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Liberal Arts Chemistry (Non Science Majors)

Textbooks

International Edition

CHEMISTRY IN CONTEXT

Applying Chemistry to Society, 5th Edition

By American Chemical Society

2006 (Feb 2005)

ISBN-13: 978-0-07-310159-0 / MHID: 0-07-310159-1

(with OLC Password Card)

ISBN-13: 978-0-07-111535-3 / MHID: 0-07-111535-8

[IE with OLC]

Website: <http://www.mhhe.com/cic>

Following in the tradition of the first four editions, the goal of this market leading textbook, Chemistry in Context, fifth edition, is to establish chemical principles on a need-to-know basis within a contextual framework of significant social, political, economic and ethical issues. The non traditional approach of Chemistry in Context reflect today's technological issues and the chemistry principles imbedded within them. Global warming, alternate fuels, nutrition, and genetic engineering are examples of issues that are covered in CIC.

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The Air We Breathe / Protecting the Ozone Layer / The Chemistry of Global Warming / Energy, Chemistry, and Society / The Water We Drink / Neutralizing the Threat of Acid Rain / The Fires of Nuclear Fission / Energy from Electron Transfer / The World of Plastics and Polymers / Manipulating Molecules and Designing Drugs / Nutrition: Food for Thought / Genetic Engineering and the Chemistry of Heredity / Measure for Measure: Conversion Factors and Constants / The Power of Exponents / Clearing the Logjam / Answers to Your Turn Questions Not Answered in the Text / Answers to Selected End-of-Chapter Questions

LABORATORY MANUAL TO ACCOMPANY CHEMISTRY IN CONTEXT

Applying Chemistry to Society

5th Edition

By American Chemical Society

2006 (Feb 2005) / 224 pages

ISBN-13: 978-0-07-282836-8 / MHID: 0-07-282836-6

The 5th edition Laboratory Manual that accompanies Chemistry in Context is compiled and edited by Gail Steehler (Roanoke College). The experiments use microscale equipment (wellplates and Beral-type pipets) as well as common materials. Project-type and cooperative/collaborative laboratory experiments are included. Additional experiments are available on the Online Learning Center, as is the instructor's guide.

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Preface to Instructions / To the Student / Essay: The Wonder of Chemistry Experiments / Some Notes About Laboratory Safety / 1 Preparation and Properties of Gases in a Breath 2 Chromatographic Study of Felt-Tip Pen Inks 3 Weighing Air and Cooling Water: A Graphic Experience 4 Solids in Cigarette Smoke 5 What Protects Use from Ultraviolet Light? 6 Visibly Delighted: A Spectrophotometric Study of Colored Solutions 7 Chemical Bonds, Molecular Models, and Molecular Shapes 8 Weighing Gases To Find Molar Masses 9 Chemical Moles: Converting Baking Soda to Table Salt 10 Hot Stuff: An Energy Conservation Problem 11 Comparison of the Energy Content of Fuels 12 Building a Conductivity Detector and Testing for Ions 13 Analysis of Vinegar 14 Measurement of

Water Hardness 15 Measurement of Chloride in River Water 16 Analysis of Bottled Water 17 Reactions of Acids with Common Substances 18 pH Measurements of Common Substances 19 What Is the pH of Rain? 20 Solubilities: An Investigation 21 Measurement of Radon in Air 22 Chemical Reactions and Electricity 23 Polymer Synthesis and Properties 24 Classification and Identification of Common Plastics 25 Identification of Analgesic Drugs by Thin-Layer Chromatography 26 Synthesis of Aspirin 27 How Much Fat Is in Potato Chips and Hot Dogs? 28 How Much Sugar Is in Soft Drinks and Fruit Juices? 29 Vitamin C in Fruit Juice and in a Vitamin Tablet 30 Isolation of DNA (Deoxyribonucleic Acid) / Performance-Based Assessment Activities

SCHAUM'S OUTLINE OF BEGINNING CHEMISTRY

3rd Edition

By David Goldberg, University of Illinois – Urbana – Champaign

2005 (Dec 2004) / 384 pages

ISBN-13: 978-0-07-144780-5 / MHID: 0-07-144780-6

[A Schaum Professional Publication]

This clear and complete guide to the fundamentals of chemistry features course material in a succinct outline form, together with hundreds of detailed, fully solved problems. A perfect companion to most standard texts, this third edition has been updated to include the latest pedagogic approaches; more than 670 fully worked problems of varying difficulty, designed to lead you safely through the pitfalls of the course; and hundreds more practice problems.

International Edition

CHEMISTRY

A World of Choices, 2nd Edition

By Paul B. Kelter, University of North Carolina—Greensboro, James

D. Carr, University of Nebraska—Lincoln and Andrew Scott

2003 / 672 pages

ISBN-13: 978-0-07-293040-5 / MHID: 0-07-293040-3

(with OLC Bind-In Card) - Out of Print

ISBN-13: 978-0-07-119938-4 / MHID: 0-07-119938-1

[IE with OLC Bind-In Card]

Website: <http://www.mhhe.com/kelter2>

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Website: www.mcgraw-hill.com.sg

HOW TO SOLVE WORD PROBLEMS IN CHEMISTRY

By David E. Goldberg, Brooklyn College

2001 / 231 pages

ISBN-13: 978-0-07-136302-0 / MHID: 0-07-136302-5

[A Schaum Professional Publication]

Website: <http://books.mcgraw-hill.com/cgi-bin/getbook.pl?isbn=0071363025&adkey=W02003>**CONTENTS**

Chapter 1: Introduction. Chapter 2: Measurement. Chapter 3: Classical Laws of Chemical Combination. Chapter 4: Formula Calculations. Chapter 5: Stoichiometry. Chapter 6: Concentration Calculations. Chapter 7: Gas Laws. Chapter 8: Thermochemistry. Chapter 9: Electrochemistry. Chapter 10: Equilibrium. Chapter 11: Colligative Properties. Chapter 12: Thermodynamics. Chapter 13: Miscellaneous Problems. List of Important Equations.

3,000 SOLVED PROBLEMS IN CHEMISTRY

By David E. Goldberg, Brooklyn College

1988 / 624 pages

ISBN-13: 978-0-07-023684-4 / MHID: 0-07-023684-4

[A Schaum Professional Publication]

Website: <http://books.mcgraw-hill.com/cgi-bin/getbook.pl?isbn=0070236844&adkey=W02003>

This powerful problem-solver gives you 3,000 problems in chemistry, fully solved step-by-step! From Schaum's, the originator of the solved-problem guide, and students' favorite with over 30 million study guides sold his timesaver helps you master every type of general chemistry problem that you will face in your homework and on your tests, from basic units to coordination compounds. Work the problems yourself, then check the answers, or go directly to the answers you need with a complete index. Compatible with any classroom text, Schaum's 3000 Solved Problems in Chemistry is so complete it's the perfect tool for graduate or professional exam review!

Prep/Basic Chemistry

Textbooks

International Edition

NEW

CONCEPTUAL INTRODUCTION CHEMISTRY

By Rich Bauer, James Birk and Pamela S Marks of Arizona State University-Tempe

2007 (Jan 2006)

ISBN-13: 978-0-07-322106-9 / MHID: 0-07-322106-6

ISBN-13: 978-0-07-110794-5 / MHID: 0-07-110794-0 [IE]

Website: <http://highered.mcgraw-hill.com/sites/0072857684>

A Conceptual Introduction to Chemistry by Bauer/Birk/Marks offers today's student a fresh perspective to the introduction of chemistry. This new textbook offers a conceptual approach to chemistry by starting first with macroscopic phenomena, and then presenting the underlying microscopic detail. Each chapter opens with a real-life scenario that helps students connect abstract chemical concepts to their own lives. The math found in A Conceptual Introduction to Chemistry is introduced on a need-to-know basis, with "Math Toolboxes" ending each chapter, in support of the math skills required in that chapter.

FEATURES

- Vivid, micro to macro art.
- Introduction of math where applicable, on a need-to-know basis. This book is not a baby general chemistry textbook.
- All chapters begin with a scenario involving students in real-life situations.
- This textbook will take a conceptual approach, teaching the chemistry first and the mathematics later.

CONTENTS

Chapter 1 Matter and Energy Chapter 2 Atoms, Ions, and the Periodic Table Chapter 3 Chemical Compounds Chapter 4 Chemical Composition Chapter 5 Chemical Reactions and Equations Chapter 6 Quantities in Chemical Reactions Chapter 7 Electron Structure of the Atom Chapter 8 Chemical Bonding Chapter 9 The Gaseous State Chapter 10 The Liquid and Solid States Chapter 11 Solutions Chapter 12 Reaction Rates and Chemical Equilibrium Chapter 13 Acids and Bases Chapter 14 Oxidation-Reduction Reactions Chapter 15 Nuclear Chemistry Chapter 16 Organic Chemistry Appendix A Useful Reference Information Appendix B Toolboxes Appendix C Answers to Practice Problems Appendix D Answers to Selected Questions and Problems Glossary Index

International Edition

NEW

FUNDAMENTALS OF CHEMISTRY**5th Edition**

By David Goldberg, Brooklyn College

2007 (May 2006)

ISBN-13: 978-0-07-322104-5 / MHID: 0-07-322104-X

ISBN-13: 978-0-07-326769-2 / MHID: 0-07-326769-4

(with ARIS Instructor Access Kit)

ISBN-13: 978-0-07-110842-3 / MHID: 0-07-110842-4

[IE with ARIS Card]

Website: <http://www.mhhe.com/goldberg>

Designed for the one-semester preparatory chemistry course, the new, fifth edition of Fundamentals of Chemistry provides students with a solid foundation in problem solving for all the topic areas covered in a standard general chemistry course. The author not only provides a clear consistent methodology to help students develop conceptual and quantitative problem-solving skills, but also engages students by using analogies that relate chemistry to everyday life. Students who need help with mathematical manipulations, as well as reading and writing scientific material, will find Goldberg's text an excellent learning tool.

NEW TO THIS EDITION

- NEW CHAPTER 17: ELECTROCHEMISTRY provides students with more detailed coverage of this topic so they are well-prepared for future courses.

FEATURES

- Proven methodology to teaching chemistry:
 - Use of real world problems (use of analogies and conceptual problems) engages students in the topic of study.
 - Dimensional analysis is integrated as a key element for helping students to translate word problems into algebraic expressions.
 - Various problem-solving methods are introduced (in-chapter; self-tutorial; end-of-chapter problems by topic; end-of-chapter general problems), each designed to challenge students to think logically.
- Proven methodology to helping students learn chemistry:

- Organizing the readers' thoughts (chapter outlines, learning objectives; review clues, problem-solving flow diagrams).

- Tools to learning (worked examples; stop and review sections; key tables and illustrations).

- Summarizing what they have learned (Snapshot Reviews after each section, Chapter Summaries; Items for Special Attention, Self-Tutorial Problems).

• Solid ancillary package, written by the author himself:

- For the student: Online Learning Center, ChemSkill Builder, How to Study Science, 3000 Solved Problems in Chemistry.

- For the instructor: Instructor's Manual and Solution Manual, Instructor Testing and Resource CD-ROM, Digital Content Manager CD-ROM, ChemSkill Builder.

CONTENTS

Chapter 1: Basic Concepts Chapter 2: Measurement Chapter 3: Atoms and Atomic Masses Chapter 4: Electronic Configuration of the Atom Chapter 5: Chemical Bonding Chapter 6: Nomenclature Chapter 7: Formula Calculations Chapter 8: Chemical Reactions Chapter 9: Net Ionic Equations Chapter 10: Stoichiometry Chapter 11: Molarity Chapter 12: Gases Chapter 13: Atomic and Molecular Properties Chapter 14: Solids and Liquids, Energies of Physical and Chemical Changes Chapter 15: Solutions Chapter 16: Oxidation Numbers Chapter 17: Chemical Equilibrium Chapter 18: Acid-Base Theory Chapter 19: Organic Chemistry Chapter 20: Nuclear Reactions

International Edition

CHEMISTRY

A First Course, 3rd Edition

By Jacqueline I Kroshwitz, formerly of Kean College of New Jersey, Melvin Winokur, formerly of Bloomfield College and A Bryan Lees, Kean College of New Jersey

1995 / 640 pages

ISBN-13: 978-0-697-27282-9 / MHID: 0-697-27282-6

(Out of Print)

ISBN-13: 978-0-697-23660-9 / MHID: 0-697-23660-9

(with Student Study Art Notebook, Mandatory Package)

(Out of Print)

ISBN-13: 978-0-697-32799-4 / MHID: 0-697-32799-X

(Extended Version)

ISBN-13: 978-0-07-114453-7 / MHID: 0-07-114453-6 [IE]

Supplements

SCHAUM'S EASY OUTLINE BEGINNING CHEMISTRY

By David E. Goldberg, Brooklyn College

2004 (Oct 2003) / 144 pages

ISBN-13: 978-0-07-142239-0 / MHID: 0-07-142239-0

[A Schaum Professional Publication]

What could be better than the bestselling Schaum's Outline series? For students looking for a quick nuts-and-bolts overview, it would have to be Schaum's Easy Outline series. Every book in this series is a pared-down, simplified, and tightly focused version of its predecessor. With an emphasis on clarity and brevity, each new title features a streamlined and updated format and the absolute essence of the subject, presented in a concise and readily understandable form.

» Graphic elements such as sidebars, reader-alert icons, and boxed highlights stress selected points from the text, illuminate keys to learning, and give students quick pointers to the essentials.

» Designed to appeal to underprepared students and readers turned off by dense text

» Cartoons, sidebars, icons, and other graphic pointers get the material across fast

» Concise text focuses on the essence of the subject

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Allied Health / Nursing Chemistry (General, Organic and Biochemistry)

Textbooks



FOUNDATIONS OF GENERAL, ORGANIC AND BIOCHEMISTRY

By Katherine Denniston and Joseph Topping of Towson University
2008 (January 2007)

ISBN-13: 978-0-07-331183-8 / MHID: 0-07-331183-9

ISBN-13: 978-0-07-331531-7 / MHID: 0-07-331531-1
(with ARIS Instructor's Access Guide)

This new Foundations of General, Organic, and Biochemistry is designed to help undergraduate health-related majors, and students of all other majors, understand key concepts and appreciate the significant connections between chemistry, health, disease, and the treatment of disease. Foundations, just like its parent text, strikes a balance between theoretical and practical chemistry, while emphasizing material that is unique to health-related studies. Foundations of General, Organic and Biochemistry is designed for the one semester allied health chemistry course. This text has an easy-to-follow problem-solving approach, vivid illustrations, and engaging applications including timely "Chemistry at the Crime Scene" applications with "For Further Understanding" questions that follow to help the students think through what they just read. The art program, engaging and thought provoking questions, problems, and discussion topics, is what will make this book appealing to students and instructors alike.

FEATURES

- Denniston's new Foundations of General, Organic and Biochemistry textbook will feature macroscopic and molecular views of a process, so students can learn to connect these two levels of reality with each other.
- Denniston's new Foundations will have a complete ARIS electronic homework site that will contain in-chapter and end-of-chapter problems from the text and an online gradebook.
- Clear and Effective Approach to Problem Solving In-Chapter Examples, Solutions, and Problems: Each chapter includes examples that show the student, step by step, precisely how to properly determine the correct answer. Whenever possible, the solved examples are followed by in-text problems that allow the students to test their mastery of information and to build self-confidence. In-Chapter and End-of Chapter Problems: The authors have created a wide variety of paired concept problems. The answers to the odd-numbered questions will be found in the back of the book as reinforcement for the students as they develop problem-solving skills. However, the students must then be able to apply the same principles to the related even-numbered problems. Critical Thinking Problems: Each chapter includes a set of critical thinking problems. These problems are intended to challenge the students to integrate concepts to solve more complex problems. They make a perfect complement to the classroom lecture since they provide an opportunity for in-class discussion of complex problems dealing with daily life and the health care sciences
- Engaging Applications! Connections: Clinical, Medical, Human and Chemistry at the Scene Connections are found throughout every chapter of the book. The Medical, Clinical, Human and Chemistry at the Scene Connections provide updated information in various health fields and

other growing areas of chemistry to engage students' interest and help them understand chemistry as related to their lives. Learning Goal Icons: To help alert the student to the important concepts covered in the text, an icon is placed next to the textual material that supports the learning goal. Integration of Chemistry in all Disciplines: The emphasis in this text is on integration of general, organic, and biochemistry to help students understand the interrelatedness of these sub-disciplines. Students need to understand that chemistry is not divided into separate areas but is one interconnected discipline. Margin notes demonstrate the relationships between the areas.

CONTENTS

1. Chemistry: Methods and Measurement 2. The Structure of the Atom and the Periodic Table 3. Structure and Properties of Ionic and Covalent Compounds 4. Calculations and the Chemical Equation 5. Energy, Rate, and Equilibrium 6. States of Matter: Gases, Liquids, and Solids 7. Solutions 8. Acids and Bases 9. The Nucleus and Radioactivity 10. An Introduction to Organic Chemistry: The Saturated Hydrocarbons 11. The Unsaturated Hydrocarbons: Alkenes, Alkynes, and Aromatics 12. Oxygen- and Sulfur Containing Organic Compounds 13. Carboxylic Acids, Esters, Amines, and Amides 14. Carbohydrates 15. Lipids and their Functions in Biochemical Systems 16. Protein Structure and Enzymes 17. Introduction to Molecular Genetics 18. Carbohydrate Metabolism 19. Fatty Acid and Amino Acid Metabolism

International Edition



GENERAL, ORGANIC AND BIOCHEMISTRY

5th Edition

By Katherine J. Denniston and Joseph J. Topping of Towson University, Robert L. Caret, San Jose State University

2007 (Nov 2005)

ISBN-13: 978-0-07-322107-6 / MHID: 0-07-322107-4

ISBN-13: 978-0-07-110795-2 / MHID: 0-07-110795-9

[IE with ARIS Card]

Website: <http://highered.mcgraw-hill.com/sites/0072828471>

The fifth edition of General, Organic, and Biochemistry is designed to help undergraduate health-related majors, and students of all other majors, understand key concepts and appreciate the significant connections between chemistry, health, disease, and the treatment of disease. This text continues to strike a balance between theoretical and practical chemistry, while emphasizing material that is unique to health-related studies. Designed for the one- or two-semester course, the text has an easy-to-follow problem-solving pedagogy, vivid illustrations, and engaging applications. The updating of the art program throughout, along with many new questions, problems, and discussion topics, continues to make this book appealing to students and instructors alike.

NEW TO THIS EDITION

- New micro-to-macro art!
- Denniston's textbook will feature macroscopic and molecular views of a process, so students can learn to connect these two levels of reality with each other.
- Art program has been updated throughout.
- Approximately 220 full-color illustrations have been revised for this edition, in addition to over 30 new illustrations and 50 new photos, to help students better understand difficult concepts. In many cases, illustrations have been redrawn to be more realistic, and have been color-enhanced.
- New Electronic Homework Program for GOB! GOB Zone will contain in-chapter and end-of-chapter problems from the text and an online gradebook.

- Additional Questions and Problems have been added in every chapter.

- Each chapter contains new additional problems for students, for a total of over 500 new problems in the Fifth Edition. These questions are now separated into sections for Foundations and Applications. "Foundations" include fundamentals and drill problems. "Applications" require the students to use the basic course content to solve more complex problems.

FEATURES

- Clear and effective approach to problem solving: Each chapter includes examples that show the student, step-by-step, precisely how to properly determine the correct answer. Whenever possible, the solved examples are followed by in-text problems that allow the students to test their mastery of information and to build self-confidence.

- In-chapter and end-of chapter problems: The authors have created a wide variety of paired concept problems. The answers to the odd-numbered questions will be found in the back of the book as reinforcement for students as they develop problem-solving skills. The students must then be able to apply the same principles to the related even-numbered paired problems.

- Critical Thinking Problems: Each chapter includes a set of critical thinking problems. These problems are intended to challenge the students to integrate concepts to solve more complex problems. They make a perfect complement to the classroom lecture, since they provide an opportunity for in-class discussion of complex problems dealing with daily life and the health care sciences.

- Engaging Applications!

- Perspectives: Added eleven new Clinical, Medical and Human Perspectives throughout the book. The Medical, Clinical, Human and Environmental Perspectives provide updated information in various health fields and other growing areas of chemistry to engage students' interest and help them understand chemistry as related to their lives.

- Learning Goal Icons: To help alert the student to the important concepts covered in the text, an icon is placed next to the textual material that supports the learning goal.

- Integration of Chemistry in all Disciplines: The emphasis in this text is on integration of general, organic, and biochemistry to help students understand the interrelatedness of these sub-disciplines. Students need to understand that chemistry is not divided into separate areas but is one interconnected discipline. Margin notes demonstrate the relationships between the areas.

- Dynamic Visual Program

- Illustrations: Each chapter is amply illustrated using figures, tables, and chemical formulas. All of these illustrations are carefully annotated for clarity.

- Color-Coding Scheme: Because it is difficult for students to understand the chemical changes that occur in complex reactions, the authors have color-coded the reactions so that chemical groups being added or removed in a reaction can be quickly recognized.

- Spartan models: The students' ability to understand the geometry and three-dimensional structure of molecules is essential to the understanding of organic and biochemical reactions. This text has used WaveFunction Inc. cutting edge molecular modeling software, Spartan, to render many of the molecules in the text.

- The text's website has been expanded. The Online Learning Center website now includes the former textbook appendices providing cross-references to the website in the text, allowing more effective use of the website in conjunction with the text material. In addition, interactive learning exercises, animations, web links, and math tutorials have been added to this Online Learning Center.

- Substantial revision has been made to the content of specific chapters. In response to reviewers' comments, chapters have been updated for content and perspectives; art has been enhanced in all chapters;

and problems have been organized to reflect different levels of student understanding, and the number of problems has been increased.

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Lab Manuals



LABORATORY MANUAL BY HENDRICKSON TO ACCOMPANY GENERAL, ORGANIC & BIOCHEMISTRY

5th Edition

By Charles H Hendrickson, Western Kentucky University

2007 (Oct 2005) / 400 pages

ISBN-13: 978-0-07-282848-1 / MHID: 0-07-282848-X

CONTENTS

I. General Laboratory Procedures and Laboratory Safety II. Basic Concepts, Measurement, and Properties 1 Measurement and Density 2 Preparing Graphs 3 The Identification of an Unknown Liquid **III. Chemical Separations** 4 Elements, Compounds, and Mixtures 5 Separation Using Chromatographic Techniques **IV. Chemical Formulas, Equations, Mass Relationships, and Structure** 6 Hydrates and the Determination of the Formula of a Hydrate 7 Simple Chemical Reactions 8 Analysis of a KClO₃-KCl Mixture 9 The Structure of Covalent Molecules and Polyatomic Ions **V. The Chemical Behavior of Elements** 10 An Activity Series of Several Metals 11 The Preparation and Properties of Oxygen and the Properties of Oxides **VI. The Gas Laws** 12 Boyle's Law and Charles' Law 13 The Combined Gas Law and Dalton's Law **VII. Acid-Base Chemistry** 14 Acid-Base Titrations 15 Acids, Bases, pH, Hydrolysis, and Buffers **VIII. Organic and Biochemistry** 16 The Structure of Hydrocarbons 17 Properties of Hydrocarbons 18 The Synthesis of Aspirin 19 The Properties and Preparation of Esters and Soaps 20 Alcohols 21 Aldehydes and Ketones 22 Organic Functional Group Tests 23 The Detection of Fats, Proteins, and Carbohydrates in Foods 24 The Characterization of Carbohydrates 25 Enzyme Action 26 Analysis of Proteins and Amino Acids by Chromatography 27 Digestion **Appendixes** A: Vapor Pressure of Water at Several Temperatures B: Concentration of Common Acids and Bases C: Values of Physical Constants D: The Metric Prefixes E: Conversion Factors F: An Introduction to Chemical Nomenclature G: Significant Figures and Rounding Numbers H: The Solubility Rules I: Using Excel to Prepare Straight-Line Graphs / Periodic Table (inside front cover)

Supplements

International Edition

SCHAUM'S OUTLINE OF GENERAL, ORGANIC AND BIOLOGICAL CHEMISTRY

By George Odian, and Ira Blei of College of Staten Island, CUNY
1994 / 512 pages

ISBN-13: 978-0-07-047609-7 / MHID: 0-07-047609-8

ISBN-13: 978-0-07-113529-0 / MHID: 0-07-113529-4 [IE]

[A Schaum Professional Publication]

(International Edition is not available for sale in Japan)

If you want top grades and excellent understanding of general, organic and biological chemistry, this powerful study tool is the best tutor you can have! It takes you step-by-step through the subject and gives you accompanying related problems with fully worked solutions. You also get hundreds of additional problems to solve on your own, working at your own speed. This superb Outline clearly presents every aspect of general, organic and biological chemistry. Famous for their clarity, wealth of illustrations and examples, and lack of dreary minutia, Schaum's Outlines have sold more than 30 million copies worldwide. Compatible with any textbook, this Outline is also perfect for self-study. For better grades in courses covering general, organic and biological chemistry, and invaluable preparation for careers in the health professions and you can do better than this Schaum's Outline!

are looking for a "ready-to-use-straight-out-of-the-box" system or one in which you can customize to fit your specific course needs, ARIS is the solution. Go to www.aris.mhhe.com to learn more.

- Accurate Chemical Models. New Molecular Images which can be found in the text's line art, figures of molecular reactions, and underlining an equation, were created using the Spartan software.

FEATURES

- Clear Examples. All of the worked examples assist students with step-by-step processes. Additional hand-worked examples show students how a scientist would work out a problem (sometimes called the back-of-the-envelope calculations.)

- Macro to Micro Understanding. Macroscopic to microscopic art pieces allow students to see "zoom in" on real-life examples of chemical reactions.

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General Chemistry
Textbooks

International Edition

NEW

GENERAL CHEMISTRY

The Essential Concepts, 5th Edition

By Raymond Chang, Williams College
2008 (March 2007)

ISBN-13: 978-0-07-331185-2 / MHID: 0-07-331185-5

ISBN-13: 978-0-07-110226-1 / MHID: 0-07-110226-4 [IE]

The fifth edition of General Chemistry continues the tradition of presenting only the material that is essential for a one-year general chemistry course. It strikes a balance between theory and application by incorporating real-world examples; helping students visualize the three-dimensional atomic and molecular structures that are the basis of chemical activity; and developing problem-solving and critical thinking skills. Although the fifth edition incorporates many new features, such as macro to micro artwork, six new animations correlated to the text, and the addition of new hand-drawn worked examples, General Chemistry is still 200 to 300 pages shorter and much less expensive than other two-semester textbooks. Dr. Chang's concise-but-thorough approach will appeal to efficiency-minded instructors and value-conscious students.

NEW TO THIS EDITION

- Electronic Homework. McGraw-Hill's ARIS is an online, electronic homework and course management system which is designed for greater power, flexibility, and ease of use than any other system. Whether you

International Edition

NEW

CHEMISTRY

9th Edition

By Raymond Chang, Williams College

2007 (June 2006)

ISBN-13: 978-0-07-322103-8 / MHID: 0-07-322103-1

ISBN-13: 978-0-07-110792-1 / MHID: 0-07-110792-4 [IE]

Website: <http://highered.mcgraw-hill/sites/0072980605>

Designed for the two-semester general chemistry course, Chang's best-selling textbook continues to take a traditional approach and is often considered a student and teacher favorite. The book features a straightforward, clear writing style and proven problem-solving strategies. It continues the tradition of providing a firm foundation in chemical concepts and principles while presenting a broad range of topics in a clear, concise manner. The new edition of Chemistry continues to strike a balance between theory and application by incorporating real examples and helping students visualize the three-dimensional atomic and molecular structures that are the basis of chemical activity. An integral part of the text is to develop students' problem-solving and critical thinking skills. A hallmark of the ninth edition is the integration of many tools designed to inspire both students and instructors. The textbook is a foundation for the unparalleled, effective technology that is integrated throughout. The multimedia package for the new edition stretches students beyond the confines of the traditional textbook.

NEW TO THIS EDITION

- New GenchemZone—our newest electronic homework program contains algorithmically-generated problems, feedback and solutions in response to incorrect answers, a molecular drawing component and a comprehensive gradebook.

■ Approximately 20% new end-of-chapter problems have been added. These problems continue to be categorized into various topics and difficulty levels.

■ New Molecular Images created using the Spartan software for chemical accuracy of models. You will see the images in line art, figures of molecular reactions and underlining an equation.

■ New "Chemistry in Action" essays have been added.

■ New "Chemical Mystery" have been added.

FEATURES

■ Each chapter opening page has an Interactivity Summary List for the accompanying media.

■ All of the worked examples have been revised to give the student more help in the step by step processes. Statement of problem, Strategy, Solution, Check.

■ Additional hand-worked examples show students what a scientist would do as he/she works out a problem (sometimes called the back-of-the-envelope calculations).

■ Revised art program now includes macroscopic to microscopic art pieces. These pieces allow students to see real life examples and to zoom in to see what is occurring chemically in a specific reaction.

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SCHAUM'S OUTLINE OF COLLEGE CHEMISTRY

9th Edition

By Jerome Rosenberg and Lawrence Epstein of University of Pittsburgh and Peter Krieger, Palm Beach CC Eisey Campus

2007 (April 2007) / 400 pages

ISBN-13: 978-0-07-147670-6 / MHID: 0-07-147670-9

[A Schaum Professional Publication]

The best and most up-to-date study guide of its kind, this book summarizes the chemical principles of a first course in college chemistry through problems with clearly explained solutions. This new edition reflects changes in the major current textbooks, and it contains up-to-date information about newer techniques used in environmental chemistry, biochemistry and medicinal chemistry.

International Edition

NEW

PRINCIPLES OF GENERAL CHEMISTRY

By Martin Silberberg

2007 (Jan 2006)

ISBN-13: 978-0-07-322105-2 / MHID: 0-07-322105-8

ISBN-13: 978-0-07-110793-8 / MHID: 0-07-110793-2 [IE]

Website: <http://highered.mcgraw-hill.com/sites/0073107204>

Silberberg's Principles of General Chemistry offers students the same authoritative topic coverage as his 4th edition textbook while appealing to today's efficiency-minded and value-conscious instructors and students. Principles allows for succinct coverage of content with minimal emphasis on pedagogic learning aids. This new approach offers a more straightforward approach to learning the core principles without sacrificing depth, clarity, or rigor.

FEATURES

■ This is a shorter textbook! For any instructor who has felt that Silberberg's text was too much, this will be the perfect book. We will retain the same writing style and ground-breaking artwork. However, this will be a shorter, cleaner textbook.

■ This text will have a very clean design. It will be void of all margin notes and most margin artwork.

■ Less Expensive than most textbooks. This textbook will be approximately \$12 less expensive than most books on the market.

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*International Edition***CHEMISTRY****The Molecular Nature of Matter and Change,
4th Edition**

By Martin Silberberg

2006 (Jan 2005)

ISBN-13: 978-0-07-310169-9 / MHID: 0-07-310169-9

(with OLC Password Card)

ISBN-13: 978-0-07-111659-6 / MHID: 0-07-111659-1 [IE]

Website: <http://www.mhhe.com/silberberg>

Chemistry: The Molecular Nature of Matter and Change by Martin Silberberg has become a favorite among faculty and students. Silberberg's 4th edition contains features that make it the most comprehensive and relevant text for any student enrolled in General Chemistry. The text contains unprecedented macroscopic to microscopic molecular illustrations, consistent step-by-step worked exercises in every chapter, an extensive range of end-of-chapter problems which provide engaging applications covering a wide variety of freshman interests, including engineering, medicine, materials, and environmental studies. All of these qualities make Chemistry: The Molecular Nature of Matter and Change the centerpiece for any General Chemistry course.

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Supplements

International Edition

UNDERSTANDING CHEMISTRY

By Charles Lovett and Raymond Chang of Williams College

2005 (Jan 2004) / 208 pages

ISBN-13: 978-0-07-255553-0 / MHID: 0-07-255553-X

ISBN-13: 978-0-07-121595-4 / MHID: 0-07-121595-6 [IE]

Website: <http://www.understandingchemistry.com>

This is a supplement to accompany any of our General Chemistry titles. It is an easy to read guide written to help students with little or no background in chemistry.

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A User Friendly Guide to General Chemistry / In the Beginning / Building a Foundation / Chemical Reactions / Reactants to Products / Energy Changes in Chemical Reactions / Atomic Structure and the Periodic Table / Chemical Bonding / Chemical Equilibrium / Glossary

SCHAUM'S A-Z CHEMISTRY

By Andrew Hunt

2004 / 400 pages

ISBN-13: 978-0-07-141935-2 / MHID: 0-07-141935-7

[A Schaum Professional Publication]

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- A-to-Z format for ready reference
- Clear definitions and explanations, cross-referenced and enhanced with numerous worked examples and illustrations
- Extended explanations of more important concepts
- Review lists of entries that relate to main topics in the Appendix aid review

CHEMISTRY DEMYSTIFIED

By Linda Williams

2003 / 280 pages

ISBN-13: 978-0-07-141011-3 / MHID: 0-07-141011-2

[A Professional Reference Publication]

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By McGraw-Hill

2003 / 431 pages

ISBN-13: 978-0-07-141046-5 / MHID: 0-07-141046-5

[A Professional Reference Publication]

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SCHAUM'S EASY OUTLINES: COLLEGE CHEMISTRY

By Jerome Rosenberg and Lawrence M. Epstein of University of Pittsburgh

2000 / 156 pages

ISBN-13: 978-0-07-052714-8 / MHID: 0-07-052714-8

[A Schaum Professional Publication]

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Lab

COOPERATIVE CHEMISTRY LAB MANUAL**3rd Edition**

By Melanie M. Cooper, Clemson University

2006 (Feb 2005) / 160 pages

ISBN-13: 978-0-07-282846-7 / MHID: 0-07-282846-3

The laboratory course described in the lab manual emphasizes experimental design, data analysis, and problem solving. Inherent in the design is the emphasis on communication skills, both written and oral. Students work in groups on open-ended projects in which they are given an initial scenario and then asked to investigate a problem. There are no formalized instructions and students must plan and carry out their own investigations.

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HANDS ON CHEMISTRY LABORATORY MANUAL

By Jeffrey A. Paradis

2006 (Jan 2005) / 384 pages

ISBN-13: 978-0-07-253411-5 / MHID: 0-07-253411-7

Website: <http://www.mhhe.com/paradis>

This lab manual offers a modern approach to the two semester general chemistry laboratory course. The manual contains over 37 labs that cover all of the topics commonly taught in the course. Each experiment contacts extensive background and procedure outlines to give students a solid conceptual background before completing the lab.

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Multimedia

International Edition

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Version 2, 2nd Edition

By James D Spain, Electronic Homework Systems, Inc and Hal Peters 2004

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(Student's Edition-Password Booklet)

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(Instructor's Edition- Password Booklet)

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Biochemistry - 1 Semester

Textbooks

International Edition

BIOCHEMISTRY

An Introduction, 3rd Edition

By Gertrude McKee, Thomas Jefferson University and James R McKee, Philadelphia College Pharmacy

2003 / 800 pages

ISBN-13: 978-0-07-231592-9 / MHID: 0-07-231592-X

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*International Edition***BASIC CONCEPTS IN BIOCHEMISTRY****A Student's Survival Guide, 2nd Edition**

By Hiram F. Gilbert, Baylor University College of Medicine

2000 / 331 pages

ISBN-13: 978-0-07-135657-2 / MHID: 0-07-135657-6

ISBN-13: 978-0-07-120182-7 / MHID: 0-07-120182-3 [IE]

*[A Professional Publication]***CONTENTS**

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SCHAUM'S OUTLINE OF BIOCHEMISTRY**2nd Edition**

By Phillip Kuchel, University of Sydney

1997 / 576 pages

ISBN-13: 978-0-07-036149-2 / MHID: 0-07-036149-5

[A Schaum Professional Publication]

This step-by-step outline steers you logically, expertly, and clearly through biochemistry. It can save you study time and helps you get better grades because it focuses on the core information you really need to know and avoids confusing, extraneous material that you don't need! A question-and-answer format highlights the meaning of the material and helps you remember. Easy-to-read line drawings and diagrams make important structures and processes memorable. This new second edition features added sections on whole-body metabolism, enzyme kinetics, and new technologies for monitoring metabolic processes. Use this excellent study guide to help you ace your biochemistry course, study it alone as a complete biochemistry course, or use it for review before a standardized test it can cut your study hours as it moves you quickly from cell structure through protein synthesis. This is the study guide that makes biochemistry comprehensible the one whose first edition was chosen by 32,000 grateful students!

Organic Chemistry - 1 Semester**Textbooks****ORGANIC CHEMISTRY DEMYSTIFIED**

By Daniel Bloch

2006 (March 2006) / 551 pages

ISBN-13: 978-0-07-145920-4 / MHID: 0-07-145920-0

[A Schaum Professional Publication]

There's no easier, faster, or more practical way to learn the really tough subjects. Organic Chemistry Demystified follows the organization of standard organic chemistry courses and can also be used as a study guide for the MCAT (Medical College Admission Test) and DAT (Dental Admissions Testing) exams. This self-teaching guide comes complete with key points, background information, quizzes at the end of each chapter, and even a final exam. Simple enough for beginners but challenging enough for advanced students, this is a lively and entertaining brush-up, introductory text, or classroom supplement.

FEATURES

- Written in a style that enables readers to mentally visualize why molecules react the way they do
- Chock-full of illustrations and chemical structures
- Can be used as a study guide for the MCATs and/or DAT exam
- Questions and answers follow each chapter, and the book includes a final exam to help readers monitor their progress and comprehension of topics

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