

FEATURES

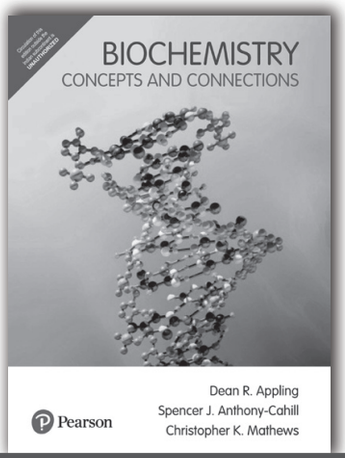
- Focus on today's learners
- NEW! Streamlined organization better suits how instructors structure their courses, organizing course topics by 6 units consisting of 32 chapters. The Fourteenth Edition effectively and efficiently introduces students to the foundation and science of microbiology in a modern, appropriate organization.
- NEW! Molecular microbiology and genomics are introduced early in the text and discussed throughout multiple chapters for a more integrated, comprehensive introduction to the field.
- NEW! MicrobiologyNow chapter openers focus on current research problems and discoveries contextualizing chapter content and adding interest with content
- REVISED! A renamed "Explore the Microbial World" box feature (formerly "Microbial Sidebar") places greater emphasis on engaging research and discoveries from multiple microbiology disciplines.
- NEW! Updates have been made to all chapters, tables, boxes, and statistics with the latest data available.
- The Big Ideas at the end of each chapter review the core principles in the chapter by summarizing each section in 2–3 sentences.
- MiniQuizzes concluding each section contain 3–4 questions that give students an opportunity to stop and think about the core principles of each section.
- Extensive and accurate coverage of microbiology make this text a trusted name and valuable reference.
- Well organized and easy to understand writing style. Each author brings superb teaching and research knowledge to the book, with care to cover each topic and discipline appropriately and accurately. Madigan, as the general editor, provides a consistent voice and writing style to guide students throughout the course providing the best of both worlds: extensive coverage of all of the topics in microbiology as well as a consistent pedagogy and approach.
- Teach tough topics with superior art
- UPDATED! A heavily revised art program provides the consistency and context students need to understand this visual science. Updates include new illustrations and photos, as well as significant art style updates including:
  - Step/process art
  - Cell style
  - Glassware
  - DNA, RNA, and mRNA pipe style
  - Phylogenetic trees
  - Cell membranes
  - Keys
- NEW! Interior text design with a bold color palette, color screens, rules, more distinct heads, and new table design.

CONTENTS

ABOUT THE AUTHOR (S)

Michael T. Madigan, Southern Illinois University Carbondale
John M. Martinko, Southern Illinois University Carbondale
Jennifer Aiyer, Southern Illinois University Carbondale
Kelly S. Bender, Southern Illinois University Carbondale
Dale Wortley, Cornell University
David A. Stahl, University of Washington Seattle
Daniel H. Buckley, Cornell University

Biotechnology



ISBN: 9789332585454

Biochemistry: Concepts and Connections

Dean R. Appling Spencer J. Anthony-Cahill Christopher K. Mathews

920 | © 2016

ABOUT THE BOOK

A highly visual, precise and fresh approach to guide today's mixed-science majors to a deeper understanding of biochemistry.

Biochemistry: Concepts and Connections engages students in the rapidly evolving field of biochemistry, better preparing them for the challenges of 21st century science through quantitative reasoning skills and a rich, chemical perspective on biological processes.

This concise first edition teaches mixed-science-majors the chemical logic underlying the mechanisms, pathways, and processes in living cells through groundbreaking biochemical art and a clear narrative that illustrates biochemistry's relation to all other life sciences. Integration of biochemistry's experimental underpinnings alongside the presentation of modern techniques encourages students to appreciate and consider how their understanding of biochemistry can and will contribute to solving problems in medicine, agricultural sciences, environmental sciences, and forensics.

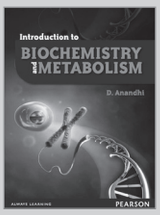
FEATURES

- A striking art program designed specifically for teaching
- Modern science presented in a relevant way
- Organized with students in mind

CONTENTS

ABOUT THE AUTHOR (S)
Dean R. Appling, The University of Texas at Austin
Spencer J. Anthony-Cahill, Western Washington University
Christopher K. Mathews, Oregon State University

➦ ALSO AVAILABLE...

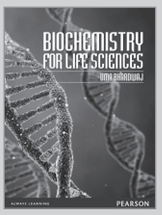


Introduction to Biochemistry and Metabolism

Anandhi

ISBN: 9788131774854

Pages: 416



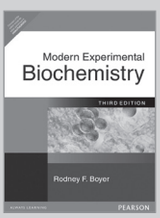
Biochemistry: for Life Sciences

Bhardwaj

ISBN: 9789332528475

Pages: 576

Web Sup

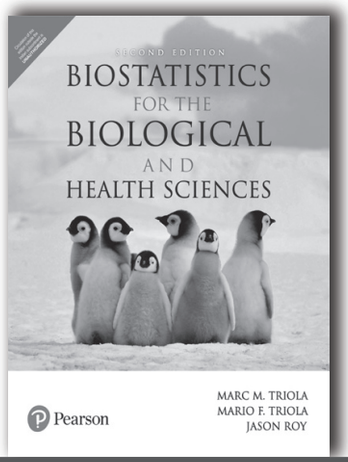


Modern Experimental Biochemistry, 3/e

Boyer

ISBN: 9788177588842

Pages: 480



ISBN: 9789353436537

Biostatistics for the Biological and Health Sciences, 2/e

Marc M Triola | Mario F Triola

728 | © 2020

Web Supplements

ABOUT THE BOOK

Biostatistics for the Biological and Health Sciences uses a variety of real-world applications to bring statistical theories and methods to life. Through these examples and a friendly writing style, the 2nd Edition ensures that students understand concepts and develop skills in critical thinking, technology, and communication. The result of collaboration between two biological sciences experts and the author of the #1 statistics book in the US, this text provides an excellent introduction to statistics for students studying the biological, life, medical, and health sciences.

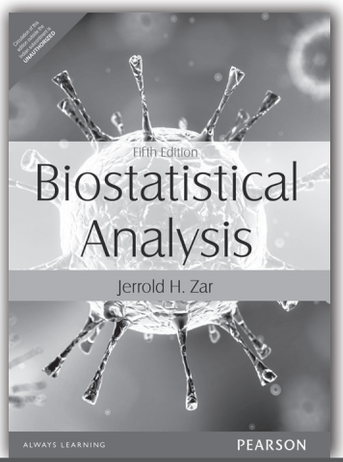
FEATURES

- Latest and best methods used by professional statisticians are incorporated.
- New examples, exercises, and Chapter Problems provide relevant and interesting real-world statistical applications, including biometric security, self-driving cars, smartphone data speeds, and the use of drones for delivery.
- More than 1,600 exercises are included in the text, and nearly 85% are brand new!
- More than 200 examples are scattered throughout the book, and almost 85% are new!
- EXPANDED! Larger data sets give students a more comprehensive look at concepts.
- UPDATED! Real Data Sets: 89% of the exercises in the text use real data, and 87% of the examples feature real statistics.
- Easy-to-assign exercises are graded by difficulty, and exercises that are particularly difficult or involve a new concept appear at the end of exercise sets and are marked by an asterisk, making it easy for instructors to assign homework.
- Statistical Software: SPSS, SAS, STATDISK, MINITAB, Excel, and TI-83/84 Plus output appear throughout the text.

CONTENTS

ABOUT THE AUTHOR

Dr. Triola is the associate dean for educational informatics and an associate professor of medicine at NYU Langone Health, where he is also the founding director of the Institute for Innovations in Medical Education, known as IIME.



ISBN: 9789332536678

Biostatistical Analysis, 5/e

Bruce M. Mahan | Rollie J. Meyers

1076 | © 2009

ABOUT THE BOOK

Zar's Biostatistical Analysis, Fifth Edition, is the ideal textbook for graduate and undergraduate students seeking practical coverage of statistical analysis methods used by researchers to collect, summarize, analyze and draw conclusions from biological research. The latest edition of this best-selling textbook is both comprehensive and easy to read. It is suitable as an introduction for beginning students and as a comprehensive reference book for biological researchers and for advanced students.

This book is appropriate for a one- or two-semester, junior or graduate-level course in biostatistics, biometry, quantitative biology, or statistics, and assumes a prerequisite of algebra.

FEATURES

- A broad collection of data-analysis procedures and techniques are presented, covering a wide variety of biological research, such as physiology, genetics, ecology, behavior, morphology.
- The most comprehensive treatment available includes coverage of the basics of statistical analysis, and also the following topics rarely or never found in statistics books for biologists:
  - Diversity
  - Polynomial regression
  - Multidimensional contingency tables
  - Stepwise regression
  - Nonparametric multiple comparisons
  - Higher order factorial analyses of variance
  - Circular distributions
  - Power and sample size determinations.
- An orderly organization and presentation of topics, with cross-referencing as appropriate.
- The readable and accessible approach allows students with no previous statistical background or mathematical expertise beyond simple algebra to understand the material presented.
- The thoughtful presentation encourages students to think about the value of each statistical technique, as opposed to merely plugging numbers into formulae.
- The exposition considers complex procedures such as factorial analysis of variance and multiple regression in terms of the interpretation of typical computer output.
- A wealth of graphs and other figures are integrated to visually support concepts under discussion.
- A uniquely comprehensive set of statistical tables–more than 40 in all–facilitates statistical analyses without having to consult a separate book. This includes tables that are unique to this book.
- Worked examples for all major procedures guide readers step-by-step through the techniques, demonstrating each of the important concepts.
- An extensive bibliography directs readers to further relevant literature.

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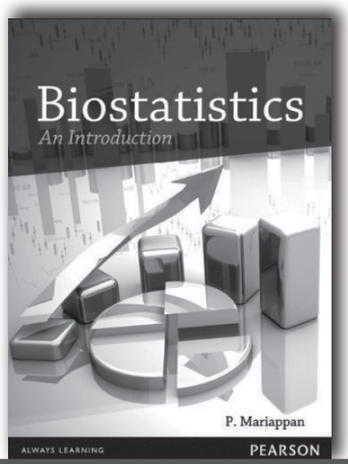
ABOUT THE AUTHOR

Jerrold H. Zar received his undergraduate degree in Biological Sciences from Northern Illinois University in 1962. He later earned his M.S. and Ph.D. degrees in biology and zoology from the University of Illinois at Urbana-Champaign. Zar then returned to Northern Illinois University for 34 years to serve in a variety of capacities. He joined the faculty at NIU as an Assistant Professor in 1968 and quickly rose through the ranks of associate and full professor to become Chair of the Department of Biological Sciences in 1978. He served two terms as Chair of the Department and then, became the Vice Provost for Graduate Studies and Research and Dean of the Graduate School. He was a founder of the Illinois Minority Graduate Incentive Program and the Illinois Consortium for Educational Opportunities Program, where he helped create and protect fellowship opportunities for minority graduate students at universities across the state. Zar is a member of 17 professional scientific societies, including being an elected fellow of the American Association for the Advancement of Science. His many research publications cover a range of topics, from statistical analysis to physiological adaptations of animals to their environment.



ISBN: 9788131775141

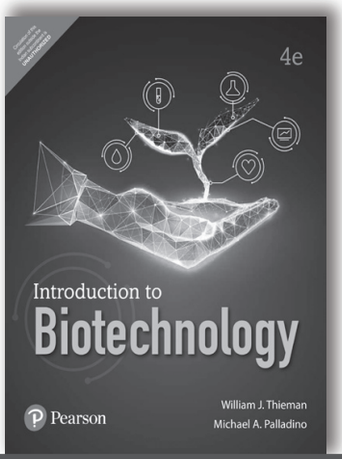
Biostatistics: An Introduction

P. Mariappan

480 | © 2013

ABOUT THE BOOK

This textbook is exclusively designed for the undergraduate students of Botany, Biotechnology and Zoology for gaining fundamental knowledge on biostatistics and its applications. Adequate coverage has been provided to the concepts of biostatistics making this book useful in biological data management.



ISBN: 9789353945350

Introduction to Biotechnology, 4e

William J. Thieman | Michael A. Palladino

448 | © 2020

Web Supplements

ABOUT THE BOOK

Introduction to Biotechnology brings the latest information and emphasizes the future of biotechnology and the biotechnology student's role with balanced coverage of basic cell and molecular biology, fundamental techniques, historical accounts, new advances, and hands-on applications. The 4th Edition features content updates in every chapter that reflect the most relevant, up-to-date changes in technology, applications, ethical issues, and regulations. Additionally, every chapter now includes an analytic Case Study that highlights current research and asks students to use what they've learned about key chapter concepts to answer questions.

FEATURES

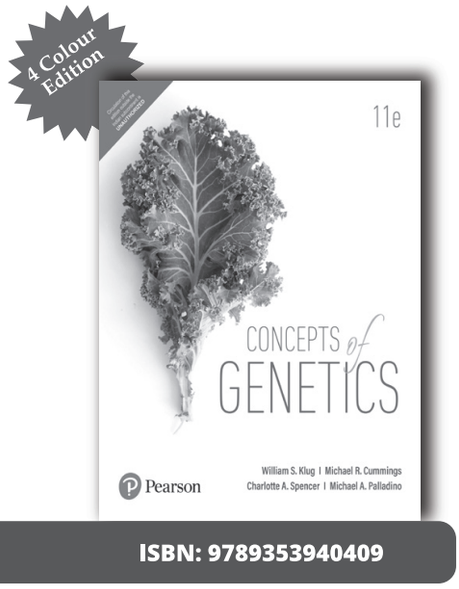
- Coverage of recent research and developments includes discussions of gene editing approaches like CRISPR, precision medicine, immunotherapies, biosimilar drugs, transgenic crops, 3D bioprinting of tissues and organs, the Human Microbiome Project, and the Cancer Atlas Genome Project.
- Tools of the Trade Boxes provide details on modern techniques and methods related to each chapter's content and the biotech industry.
- Making a Difference inspires and engages students by discussing how real people, real companies, and real organizations are putting biotech to use to improve the quality of life.
- Forecasting the Future begins each chapter and highlights biotechnology-driven questions that have yet to be answered, are in the process of being researched, or are topics/research/policy that are under development and will have an impact on our future.
- 18 New - "You Decide" activities provide expanded coverage of ethics based on contemporary ethical issues. Thirty-seven "You Decide" boxes, integrated across all chapters, stimulate ethical discussion by giving students information relating to the social and ethical implications of biotechnology and regulations and asking students to grapple with open-ended questions.

CONTENTS

ABOUT THE AUTHOR (S)

William J. Thieman taught biology at Ventura College for 40 years and biotechnology for 11 years before retiring from full time teaching in 2005. He continues to serve as an advisor to the college biotechnology program. He received his B.A. in biology from California State University at Northridge in 1966 and his M.A. degree in Zoology in 1969 at UCLA. In 1995, he started the biotechnology program at Ventura College. In 1998, he added the laboratory skills course, and it was articulated as a state-approved vocational program. He identified technical skills needed for the program while serving three summer internships at Amgen, Biosource (now Invotrogen) and Biopool. The internships provided an op portunity to learn protocols, interact with lab directors, and query technicians, focusing on identifying the skills needed in these biotechnology companies. He routinely engaged his contacts at these biotechnology companies to lead lab protocols and describe their experiences to his classes.

Michael A. Palladino is Vice Provost for Graduate Studies, former Dean of the School of Science and Professor of Biology at Monmouth University in West Long Branch, New Jersey. He received his B.S. degree in Biology from Trenton State College (now known as The College of New Jersey) in 1987 and his Ph.D. in Anatomy and Cell Biology from the University of Virginia in 1994.



ISBN: 9789353940409

Concepts of Genetics, 11/e

William S. Klug | Michael R. Cummings | Charlotte A. Spencer | Michael A. Palladino

816 | © 2020

ABOUT THE BOOK

Pearson presents the Eleventh Edition of ***Concepts of Genetics***—a text now entering its fourth decade of providing support for students studying in this field, has occasioned still another fresh look. In addition to the normal updating that is inevitably required, this new edition focusses on the need to increase the opportunities for instructors and students to engage in ***active and cooperative learning approaches and the need to provide more comprehensive, cutting-edge coverage of important and emerging topics*** in genetics. This edition emphasizes the fundamental ideas of genetics and a strong problem-solving approach, while exploring modern techniques and applications of genetic analysis.

FEATURES

- Modern Approaches to Understanding Gene Function feature challenges students to understand how modern gene targeting approaches have dramatically advanced our understanding of gene function.
- Evolving Concept of the Gene is a short feature, integrated in appropriate chapters, that highlights how scientists' understanding of what a gene is has changed over time.
- Three new Special Topics in Modern Genetics mini-chapters explore cutting-edge topics, including updated content on Emerging Roles of RNA, Genetically Modified Foods, and Gene Therapy.
- Neurogenetics has been completely reworked and redefined to reflect the wealth of information regarding the impact of genetics on the field of neurobiology, linking genetic analysis to brain function and brain disorders.

CONTENTS

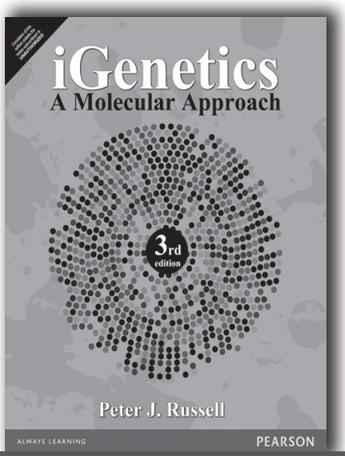
ABOUT THE AUTHOR (S)

William S. Klug is an Emeritus Professor of Biology at The College of New Jersey (formerly Trenton State College) in Ewing, New Jersey, where he served as Chair of the Biology Department for 17 years.

Michael R. Cummings is Research Professor in the Department of Biological, Chemical, and Physical Sciences at Illinois Institute of Technology, Chicago, Illinois.

Charlotte A. Spenceris a retired Associate Professor from the Department of Oncology at the University of Alberta in Edmonton, Alberta, Canada.

Michael A. Palladino is Dean of the School of Science and Professor of Biology at Monmouth University in West Long Branch, New Jersey.



ISBN: 9789332571624

iGenetics: A Molecular Approach, 3/e

Peter J. Russell

864 | © 2016

ABOUT THE BOOK

With its modern chapter organization and new "Focus on Genomics" boxes, ***iGenetics: A Molecular Approach*** reflects the increasing molecular emphasis in today's experimental study of genes while helping students develop problem-solving skills and an appreciation for classic experiments. Although molecular topics are presented first, instructors can assign the chapters in any sequence.
Pedagogical features such as chapter-opening "Key Questions" and strategically placed "Keynotes" help students to efficiently master genetic concepts. The Genetics Place Companion Website contains interactive iActivities and narrated animations that help students visualize and understand processes and concepts that are illustrated in the text.

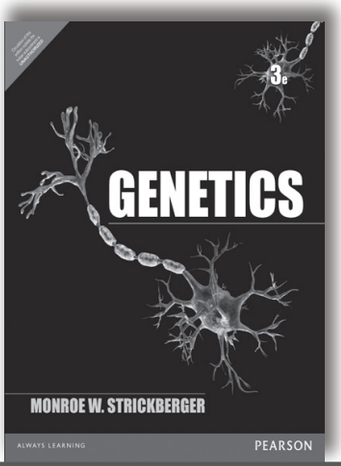
FEATURES

- Modern chapter organization covers all major areas of genetics, balancing molecular and classical aspects to give students an integrated view of genetic principles.
- The text's inquiry-based approach engages students in the process of science.
- Step-by-step examples of problem solving throughout the book represent a wide range of topics and difficulty levels.
- Key Questions, appear at the beginning of each chapter, focus student attention in advance on the major concepts within their reading.
- Keynotes, strategically placed throughout the chapter, summarize important ideas and allow students to check their progress.

CONTENTS

ABOUT THE AUTHOR

Peter J. Russell received his B.Sc. in Biology from the University of Sussex, U.K., in 1968 and his Ph.D. in Genetics from Cornell University in 1972. He then joined the Biology faculty of Reed College in 1972 where he is currently Professor of Biology. Russell teaches an upper-division genetics and molecular biology lecture/laboratory course, the genetics section of the introductory biology course, an advanced seminar course in molecular virology, and advises senior thesis research students. He is also the author of a number of successful biology and genetics textbooks.



ISBN: 9789332555105

Genetics, 3/e

Monroe W. Strickberger

864 | © **2015**

ABOUT THE BOOK

Genetics occupies a unique central position among the various biological sciences because of its diverse specializations. This acclaimed book provides the basic theoretical information on genetics, the study of heredity and details some of the exper iments and reasoning which yield this information. The book is organized into six parts and deals with the identification, transmission and distribution, arrangement, structure, and function of genetic material. The last part of the book deliberates on the course of genetic material in populations. The comprehensive material is sup ported by a multitude of illustrations and references and problems in every chapter.

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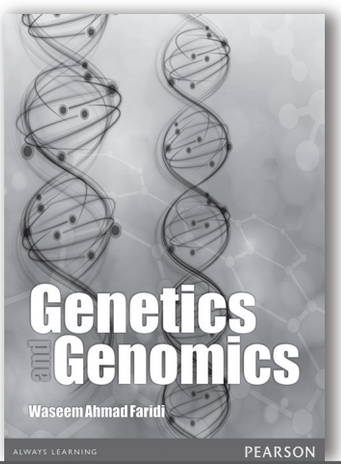


ISBN: 9788131771099

Genetics and Genomics

Waseem Ahmad Faridi

Web Supplements

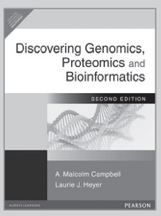
572 | © **2013**

ABOUT THE BOOK

Genetics and Genomics provides an incredible blend of basic as well as applied knowledge and deals with the identification, transmission, structure and function of genetic material, recombinant DNA technology, and areas related to the expression and regulation of genome.

The book exhibits a thorough and enhanced approach to the conceptual understanding of the subject with latest examples and experiments. Being a multidisciplinary subject, the book would be a great asset for students studying zoology, bota ny, biochemistry, genetics and genomics, cytology, cytogenetics, cell and molecular biology. Students of toxicology, genotoxicity and environmental biology, human genetics, medical and clinical genetics, paramedical and allied sciences would also find the book useful.

➦ ALSO AVAILABLE...

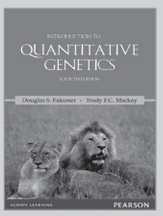


Discovering Genomics, Proteomics and Bioinformatics, 2/e

Campbell

ISBN: 9788131715598

Pages: 464



Introduction to Quantitative Genetics, 4/e

Falconer

ISBN: 9788131727409

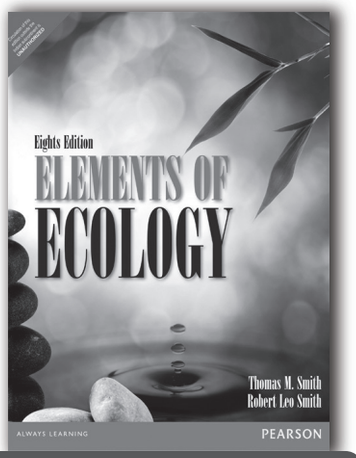
Pages: 480

Nanotechnology: A Gentle Introduction to the Next Big Idea

Ratner

ISBN: 9788177587432

Pages: 280



ISBN: 9789332536692

Elements of Ecology, 8/e

Thomas M. Smith | Robert Leo Smith

688 | © 2014

ABOUT THE BOOK

Known for its evolution theme and strong coverage of the relevance of ecology to everyday life and the human impact on ecosystems, the thoroughly revised Eighth Edition features refined quantitative exercises, a restructured chapter on life history, a thoroughly revised species interactions unit including a chapter introducing the subject, and a new chapter on species interactions.

To emphasize the dynamic and experimental nature of ecology, each chapter draws upon current research in the various fields of ecology while providing accessible examples that help students understand species natural history, specific ecosystems, the process of science, and ecological patterns at both an evolutionary and demographic scale.

To engage students in using and interpreting data, a wide variety of Quantifying Ecology boxes walk through stepby-step examples of equations and statistical techniques. The enhanced companion website (www.ecologyplace.com) features new MapMaster™ interactive map activities for exploring ecosystems, physical environments, and populations at regional and global scales, along with popular GRAPHit!, and QUANTIFYit! exercises that help students further master and apply math skills, and a new Pearson eText.

FEATURES

- Interpreting Ecological Data exercises help students test their understanding of graphs and data and to consider different outcomes.
- The Ecology Place companion website is referenced in the text and features new MapMaster interactive map activities for exploring ecosystems, physical environments, and populations at regional and global scales, along with popular GRAPHit!, and QUANTIFYit! exercises that help students further master and apply math skills, and a new Pearson eText. A subscription to the Ecology Place is included with each new copy of the text for no additional charge (www.ecologyplace.com).
- Quantifying Ecology boxes help students develop the quantitative skills they need to interpret ecological data, research, and models. Skills are reinforced by a set of follow-up questions and links to GRAPHit! and QUANTIFYit! on the companion website (www.ecologyplace.com).
- Field Studies discuss ecological research performed by young up-and-coming scientists, and challenge students to interpret the results of the featured research.
- Ecological Issues essays describe how humans influence the study of ecology. For example, the short essay "The Ecology of Antibiotic Resistance" discusses how antibiotic resistance is a result of natural selection. Each essay is followed by a set of critical thinking questions.
- Engaging introductions give students a "big picture" overview of the coming chapters in each of the eight parts of the book, so they can understand how various topics interrelate.
- Landscape Ecology chapter explores the role of disturbance in ecosystems.
- Further Readings at the end of each chapter emphasize how the text is based on real scientific studies. These Further Readings are annotated to explain their relevance to the student/instructor.

CONTENTS

14. Interspecific Competition
15. Predation
16. Parasitism and Mutualism

V. Community Ecology

17. Community Structure
18. Factors Influencing the Structure of Communities
19. Community Dynamics
20. Landscape Ecology

VI. Ecosystem Ecology

21. Ecosystem Energetics
22. Decomposition and Nutrient Cycling
23. Biogeochemical Cycles

VII. Biogeographical Ecology

24. Terrestrial Ecosystems
25. Coastal and Wetland Ecosystems
26. Land-Water Margins
27. Large-scale Patterns of Biological Diversity

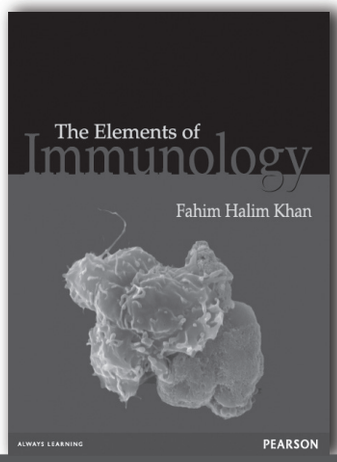
VIII. Human Ecology

28. Population Growth, Resource Use, and Sustainability
29. Global Climate Chang

ABOUT THE AUTHOR

Thomas M. Smith, Associate Professor in Environmental Sciences at the University of Virginia, received his Ph.D. in ecology from the University of Tennessee in 1982. The main focus of his research over the past two decades has been to develop an individual based theory of community and ecosystems dynamics. As part of this work he has served on numerous national and international panels that have addressed the potential influence of human activities on the global environment. He has authored over 70 publications based on his research, and he has been recognized as one of the most cited scientists in the field of global change research.

Robert L. Smith holds a Ph.D. in Wildlife Biology from Cornell University. He is Professor Emeritus of Ecology at West Virginia University. He has spent over 30 years teaching Ecology and conducting field research throughout the world. His teaching responsibilities have involved mostly undergraduate courses in general ecology and graduate courses in population ecology and wildlife management. His research has included forest-fire related problems in southern West Virginia, vegetational development and succession on abandoned and reclaimed surface mines, the relation between forest vegetational structure and the forest bird community, and forest habitat assessment and habitat evaluation procedures based on vegetational structure.



ISBI: 9788131711583

The Elements of Immunology

Fahim Halim Khan

508 | © 2009

Web Supplements

ABOUT THE BOOK

The Elements of Immunology is designed to introduce readers to the exciting world of immunology, the people who populate it and foster a curiosity to question and know more. The book is supported by a consistent, colourful art programme. The detailed explanation of concepts and terms, and the deconstruction of complex molecular mechanisms into simple, easy-to-remember steps help students focus on the fundamentals without any distractions. Packed with extensive Web-based supplements, the book enables students to visualize concepts, thereby enriching the learning process. The book, comprising twenty chapters, has numerous peda gogical elements built into it. Margin snippets present interesting and relevant information without breaking the flow of the text. Margin definitions highlight the key terms for easy identification and recollection. Each chapter talks about a relevant molecular biology technique, thus providing an insight into the practical aspect of immunology as well. A glossary at the end of the book lists out the important terms used.

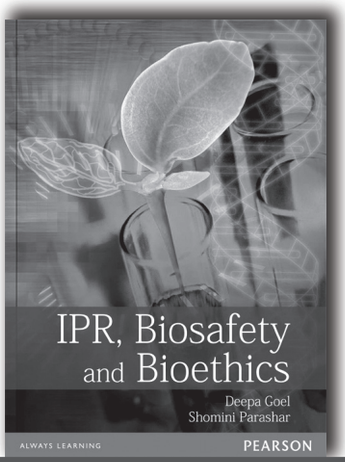
FEATURES

- Simple and lucid language explaining core concepts
- Rich pedagogy that facilitates learning
- Colourful and consistent art programme comprising over 300 four-colour illustrations that helps to visualize and comprehend concepts better
- 400 end-of-chapter questions help revise the key concepts
- Discussion of the latest developments in the area of immunology such as MHC haplotype matching for cell transplantation, latest antiretroviral drugs developed against HIV, etc.
- Description of key contributors, researchers and their landmark experiments
- Packed with supplements and media resources
  - Over 30 animations that depict key concepts in three dimensions
  - A question bank containing over 400 questions and clinical case studies along with lecture slides including artwork from the book, as supplements to the text, specifically for the instructors

CONTENTS

ABOUT THE AUTHOR

Fahim Halim Khan is an assistant professor of biochemistry at the Aligarh Muslim University.



ISBN: 9788131774700

IPR, Biosafety and Bioethics

Deepa Goel | Shomini Parashar

248 | © 2013

Web Supplements

ABOUT THE BOOK

This book provides a broad coverage of three areas of patenting intellectual property rights (IPR), biosafety and bioethics. It creates awareness about the value of IPR in our lives. The book also fosters a better understanding of the rights associated with IPR such as copyright, patent, trademarks, industrial designs, geographical indications and so on. Biosafety and bioethical issues prevalent in modern society are discussed. The text covers the complete syllabi of all major Indian universities and caters to the needs of Indian students.

FEATURES

- Discusses all aspects of the subject in a simple and lucid manner
- Contains review question and multiple-choice questions for practice
- Provides unmatched pedagogy:
  - 100 review questions
  - 120 multiple-choice questions

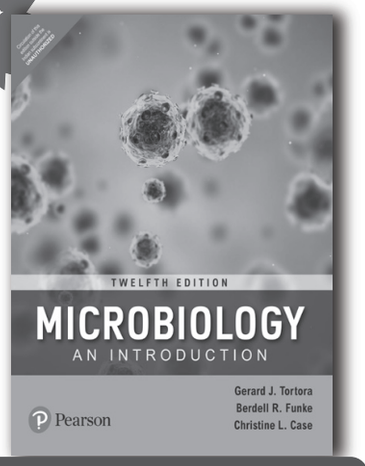
CONTENTS

ABOUT THE AUTHOR (S)

Deepa Goel is Assistant Professor at the Department of Biotechnology, IMS Engineering College, Ghaziabad. Her core area of interest is the development of transgenic plants with elite traits.

Ms Shomini Parashar is Assistant Professor at the Department of Biotechnology. IMS Engineering College, Ghaziabad. Her core area of interest is screening of microbes with novel traits that are useful to mankind.

4 Colour Edition



ISBN: 9789353437855

Microbiology: An Introduction, 12/e

Gerard J. Tortora | Berdell R. Funke | Christine L. Case

Web Supplements

960 | © 2019

ABOUT THE BOOK

Praised for its exceptionally clear presentation of complex topics, this #1-selling text for microbiology non-majors provides a careful balance of concepts and applications, and proven art that teaches. The **Twelfth Edition** of Tortora, Funke, and Case's **Microbiology: An Introduction** focuses on big picture concepts and themes in microbiology, encouraging students to visualize and synthesize tough topics such as microbial metabolism, immunology, and microbial genetics. The text and accompanying resources also help students make connections between microbiology theory and disease diagnosis, treatment, and prevention.

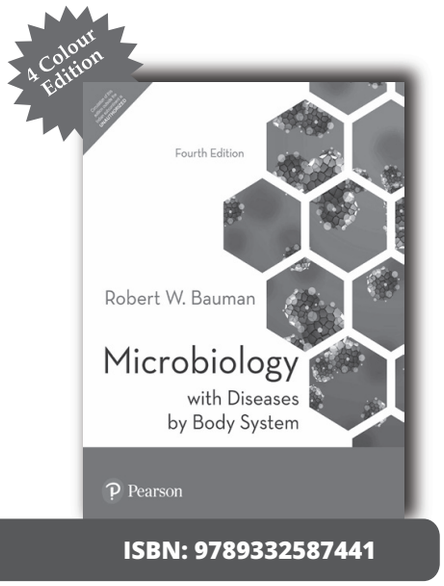
FEATURES

- An appropriate balance between microbiological fundamentals and applications, and between medical applications and other applied areas of microbiology—Basic microbiological principles are given greater emphasis, and health-related applications are featured.
- Straightforward presentation of complex topics—Each section of the text is written with the student in mind.
- Clear, accurate, and pedagogically effective illustrations and photos—Step-by-step diagrams that closely coordinate with narrative descriptions aid student comprehension of concepts.

CONTENTS

ABOUT THE AUTHOR (S)

Gerard J. Tortora, Bergen Community College
Berdell R. Funke, North Dakota State University
Christine L. Case, Skyline College



ISBN: 9789332587441

Microbiology with Diseases by Body System, 3/e

Robert W. Bauman

944 | © **2017**

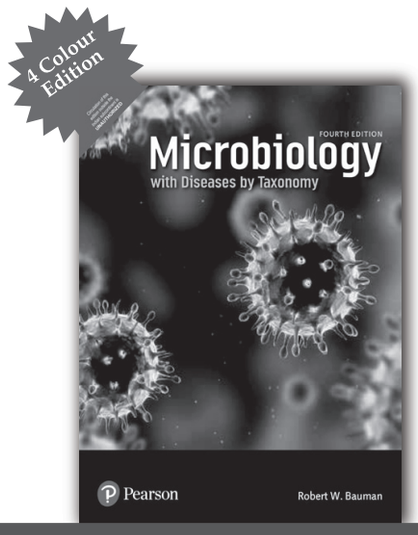
ABOUT THE BOOK

Designed for pre-nursing and allied health students (and also mixed-majors courses), Microbiology with Diseases by Body System, Third Edition retains the hallmark art program and clear writing style that have made Robert Bauman's book a success. This Third Edition features compelling clinical content related to students' future healthcare careers and abundant opportunities for applied student practice. Chapter-opening Clinical Cases, Emerging Diseases boxes, and Clinical Applications boxes introduce students to real-world clinical situations. Student comprehension is ensured with end-of-chapter practice that encompasses applied, visual, and conceptual understanding.

CONTENTS

ABOUT THE AUTHOR

Robert W. Bauman, Amarillo College



ISBN: 9789332587274

Microbiology with Diseases by Taxonomy, 4/e

Robert W. Bauman

900 | © 2017

ABOUT THE BOOK

The Fourth Edition of Microbiology with Diseases by Taxonomy, 4e is the most cutting-edge microbiology book available, offering unparalleled currency, accuracy, and assessment. The state-of-the-art approach includes 18 new Video Tutors written and developed by the author to walk students through key microbiology concepts, bringing the textbook to life. QR codes in the textbook enable students to use their smartphone or tablet to instantly interact with these step-by-step tutorials and visualize important concepts and processes. Compelling clinical case studies and emerging disease case studies give students opportunities to apply new knowl edge and explore real-world microbiology. Student comprehension is ensured with end-of-chapter practice that en□com-passes both visual and conceptual understanding. This edition retains the hallmark art program and clear writing style that have made Robert W. Bauman's book an engaging and successful introductory text.

FEATURES

- Organization and Currency
  - The taxonomic organization of the disease chapters (Chapters 19—25) presents microbial diseases by type of pathogenic microbe, helping students recognize shared characteristics among categories of microbes.
  - Chapter 3 (Cell Structure and Function) de-emphasizes the term "prokaryote" (a term that is based on an outdated perception of taxonomy and is thus misleading to students) and instead emphasizes the three domains of living organisms, matching the latest taxonomic research. This state-of-the-science organization sets this book apart from all other allied health microbiology books.
  - The immunology chapters (Chapters 15—18), which have been and continue to be reviewed in-depth by immunology specialists, reflect the most current understanding of this rapidly-evolving field of any microbiology book available.
- Student Interest Features
  - Microbe-at-a-Glance boxes showcase representative microbes in each of the disease chapters. They feature an illustration of a microbe accompanied by very brief summaries of taxonomy, morphology, virulence factors, diseases caused, and treatment/prevention. These "snapshots" also appear as flashcards on the book's website, giving students extra "on-the-go" practice and review opportunities.
  - Beneficial Microbe boxes emphasize the practical or benevolent nature and uses of microbes and help students overcome the common misconception that all microbes cause disease.
  - Clinical Case Study and Emerging Disease Case Study boxes are written in an engaging narrative voice and feature a patient's experience with microbial diseases and follow-up critical thinking questions for students.
  - Highlight boxes appear throughout the text and focus on interesting topics in microbiology; e.g., what causes that "fishy" smell in fish markets, what allows some organisms to glow in the dark, how gold-mining microbes are used, and which cutting-edge molecular techniques are used in microbiology.
- Visually Superior Art Program
  - Half-illustration/half-micrograph 3D cellular art sets a new standard for teaching cellular structure.
  - Superior text-art integration breaks complex processes into smaller, more manageable pieces for students.
  - Colors and icons are used consistently throughout the text to make it easier for students to recognize structures and processes from chapter to chapter.
- Student Text Resources
  - Figure Legend Questions encourage critical thinking.
  - Critical Thinking Questions appear throughout the chapters and in the EOC section.
  - Answers to all end-of-chapter review questions (except Short Answers) are at the back of the book; answers to Short Answer questions are in the Instructor's Manual. The answer section and appendices in this edition are tabbed for easy reference.

- TEM/SEM Designations, a feature regularly requested by instructors, appear in all micrographs and many illustrations.
- Pronunciations and Etymology Guides help students with pronouncing and remembering vocabulary.
- Concept Mapping exercises appear in the end-of-chapter material, guiding students to create their own concept maps from a list of key terms focused around an important chapter topic.

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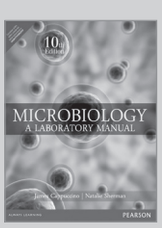
ABOUT THE AUTHOR

Robert W. Bauman, Amarillo College

➦ ALSO AVAILABLE...

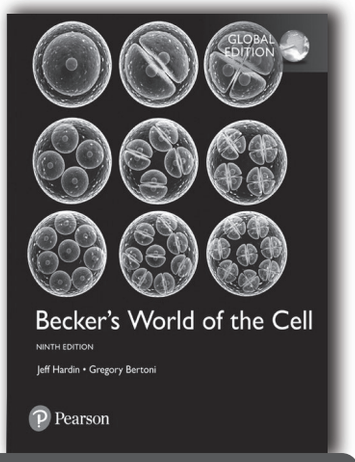


Microbiology: A Laboratory Manual, 10/e

Cappuccino

ISBN: 9789332535190

Pages: 576



ISBN: 9781292177694

Becker's World of the Cell, 9/e

Jeff Hardin | Gregory Bertoni

912 | © 2015

ABOUT THE BOOK

Widely praised for its strong biochemistry coverage and clear, easy-to-follow explanations and figures, Becker's World of the Cell provides a beautifully-illustrated, upto-date introduction to cell biology concepts, processes, and applications. Informed by many years of classroom experience in the sophomore-level cell biology course, the dramatically-revised Ninth Edition introduces molecular genetics concepts earlier in the text and includes more extensive coverage of key techniques in each chapter. Becker's World of the Cell provides accessible and authoritative descriptions of all major principles, as well as unique scientific insights into visualization and applications of cell and molecular biology.

FEATURES

- Reorganization of cell signaling, cell division, and cell cycle regulation materials, including moving the molecular genetics material to an earlier position, more tightly integrates these topics with coverage of many topics in the last sections of the text.
- Chapter on molecular techniques that focuses on the tools or the key technologies cell biologists use to analyze and manipulate DNA, genomes, RNA and proteins, and gene function.
- Twenty-six Key Technique boxes in every chapter are integrated throughout the text, demonstrating how cutting-edge technologies can be used to answer outstanding questions in Cell Biology.
- Twenty-four Human Connection boxes incorporate human examples and show the relevance of Cell Biology to human health and societal issues
- Concept Check questions and Quantitative questions in every chapter
- Content updates have been added throughout the book highlighting the most recent advances in the understanding of cell biology.

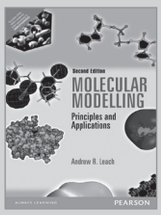
CONTENTS

ABOUT THE AUTHOR (S)

Jeff Hardin, University of Wisconsin, Madison

Gregory Paul Bertoni, Columbus State Community College

➦ **ALSO AVAILABLE...**

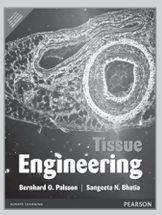


Molecular Modelling: Principles and Applications, 2/e

Leach

ISBN: 9788131728604

Pages: 768

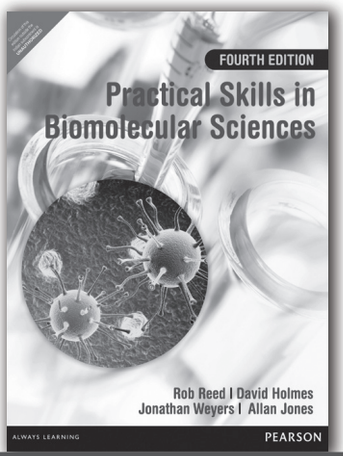


Tissue Engineering

Palsson

ISBN: 9789332571792

Pages: 432



ISBN: 9789332517387

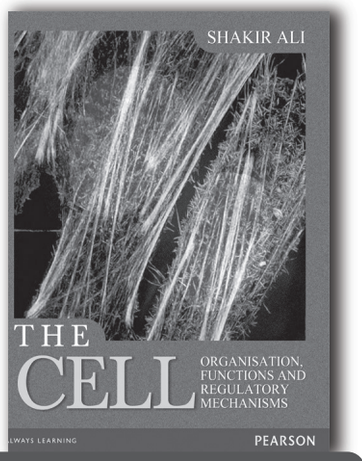
Practical Skills in Biomolecular Sciences, 4/e

Jonathan Weyers

576 | © **2014**

ABOUT THE BOOK

If you are a studying within the biomolecular sciences (including biochemistry, biomedical sciences, biotechnology, genetics, microbiology and molecular biology) then this book will be an indispensable companion throughout the whole of your degree programme. It provides effective support for the development of the laboratory and data analysis skills that you will draw on time and again for the practical aspects of your studies.



ISBN: 9788131773284

The Cell: Organization, Functions and Regulatory Mechanisms

Shakir Ali

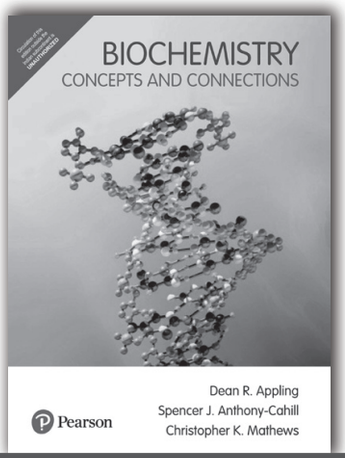
376 | © 2014

Web Supplements

ABOUT THE BOOK

The Cell: Organisation, Functions and Regulatory Mechanisms provides a precise blend of basic and applied knowledge of cell science that reinforces the conceptual understanding of the subject with leading edge examples and experiments. Catering to the prescribed curricula for a wide range of programmes in different universities and colleges, this book is ideal for undergraduate and postgraduate students who pursue a detailed study of the subject. The book will also serve as a standard resource material for teachers and scholars who may like to enrich their knowledge about the cell in areas pertaining to their specific fields of interest.

Geology & Earth Science



ISBN: 9789332585454

McKnight's Physical Geography: A Landscape Appreciation, 10/e

Darrel Hess | Dennis G. Tasa

624 | © 2016

ABOUT THE BOOK

Carrying forth Tom L. McKnight's well-known thematic focus on landscape appreciation, this best-seller fosters a solid understanding of Earth and its physical geography. Its clear writing style, superior art program, and abundant pedagogy appeal to a wide variety of students. This edition includes thoroughly updated content and introduces renowned illustrator Dennis Tasa—yet it maintains the proven approach first presented by McKnight more than two decades ago.

FEATURES

- Unique landscape appreciation approach and clear presentation of concepts make this hallmark classic text engaging and easily accessible to students of all backgrounds.
- An excellent new cartographic and illustration program by renowned geoscience Illustrator Dennis Tasa provides:
- Hundreds of maps with shaded relief where appropriate
- Line art with numerous multi-part illustrations that capture sequence and evolution to help students understand various processes
- Major photos paired with locator maps to enhance geographic literacy.
- Global environmental change is integrated and discussed extensively throughout the book.

CONTENTS

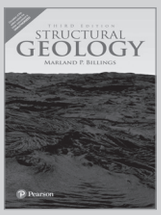
ABOUT THE AUTHOR (S)

Darrel Hess is professor of geography at City College of San Francisco, where he served as chair of the Earth Sciences department from 1995-2009. He regularly teaches physical geography, economic geography, and human geography. Hess received his B.A. in geography from UC Berkeley and his M.A. in geography from UCLA.

Dennis Tasa has been a renowned illustrator of many bestselling geoscience textbooks since 1978, including Physical Geography by Darrel Hess, Laboratory Manual in Physical Geology by the American Geosciences Institute and the National Association of Geoscience Teachers, as well as the physical geology, Earth science, and meteorology franchises by Tarbuck and Lutgens.

Tom L. McKnight taught geography at UCLA from 1956 to 1993. He received his bachelor's degree in geology from Southern Methodist University in 1949, his master's degree in geography from the University of Colorado in 1951, and his Ph.D. in geography and meteorology from the University of Wisconsin in 1955. During his long academic career, Tom served as chair of the UCLA Department of Geography from 1978 to 1983, and was director of the University of California Education Abroad Program in Australia from 1984 to 1985.

➦ ALSO AVAILABLE...

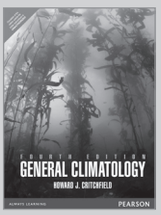


Structural Geology, 3/e

Billings

ISBN: 9789332577565

Pages: 624

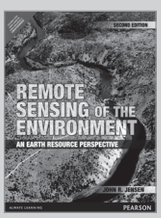


General Climatology, 4/e

Critchfield

ISBN: 9789332555242

Pages: 464

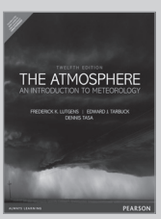


Remote Sensing of the Environment: An Earth Resource Perspective, 2/e

Jensen

ISBN: 9789332518940

Pages: 618

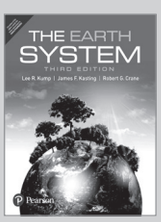


Atmosphere: An Introduction to Meteorology, 12/e

Lutgens / Tarbuck / Tasa

ISBN: 9789332551817

Pages: 528

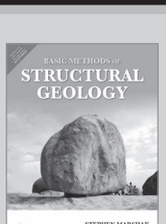


The Earth System, 3/e

Kump

ISBN: 9789332575738

Pages: 472

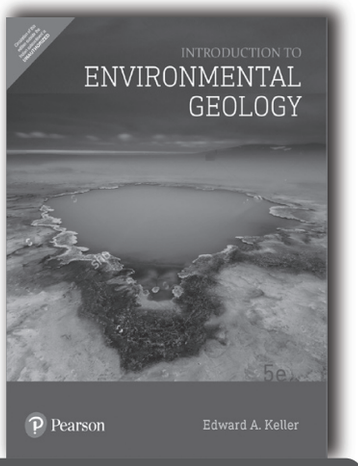


Basic Methods of Structural Geology

Marshak

ISBN: 9789352864348

Pages: 464



ISBN: 9789352864324

Introduction to Environmental Geology, 5/e

Edward A. Keller

792 | © 2018

ABOUT THE BOOK

This text focuses on helping non-science majors develop an understanding of how geology and humanity interact. Ed Keller—the author who first defined the environmental geology curriculum—focuses on five fundamental concepts of environmental geology: Human Population Growth, Sustainability, Earth as a System, Hazardous Earth Processes, and Scientific Knowledge and Values. These concepts are introduced at the outset of the text, integrated throughout the text, and revisited at the end of each chapter. The Fifth Edition emphasizes currency, which is essential to this dynamic subject, and strengthens Keller's hallmark "Fundamental Concepts of Environmental Geology," unifying the text's diverse topics while applying the concepts to real-world examples.

FEATURES

- Five Fundamental Concepts of Environmental Geology are introduced in Chapter 1 to unify the diverse topics in the text: Human Population Growth, Sustainability, Earth as a System, Hazardous Earth Processes, and Scientific Knowledge and Values. The connections are reinforced at the end of each chapter, where the chapter's topic is summarized in terms of these concepts (see "Revisiting Fundamental Concepts").
- Student-focused chapter structure includes consistent learning aids to maximize students' understanding of the material and review of major topics:
  - Learning objectives
  - Chapter summary
  - Detailed references at the end of each chapter
  - Key terms at the end of each chapter
  - Review questions
  - Critical-thinking questions that stimulate students to think about some of the important issues in the text and relate these to their lives and society.
- Environmental considerations are balanced with a solid presentation of the fundamental concepts and processes of physical geology, so that concepts covered later in the text are easier for students to understand.
- Comprehensive appendices help students grasp some of the more applied aspects of environmental geology and are also useful for supplementing laboratory exercises and field exercises. Appendices include:
  - Identification of rocks and minerals with accompanying tables and suggestions
  - Strength of rocks
  - Introduction to topographic and geologic maps with specific information concerning how to read topographic maps, construct topographic profiles, and understand geologic maps
  - Introduction to Digital Elevation Models (DEMs) and Global Positioning System instrumentation (GPS)
  - Discussion of how geologists determine and interpret geologic time
  - A glossary of terms used in the field of environmental geology

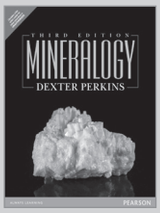
CONTENTS

ABOUT THE AUTHOR

Edward A. Keller is a professor, researcher, writer, and most importantly, mentor and teacher to undergraduate and graduate students. Currently, Dr. Keller's students are working on earthquake hazards, how waves of sediment move through a river system following disturbance, and geologic controld on habitat to endangered southern steelhead trout.

natural history expedition vessels in Alaska and the Sea of Cortez/Baja California. His research interests include beach processes, sea cliff erosion, and computer applications in oceanography. Harold V. Thurman retired in May 1994, after 24 years of teaching in the Earth Sciences Department of Mt. San Antonio College in Walnut, California. Interest in geology led to a bachelor's degree from Oklahoma A&M University, followed by seven years working as a petroleum geologist, mainly in the Gulf of Mexico, where his interest in oceans developed. He earned a master's degree from California State University at Los Angeles and then joined the Earth sciences faculty at Mt. San Antonio College. Other books that Hal has co-authored includeIntroductory Oceanography (with Alan Trujillo) and a marine biology textbook. He has also written articles on the Pacific, Atlantic, Indian, and Arctic Oceans for the 1994 edition of World Book Encyclopedia and served as a consultant on the National Geographic publication Realms of the Sea.

MINERALOGY – AVAILABLE TITLE

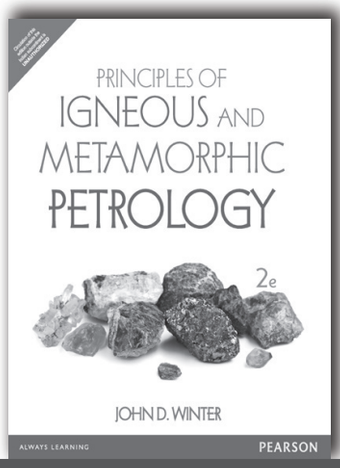


Mineralogy, 3/e

Perkins

ISBN: 9789332550421

Pages: 453



ISBN: 9789332550407

Principles of Igneous and Metamorphic Petrology, 2/e

John D. Winter

560 | © 2015

ABOUT THE BOOK

Typical texts on igneous and metamorphic petrology are geared to either advanced or novice petrology students. This unique text offers comprehensive, up-to-date coverage of both igneous and metamorphic petrology in a single volume—and provides the quantitative and technical background required to critically evaluate igneous and metamorphic phenomena in a way that students at all levels can understand. The goal throughout is for students to be able to apply the techniques—and enjoy the insights of the results—rather than tinker with theory and develop everything from first principles.

FEATURES

- A balanced presentation limits the theory to the extent that students can practice it on real occurrences—without such excessive detail that the course becomes more like chemistry than geology.
- A survey of actual occurrences of igneous and metamorphic rocks, and processes that produce them, is provided. This section is often greatly condensed in most other texts, but it is the most interesting and dynamic aspect of petrology.
- A techniques/occurrences approach for both igneous and metamorphic rocks that first presents the techniques, then applies them to assess a field area, and then expands the techniques as necessary if the field examples call for it.
- A comprehensive section on petrogenesis, particularly igneous petrogenesis, covers important igneous petrogenetic associations
- An accessible approach to mathematics, chemistry, and physics requires only a working knowledge of algebra; calculus is occasionally discussed, but is not required. Chemical and physical principles are presented early on, and at a level that is comprehensible and accessible.

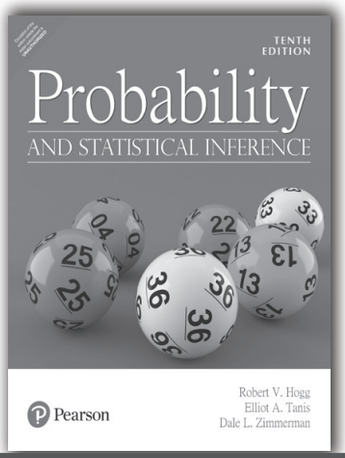
- Worked examples, problems, and computer-related problems, found at the end of many chapters, carefully integrate a number of problems and computer programs
- Spreadsheets are used extensively in worked examples and problems. Spreadsheets, data files, and other programs
- Approximately 350 figures and tables are provided.

CONTENTS

ABOUT THE AUTHOR

John D. Winter did his undergraduate work in geology at the University of Illinois at Urbana, and earned his M.S. and Ph.D. at the University of Washington in Seattle. Now Professor of Geology at Whitman College in Walla Walla, Washington, his principal fields of interest are in metamorphic petrology, mineralogy and crystallography, and geochemistry. He has spent several summers in Greenland, a summer in Labrador, and another in Norway, where he studied processes that take place during the formation and subsequent development of the ancient deep continental crust. He is also working on contact metamorphism in the Wallowa Mountains of NE Oregon. Briefly, he also worked as an exploration geologist in New Guinea. Professor Winter teaches Mineralogy, Igneous and Metamorphic Petrology, Introductory Geology, Environmental Geology, and Geochemistry. Outside the classroom, his interests include travel, mountaineering, hiking, mountain biking, and telemark skiing.

MATHEMATICS



ISBN: 9789353947781

Probability and Statistical Inference, 10e

Robert V. Hogg | Elliot A. Tanis | Dale L. Zimmerman

545 | © 2021

ABOUT THE BOOK

Advances in computing technology – particularly in science and business, have increased the need for more statistical scientists to examine the huge amount of data being collected. Written by veteran statisticians, Probability and Statistical Inference, 10th Edition emphasizes the existence of variation in almost every process, and how the study of probability and statistics helps us understand this variation. This applied introduction to probability and statistics reinforces basic mathematical concepts with numerous real-world examples and applications to illustrate therelevance of key concepts.

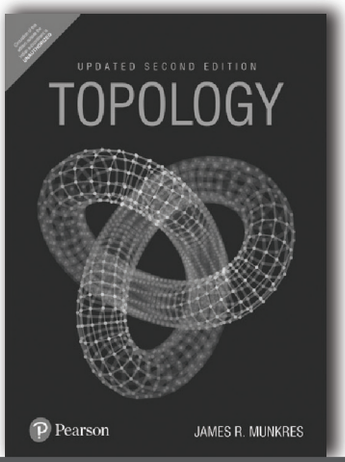
FEATURES

- Balanced coverage of probability and statistics:
  The text's fi¬rst half (Chapters 1-5) focuses on probability and probability distributions. Additionally, this portion of the text is particularly helpful for actuarial students. The text's second half (Chapters 6-9) emphasizes statistics and statistical inference.
- Application-oriented content features real-world scenarios in the exercises and examples, with applications in the areas of biology, economics, health, sociology, and sports. Integration of computer-based data and applications showcases the increased use of data and computers for calculating probabilities, analyzing data, solving problems, and conducting simulations. New sections and over 100 new examples and exercises have been added.
- All data sets are available online in formats for use with most statistical software packages; enhanced ¬figures from the text and Maple examples are also available

CONTENTS

ABOUT THE AUTHOR (S)

Robert V. Hogg
Elliot A. Tanis
Dale L. Zimmerman



ISBN: 9789353432775

Topology, Updated 2e

JAMES R. MUNKRES

519 | © 2021

ABOUT THE BOOK

This text is designed to provide instructors with a convenient single text resource for bridging between general and algebraic topology courses. Two separate, distinct sections (one on general, point set topology, the other on algebraic topology) are each suitable for a one-semester course and are based around the same set of basic, core topics. Optional, independent topics and applications can be studied and developed in depth depending on course needs and preferences.

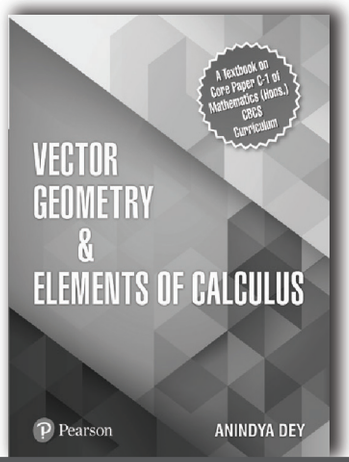
FEATURES

- New! Chapter on Applications to group theory.
- New! Greatly expanded, full-semester coverage of algebraic topology—Extensive treatment of the fundamental group and covering spaces. What follows is a wealth of applications—to the topology of the plane (including the
- Jordan curve theorem), to the classification of compact surfaces, and to the classification of covering spaces. A final chapter provides an application to group theory itself.
- Follows the present-day trend in the teaching of topology which explores the subject much more extensively with one semester devoted to general topology and a second to algebraic topology.
- Advanced topics—Such as metrization and imbedding theorems, function spaces, and dimension theory are covered after connectedness and compactness.
- Order of topics proceeds naturally from the familiar to the unfamiliar—Begins with the familiar set theory, moves on to a thorough and careful treatment of topological spaces, then explores connectedness and compactness (with their many ties to calculus and analysis), and then branches out to the new and different topics mentioned above.
- Many examples and figures—Exploits six basic counterexamples repeatedly.
- Exercises—Varied in difficulty from the routine to the challenging.

CONTENTS

ABOUT THE AUTHOR

James R. Munkres
Massachusetts Institute of Technology



ISBN: 9789354498756

Vector Geometry &Elements of Calculus

Anindya Dey

707 | © 2021

ABOUT THE BOOK

The present volume VECTOR GEOMETRY & ELEMENTS OF CALCULUS is primarily a textbook meant for the students beginning their academic journey with mathematics as their major subject in the CBCS curriculum. The book although consists of nine chapters on four different topics (viz. Vectors, Geometry, Calculus and Differential equations of first order) it is not just a compiled work—instead, the author claims to render some ingenuity in its representation as he has made honest attempts to twine these heterogeneous topics by making sensible yet limited use of vector and matrix algebra occasionally in the branches Geometry and Calculus and tried to invoke physical insight to what is being taught to instill a spirit of global learning into the readers. Incisive remarks put at the ends of some worked-out examples and some of the theoretical discussions are exceptionally bright features not commonly found in the popular texts.

FEATURES

- Written based on the UGC proposed CBCS curriculum and more than 100% coverage of the topics prescribed in the core paper C1 [Calculus].
- Over 375 worked-out examples: 80% meant for mediocre students and 20% designed for advanced learners.
- Over 350 MCQ's on the content of this book.
- More than 180 figures to supplement the text.
- End-of-chapter exercises of different variety for providing the learners good practice.
- Hints and Solutions to the exercises.
- Bridging of different ideas of the four main areas through cross-references.
- Compactness and lucidity of presentation.

CONTENTS

ABOUT THE AUTHOR

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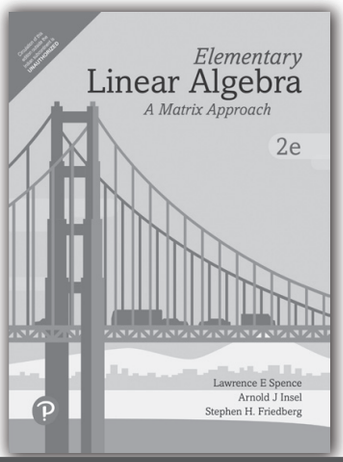
Senior Assistant Professor
Department of Mathematics
St. Xavier's College (Autonomous), Kolkata



ISBN: 9789353432997

Elementary Linear Algebra, 2/e

Lawrence E. Spence | Arnold J. Insel | Stephen H Friedberg

Web Supplements

648 | © 2019

ABOUT THE BOOK

Based on the recommendations of the Linear Algebra Curriculum Study Group, this introduction to linear algebra offers a matrix-oriented approach with more emphasis on problem solving and applications. Throughout the text, use of technol ogy is encouraged. The focus is on matrix arithmetic, systems of linear equations, properties of Euclidean n-space, eigenvalues and eigenvectors, and orthogonality. Although matrix-oriented, the text provides a solid coverage of vector spaces.

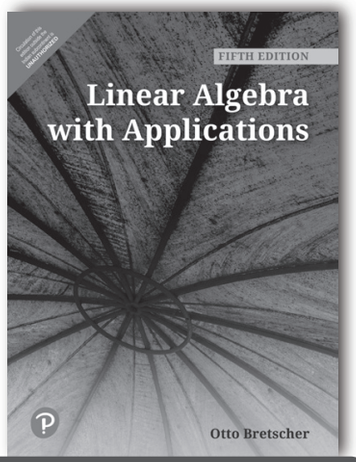
FEATURES

- Examples in book are accompanied by similar practice problems that enable students to test their understanding of the material.
- Most sections include approximately twenty true/false exercises designed to test students understanding of the conceptual ideas in each section.
- For a proof-oriented course, the authors have included a significant number of accessible exercises requiring proofs, ordered according to difficulty.
- All computational exercises are designed so that the calculations involve “nice” numbers.
- The authors have added an appendix introducing MATLAB.

CONTENTS

ABOUT THE AUTHOR (S)

Stephen H. Friedberg, Illinois State University
Arnold J. Insel, Illinois State University
Lawrence E. Spence, Illinois State University



ISBN: 9789353433048

Linear Algebra with Applications, 5/e

Otto Bretscher

528 | © 2019

Web Supplements

ABOUT THE BOOK

Linear Algebra with Applications, Fifth Edition emphasizes linear transformations as a unifying theme. This elegant textbook combines a user-friendly presentation with straightforward, lucid language to clarify and organize the techniques and applications of linear algebra. Exercises and examples make up the heart of the text, with abstract exposition kept to a minimum. Exercise sets are broad and varied and reflect the author's creativity and passion for this course.

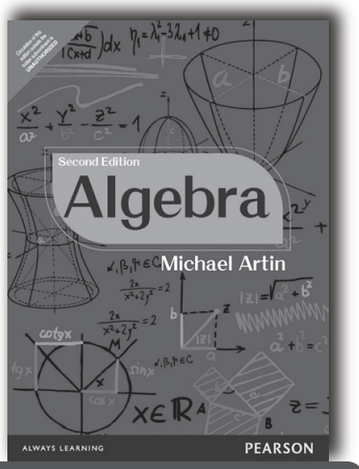
FEATURES

- Linear transformations are introduced early in the text to make the discussion of matrix operations more meaningful and easier to navigate.
- Visualization and geometrical interpretation are emphasized extensively throughout the text.
- Fifty to sixty True/False questions conclude every chapter, testing conceptual understanding and encouraging students to read the text.
- Historical problems from ancient Chinese, Indian, Arabic, and early European sources add diversity to the selection of exercises.
- Rotations, reflections, projections, and shears are used throughout to illustrate new ideas.
- Commutative diagrams enable students to visualize the relations between linear transformations.

CONTENTS

ABOUT THE AUTHOR

Otto Bretscher, Colby College, Waterville



ISBN: 9789332549838

Algebra, 2/e

Michael Artin

560 | ©2015

ABOUT THE BOOK

Algebra, Second Edition, by Michael Artin, is ideal for the honors undergraduate or introductory graduate course. The second edition of this classic text incorporates twenty years of feedback and the author's own teaching experience. The text discusses concrete topics of algebra in greater detail than most texts, preparing students for the more abstract concepts; linear algebra is tightly integrated throughout.

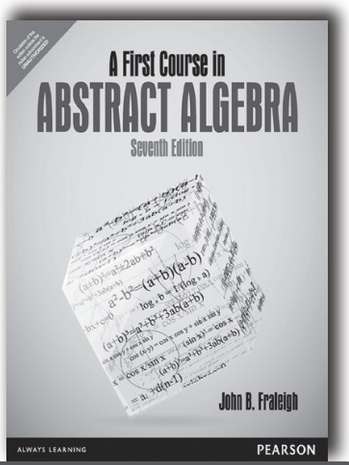
FEATURES

- High emphasis on concrete topics, such as symmetry, linear groups, quadratic number fields, and lattices, prepares students to learn more abstract concepts. The focus on these special topics also allows some abstractions to be treated more concisely, devoting more space to the areas students are the most interested in.
- Thechapter organization emphasizes the connections between algebra and geometry at the start, with the beginning chapters containing the content most important for students in other fields. To counter the fact that arithmetic receives less initial emphasis, the later chapters have a strong arithmetic slant.
- Treatment beyond the basics sets this book apart from others. Students with a reasonably mature mathematical background will benefit from the relatively informal treatments the author gives to the more advanced topics.
- Content notes in the preface include teaching tips from the author's own classroom experience.
- Challenging exercises are indicated with an asterisk, allowing instructors to easily create the right assignments for their class.

CONTENTS

ABOUT THE AUTHOR

Michael Artin (born 1934) is an American mathematician and a professor at MIT, known for his contributions to algebraic geometry. He is the son of Emil Artin. He was brought up in Indiana. In the early 1960s he spent time at the IHES in France, contributing to the SGA4 volumes of the Séminaire de géométrie algébrique, on topos theory and étale cohomology.He also worked on the question of characterising the representable functors in the category of schemes; this led to the Artin approximation theorem, in local algebra. This work also gave rise to the ideas of an algebraic space and algebraic stack, and has proved very influential in moduli theory. Additionally, he has made contributions to the deformation theory of algebraic varieties. In 2002, he won the American Mathematical Society's annual Steele Prize for Lifetime Achievement. He is currently working on non-commutative rings, especially geometric aspects.



ISBN: 9789332519039

A First Course in Abstract Algebra, 7/e

John B. Fraleigh

460 | ©2014

ABOUT THE BOOK

Considered a classic by many, ***A First Course in Abstract Algebra*** is an in-depth introduction to abstract algebra. Focused on groups, rings and fields, this text gives students a firm foundation for more specialized work by emphasizing an understanding of the nature of algebraic structures.

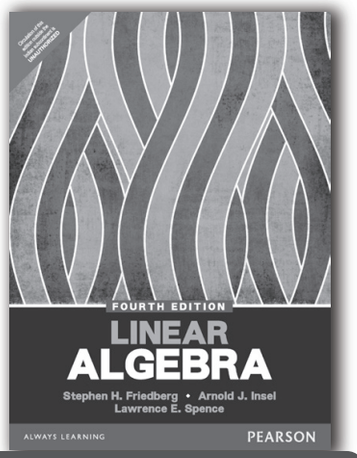
FEATURES

- This classical approach to abstract algebra focuses on applications.
- The text is geared toward high-level courses at schools with strong mathematics programs.
- Accessible pedagogy includes historical notes written by Victor Katz, an authority on the history of math.
- By opening with a study of group theory, this text provides students with an easy transition to axiomatic mathematics

CONTENTS

ABOUT THE AUTHOR

John B. Fraleigh, University of Rhode Island



ISBN: 9789332549647

Linear Algebra, 4/e

Stephen H Friedberg | Arnold J Insel | Lawrence E. Spence

601 | ©2015

ABOUT THE BOOK

This top-selling, theorem-proof text presents a careful treatment of the principle topics of linear algebra, and illustrates the power of the subject through a variety of applications. It emphasizes the symbiotic relationship between linear transformations and matrices, but states theorems in the more general infinite-dimensional case where appropriate.

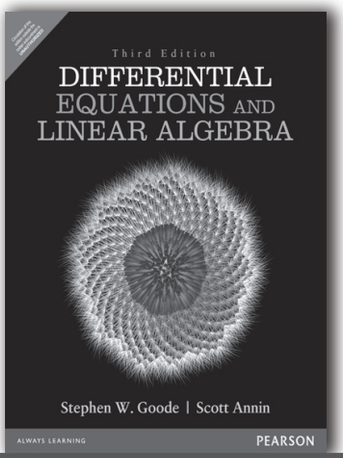
FEATURES

- NEW - Added section on the singular value decomposition which discusses the pseudo inverse of a matrix or a linear transformation between finite-dimensional inner product spaces.
- NEW - Revised proofs, added examples and exercises which improves the clarity of the text and enhances students' understanding of it.
- The friendliest treatment of rigor in linear algebra—Usually used for a 2nd course, but can be used for smart, fast students in first course.
- Numerous accessible exercises—Enriches and extends the text material.
- Real-world applications throughout.

CONTENTS

ABOUT THE AUTHOR (S)

Stephen H. Friedberg, Illinois State University
Arnold J. Insel, Illinois State University
Lawrence E. Spence, Illinois State University



ISBN: 9789332571631

Differential Equations and Linear Algebra, 3/e

Stephen W. Goode

800 | ©2015

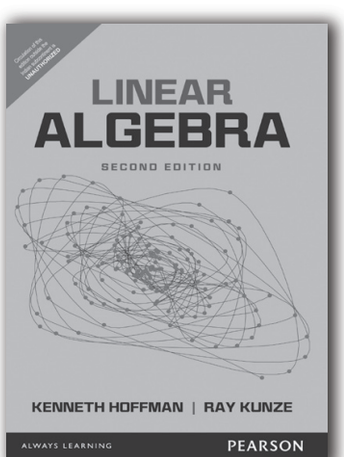
ABOUT THE BOOK

"For combined differential equations and linear algebra courses teaching students who have successfully completed three semesters of calculus. This complete introduction to both differential equations and linear algebra presents a carefully balanced and sound integration of the two topics. It promotes in-depth understanding rather than rote memorization, enabling students to fully comprehend abstract concepts and leave the course with a solid foundation in linear algebra. Flexible in format, it explains concepts clearly and logically with an abundance of examples and illustrations, without sacrificing level or rigor. A vast array of problems supports the material, with varying levels from which students/instructors can choose."

CONTENTS

ABOUT THE AUTHOR (S)

Stephen W. Goode, California State University, Fullerton
Scott A. Annin, California State University, Fullerton



ISBN: 9789332550070

Linear Algebra, 2/e

Kenneth M Hoffman | Ray Kunze

592 | ©2015

ABOUT THE BOOK

This introduction to linear algebra features intuitive introductions and examples to motivate important ideas and to illustrate the use of results of theorems.

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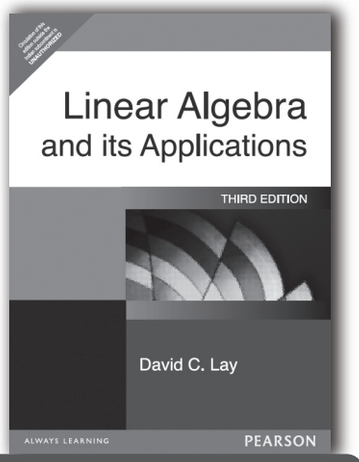


ISBN: 9788177583335

Linear Algebra and Its Applications, 3/e

David C. Lay

580 | ©2002

ABOUT THE BOOK

Linear algebra is relatively easy for students during the early stages of the course, when the material is presented in a familiar, concrete setting. But when abstract concepts are introduced, students often hit a brick wall. Instructors seem to agree that certain concepts (such as linear independence, spanning, subspace, vector space, and linear transformations), are not easily understood, and require time to assimilate. Since they are fundamental to the study of linear algebra, students understanding of these concepts is vital to their mastery of the subject. Lay introduces these concepts early in a familiar, concrete R n setting, develops them gradually, and returns to them again and again throughout the text. Finally, when discussed in the abstract, these concepts are more accessible.

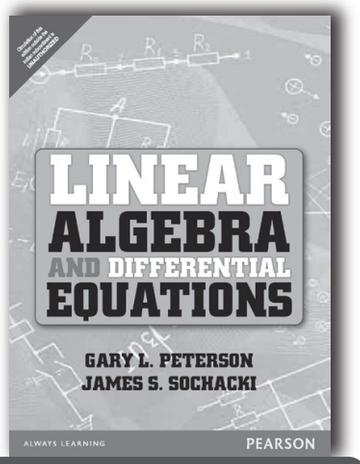
FEATURES

- Fundamental ideas of linear algebra are introduced within the first seven lectures, in the concrete setting of R n, and then gradually examined from different points of view. Later generalizations of these concepts appear as natural extensions of familiar ideas.
- Focus on visualization of concepts throughout the book.
- Icons in the margins to flag topics for which expanded or enhanced material is available on the Web.
- A modern view of matrix multiplication is presented. Definitions and proofs focus on the columns of a matrix rather than on the matrix entries.
- Numerical Notes give a realistic flavor to the text. Students are reminded frequently of issues that arise in the real-life use of linear algebra.
- Each major concept in the course is given a geometric interpretation because many students learn better when they can visualize an idea.

CONTENTS

ABOUT THE AUTHOR

David C. Lay has been an educator and research mathematician since 1966, mostly at the University of Maryland, College Park. He has also served as a visiting professor at the University of Amsterdam, the Free University in Amsterdam, and the University of Kaiserslautern, Germany. He has over 30 research articles published in functional analysis and linear algebra.



ISBN: 9789332552463

Linear Algebra and Differential Equations

Gary L. Peterson | James S. Sochacki

480 | ©2015

ABOUT THE BOOK

Linear Algebra and Differential Equations has been written for a one-semester combined linear algebra and differential equations course, yet it contains enough material for a two-term sequence in linear algebra and differential equations. By introducing matrices, determinants, and vector spaces early in the course, the authors are able to fully develop the connections between linear algebra and differential equations. The book is flexible enough to be easily adapted to fit most syllabi, including separate courses that that cover linear algebra in the first followed by differential equations in the second. Technology is fully integrated where appropriate, and the text offers fresh and relevant applications to motivate student interest.

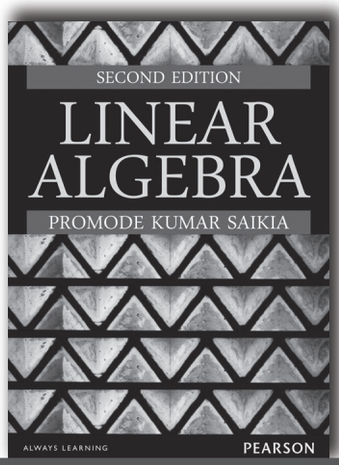
FEATURES

- Offers a solid foundation in both linear algebra and differential equations, with an emphasis on finding connections between the two subjects.
- Contains applications to many areas, including engineering, business, and life sciences.
- Maple exercises incorporated throughout; support is also offered to users of Mathematica and Matlab in the technology resource manual.

CONTENTS

ABOUT THE AUTHOR (S)

Gary L. Peterson, James Madison University
James S. Sochacki, James Madison University



ISBN: 9789332522145

Linear Algebra, 2/e

Promode Kumar Saikia

456 | © **2014**

ABOUT THE BOOK

Designed as a text on ***Linear Algebra*** for undergraduate and postgraduate students of Mathematics, this book explains the basics comprehensively and with clarity. The flowing narrative of the book provides a refreshing approach to the subject. Drawing on decades of experience from teaching and based on extensive discussions with teachers and students, the book simplifies proofs while doing away with needless burdensome textual details.

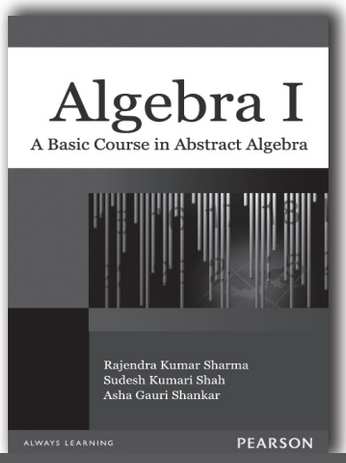
FEATURES

- Easy-paced treatment of basic concepts
- Re-arrangement of topics for better clarity and understanding (New)
- Coverage of additional topics such as LU factorization, definitions and examples of groups, rings and fields etc (New)
- Treatment of ranks of matrices through row and column spaces
- Explicit computations of bases of sums and intersections of subspaces
- Careful expositions of concepts such as minimal polynomial, invariant subspaces, etc.
- A simplified derivation of Jordan form
- Application of real quadratic forms to conic sections, constrained optimizations, etc.
- Introduction to singular value decomposition and generalized inverses
- Additional examples and exercises of varying difficulty
- Hints provided to selected questions
- Extensive supplements: Solution to end –of –chapter questions for Instructors and Hints and answers to selected questions for students and Additional Topics

CONTENTS

ABOUT THE AUTHOR

Promode Kr. Saikia has been teaching in the North Eastern Hill University, Shillong for over thirty three years. He also taught in the undergraduate college of St. Anthony's in Shillong for two years after completing his B. Sc and M.Sc. in Mathematics from Delhi University in 1972. He obtained his Ph. D. from the University of Wisconsin, Madison (U.S.A.), working under the supervision of Prof. Louis Solomon. His research interests are in the areas of number theory and p-adic analysis. Helping students enjoy mathematics and develop an interest in problem-solving has been the main goal of his long teaching career.



ISBN: 9788131760864

Algebra I: A Basic Course in Abstract Algebra

Rajendra Kumar Sharma | Sudesh Kumari Shah | Asha Gauri Shankar

Web Supplements

780 | © 2011

ABOUT THE BOOK

Algebra is a compulsory paper offered to the undergraduate students of Mathematics. The majority of universities offer the subject as a two /three year paper or in two/three semester. In views of this, we are bringing out three books ranging from introductory to advance level course in Algebra.

Algebra I is the first book of the series and covers the topic required for a basic course.

FEATURES

- Learning Objectives
- Chapter end summary for quick revision
- Geometric interpretation of the concept
- Answer to exercise
- Hints to difficult problems

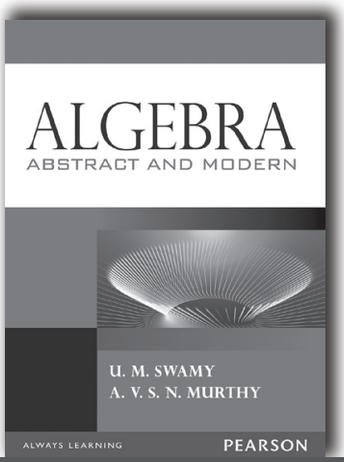
CONTENTS

ABOUT THE AUTHOR (S)

Rajendra Kumar Sharma is a Professor and Head of Department of Mathematics at Indian Institute of Technology Delhi. He has been teaching undergraduate and postgraduate students for more than 20 years.

Sudesh Kumari Shah is Associate Professor in Department of Mathematics at Sri Venkteshwra College, University of Delhi. She has been teaching the undergraduate and postgraduate students of Delhi University of more than 30 years.

Asha Gauri Shankar is Associate Professor in Department of Mathematics at Lakshmibai College, University of Delhi. She has received Shiksha Ratan Puraskar by India International Friendship Society.



ISBN: 9788131758922

Algebra: Abstract and Modern

U M Swamy | A V S N Murty

512 | © 2011

ABOUT THE BOOK

Spread across 16 chapters, this book introduces the readers to the preliminaries of algebra and then explains topics like group theory and field theory in depth. It also features a blend of numerous challenging exercises and examples that further enhance each chapter. Covering all the necessary topics on the subject, this text is an ideal text book for an undergraduate course on mathematics.

FEATURES

- Balanced and comprehensive coverage of ring theory
- An exclusive chapter on Galois theory and its application
- A real flavor of numerical notes to the text, which reminds the students of the real-life use of algebra
- Concepts are summarized visually using graphs and charts

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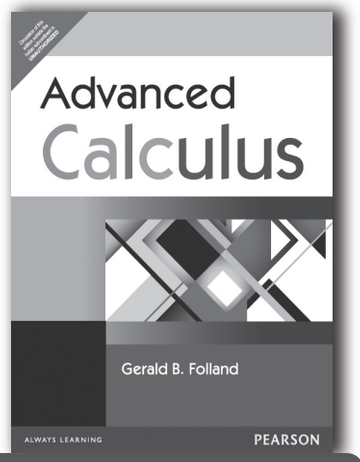
ABOUT THE AUTHOR (S)

U. M. Swamy is former Dean, Faculty of Science, Andhra University, Visakhapatnam, Andhra Pradesh.

A. V. S. N. Murty is a Professor of Mathematics, Srinivasa Institute of Engineering and Technology, Amalapuram, Andhra Pradesh.



ISBN: 9788131768570

Advanced Calculus

Gerald B. Folland

476 | © 2002

Web Supplements

ABOUT THE BOOK

This text presents a unified view of calculus in which theory and practice reinforce each other. It covers the theory and applications of derivatives (mostly partial), integrals, (mostly multiple or improper), and infinite series (mostly of functions rather than of numbers), at a deeper level than is found in the standard advanced calculus books.

FEATURES

- Single and Multivariable Analysis equally balanced
- A focus on calculus itself and its applications
- Numerous worked-out examples and exercises throughout
- A chapter on Fourier analysis

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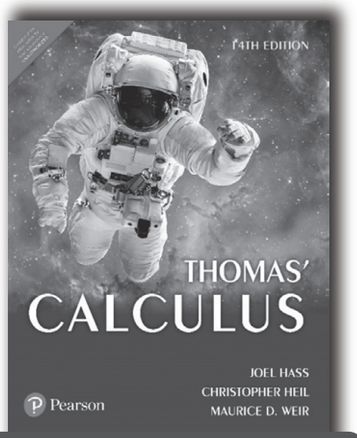


ISBN: 9789353060411

Thomas' Calculus, 14/e

Joel Hass | Christopher Heil | Maurice D. Weir

1208 | © 2018

Web Supplements

ABOUT THE BOOK

Thomas' Calculus, Fourteenth Edition, introduces students to the intrinsic beauty of calculus and the power of its applications. For more than half a century, this text has been revered for its clear and precise explanations, thoughtfully chosen examples, superior figures, and time-tested exercise sets

FEATURES

- Strong exercise sets feature a great breadth of problems—progressing from skills problems to applied and theoretical problems—to encourage students to think about and practice the concepts until they achieve mastery.
- Complete and precise multivariable coverage enhances the connections of multivariable ideas with their singlevariable analogues studied earlier in the book.

NEW TO THIS EDITION

- Updated graphics emphasize clear visualization and mathematical correctness.
- New examples and figures have been added throughout all chapters, based on user feedback.
- New types of homework exercises, including many geometric in nature, have been added to provide different perspectives and approaches to each topic.
- Short URLs have been added to the historical margin notes, allowing students to navigate directly to online information.
- New annotations within examples guide the student through the problem solution and emphasize that each step in a mathematical argument is rigorously justified.

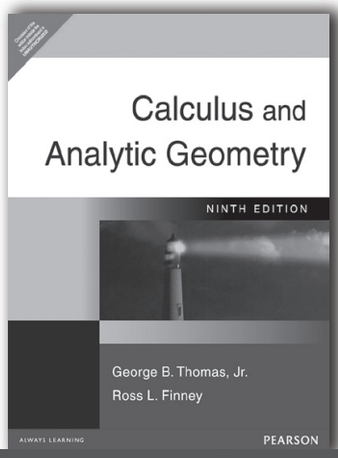
CONTENTS

1. Functions
2. Limits and Continuity
3. Derivatives
4. Applications of Derivatives
5. Integrals
6. Applications of Definite Integrals
7. Transcendental Functions
8. Techniques of Integration
9. First-Order Differential Equations
10. Infinite Sequences and Series

ABOUT THE AUTHOR (S)

George B. Thomas, Jr. (late) of the Massachusetts Institute of Technology, was a professor of mathematics for thirty-eight years; he served as the executive officer of the department for ten years and as graduate registration officer for five years. Thomas held a spot on the board of governors of the Mathematical Association of America and on the executive committee of the mathematics division of the American Society for Engineering Education. **Joel Hass** received his PhD from the University of California Berkeley. He is currently a professor of mathematics at the University of California Davis. He has coauthored widely used calculus texts as well as calculus study guides. He is currently on the editorial board of several publications, including the Notices of the American Mathematical Society. **Christopher Heil** received his PhD from the University of Maryland. He is currently a professor of mathematics at the Georgia Institute of Technology.

Maurice D. Weir (late) of the the Naval Postgraduate School in Monterey, California was Professor Emeritus as a mem ber of the Department of Applied Mathematics. He held a DA and MS from Carnegie-Mellon University and received his BS at Whitman College



ISBN: 9788177583250

Calculus & Analytical Geometry, 9/e

George B. Thomas Jr.

1264 | © **2006**

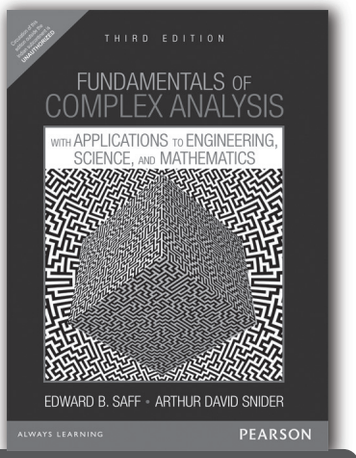
ABOUT THE BOOK

George Thomas' clear, precise calculus text with superior applications defined the modern-day, three-semester or four-quarter calculus course. The ninth edition of this proven text has been carefully revised to give students the solid base of material they will need to succeed in math, science, and engineering programs. This edition includes recent innovations in teaching and learning that involve technology, projects, and group work.

FEATURES

- Exercises have been reorganized to facilitate assigning a subset of the material in a section.
- New Computer Algebra System (CAS) explorations and projects that require a CAS have been included.
- Technology Connection notes appear throughout the text suggesting experiments students might do with a grapher to supplement their understanding of given topic.

CONTENTS



ISBN: 9789332535091

Fundamentals of Complex Analysis with Applications to Engineering, Science, and Mathematics, 3/e

Edward B. Saff

520 | © 2014

ABOUT THE BOOK

This is the best seller in this market. It provides a comprehensive introduction to complex variable theory and its applications to current engineering problems. It is designed to make the fundamentals of the subject more easily accessible to students who have little inclination to wade through the rigors of the axiomatic approach. Modeled after standard calculus books—both in level of exposition and layout—it incorporates physical applications throughout the presentation, so that the mathematical methodology appears less sterile to engineering students.

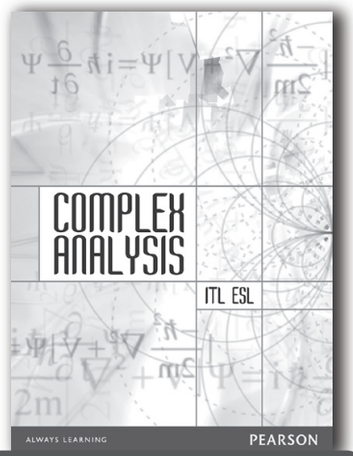
FEATURES

- NEW–Downloadable MATLAB toolbox–A state-of-theart computer aid.
- NEW–Modern exposition of the use of complex numbers in linear analysis–AC circuits, kinematics, signal processing.
- NEW–Section on Julia sets–The graphical depiction of iterated complex functions leads to interesting fractal patterns.
- NEW–Early introduction of Euler's formula.
- Physical interpretation of properties of analytic function as equilibrium temperature profiles.
- Two alternative presentations of Cauchy's theorem are given (Ch. 4–The first is based on the deformation of contours (homotopy). The second interprets contour integrals in terms of line integrals and invokes Green's theorem to complete the argument. These developments are presented parallel to one another. Either one may be read, and the other omitted, without disrupting the exposition.
- Frequent use of analogies from elementary calculus or algebra to introduce complex concepts.
- Applications to "real world" engineering problems.

CONTENTS

ABOUT THE AUTHOR

Edward B. Saff, Vanderbilt University



ISBN: 9788131772492

Complex Analysis

Arthur I. Voge

382 | © **2010**

ABOUT THE BOOK

Complex Analysis presents a comprehensive and student-friendly introduction to the important concepts of the subject. Its clear, concise writing style and numerous applications make the basics easily accessible to students, and serves as an excellent resource for self-study. Its comprehensive coverage includes:

- Cauchy-Goursat theorem, along with the description of connected domains and its extensions
- A separate chapter on Analytic Functions explaining the concepts of limits, conti

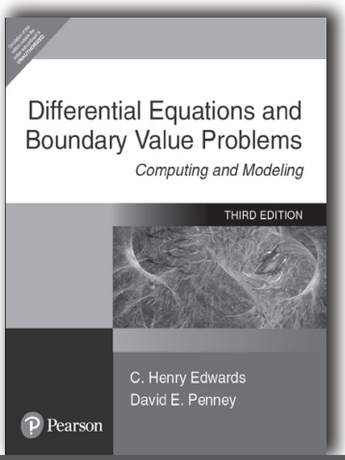
FEATURES

- Over 150 illustrations to help the reader visualize complex relationships
- 180 solved problems and 729 unsolved problems for practice
- Answers to unsolved problems included

CONTENTS

ABOUT THE AUTHOR

ITL Education Solutions Limited (ITL ESL) is a part of the ITL group, which has operations all over the world with a significant presence in education and IT-enabled services. It specializes in handling educational projects in IT domains with a dedicated R&D wing of industry experts that helps in designing and developing content.



ISBN: 9788131728222

Differential Equations and Boundary Value Problems: Computing and Modeling, 3/e

C. Henry Edwards | David E. Penney

708 | © 2010

ABOUT THE BOOK

This best-selling text by these well-known authors blends the traditional algebra problem solving skills with the conceptual development and geometric visualization of a modern differential equations course that is essential to science and engineering students. It reflects the new qualitative approach that is altering the learning of elementary differential equations, including the wide availability of scientific computing environments like Maple, Mathematica, and MATLAB. Its focus balances the traditional manual methods with the new computer-based methods that illuminate qualitative phenomena and make accessible a wider range of more realistic applications. Seldom-used topics have been trimmed and new topics added: it starts and ends with discussions of mathematical modeling of real-world phenomena, evident in figures, examples, problems, and applications throughout the text.

FEATURES

- **Approximately 2000 problems**–These problems span the range from computational problems to applied and conceptual problems. There are over 300 new qualitative problems in this edition.
- NEW - **Emphasis on the intersection of technology and ODEs**–Recognizes the need to instruct students in the new methods of computing differential equations.
- NEW - **300 new computer-generated graphics**–Show vivid pictures of slope fields, solution curves, and phase plane portraits.
- NEW - **Extensive expansion of qualitative solutions to the problem sets.**
- NEW - **Fresh numerical methods emphasis**–Made possible by the early introduction of numerical solution techniques, mathematical modeling, stability and qualitative properties of differential equations. The text includes generic numerical algorithms that can be implemented in various technologies.
- NEW - **Application Modules**–Follow key sections throughout the text; while many involve computational investigations, they are written in a technology-neutral manner. Technology-specific systems modules are available in the accompanying Applications Manual.
- NEW - **Leaner and more streamlined coverage**–Shaped by the availability of computational aids.

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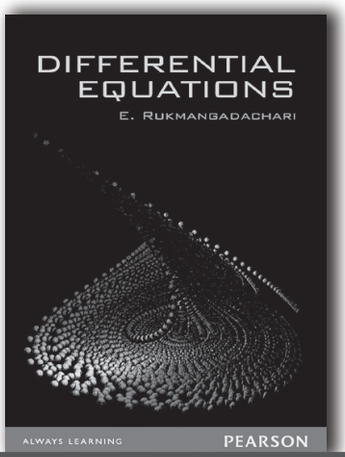
ABOUT THE AUTHOR (S)

C. Henry Edwards, University of Georgia, Athens
David E. Penney, University of Georgia, Athens



ISBN: 9788131770375

Differential Equations

E. Rukmangadachari

472 | © 2012

ABOUT THE BOOK

This book presents the basics of differential equations, adhering to the UGC curriculum for undergraduate courses on differential equations offered by all Indian universities. With equal emphasis on theoretical and practical concepts, the book provides a balanced coverage of all topics essential to master the subject at the undergraduate level, making it an ideal classroom text.

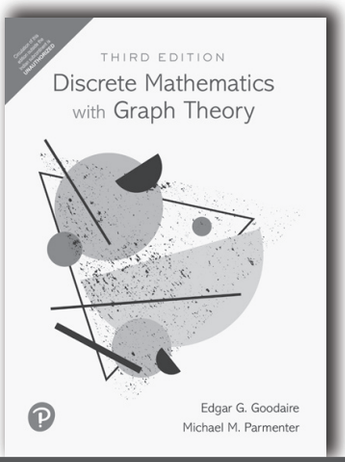
FEATURES

- Detailed coverage of integration in series
- In-depth coverage of differential equations of first order and first degree and linear equations with constant coefficients
- Focus on application-oriented concepts and problems
- Extensive coverage of Fourier integral transforms and partial differential equations.

CONTENTS

ABOUT THE AUTHOR

E. Rukmangadachari is former head of the departments of computer science and engineering as well as humanities and sciences at Malla Reddy Engineering College, Secunderabad. A recipient of the Andhra Pradesh State Meritorious Teachers' Award in 1981, Professor Rukmangadachari has over 45 years' experience in teaching mathematics to undergraduate, postgraduate and engineering students.



ISBN: 9789353433017

Discrete Mathematics with Graph Theory, 3/e

Edgar Goodaire | Michael Parmenter

592 | © 2019

ABOUT THE BOOK

AFar more "user friendly" than the vast majority of similar books, this text is truly written in a friendly, conversational, humorous style with the "beginning" reader in mind. The pace is tight, the style is light, and the text emphasizes theorem proving throughout. The authors emphasize "Active Reading," a skill vital to success in learn□ing how to think mathematically and write clean, error-free programs.

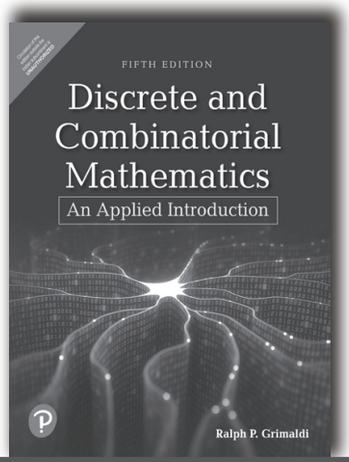
FEATURES

- A friendly, conversational, humorous style – Makes this top seller stimulating and engaging for the reader.
- Emphasis on writing and critical-thinking skills.
- More than 300 worked examples and 3500 exercises. The problem sets are carefully graded by level of difficulty.
- A FREE Student Solutions Manual is built into the back of the text.
- Topics in discrete math are used as a vehicle for teaching proofs.
- An unusually strong emphasis on graph theory, incorporating its coverage throughout six chapters.

CONTENTS

ABOUT THE AUTHOR

Edgar Goodaire Honorary Research Professor (retired). PhD British Columbia, 1973 B.Sc. Toronto, 1969. CMS Distinguished Service Award, 2004.



ISBN: 9789353433055

Discrete and Combinatorial Mathematics, 5/e

Ralph P. Grimaldi

1008 | © 2019

Web Supplements

ABOUT THE BOOK

This fifth edition continues to improve on the features that have made it the market leader. The text offers a flexible organization, enabling instructors to adapt the book to their particular courses. The book is both complete and careful, and it continues to maintain its emphasis on algorithms and applications. Excellent exercise sets allow students to perfect skills as they practice. This new edition continues to feature numerous computer science applications—making this the ideal text for preparing students for advanced study.

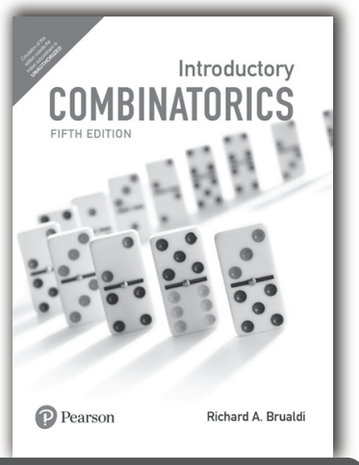
FEATURES

- Enhanced mathematical approach with carefully thought out examples, including many examples with computer sciences applications.
- New material on cryptology, private-key cryptosystems and public-key RSA cryptosystems.
- Expanded treatment of discrete probability.
- Includes historical reviews and biographies that bring a human element to their assignments.
- Provides chapter summaries to allow students to review what they have learned.

CONTENTS

ABOUT THE AUTHOR

Ralph Peter Grimaldi (born January 1943) is an American mathematician specializing in discrete mathematics who is a professor at Rose-Hulman Institute of Technology.



ISBN: 9789353433062

Introductory Combinatorics, 5/e

Richard A. Brualdi

624 | © **2019**

ABOUT THE BOOK

This trusted best-seller covers the key combinatorial ideas–including the pigeonhole principle, counting techniques, permutations and combinations, Pólya counting, binomial coefficients, inclusion-exclusion principle, generating functions and recurrence relations, combinatorial structures (matchings, designs, graphs), and flows in networks. The 5th Edition incorporates feedback from users to the exposition throughout and adds a wealth of new exercises.

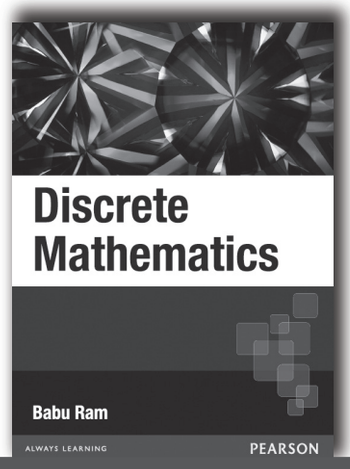
FEATURES

- Covers a wide range of topics:
  - Dilworth's Theorem
  - Partitions of integers
  - Counting sequences and generating functions
  - Extensive graph theory coverage
- A clear and accessible presentation, written from the student's perspective, facilitates understanding of basic concepts and principles.
- An excellent treatment of Pólya's Counting Theorem that does not assume students have studied group theory.
- Many worked examples illustrate methods used.

CONTENTS

ABOUT THE AUTHOR

Richard A. Brualdi is Bascom Professor of Mathematics, Emeritus at the University of Wisconsin-Madison. He served as Chair of the Department of Mathematics from 1993–1999.



ISBN: 9788131733103

Discrete Mathematics

Babu Ram

Web Supplements

584 | © **2011**

ABOUT THE BOOK

Discrete Mathematics is an integral part of any undergraduate as well as post graduate courses in Computer Science and Mathematics. The syllabi of all these courses have been studied in depth and utmost care has been taken to ensure that all the essential topics in discrete structures are adequately emphasized. The book will enable the students to develop the requisite computational skills need ed in software engineering.

FEATURES

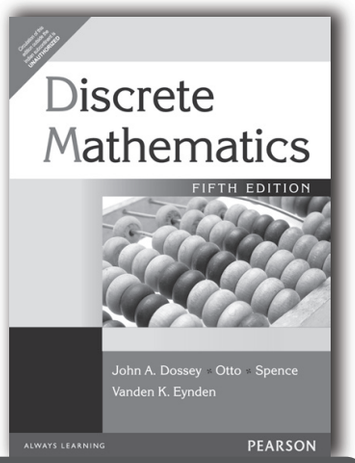
- C Programs of important algorithms
- Extensive coverage of Boolean Algebra, Algebraic Structures and Graph Theory
- 550 Solved examples and 170 practice problems with hints/answers

CONTENTS

1. Sets, Relations and Functions
2. Counting
3. Recurrence Relations
4. Logic
5. Algebraic Structures
6. Lattices
7. Boolean Algebra
8. Graphs
9. Finite State Automata
10. Languages and Grammars

ABOUT THE AUTHOR

Babu Ram received his Ph.D. degree in mathematics in 1973 from Kurukshetra University, Kurukshetra, India. He was formerly Professor of Mathematics and Dean, Faculty of Physical Sciences at Maharshi Dayanand University, Rohtak and has been teaching mathematics for the past 36 years. A member of Indian Mathematical Society and the American Mathematical Society, Professor Babu Ram has published 42 research papers in Real and Functional Analysis in inter national journals of repute. He is on the board of reviewers of both American Mathematical Reviews and Zentralblatt fur Mathematik und ihre Grengebiete, Berlin. Presently, he is working as Director MCA at Manav Rachna International University, Faridabad.



ISBN: 9788131766262

Discrete Mathematics, 5/e

John A Dossey | Charles Vanden Eynden | Albert D Otto | Lawrence E Spence

Web Supplements

684 | © **2006**

ABOUT THE BOOK

An ever-increasing percentage of mathematic applications involve discrete rather than continuous models. Driving this trend is the integration of the computer into virtually every aspect of modern society. Intended for a one-semester introductory course, the strong algorithmic emphasis of ***Discrete Mathematics*** is independent of a specific programming language, allowing students to concentrate on foundational problem-solving and analytical skills. Instructors get the topical breadth and organizational flexibility to tailor the course to the level and interests of their students

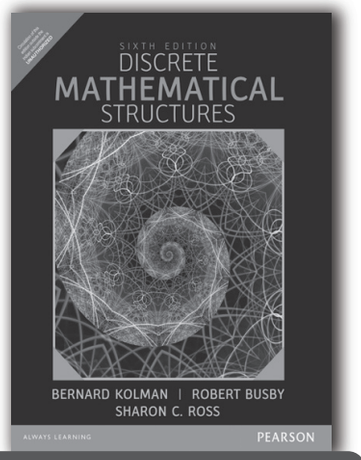
FEATURES

- Approach: A strong algorithmic emphasis serves to unify the material. Algorithms are presented in English, eliminating the need for knowledge of a particular programming language.
- Supplementary Exercises: Ending each chapter, these sets of supplementary exercises reprise the most important concepts and techniques of the chapter and explore new ideas not covered elsewhere.
- Coding Theory: A new chapter 3 has been added that includes material on Matrix Codes, Error Correcting Codes, Congruence, Euclidean Algorithm and Diophantine Equations, and the RSA Algorithm.
- Choice of Topics: Based upon the recommendations of respected professional organizations--the MAA's Panel on Discrete Mathematics in the First Two Years, the NCTM's Principles and Standards for School Mathematics, and the CBMS's recommendations for the mathematical education of teachers-;this text offers a solid, comprehensive introduction to discrete mathematics.

CONTENTS

ABOUT THE AUTHOR

Richard Johnsonbaugh is Professor Emeritus of Computer Science, Telecommunications and Information Systems, DePaul University, Chicago. Prior to his 20-year service at DePaul University, he was a member and sometime chair of the mathematics departments at Morehouse College and Chicago State University. He has a B.A. degree in mathematics from Yale University, M.A. and Ph.D. degrees in mathematics from the University of Oregon, and an M.S. degree in computer science from the University of Illinois, Chicago. His most recent research interests are in pattern recognition, programming languages, algorithms, and discrete mathematics. He is the author or co-author of numerous books and articles in these areas. Several of his books have been translated into various languages. He is a member of the Mathematical Association of America.



ISBN: 9789332549593

Discrete Mathematical Structures, 6/e

Bernard Kolman | Robert Busby | Sharon C. Ross

552 | ©2015

ABOUT THE BOOK

Discrete Mathematical Structures, Sixth Edition, offers a clear and concise presentation of the fundamental concepts of discrete mathematics. Ideal for a one-semester introductory course, this text contains more genuine computer science applications than any other text in the field.

This book is written at an appropriate level for a wide variety of majors and non-majors, and assumes a college algebra course as a prerequisite.

FEATURES

- The focus on computer science prepares students for future computer science careers.
- The emphasis on proof lays the foundation for mathematical thinking.
- Clear organization of topics prevents students from being overwhelmed. The authors treat relations and digraphs as two aspects of the same fundamental idea, which is then used as the basis of virtually all the concepts introduced in the book.
- Vignettes of mathematical history open each chapter, providing students with a practical background of how these ideas were developed.
- Additional number theory coverage provides more information on the properties of integers, including basen representations, and gives more contexts for isomorphism.
- Cryptology is explored throughout the book, introducing students to this exciting field.
- Coverage of coding provides students with a full picture of all of its aspects, including efficiency, effectiveness, and security. A set of coding exercises for each chapter is also included in Appendix C.
- Exercises emphasize multiple representations of concepts, and provide practice on reading and writing mathematical proofs.
- Experiments provide opportunities for in-depth exploration and discovery, as well as for writing and for working in groups. Topics include weighted voting systems, Petri nets, Catalan numbers, and others.
- End-of-chapter material includes Tips for Proofs, a summary of Key Ideas, and a Self-Test, which contains a set of conceptual review questions to help students identify and synthesize the main ideas of each chapter.

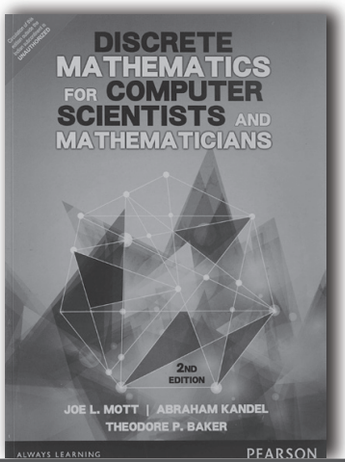
CONTENTS

ABOUT THE AUTHOR (S)

Bernard Kolman received his BS in mathematics and physics from Brooklyn College in 1954, his ScM from Brown University in 1956, and his PhD from the University of Pennsylvania in 1965, all in mathematics. He has worked as a mathematician for the US Navy and IBM. He has been a member of the mathematics department at Drexel University since 1964, and has served as Acting Head of the department. His research activities have included Lie algebra and perations research. He belongs to a number of professional associations and is a member of Phi Beta Kappa, Pi Mu Epsilon, and Sigma Xi.

Robert C. Busby received his BS in physics from Drexel University in 1963, his AM in 1964 and PhD in 1966, both in mathematics from the University of Pennsylvania. He has served as a faculty member of the mathematics department at Drexel since 1969. He has consulted in applied mathematics and industry and government, including three years as a consultant to the Office of Emergency Preparedness, Executive Office of the President, specializing in applications of mathematics to economic problems. He has written a number of books and research papers on operator algebra, group representations, operator continued fractions, and the applications of probability and statistics to mathematical demography.

Sharon Cutler Ross received a SB in mathematics from the Massachusetts Institute of Technology in 1965, an MAT in secondary mathematics from Harvard University in 1966, and a PhD in mathematics from Emory University in 1976. She has taught junior high, high school, and college mathematics, and has taught computer science at the collegiate level. She has been a member of the mathematics department at DeKalb College. Her current professional interests are in undergraduate mathematics education and alternative forms of assessment. Her interests and associations include the Mathematical Association of America, the American Mathematical Association of Two-Year Colleges, and UME Trends. She is a member of Sigma Xi and other organizations.



ISBN: 9789332550490

Discrete Mathematics for Computer Scientists, 2/e

Joe L Mott | Abraham Kandel

768 | © **2015**

ABOUT THE BOOK

This is a lucidly written fine-tuned introduction to discrete mathematics. It is eminently suited for students persuing BCA, MCA and B.E./B.Tech courses. Considering the importance of the subject, quite a number of universities have sought to introduce discrete mathematics as a core subject in the engineering curriculum.

FEATURES

- Comprehensive discussions on graph theory, mathematical induction, Boolean algebras, logic and other proof techniques and recurrence relations have been dealt with.
- Gives good insights into graphs as a modeling tool.
- Gives better understanding of computer solutions of differential equations.
- Many worked out examples and solutions follow each section.

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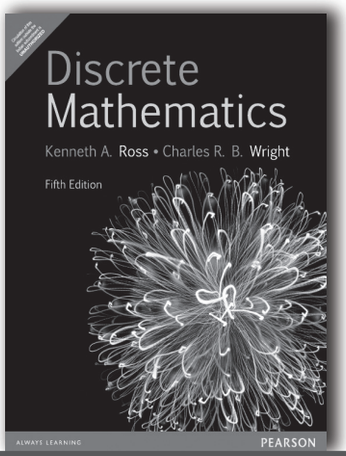


ISBN: 9788131790618

Discrete Mathematics, 5/e

Kenneth A Ross | Charles R. Wright

635 | © **2012**

ABOUT THE BOOK

Revised for extra clarity, the distinguishing characteristic of Ross and Wright is a sound mathematical treatment that increases smoothly in sophistication. The text presents utility-grade discrete math tools so students can understand them, use them, and move on to more advanced mathematical topics

FEATURES

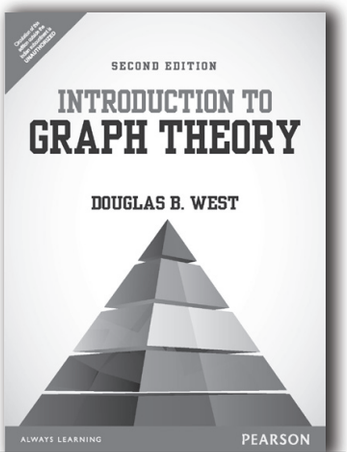
- NEW - Over 270 supplementary exercises All with answers
- NEW - Full chapter on discrete probability
- NEW - Chapter on algebraic structures
- Comprehensive coverage of logic and proofs
- Full chapter on recursion

CONTENTS

ABOUT THE AUTHOR (S)

Kenneth A. Ross, University of Oregon

Charles R. Wright, University of Oregon



ISBN: 9789332549654

Introduction to Graph Theory, 2/e

Douglas B. West

470 | © **2015**

ABOUT THE BOOK

For undergraduate or graduate courses in Graph Theory in departments of mathematics or computer science.

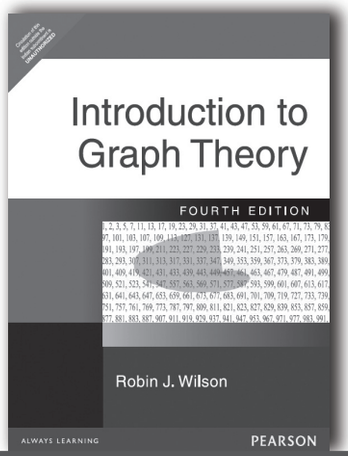
This text offers a comprehensive and coherent introduction to the fundamental topics of graph theory. It includes basic algorithms and emphasizes the understanding and writing of proofs about graphs. Thought-provoking examples and exercises develop a thorough understanding of the structure of graphs and the techniques used to analyze problems. The first seven chapters form the basic course, with advanced material in Chapter 8.

FEATURES

- NEW - Appendix of Mathematical Background—Appendix A presents background material on logical statements, basic set theory, equivalence relations, and elementary counting.
- Makes review material easily accessible for beginning students (Chapter 1 still discusses central proof techniques).

- NEW - Expanded and improved selection of exercises—Exercises have been added, especially easier exercises, and many exercises have been further clarified.
- Enlarged selection of easier exercises provides greater encouragement for beginning students and makes the material useful for a broader range of students.
- NEW - Reorganization of material. Some material has been reorganized to provide a smoother development and clearer focus on essential material with optional material clearly designated or removed.
- Facilitates more efficient learning by aiding instructors in designing courses and students in seeing what is important.
- NEW - Definitions more prominent. Terms being defined are in bold type and most important definitions occur in numbered items.
- Makes definitions easier for students to find.
- NEW - Hints for selected exercises—More hints have been added as Appendix C.
- Allows students to learn at their own pace; weaker students have more opportunity to be successful; stronger students have more opportunity to be stimulated.
- Logical organization—Concepts are introduced as needed, achieving a gradual increase in intellectual difficulty.
- Allows students to find fundamental results in the early sections of chapters and to master elementary concepts in preparation for later applications.
- Additional topics—Final chapter is a bridge to advanced topics.
- Provides supplementary reading for good students and flexibility in advanced courses.
- Over 400 illustrations.
- Allows students to check their understanding of definitions and of steps in proofs.
- Over 1200 exercises—Ranging from relatively straightforward applications of ideas in the text to subtle problems requiring some ingenuity.
- Helps students to understand the ideas of the course and to improve their presentation of coherent arguments.
- Graduation of exercises—Denotes easier exercises by (-), harder by (+), and particularly valuable or instinctive exercises by (!).
- Aids instructor in selecting appropriate exercises and students in practicing for tests.

CONTENTS



ISBN: 9788131706985

Introduction to Graph Theory, 4/e

Robin J. Wilson

184 | © 1996

ABOUT THE BOOK

Graph Theory has recently emerged as a subject in its own right, as well as being an important mathematical tool in such diverse subjects as operational research, chemistry, sociology, and genetics. This book provides a comprehensive introduction to the subject.

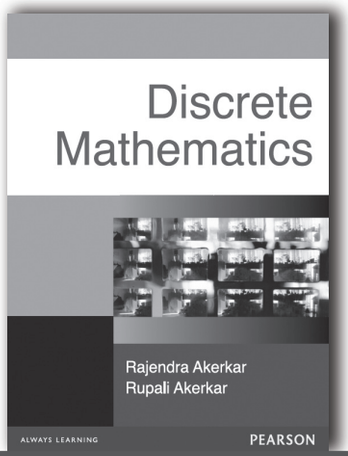
FEATURES

- Provides a basic foundation for the course.
- Text has been completely revised.
- Includes full range of exercises of varying difficulty.
- Incorporates new material on algorithms, tree-searches, and graph-theoretical puzzles.
- Full solutions are provided for many of the exercises.
- Includes a chapter on matroid theory, which is used to consolidate some of the material from earlier chapters.

CONTENTS

ABOUT THE AUTHOR

Robin J. Wilson is Dean and Director of Studies in the Faculty of Mathematics and Computing at the Open University.



ISBN: 9788131717943

Discrete Mathematics

Rajendra Akerkar | Rupali Akerkar

332 | © **2004**

ABOUT THE BOOK

Discrete Mathematics provides an introduction to some of the fundamental concepts in modern mathematics. Abundant examples help explain the principles and practices of Discrete Mathematics. The book intends to cover material required by readers for whom mathematics is just a tool, as well as provide a strong foundation for mathematics majors. The vital role that Discrete Mathematics plays in computer science is strongly emphasized as well. The book is useful for students and instructors, and also software professionals.

FEATURES

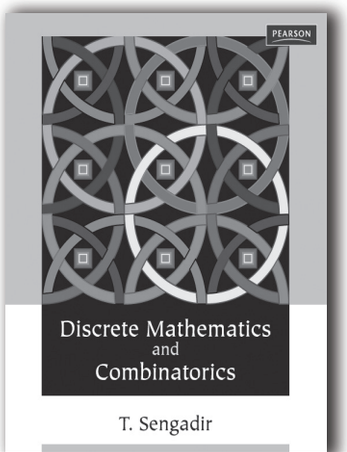
- User-friendly, conversational style of writing
- Covers topics such as combinatorics, proof methods, induction, sets, theory of automata
- Examples in each chapter bring clarity to the most complex concepts

CONTENTS

1. Proof Methods and Induction
2. Symbolic Logic
3. Set Theory
4. Relations
5. Functions and Recursion
6. Algebraic Structures
7. Graph Theory
8. Counting
9. Combinatorics
10. Automata
11. Program Verification
12. Design of Algorithms

ABOUT THE AUTHOR

Robin J. Wilson is Dean and Director of Studies in the Faculty of Mathematics and Computing at the Open University.



ISBN: 9788131714058

Discrete Mathematics and Combinatorics

T. Sengadir

568 | © **2009**

ABOUT THE BOOK

Discrete Mathematics and Combinatorics provides a concise and practical introduction to the core components of discrete mathematics, featuring a balanced mix of basic theories and applications. The book covers both fundamental concepts such as sets and logic, as well as advanced topics such as graph theory and Turing machines. The example-driven approach will help readers in understanding and applying the concepts. Other pedagogical tools—illustrations, practice questions, and suggested reading—facilitate learning and mastering the subject.

FEATURES

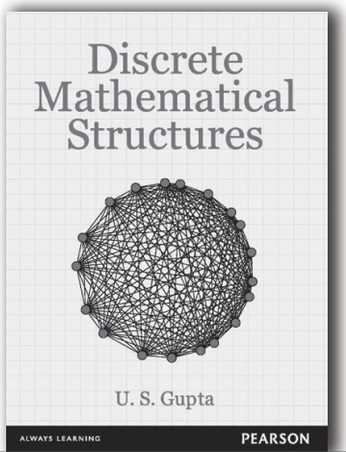
- Mathematical concepts explained in a simple and understandable form.
- Well-structured organization of chapters, moving from simple to complex.
- Numerous worked examples and illustrations to introduce concepts
- A rich and varied set of practice questions to reinforce the concepts.
- Appendices on mathematical prerequisites— trigonometry, matrices and basic algebra.

CONTENTS

1. Equations, Inequalities and Basic Logic
2. Sets, Functions and Relations
3. Logic
4. Permutations and Combinations
5. Mathematical Induction, Principle of Inclusion and Exclusion and Pigeon Hole Principle
6. Recurrence Relations
7. Number Theory
8. Groups, Rings and Fields
9. Graph Theory
10. Posets, Lattices and Boolean Algebras
11. Formal Languages and Language Acceptors
12. Turing Machines and Computable Functions
13. Coding Theory
14. Discrete Probability

ABOUT THE AUTHOR

T. Sengadir is an Associate Professor in the Department of Mathematics at SSN College of Engineering, Chennai.



ISBN: 9789332521391

Discrete Mathematical Structures

U.S Gupta

576 | © **2014**

ABOUT THE BOOK

Discrete Mathematical Structures provides comprehensive, reasonably rigorous and simple explanation of the concepts with the help of numerous applications from computer science and engineering.

Every chapter is equipped with a good number of solved examples that elucidates the definitions and theorems discussed. Chapter-end exercises are graded, with the easier ones in the beginning and then the complex ones, to help students for easy solving.

FEATURES

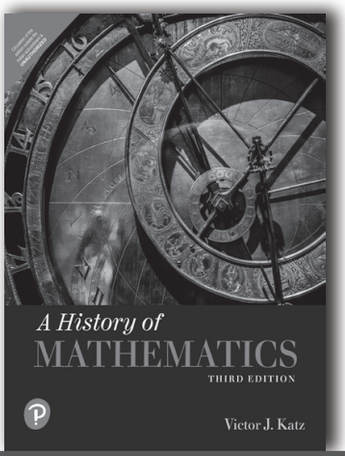
- Over 250 unsolved questions
- Around 400 solved examples

CONTENTS

1. Set Theory
2. Relations and Digraphs
3. Functions
4. Mathematical Logic and Methods of Proofs
5. Combinatorics
6. Recurrence Relations and Generating Functions
7. Algebraic Structures
8. Ordered Sets and Lattices
9. Boolean Algebra
10. Graph Theory
11. Trees
12. Vector Spaces

ABOUT THE AUTHOR

Uma Shanker Gupta joined the department of mathematics, the University of Roorkee (presently IIT-Roorkee), in 1967, after teaching for five years at Ewing Christian Degree College, Allahabad. He was awarded PhD (Mathematics) by the University of Roorkee in 1971. He has been a reviewer of many International journals like Journal of Applied Mechanics, Journal of Sound and Vibration to name a few. He became EMERITUS FELLOW in 2004 and held this position till 2006.



ISBN: 9789353433000

A History of Mathematics, 3/e

Victor J. Katz

992 | © 2019

ABOUT THE BOOK

A History of Mathematics, 3rd Edition, provides students with a solid background in the history of mathematics and focuses on the most important topics for today's elementary, high school, and college curricula. Students will gain a deeper understanding of mathematical concepts in their historical context, and future teachers will find this book a valuable resource in developing lesson plans based on the history of each topic.

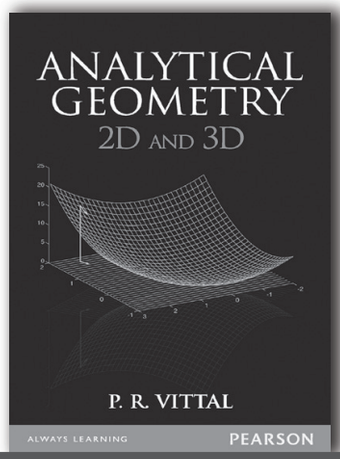
FEATURES

- The flexible presentation organizes the book by chronological period and then by topic.
- Discussions of the important textbooks of major time periods show students how topics were historically treated, allowing students to draw connections to modern approaches.
- A global perspective integrates non-Western coverage, including contributions from Chinese, Indian, and Islamic mathematicians. An additional chapter discusses the mathematical achievements of early Africa, America, and Asia.
- Chapter openers include a vignette and quotation to add motivation and human interest.
- Focus essays are boxed features that are set apart from the main narrative of the text for easy reference.
- A chronology of major mathematicians at the end of every chapter gives an overview of important individuals and their contribution to the field of mathematics.

CONTENTS

ABOUT THE AUTHOR

Victor J. Katz received his PhD in mathematics from Brandeis University in 1968 and has been Professor of Mathematics at the University of the District of Columbia for many years.



ISBN: 9788131773604

Analytical Geometry: 2D and 3D

P R Vittal

752 | © **2013**

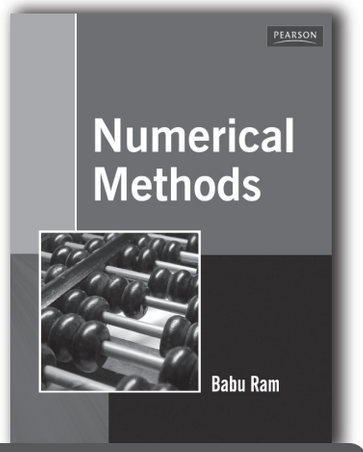
ABOUT THE BOOK

Designed to meet the requirements of UG students, the book deals with the theoretical as well as the practical aspects of the subject. Equal emphasis has been given to both 2D as well as 3D geometry. The book follows a systematic approach with adequate examples for better understanding of the concepts.

CONTENTS

ABOUT THE AUTHOR

P. R. Vittal was a postgraduate professor of mathematics at Ramakrishna Mission Vivekananda College, Chennai, from where he retired as principal in 1996. His assignments as visiting professor took him to Western Carolina University, USA. Currently, Vittal is a visiting professor at the Department of Statistics, University of Madras; The Institute of Chartered Accountants of India, Chennai; the Institute for Technology and Management, Chennai; and National Management School, Chennai, besides being a research guide for management science at BITS Pilani.



ISBN: 9788131732212

Numerical Methods

Babu Ram

520 | © **2010**

ABOUT THE BOOK

Numerical Methods is a mathematical tool used by engineers and mathematicians to do scientific calculations. It is used to find solutions to applied problems where ordinary analytical methods fail. This book is intended to serve for the needs of courses in ***Numerical Methods*** at the Bachelors' and Masters' levels at various universities.

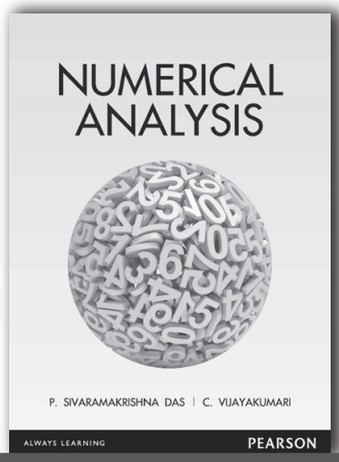
FEATURES

- Concise and easy-to-understand treatment of concepts
- Most of the numerical methods have been described technically along with the convergence and error
- 260 solved examples
- 160 practice problems
- Error analysis using various methods
- C programs of important numerical methods

CONTENTS

ABOUT THE AUTHOR

Babu Ram received his Ph.D. degree in Mathematics in 1973 from Kurukshetra University, Kurukshetra, India. He retired from Maharshi Dayanand University, Rohtak in 2006 as Professor of Mathematics and Dean, Faculty of Physical Sciences. Currently, he is Programme Director (MCA) at Manav Rachna International University, Faridabad (Haryana). He has published 42 research papers in Real and Functional Analysis in international journals of repute.



ISBN: 9788131776469

Numerical Analysis

Sivaramakrishna Das | Vijayakumari

768 | © 2014

Web Supplements

ABOUT THE BOOK

A text book designed exclusively for the undergraduate students. With a complete presentation on theoretical and numerical derivations supported with rich pedagogy for practice. All chapters begin with theoretical presentation emphasizing the practical computation which addresses the accurate approximation. Subsequently, the book provides a detailed explanation on Errors in Numerical Computation, Algebraic and Transcendental Equations, Solution of Linear System of Equation, Curve Fitting, Initial value problem for ordinary differential equation, Boundary value problems of second order partial differential equation and Solution of differenc equation with constant coefficient.

FEATURES

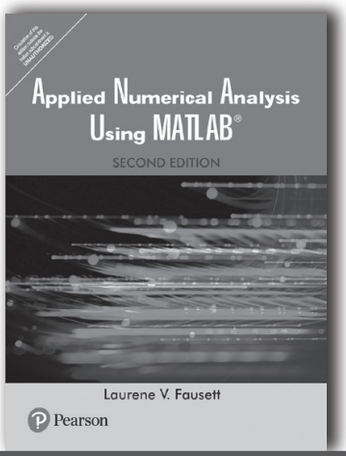
- An exclusive coverage on Boundary value problems of second order partial differential equation and solution of difference equation with constant coefficient
- Over 200 line diagrams
- 400 solved problems
- 250 unsolved problems for practice.

CONTENTS

ABOUT THE AUTHOR (S)

P. Sivaramakrishna Das started his career as Assistant Professor of Mathematics at Ramakrishna Mission Vivekananda College, Chennai, his alma mater, and retired as Professor and Head of the Department of Mathematics from the same college after an illustrious career spanning 36 years. Currently, he is Professor of Mathematics, Department of Science and Humanities, K.C.G. College of Technology, Chennai.

C. Vijayakumari began her career as Assistant Professor of Mathematics at Government Arts College for Women, Thanjavur, and has taught at various government arts and science colleges across Tamil Nadu before retiring as Professor of Mathematics, Queen Mary's College, Chennai, with 40 years of teaching experience behind her.



ISBN: 9788131728536

Applied Numerical Analysis Using MATLAB, 2/e

Laurene V. Fausett

688 | © 2009

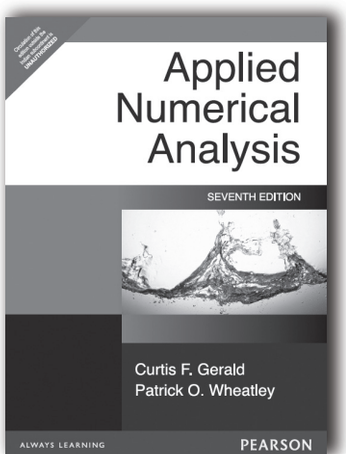
ABOUT THE BOOK

This text is appropriate for undergraduate courses on numerical methods and numerical analysis found in engineering, mathematics & computer science departments. Each chapter uses introductory problems from specific applications. These easy-to-understand problems clarify for the reader the need for a particular mathematical technique. Numerical techniques are explained with an emphasis on why they work.

FEATURES

- Full-page overview for each chapter " Includes two applications to introduce each chapter (except the first introductory chapter)
- End-of-chapter Beyond the Basics or Further Topics Introduce more advanced methods, often including those used by MATLAB and other professionally developed software packages.
- Chapter Wrap-Up " Includes a summary of the formulas for the basic methods presented in the chapter, suggestions for further reading, and several types of exercises.
- Practice the Techniques problems " Present fairly straightforward problems that encourage practice by handor verification of simple MATLAB programs.

CONTENTS



ISBN: 9788131717400

Applied Numerical Analysis, 7/e

Curtis F. Gerald

624 | © 2007

ABOUT THE BOOK

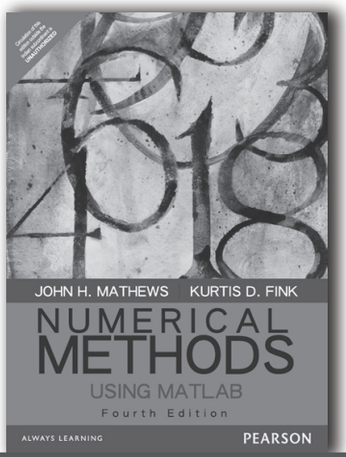
The seventh edition of this classic text has retained the features that make it popular, while updating its treatment and inclusion of Computer Algebra Systems and Programming Languages. The exercise sets include additional challenging problems and projects which show practical applications of the material. Also, sections which discuss the use of computer algebra systems such as Maple®, Mathematica®, and MATLAB®, facilitate the integration of technology in the course. Furthermore, the text incorporates programming material in both FORTRAN and C. The breadth of topics, such as partial differential equations, systems of nonlinear equations, and matrix algebra, provide comprehensive and flexible, coverage of all aspects of numerical analysis.

FEATURES

- Applied problems and applications emphasize real applications not detailed mathematical theorems
- Computer programs in either Fortran 90 or C are given at the conclusion of each chapter.
- Treats Linear systems before non-linear systems.
- The pace of topic presentation is appropriate for the audience.
- Excellent treatment of parallel processing.

CONTENTS

1. Solving Nonlinear Equations.
2. Solving Sets of Equations.
3. Interpolation and Curve Fitting.
4. Approximation of Functions.
5. Numerical Differentiation and Integration.
6. Numerical Solution of Ordinary Differential Equations.
7. Optimization.
8. Partial Differential Equations.
9. Finite Element Analysis.



ISBN: 9789332549357

Numerical Methods Using MATLAB, 4/e

John H. Mathews | Kurtis K. Fink

696 | © **2015**

ABOUT THE BOOK

This book provides a fundamental introduction to numerical analysis for undergraduate students in the areas of mathematics, computer science, physical sciences, and engineering. Knowledge of calculus is assumed.

FEATURES

- NEW - Expanded emphasis on analysis of competing methods and issues of error.
- NEW - Rewritten chapter on numerical optimization.
- NEW - New topics for minimization of z = f(x,y) are included.
- NEW - Projects for undergraduate library research experience have been added.
- Explicit use of the software MATLAB is offered.
- Each numerical method is presented in a self-contained format.
- Balance of theory and application.
- A variety of problems to sharpen students skills with extensive problem sets with a wide variety of activities.
- A wealth of tables and graphs which illustrates computer calculations in examples making the resulting numerical approximations easier to interpret.

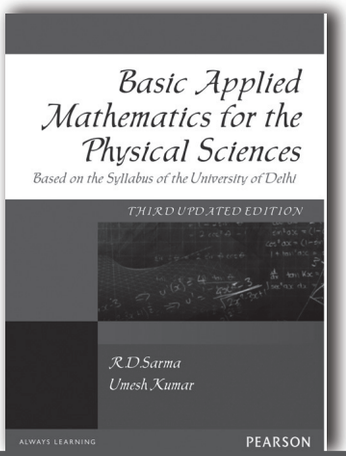
CONTENTS

1. Preliminaries.
2. The Solution of Nonlinear Equations f (x) = 0.
3. The Solution of Linear Systems AX = B.
4. Interpolation and Polynomial Approximation.
5. Curve Fitting.
6. Numerical Differentiation.
7. Numerical Integration.
8. Numerical Optimization.
9. Solution of Differential Equations.
10. Solution of Partial Differential Equations.
11. Eigenvalues and Eigenvectors.

Appendix: An Introduction to MATLAB.
Answers to Selected Exercises.

ABOUT THE AUTHOR (S)

John H. Mathews, California State University, Fullerton
Kurtis K. Fink, Northwest Missouri State University



ISBN: 9788131787823

Basic Applied Mathematics for the Physical Sciences, 3rd updated edition: Based on the syllabus of the University of Delhi, 3/e

R. D. Sarma | Umesh Kumar

440 | © **2012**

ABOUT THE BOOK

Basic Applied Mathematics for the Physical Sciences offers an introductory course in mathematics for the undergraduate students of physical sciences and applied physical sciences in the University of Delhi. Well structured into three parts, this book presents an in-depth study of matrices, calculus and complex numbers. It provides a perfect blend of theoretical principles and numerical problems to help students enhance their understanding of mathematical concepts and their appli cations. A student-friendly approach and an easy-paced treatment of all relevant topics make this book useful for students of mathematics.

FEATURES

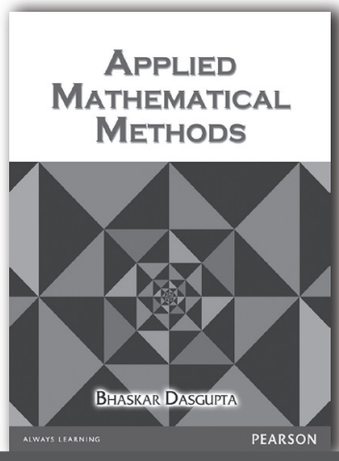
- Completely covers the semester-wise revised syllabus of the University of Delhi
- Includes the University of Delhi's solved question papers for the years 2010-11 and 2011-12
- Mathematical concepts explained using illustrative examples, diagrams and problems from various domains of science
- More than 350 solved examples interspersed in the text
- 700 practice problems
- Statistical, logarithmic and exponential tables provided, making the text completely self-contained

CONTENTS

ABOUT THE AUTHOR (S)

R. D. Sarma is an associate professor in the Department of Mathematics at Rajdhani College, New Delhi. He has over 19 years of teaching experience at the undergraduate and postgraduate levels. He has published 28 research papers in various international journals and has worked on several research projects under the UGC and CSIR. His primary areas of interest are fuzzy set theory and topology. He has attended several international conferences and has been involved in guiding students for their Ph.D. degrees .He has also worked as an associate professor in mathematics in the Eritrea Institute of Technology, under the aegis of the Ministry of Education, Eritrea.

Umesh Kumar is an assistant professor in the Department of Mathematics at Rajdhani College, New Delhi. He is an active member of the Mathematical Association of India and a life member of the Indian Mathematical Society and Indian Science Congress Association. His area of research is topology. He was recently awarded 'The Worshipful Company of International Bankers' Prize' for securing the first position in M.Sc. (Financial Mathematics) from King's College, London. Presently, he is deputed as a faculty member in the Cluster Innovation Centre, University of Delhi.



ISBN: 9788131700686

Applied Mathematical Methods

Bhaskar Dasgupta

Web Supplements

524 | © 2006

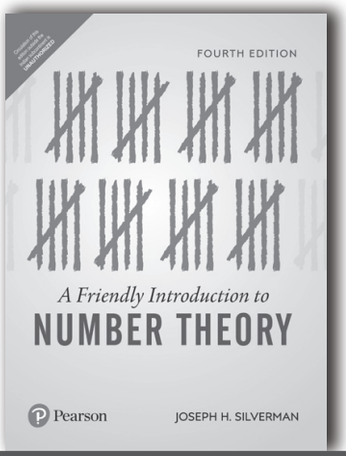
ABOUT THE BOOK

This book covers the material vital for research in today's world and can be covered in a regular semester course. It is the consolidation of the efforts of teaching the compulsory first semester post-graduate applied mathematics course at the Department of Mechanical Engineering at IIT Kanpur in two successive years.

CONTENTS

ABOUT THE AUTHOR

Bhaskar Dasgupta is associate professor in the Department of Mechanical Engineering at Indian Institute of Technology Kanpur. He received his doctorate from the Indian Institute of Science, Bangalore, India in 1997. His ever-expanding research interests include topics in robotics such as serial and parallel manipulators, and motion planning methods; as well as nonlinear optimization, domain mapping, geometric modelling and protein docking. In his spare time, he takes a zealous interest in languages, literature, history and philosophy.



ISBN: 9789353433079

A Friendly Introduction to Number Theory, 4/e

Joseph H Silverman

424 | © 2019

Web Supplements

ABOUT THE BOOK

A Friendly Introduction to Number Theory, 4th Edition is designed to introduce students to the overall themes and methodology of mathematics through the detailed study of one particular facet–number theory. Starting with nothing more than basic high school algebra, students are gradually led to the point of actively performing mathematical research while getting a glimpse of current mathematical frontiers. The writing is appropriate for the undergraduate audience and includes many numerical examples, which are analyzed for patterns and used to make conjectures. Emphasis is on the methods used for proving theorems rather than on specific results.

FEATURES

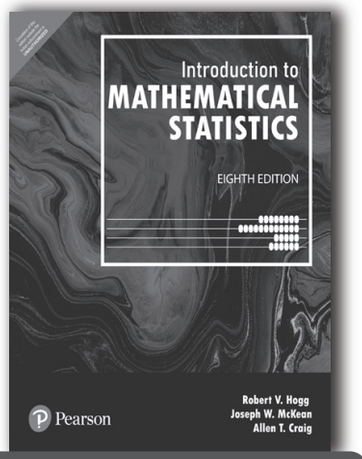
- 50 short chapters provide flexibility and options for instructors and students. A flowchart of chapter dependencies is included in this edition.
- Five basic steps are emphasized throughout the text to help readers develop a robust thought process:
  - Experimentation
  - Pattern recognition
  - Hypothesis formation
  - Hypothesis testing
  - Formal proof
- RSA cryptosystem, elliptic curves, and Fermat's Last Theorem are featured, showing the real-life applications of mathematics.

CONTENTS

1. What Is Number Theory?
2. Pythagorean Triples
3. Pythagorean Triples and the Unit Circle
4. Sums of Higher Powers and Fermat's Last Theorem
5. Divisibility and the Greatest Common Divisor
6. Linear Equations and the Greatest Common Divisor
7. Factorization and the Fundamental Theorem of Arithmetic
8. Congruences
9. Congruences, Powers, and Fermat's Little Theorem
10. Congruences, Powers, and Euler's Formula
11. Euler's Phi Function and the Chinese Remainder Theorem
12. Prime Numbers
13. Counting Primes
14. Mersenne Primes
15. Mersenne Primes and Perfect Numbers
16. Powers Modulo m and Successive Squaring
17. Computing kth Roots Modulo m
18. Powers, Roots, and "Unbreakable" Codes
19. Primality Testing and Carmichael Numbers
20. Squares Modulo p
21. Is -1 a Square Modulo p? Is 2?
22. Quadratic Reciprocity
23. Proof of Quadratic Reciprocity
24. Which Primes Are Sums of Two Squares?
25. Which Numbers Are Sums of Two Squares?
26. As Easy as One, Two, Three
27. Euler's Phi Function and Sums of Divisors
28. Powers Modulo p and Primitive Roots
29. Primitive Roots and Indices
30. The Equation X4 + Y4 = Z4
31. Square–Triangular Numbers Revisited
32. Pell's Equation
33. Diophantine Approximation
34. Diophantine Approximation and Pell's Equation
35. Number Theory and Imaginary Numbers
36. The Gaussian Integers and Unique Factorization
37. Irrational Numbers and Transcendental Numbers
38. Binomial Coefficients and Pascal's Triangle
39. Fibonacci's Rabbits and Linear Recurrence Sequences
40. Oh, What a Beautiful Function
41. Cubic Curves and Elliptic Curves
42. Elliptic Curves with Few Rational Points
43. Points on Elliptic Curves Modulo p
44. Torsion Collections Modulo p and Bad Primes
45. Defect Bounds and Modularity Patterns
46. Elliptic Curves and Fermat's Last Theorem
47. The Topsy-Turvey World of Continued Fractions [online]
48. Continued Fractions, Square Roots, and Pell's Equation [online]
49. Generating Functions [online]
50. Sums of Powers [online]

ABOUT THE AUTHOR

Joseph H. Silverman is a Professor of Mathematics at Brown University. He received his Sc.B. at Brown and his Ph.D. at Harvard, after which he held positions at MIT and Boston University before joining the Brown faculty in 1988.



ISBN: 9789353946760

Introduction to Mathematical Statistics, 8e

Robert V. Hogg | Allen T. Craig | Joseph W. McKean

764 | © 2020

ABOUT THE BOOK

Introduction to Mathematical Statistics by Hogg, McKean, and Craig enhances student comprehension and retention with numerous, illustrative examples and exercises. Classical statistical inference procedures in estimation and testing are explored extensively, and the text's flexible organization makes it ideal for a range of mathematical statistics courses. Substantial changes to the 8th Edition – many based on user feedback - help students appreciate the connection between statistical theory and statistical practice, while other changes enhance the develoment

FEATURES

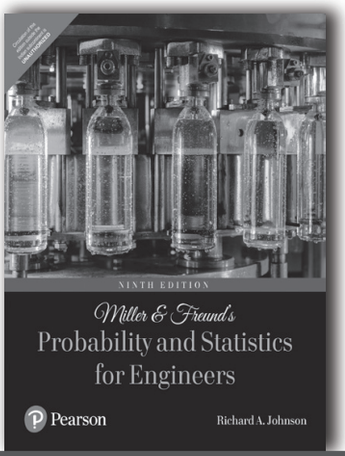
- Many additional real data sets to illustrate statistical methods or compare methods.
- Expanded use of the statistical software R, a powerful statistical language which is free and can run on all three main platforms.
- Expanded discussion of iterated integrals, with added figures to clarify discussion.
- Several important topics have been added, including a subsection on the bivariate normal distribution, Tukey's multiple comparison procedure and confidence intervals for the correlation coefficients.
- Discussion on standard errors for estimates obtained by bootstrapping the sample is now included.

CONTENTS

ABOUT THE AUTHOR (S)

Robert V. Hogg, University of Iowa

Joeseph McKean, Allen T. Craig, Late, Professor of Statistics, University of Iowa



ISBN: 9789353945237

Miller and Freund's Probability and Statistics for Engineering, 9e

Richard A. Johnson

560 | © 2020

ABOUT THE BOOK

Miller & Freund's Probability and Statistics for Engineers is rich in exercises and examples, and explores both elementary probability and basic statistics, with an emphasis on engineering and science applications. Much of the data has been collected from the author's own consulting experience and from discussions with scientists and engineers about the use of statistics in their fields. In later chapters, the text emphasizes designed experiments, especially two-level factorial design. The Ninth Edition includes several new datasets and examples showing application of statistics in scientific investigations, familiarizing students with the latest methods, and readying them to become real-world engineers and scientists.

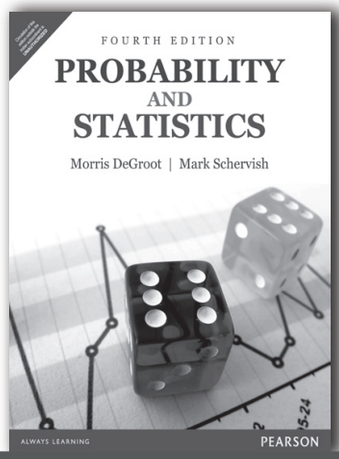
FEATURES

- Many new examples on important current engineering and scientific data further strengthen the text's orientation towards an applications-based introduction to statistics
- Added graphs illustrating P-values appear in several examples along with an interpretation
- More details about using R commands make it easy for students to check calculations on their own laptop or tablet, while reading an example.
- Key formulas are stressed and calculation formulas are downplayed. Computation formulas are set in the context of an application which only requires all, or mostly all, integer arithmetic, and now appear only at the end of sections. Students can then check their results with their choice of software.
- All examples are now numbered within each chapter.
- New data-based exercises feature real applications to help stimulate interest and strengthen a student's appreciation of the role of statistics in engineering applications.

CONTENTS

ABOUT THE AUTHOR

Richard A. Johnson University of Wisconsin–Madison



ISBN: 9789332573871

Probability and Statistics, 4/e

Morris H. DeGroot | Mark J. Schervish

2016 | © 2016

ABOUT THE BOOK

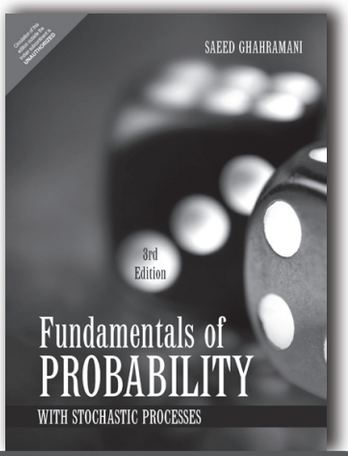
The revision of this well-respected text presents a balanced approach of the classical and Bayesian methods and now includes a chapter on simulation (including Markov chain Monte Carlo and the Bootstrap), coverage of residual analysis in linear models, and many examples using real data.

Probability & Statistics, Fourth Edition, was written for a one- or two-semester probability and statistics course. This course is offered primarily at four-year institutions and taken mostly by sophomore and junior level students majoring in mathematics or statistics. Calculus is a prerequisite, and a familiarity with the concepts and elementary properties of vectors and matrices is a plus

FEATURES

- Brief introductions in each technical section give readers a hint about what they are going to encounter, while summaries list the most important ideas.
- In addition to examples using current data, some elementary concepts of probability are illustrated by famous examples such as the birthday problem, the tennis tournament problem, the matching problem, and the collector's problem.
- Special features include sections on Markov chains, the gambler's ruin problem, and utility and preferences among gamblers. These topics are presented in an elementary fashion and can be omitted without loss of continuity.
- Optional sections of the book are indicated by an asterisk in the Table of Contents.
- Chapters 1—5 are devoted to probability and can serve as the text for a one-semester course on probability. Independence is now introduced after conditional probability.
- Chapters 6—10 are devoted to statistical inference. Both classical and Bayesian statistical methods are developed in an integrated presentation which will be useful to students when applying the concepts to the real world.

CONTENTS



ISBN: 9789332535107

Fundamentals of Probability, with Stochastic Processes, 3/e

Saeed Ghahramani

640 | © **2014**

ABOUT THE BOOK

Probability is presented in a very clear way in this text: through interesting and instructive examples and exercises that motivate the theory, definitions, theorems, and methodology. Due to its unique organization, this text has also been successfully used in teaching courses in discrete probability.

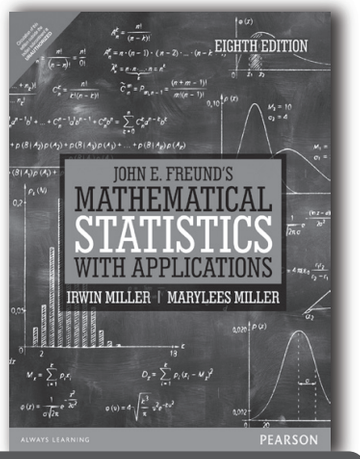
FEATURES

- NEW - An official reference for The American Actuarial Society.
- NEW - Chapter on Stochastic Processes Covers more in-depth material on Poisson processes, presents the basics of Markov chains, continuous-time Markov chains, and Brownian Motion. This text is now the most comprehensive available in probability.
- NEW - Applications of probability and stochastic processes in finance Includes some practical, meaningful, non□trivial, and relevant applications of probability and stochastic processes in finance, economics, and actuarial sciences.
- NEW - Comprehensive new section on applications to Genetics Covers basic concepts of genetics including many important examples throughout the book.
- NEW - New section on Survival Analysis and Hazard Functions.
- NEW - Fine-tuned for accuracy Praised for being very accurate and virtually error free.
- NEW - More explanations and clarifying comments.
- NEW - 276 new exercises and examples Adds new application problems.
- NEW - More insightful and better solutions.
- Historical roots and applications of many of the theorems and definitions.
- Simple probabilistic arguments Given with the usual analytic proofs.

CONTENTS

ABOUT THE AUTHOR

Saeed Ghahramani, Western New England College, Massachuettes



ISBN: 9789332519053

John E. Freund's Mathematical Statistics with Applications, 8/e

Irwin Miller | Marylees Miller

476 | © 2014

Web Supplements

ABOUT THE BOOK

John E. Freund's Mathematical Statistics with Applications, Eighth Edition, provides a calculus-based introduction to the theory and application of statistics, based on comprehensive coverage that reflects the latest in statistical thinking, the teaching of statistics, and current practices.

This text is appropriate for a two-semester or three-quarter calculus-based course in Introduction to Mathematical Statistics. It can also be used for a single-semester course emphasizing probability, probability distributions and densities, sampling, and classical statistical inference

FEATURES

- "The Theory in Practice" sections at the end of every chapter give students the chance to apply the methods they've learned.
- More than 1,200 exercises offer a wide variety to choose from in creating assignments, tests, and class work. Many of these exercises offer the opportunity to use technology so that students can understand the role of computers in factoring and analyzing statistical data.
- Comprehensive coverage of statistical theories students have appreciated for generations.
- Comprehensive appendices summarize the properties of the special probability distributions and density functions, making this text an invaluable reference.

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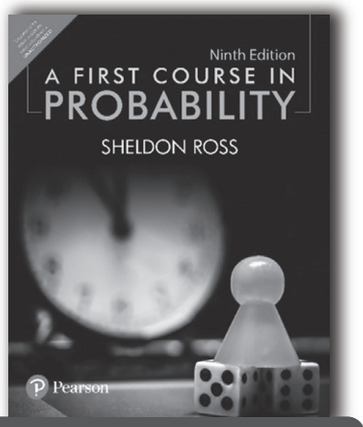


ISBN: 9789353065607

A First Course in Probability, 9/e

Sheldon Ross

480 | © 2019

Web Supplements

ABOUT THE BOOK

A First Course in Probability, 9e is a text that endeavors to present not only the mathematics of probability theory, but also, through numerous examples, the many diverse applications of the subject. Aside from a multitude of changes made to increase the clarity of the text, the new edition includes many new and updated problems, exercises, and text material chosen both for inherent interest and for their use in building student intuition about probability.

FEATURES

- Clear and intuitive explanations supported with variety of diverse examples and three sets of exercises given at the end of each chapter, that include Problems, Theoretical Exercises, and Self-Test Problems and Exercises. The Self-Test Problems and Exercises include complete solutions in the appendix, allowing students to test their comprehension and study for exams.
- Excellent Pedagogy—Over 480 exercises, 240 Theoretical exercises, 190 Self-text problems and exercises

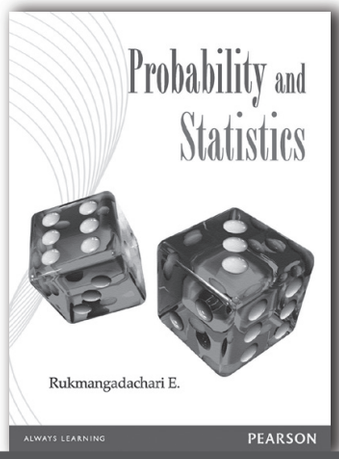
NEW TO THIS EDITION

- Stream-lined exposition focuses on improved clarity and deeper understanding.
- New examples and exercises added throughout this edition pique students' interest while building their understanding of probability.
- New Examples 3h and 4k, found in Chapter 3,engage students by discussing estimating the fraction of twin pairs that are identical and with analyzing serve and rally games.

CONTENTS

ABOUT THE AUTHOR

Sheldon M. Ross is a professor in the Department of Industrial Engineering and Operations Research at the University of Southern California. He received his Ph.D. in statistics at Stanford University in 1968. He has published many technical articles and textbooks in the areas of statistics and applied probability. Among his texts are A First Course in Probability, Introduction to Probability Models, Stochastic Processes, and Introductory Statistics.



ISBN: 9788131761366

Probability and Statistics

E. Rukmangadachari

258 | © **2012**

ABOUT THE BOOK

This book is designed for engineering students studying the core paper on probability and statistics during their second or third years. It includes detailed explanation of theory with numerous examples and exercises, as well as relevant references to engineering applications. Each chapter also has numerous objective type questions, and answers and hints are provided for all the exercise problems and objective type questions.

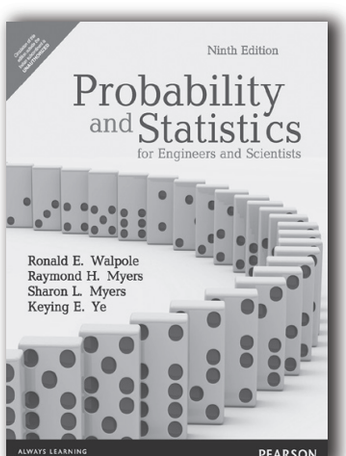
FEATURES

- Detailed examination of special probability distributions
- A separate chapter on estimation theory
- Detailed examination of regression and correlation analysis
- A separate chapter on queuing theory

CONTENTS

ABOUT THE AUTHOR

E Rukmangadachari is former head of Computer Science and Engineering as well as Humanities and Sciences at Malla Reddy Engineering College, Secunderabad. He is an MA from Osmania University, and an M.PHIL. and Ph.D. degree holder from Sri Venkateswara University, Thirupathi.



ISBN: 9789332519084

Probability and Statistics for Engineers and Scientists, 9/e

Ronald E. Walpole | Raymond H. Myers | Sharon L. Myers | Keying Ye

Web Supplements

950 | © **2014**

ABOUT THE BOOK

This classic text provides a rigorous introduction to basic probability theory and statistical inference, with a unique balance between theory and methodology. Interesting, relevant applications use real data from actual studies, showing how the concepts and methods can be used to solve problems in the field. This revision focuses on improved clarity and deeper understanding.

FEATURES

- The balance between theory and applications offers mathematical support to enhance coverage when necessary, giving engineers and scientists the proper mathematical context for statistical tools and methods.
- Mathematical level: this text assumes one semester of differential and integral calculus as a prerequisite.
  - Calculus is confined to elementary probability theory and probability distributions (Chapters 2 7).
  - Matrix algebra is used modestly in coverage of linear regression material (Chapters 11 12).
  - Linear algebra and the use of matrices are applied in Chapters 11 15, where treatment of linear regression and analysis of variance is covered.
- Compelling exercise sets challenge students to use the concepts to solve problems that occur in many real-life scientific and engineering situations. Many exercises contain real data from studies in the fields of biomedical, bioengineering, business, computing, etc.
- Real-life applications of the Poisson, binomial, and hypergeometric distributions generate student interest using topics such as flaws in manufactured copper wire, highway potholes, hospital patient traffic, airport luggage screening, and homeland security.

CONTENTS

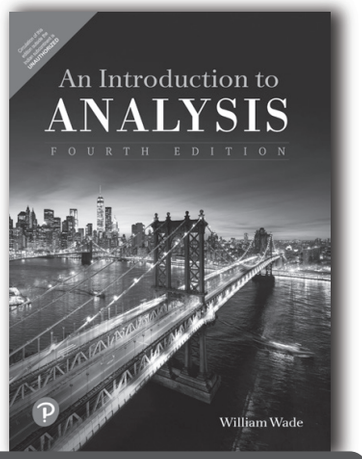
ABOUT THE AUTHOR (S)

Ronald E. Walpole

Raymond H. Myers, Virginia Polytechnic Institute

Sharon L. Myers

Keying E. Ye, Virginia Polytechnic Institute & State University



IISBN: 9789353432768

IAn Introduction to Analysis, 4/e

William Wade

696 | © **2019**

ABOUT THE BOOK

This text prepares students for future courses that use analytic ideas, such as real and complex analysis, partial and ordinary differential equations, numerical analysis, fluid mechanics, and differential geometry. The book is designed to challenge advanced students while encouraging and helping weaker students. Offering readability, practicality and flexibility, Wade presents fundamental theorems and ideas from a practical viewpoint, showing students the motivation behind the mathematics and enabling them to construct their own proofs.

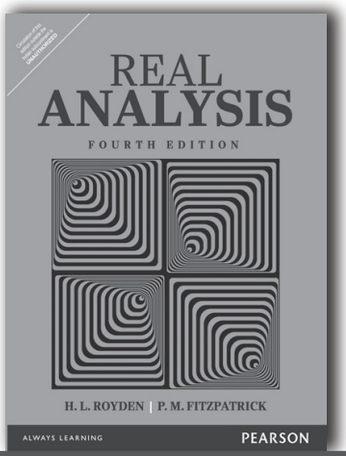
FEATURES

- The **practical focus** explains assumptions so that students learn the motivation behind the mathematics and are able to construct their own proofs.
- **Theoretical exercises** of medium difficulty have been added throughout the book.
- **New True/False questions** in the first six chapters confront common misconceptions that students sometimes acquire at this level.
- **Early introduction of the fundamental goals of analysis** refers and examines how a limit operation interacts with algebraic operation.
- **Separate coverage of topology and analysis** presents purely computational material first, followed by topological material in alternate chapters.
- **More than 200 worked examples and 600 exercises** encourage students to test comprehension of concepts, while using techniques in other contexts

CONTENTS

ABOUT THE AUTHOR

William Wade received his PhD in harmonic analysis from the University of California—Riverside. He has been a professor of the Department of Mathematics at the University of Tennessee for more than forty years. During that time, he has received multiple awards including two Fulbright Scholarships, the Chancellor's Award for Research and Creative Achievements, the Dean's Award for Extraordinary Service, and the National Alumni Association Outstanding Teaching Award.



ISBN: 9789332551589

Real Analysis, 4/e

Halsey Royden | Patrick Fitzpatrick

544 | © 2015

ABOUT THE BOOK

Real Analysis, Fourth Edition, covers the basic material that every graduate student should know in the classical theory of functions of a real variable, measure and integration theory, and some of the more important and elementary topics in general topology and normed linear space theory. This text assumes a general background in undergraduate mathematics and familiarity with the material covered in an undergraduate course on the fundamental concepts of analysis. Patrick Fitzpatrick of the University of Maryland—College Park spearheaded this revision of Halsey Royden's classic text

FEATURES

- Independent, modular chapters give instructors the freedom to arrange the material into a course according that suits their needs. A chart in the text gives the essential dependencies.
- Content is divided into three parts:
  - Part 1: Classical theory of functions, including the classical Banach spaces
  - Part 2: General topology and the theory of general Banach spaces
  - Part 3: Abstract treatment of measure and integration
- Throughout the text, an understanding of the linkages between the three parts is fostered. The expanded collection of problems range from those that confirm understanding of basic results and ideas to those that are quite chal¬lenging; many problems foreshadow future developments.

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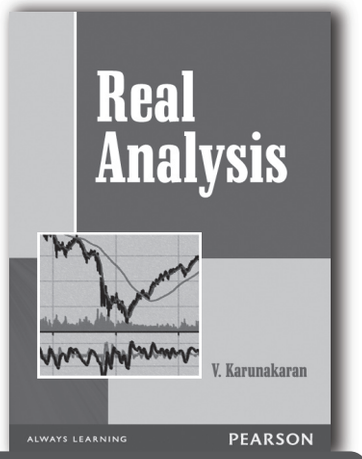


ISBN: 9788131757987

Real Analysis

V. Karunakaran

600 | © 2011

Web Supplements

ABOUT THE BOOK

This text book is designed for an undergraduate course on mathematics. It covers the basic material that every graduate student should know in the classical theory of functions of real variables, measures, limits and continuity. This text book offers readability, practicality and flexibility. It presents fundamental theorems and ideas from a practical viewpoint, showing students the motivation behind mathematics and enabling them to construct their own proofs.

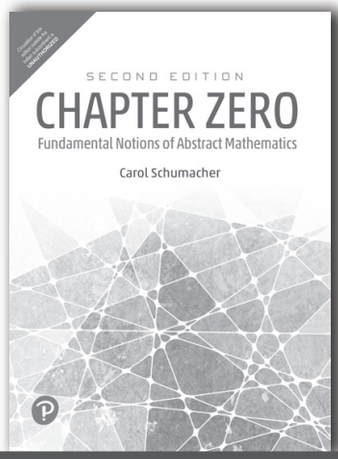
FEATURES

- Comprehensive coverage of sequence and series
- Detailed coverage of topics like measure theory, set theory, limits and continuity
- The theory is well explained, with an equal number of theorems and examples for all topics, including Lp spaces, real number system, measure theory and sequence and series
- A very flexible presentation with a uniform writing style and notation, covering the material in small sections, which allows instructors and students to adapt this book to their syllabus

CONTENTS

ABOUT THE AUTHOR

V. Karunakaran has 35 years of research experience specializing in real, complex and functional analysis. He was a life member of the Indian Mathematical Society, Association of Mathematics Teachers of India, a fellow of the Forum D'Analystes, Chennai, and a regular reviewer for Zentralblatt für Mathematik.



ISBN: 9789353432744

Chapter Zero, 2/e

Carol Schumacher

256 | © 2019

Web Supplements

ABOUT THE BOOK

Chapter Zero: Fundamental Notions of Abstract Mathematics is designed for the sophomore/junior level Introduction to Advanced Mathematics course. Written in a modified R.L. Moore fashion, it offers a unique approach in which students construct their own understandings. However, while students are called upon to write heir own proofs, they are also encouraged to work in groups. The text also offers "proof sketches" and helpful technique tips to help students as they develop their proof writing skills.

FEATURES

- NEW! Coverage of Isomorphisms and Graph Theory.
- Exercise sections have been improved by smoothing out the grade of difficulty.
- Proof Sketches are woven throughout the early chapters of the text, assisting students with proof techniques.
- Logic is used as a tool for analyzing the content of mathematical assertions and for constructing valid mathematical proofs.
- Rigorous axiomatic treatment of set theory is introduced in Appendices A and B.

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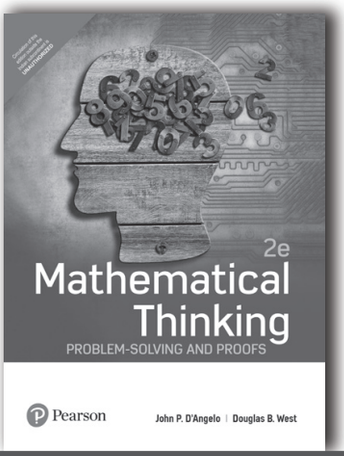
ABOUT THE AUTHOR

Professor of Mathematics, Kenyon College.



ISBN: 9789353433093

Mathematical Thinking: Problem-Solving and Proofs, 2/e

John D'Angelo | Douglas B. West

440 | © 2019

ABOUT THE BOOK

This text is designed to prepare students ***thoroughly*** in the logical thinking skills necessary to understand and communicate fundamental ideas and proofs in mathematics—skills vital for success throughout the upper class mathematics curriculum. It begins by discussing mathematical language and proof techniques including induction, applies them to easily-understood questions in elementary number theory and counting, and then develops additional techniques of proof via important topics in discrete and continuous mathematics. The stimulating exercises are ***acclaimed for their exceptional quality.***

FEATURES

- Emphasis on understanding rather than manipulation—Stresses full comprehension rather than rote symbolic manipulation for mastery of proof techniques and mathematical ideas.
- Engaging examples—Interesting applications introduce and motivate the underlying mathematics.
- Hints for selected exercises—Provides immediate hints for some exercises and hints for others in an appendix.
- Superior exercise sets—Offers over 850 exercises ranging from relatively straightforward applications of ideas in the text to subtle problems requiring some ingenuity.
- Gradation of exercises—Distinguishes easier exercises by (–), harder by (+), and particularly valuable or instructive exercises by (!).

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ABOUT THE AUTHOR

John D'Angelo Vice President of Facilities Management at Northwestern University. Douglas West is a professor of graph theory at University of Illinois at Urbana-Champaign.