



# SCIENCES 2020

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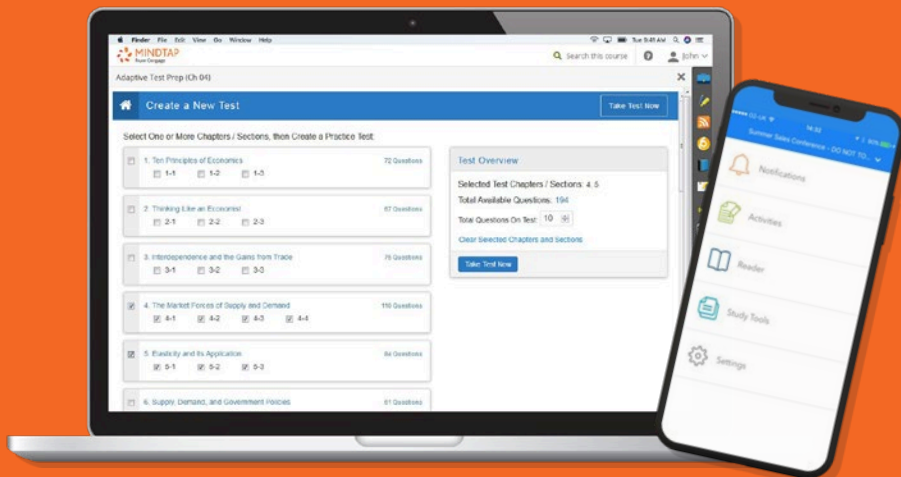
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# COURSEWARE SOLUTIONS

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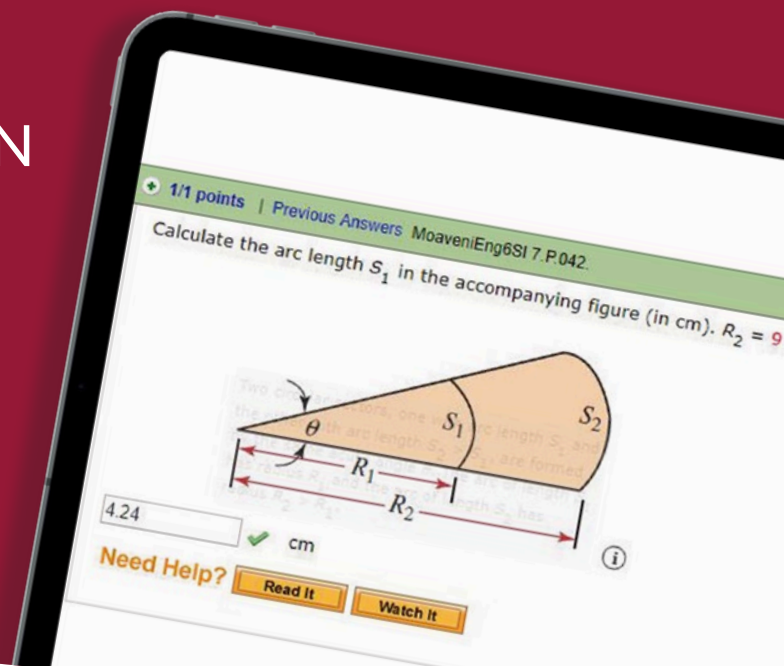
*MindTap* is a fully customisable online teaching and assessment tool available alongside our market-leading textbooks in Biology, Environmental Science and Nutrition. *MindTap* provides course content and study materials that improve engagement and student grades, all designed specifically for your course.

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 CENGAGE | OWLv2

*OWLv2* is an online learning solution for Chemistry students. It focuses on developing conceptual understanding, not memorisation, and has all the tools that you need to deliver an engaging, interactive module that will help students succeed.

Find out more information about *OWLv2*, visit [cengage.co.uk/owlv2](http://cengage.co.uk/owlv2)



**Developed by chemists, for chemists,** OWLv2 provides:

- Practice activities and assignments with instant feedback and advanced randomisation
- Learning resources including adaptive review modules, interactive study tools and maths review sections
- A gradebook and analytical tools that help you to easily monitor student grades and progress

## Preparatory Chemistry

Available with OWLv2

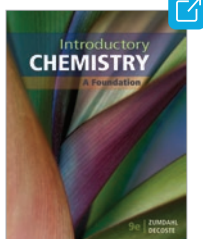
### Introductory Chemistry

A Foundation

9th Edition

**Steven S. Zumdahl**, University of Illinois  
**Donald J. DeCoste**, University of Illinois

© 2019 | 784pp | 9781337399425



*Introductory Chemistry* combines enhanced problem-solving structure with substantial pedagogy to help your students become successful problem solvers. Early coverage of chemical reactions, accessible explanations and visualizations, and an emphasis on everyday applications facilitates understanding. The authors' step-by-step approach has already helped hundreds of thousands of student's master chemical concepts and develop strong problem-solving skills. Interactive study aids in OWLv2, such as ChemWork Problems and Adaptive Learning Activities, help students master concepts.

## General, Organic & Biochemistry

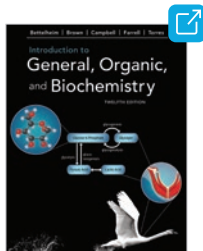
Available with OWLv2

### Introduction to General, Organic, and Biochemistry

12th Edition

**Frederick A. Bettelheim**, Adelphi University  
**William H. Brown**, Beloit College  
**Mary K. Campbell**, Mount Holyoke College

© 2020 | 912pp | 9781337571357



Help students gain a comprehensive understanding of chemistry and see how it relates to health science with *Introduction To General, Organic, And Biochemistry*. This title features dynamic art, interesting examples, coverage of the latest issues, and a wide variety of medical and biological applications. As students explore topics such as botulin toxin as a cosmetic agent, implications for the use of antibiotics, and ultraviolet sunscreen, they will see how useful the study of chemistry is to real life.

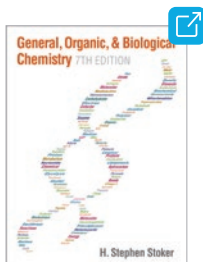
Available with OWLv2

### General, Organic, and Biological Chemistry

7th Edition

**H. Stephen Stoker**, Weber State University

© 2016 | 1232pp | 9781285853918



*General, Organic, And Biological Chemistry* provides clear explanations, engaging visual support, and easy usability. Ideal for students studying life sciences and health, this Seventh Edition emphasizes the applications of chemistry. Early chapters focus on fundamental chemical principles while later chapters build on the foundation of these principles, developing the concepts and applications central to organic and biological chemistry. Mathematics is introduced at point-of-use and only as needed.

## Chemistry for Engineers

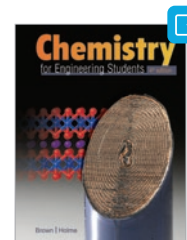
Available with OWLv2

### Chemistry for Engineering Students

4th Edition

**Lawrence S. Brown**, Texas A&M University  
**Tom Holme**, Iowa State University

© 2019 | 9780357026991



Enhanced with new problems and applications, the Fourth Edition of *Chemistry For Engineering Students* provides a concise, thorough, and relevant introduction to chemistry that prepares students for further study in any engineering field. Updated with new conceptual understanding questions and applications specifically geared toward engineering, the book emphasizes the connection between molecular properties and observable physical properties and the connections between chemistry and other subjects such as mathematics and physics.

## Biochemistry

Available with OWLv2

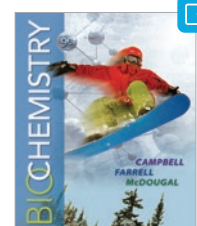
### Biochemistry

9th Edition

**Mary K. Campbell**, Mount Holyoke College  
**Shawn O. Farrell**, Colorado State University  
**Owen M. McDougal**, Southern Oregon University

© 2018 | 896pp | 9781305961135

One-Semester



Ideal for those studying biochemistry for the first time, this book balances scientific detail with readability and demonstrates how principles of biochemistry affect everyday life. Known for its logical organization, appropriate depth of coverage, and vibrant illustrations, *Biochemistry, 9th Edition*, incorporates current developments in Alzheimer's research, RNA drug therapy, gene editing with CRISPR-Cas9, and revised coverage of topics such as aging, stem cell therapies, and G-coupled protein receptors. In-text features, like "Hot Topics" and "Biochemical Connections", reflect research in the field - and demonstrate how biochemistry applies to other fields like health and sports medicine.

Available with OWLv2

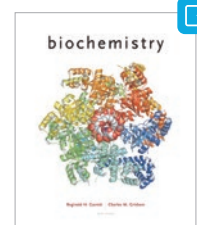
### Biochemistry

6th Edition

**Reginald H. Garrett**, University of Virginia  
**Charles M. Grisham**, University of Virginia

© 2017 | 1280pp | 9781305577206

Two-Semester



Continuing Garrett and Grisham's innovative conceptual and organizing "Essential Questions" framework, *Biochemistry* guides students through course concepts in a way that reveals the beauty and usefulness of biochemistry in the everyday world. Offering a balanced and streamlined presentation, this edition has been updated throughout with new material and revised presentations as well as integration with OWLv2.

## General Chemistry

Available with OWLv2

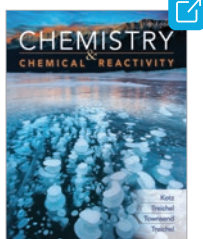
### Chemistry & Chemical Reactivity

10th Edition

**John C. Kotz**, State University of New York, Oneonta  
**Paul M. Treichel**, University of Wisconsin, Madison  
**John R. Townsend**, West Chester University of Pennsylvania

© 2019 | 1408pp | 9781337399074

Ensure your students succeed in chemistry with the clear explanations, problem-solving strategies, and dynamic study tools of *Chemistry & Chemical Reactivity*. Thorough instruction helps your students develop a deeper understanding of general chemistry concepts through an emphasis on the visual nature of chemistry and the close interrelationship of the macroscopic, symbolic, and particulate levels of chemistry. The art program illustrates each of these levels in engaging detail. Interactive study aids in OWLv2, such as Interactive Examples and Adaptive Learning Activities, help students to master concepts.



Available with OWLv2

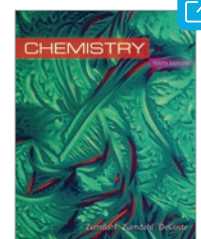
### Chemistry

10th Edition

**Steven S. Zumdahl**, University of Illinois  
**Susan A. Zumdahl**, University of Illinois  
**Donald J. DeCoste**, University of Illinois

© 2018 | 1200pp | 9781305957404

This trusted text has helped generations of students learn to “think like chemists” and develop problem-solving skills needed to master even the most challenging problems. Clear explanations and interactive examples help students build confidence for their exams, helping them to study to understand rather than simply memorize. Combined with the online resources and instant feedback in OWLv2, your students will develop a deeper understanding of chemistry concepts.



Available with OWLv2

### Chemistry

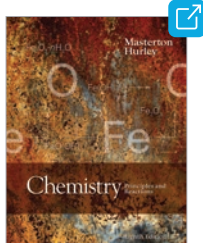
Principles and Reactions

8th Edition

**William L. Masterton**, University of Connecticut  
**Cecile N. Hurley**, University of Connecticut

© 2016 | 800pp | 9781305079373

*Chemistry, 8th Edition*, provides a clear, concise presentation based on the authors’ more than 50 years of combined teaching experience. The book includes graded and concept-driven examples as well as examples that focus on molecular reasoning and understanding, as well as “Chemistry: Beyond the Classroom” essays that demonstrate the relevance of the concepts and highlight some of the most up-to-date uses of chemistry. Integrated end-of-chapter questions and Key Concepts correlate to OWLv2.



Available with OWLv2

### Chemical Principles

8th Edition

**Steven S. Zumdahl**, University of Illinois  
**Donald J. DeCoste**, University of Illinois

© 2017 | 1216pp | 9781305581982

This fully updated Eighth Edition provides a unique organization and a rigorous but understandable introduction to chemistry that emphasizes conceptual understanding and the importance of models. Known for helping students develop a qualitative, conceptual foundation that gets them thinking like chemists, this market-leading text is designed for students with solid mathematical preparation. The Eighth Edition features a new section on “Solving a Complex Problem” that discusses and illustrates how to solve problems in a flexible, creative way based on understanding the fundamental ideas of chemistry and asking and answering key questions.



Available with OWLv2

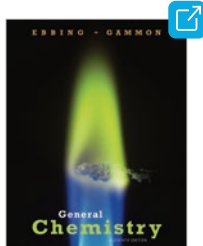
### General Chemistry

11th Edition

**Darrell D. Ebbing**, Wayne State University  
**Steven D. Gammon**, Western Washington University

© 2017 | 1152pp | 9781305580343

*General Chemistry* is better than ever with this Eleventh Edition. It includes essential updates – such as modern artwork, improved integration with OWLv2, revised end-of-chapter questions, added Capstone Problems, narrative revisions, and more – to help students succeed in Chemistry.



Available with OWLv2

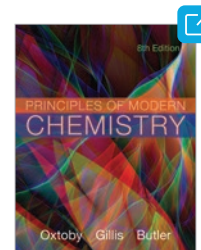
### Principles of Modern Chemistry

8th Edition

**David W. Oxtoby**, Pomona College  
**H. Pat Gillis**, University of California  
**Laurie J. Butler**, The University of Chicago

© 2016 | 1264pp | 9781305079113

This authoritative text features an “atoms first” approach and thoroughly revised chapters on Quantum Mechanics and Molecular Structure (Chapter 6), Electrochemistry (Chapter 17), and Molecular Spectroscopy and Photochemistry (Chapter 20). In addition, the text utilizes mathematically accurate and artistic atomic and molecular orbital art, and is student friendly without compromising its rigor. End-of-chapter learning aids focus on only the most important key objectives, equations and concepts, making it easier for readers to locate chapter content, while new applications to a wide range of disciplines, such as biology, chemical engineering, biochemistry, and medicine deepen readers’ understanding of the relevance of chemistry in today’s world.



NEW EDITION Available with OWLv2

### Chemistry

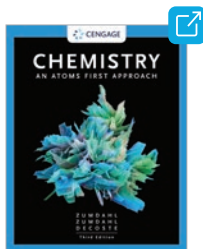
An Atoms First Approach

3rd Edition

**Steven S. Zumdahl**, University of Illinois  
**Susan A. Zumdahl**, University of Illinois

© 2021 | 1216pp | 9780357363362

With a focus on helping students build critical thinking skills through the process of becoming independent problem-solvers, this edition uses a meaningful approach that begins with the atom and proceeds through the concept of molecules, structure, and bonding to more complex materials and their properties.



## Organic Chemistry

Available with OWLv2

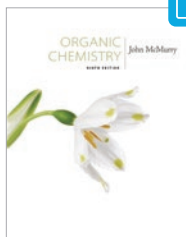
### Organic Chemistry

9th Edition

John E. McMurry, Cornell University

© 2016 | 1512pp | 9781305080485

John McMurry's *Organic Chemistry* is consistently praised as the most clearly written book available for the course and the Ninth Edition retains McMurry's hallmark qualities: comprehensive, authoritative, and clear. Updated with more coverage of nuclear magnetic resonance spectroscopy, new end-of-chapter mechanism problems and Practice Your Scientific Reasoning and Analysis questions, *Organic Chemistry* continues to set the standard for the course. More than a million students worldwide from a full range of universities have mastered organic chemistry through his trademark style, while instructors at hundreds of universities have praised his approach time and time again.



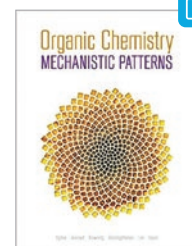
### Organic Chemistry Mechanistic Patterns

1st Edition

William Ogilvie, University of Ottawa  
Nathan Ackroyd, Mount Royal University, Calgary  
C. Scott Browning, University of Toronto  
Ghislain Deslongchamps, University of New Brunswick

© 2018 | 9780176833305

*Organic Chemistry Mechanistic Patterns* is the very first introductory organic chemistry title that holistically focuses on a mechanistic approach; an approach that has proven to achieve a deeper understanding of chemical reactivity. The text takes great care to establish a progression of reactivity, from simple to complex, introducing functional groups as necessary. To help students further visualize key concepts, the text includes Ghislain Deslongchamps' acclaimed *Organic Chemware*; interactive animations and simulations that bring static textbook molecular representations to life.



Available with OWLv2

### Organic Chemistry with Biological Applications

3rd Edition

John E. McMurry, Cornell University

© 2015 | 1224pp | 9781285842912

Renowned for its student-friendly writing style and fresh perspective, the Third Edition of John McMurry's *Organic Chemistry With Biological Applications* provides full coverage of the foundations of organic chemistry – enhanced by biological examples throughout. In addition, McMurry discusses the organic chemistry behind biological pathways. Throughout this edition new problems, illustrations, and essays have been added.



### Fundamentals of Organic Chemistry

7th Edition

John E. McMurry, Cornell University

© 2011 | 672pp | 9781439049730

Retaining the concise, to-the-point presentation that has already helped thousands of students move beyond memorization to a true understanding of the beauty and logic of organic chemistry, this Seventh Edition of John McMurry's *Fundamentals of Organic Chemistry* brings in new, focused content that shows students how organic chemistry applies to their everyday lives. In addition, redrawn chemical structures and artwork help students visualize important chemical concepts and a greater emphasis on biologically-related chemistry (including new problems) helps them grasp the enormous importance of organic chemistry in understanding the reactions that occur in living organisms.



### Organic Chemistry

A Short Course

13th Edition

Harold Hart, Michigan State University  
Christopher M. Hadad, Ohio State University  
Leslie E. Craine, Central Connecticut State University

© 2012 | 608pp | 9781111425562

Designed specifically for the one-semester short course in organic chemistry, this textbook appeals to a range of Chemistry courses, through its emphasis on practical, real-life applications, coverage of basic concepts, and engaging visual style. In contrast to other texts for the course that are streamlined versions of full-year texts, this text was created from the ground up to offer a writing style, approach, and selection of topics that uniquely meet the needs of the short course.



Available with OWLv2

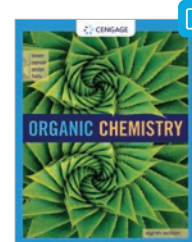
### Organic Chemistry

8th Edition

William H. Brown

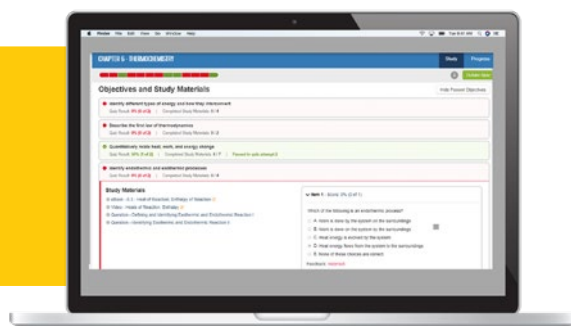
© 2018 | 1312pp | 9781305580350

A student-friendly, cutting edge introduction for chemistry, health, and the biological sciences majors. In the Eighth Edition, award-winning authors build on unified mechanistic themes, focused problem-solving, applied pharmaceutical problems and biological examples.



OWLv2 is an online learning solution for Chemistry students. It focuses on developing conceptual understanding, not memorisation, and has all the tools that you need to deliver an engaging, interactive module that will help students succeed.

Find out more information about OWLv2, visit [cengage.co.uk/owlv2](http://cengage.co.uk/owlv2)



## Physical Chemistry

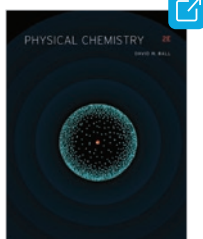
### Physical Chemistry

2nd Edition

David W. Ball, Cleveland State University

© 2015 | 880pp | 9781133958437

With its easy-to-read approach and focus on core topics, *Physical Chemistry, 2nd Edition* provides a concise, yet thorough examination of calculus-based physical chemistry. The Second Edition, designed as a learning tool for students who want to learn physical chemistry in a functional and relevant way, follows a traditional organization and features an increased focus on thermochemistry and a dynamic four-color design. Written by a dedicated chemical educator and researcher, the text also includes a review of calculus applications as applied to physical chemistry.



## Instrumental Analysis

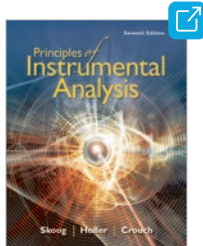
### Principles of Instrumental Analysis

7th Edition

Douglas A. Skoog, Stanford University  
F. James Holler, University of Kentucky  
Stanley R. Crouch, Michigan State University

© 2018 | 992pp | 9781305577213

*Principles Of Instrumental Analysis* is the standard for courses on the principles and applications of modern analytical instruments. In the 7th Edition, authors Skoog, Holler, and Crouch infuse their popular text with updated techniques and new Instrumental Analysis in Action case studies. Updated material enhances the book's proven approach, which places an emphasis on the fundamental principles of operation for each type of instrument, its optimal area of application, its sensitivity, its precision, and its limitations. The text also introduces students to elementary analog and digital electronics, computers, and the treatment of analytical data. A companion website, provides students with tutorials on instrumental methods, Excel files of data analysis, and simulations of analytical techniques to help them visualize important concepts.



## Analytical Chemistry

Available with OWLv2

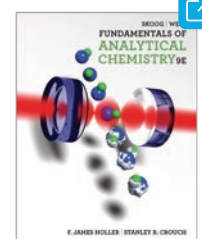
### Fundamentals of Analytical Chemistry

9th Edition

Douglas A. Skoog, Stanford University  
Donald M. West, San Jose State University  
F. James Holler, University of Kentucky

© 2013 | 1072pp | 9780495558286

Known for its readability and systematic, rigorous approach, *Fundamentals Of Analytical Chemistry* offers extensive coverage of the principles and practices of analytic chemistry and consistently shows students its applied nature. The book's award-winning authors begin each chapter with a story and photo of how analytic chemistry is applied in industry, medicine, and all the sciences. To further reinforce student learning, a wealth of dynamic photographs by renowned chemistry photographer Charlie Winters appear as chapter-openers and throughout the text. Incorporating Excel spreadsheets as a problem-solving tool, the Ninth Edition is also enhanced by a chapter on Using Spreadsheets in Analytical Chemistry.



## Spectroscopy

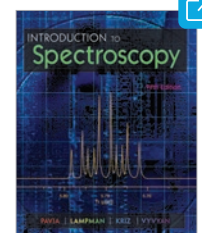
### Introduction to Spectroscopy

5th Edition

Donald L. Pavia, Western Washington University  
Gary M. Lampman, Western Washington University  
George S. Kriz, Western Washington University

© 2014 | 784pp | 9781285460123

Introduce your students to spectroscopy with the text that has set the standard in the field for more than three decades. Whether you use the book as a primary text in an upper-level spectroscopy course or as a companion book with an organic chemistry text, your students will receive an unmatched, systematic introduction to spectra and basic theoretical concepts in spectroscopic methods. This acclaimed resource features up-to-date spectra; a modern presentation of one-dimensional nuclear magnetic resonance (NMR) spectroscopy; an introduction to biological molecules in mass spectrometry; and coverage of modern techniques alongside DEPT, COSY, and HECTOR.



## ENSURE YOUR STUDENTS ARE PREPARED FOR LABS

LabSkills offers interactive, online pre-lab assignments allowing you to focus on the experiment itself and be confident that your class have the skills to work safely.

**Step-by-step videos** – Short videos cover safety through narrated clips, transcripts and bulleted key points. Each video is split into sections so students can work at their own pace.

**Practice opportunities** – Interactive Modules allow students to interact with equipment prior to the lab, so they are familiar with equipment set-up. The interactive modules also cover Measurement and Techniques.

**Assignable quizzes** – Quizzes test pre-lab skills and techniques using True/False, Fill in the Gap and Multiple Choice Questions.



## Laboratory Experiments and Techniques

## Safety-Scale Laboratory Experiments for Chemistry for Today

9th Edition

Spencer L. Seager, Weber State University

© 2018 | 544pp | 9781305968554

This lab manual offers a unique blend of laboratory skills and exercises that effectively illustrate Chemistry concepts. The book's 15 general chemistry and 20 organic/biochemistry safety-scale laboratory experiments use small quantities of chemicals and emphasize safety and proper disposal of materials. 'Safety-scale' is the authors' own term for describing the amount of chemicals each lab experiment requires – less than macroscale quantities, which are expensive and hazardous, and more than microscale quantities, which are difficult to work with and require special equipment.

Available with OWL<sup>v2</sup>

## A Macroscale and Microscale Organic Experiments

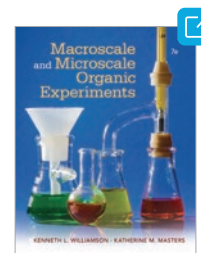
7th Edition

Kenneth L. Williamson, Mount Holyoke College, Emeritus

Katherine M. Masters, Pennsylvania State University

© 2017 | 816pp | 9781305577190

Now featuring new themed Modules experiments with real world applications, this Seventh Edition for the full-year organic laboratory course derives many experiments and procedures from the classic Feiser lab text, giving it an unsurpassed reputation for solid, authoritative content. This proven manual offers a flexible mix of macroscale and microscale options for most experiments, emphasizing safety and allowing instructors to save on the purchase and disposal of expensive, sometimes hazardous, organic chemicals. Macroscale versions for less costly experiments allow students to get experience working with conventionally-sized glassware.

NEW EDITION Available with OWL<sup>v2</sup>

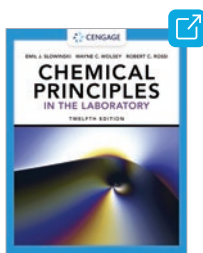
## Chemical Principles in the Laboratory

12th Edition

Emil Slowinski, Macalester College  
Wayne C. Wolsey, Macalester College  
Robert Rossi, Macalester College

© 2021 | 400pp | 9780357364536

This Twelfth Edition maintains the high-quality, time-tested experiments and techniques of *Chemical Principles in the Laboratory*. Continuing to offer complete coverage of basic chemistry principles, the authors present topics in a direct, easy-to-understand manner. This edition remains committed to green chemistry with four additional experiments made "greener" by reducing volume and toxicity, which not only benefits the environment, but also reduces the cost of the experiments overall.

Available with OWL<sup>v2</sup>

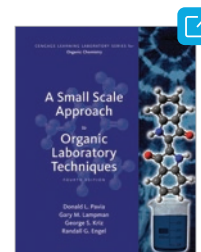
## A Small Scale Approach to Organic Laboratory Techniques

4th Edition

Donald L. Pavia, Western Washington University  
George S. Kriz, Western Washington University  
Gary M. Lampman, Western Washington University

© 2016 | 1024pp | 9781305253926

Featuring new experiments, a new essay, and new coverage of nanotechnology, this organic chemistry laboratory textbook offers a comprehensive treatment of laboratory techniques including small scale and some microscale methods that use standard-scale ("macroscale") glassware and equipment. The book is organized based on essays and topics of current interest and covers a large number of traditional organic reactions and syntheses, as well as experiments with a biological or health science focus.

Available with OWL<sup>v2</sup>

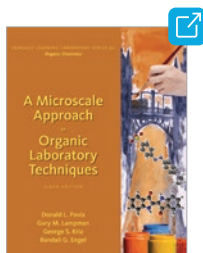
## A Microscale Approach to Organic Laboratory Techniques

6th Edition

Donald L. Pavia, Western Washington University  
George S. Kriz, Western Washington University  
Gary M. Lampman, Western Washington University

© 2018 | 1056pp | 9781305968349

Featuring new experiments unique to this lab textbook, as well as new and revised essays and updated techniques, this Sixth Edition provides the coverage students need to succeed in their coursework and future careers. From biofuels, green chemistry, and nanotechnology, the book's experiments, designed to utilize microscale glassware and equipment, demonstrate the relationship between organic chemistry and everyday life, with project-and biological or health science focused experiments.

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## Experimental Organic Chemistry

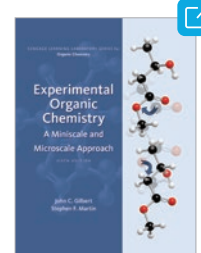
A Miniscale &amp; Microscale Approach

6th Edition

John C. Gilbert, Santa Clara University  
Stephen F. Martin, University of Texas at Austin

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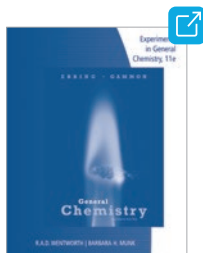
This Sixth Edition of *Experimental Organic Chemistry* contains procedures for both miniscale and microscale users. The book offers an early focus on equipment, record keeping, and safety in the laboratory, and then guides students step by step through the theoretical and mechanistic principles underlying the experiments and the laboratory techniques needed to perform them with confidence.

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## Lab Manual Experiments in General Chemistry

Rupert Wentworth, Indiana University  
Barbara H Munk

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## Calculus-Based Physics

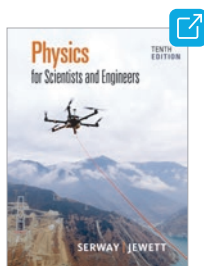
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### Physics for Scientists and Engineers

10th Edition

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**John W. Jewett**, California State Polytechnic University

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Taking an integrative approach, market-leading *Physics For Scientists And Engineers*, seamlessly matches curated content to the learning environment for which it was intended--from in-class group problem solving to online homework that utilizes targeted feedback and tutorials. More student friendly than ever, the text includes new context-rich exercises, Think-Pair-Share problems, MCAT-style passage problems and sound educational pedagogy. The unified art program and detailed worked examples compliment the concise language and meticulous instruction for which the authors are known.

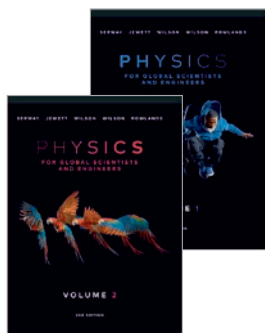
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### Physics For Global Scientists and Engineers

2nd Edition

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This international edition of Serway's *Physics For Global Scientists and Engineers* is a practical and engaging introduction for students of calculus-based physics, in two, easy-to-use volumes. This edition includes international case studies and new content on key topics in physics to engage students.

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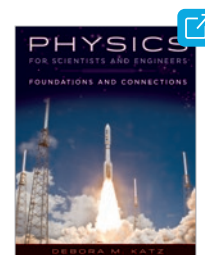
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### Physics for Scientists and Engineers

Foundations and Connections

**Debora M. Katz**, United States Naval Academy

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In Debora Katz's ground-breaking calculus-based physics program, *Physics for Scientists and Engineers: Foundations and Connections*, the one-of-a-kind case study approach enables students to connect mathematical formalism and physics concepts in a modern, interactive way. By leveraging physics education research (PER) best practices and her extensive classroom experience, Debora Katz addresses the areas students struggle with the most: linking physics to the real world, overcoming common preconceptions, and connecting the concept being taught with the mathematical steps to follow.

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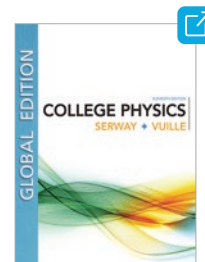
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11th Edition

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**Chris Vuille**, Embry-Riddle Aeronautical University

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This updated Eleventh Edition of *College Physics*, Global Edition is designed throughout to help students master physical concepts, improve their problem-solving skills, and enrich their understanding of the world around them. The book offers a logical presentation of concepts, a consistent problem-solving strategy, and an unparalleled array of worked examples to help students develop a true understanding of physics. This edition is enhanced by a streamlined presentation, new problems, Interactive Video Vignettes, new conceptual questions, new techniques, and hundreds of new and revised problems.

## Physics for the Life Sciences

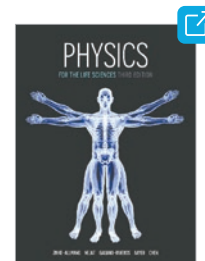
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3rd Edition

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**Reza Nejat**, McMaster University  
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*Physics for the Life Sciences, Third Edition*, brings the beauty of physics to life. Physics represents an enormous body of knowledge and methodology, and almost all of it has a huge impact on understanding the life sciences. *Physics for the Life Sciences* provides a comprehensive synopsis of the vast subject matter and delivers it in a way that is relevant to students' interests and career aspirations and that encourages retaining acquired knowledge. Taking an algebra-based approach to the selective use of calculus, the third edition provides a concise approach to basic physics concepts using an engaging layout, a consistent and student-tested art program, extensive use of conceptual examples, analytical problems, and instructive and engaging case studies.

## Laboratory Manual

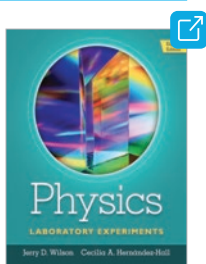
### Physics Laboratory Experiments

8th Edition

**Jerry D. Wilson**, Lander University  
**Cecilia A. Hernández-Hall**, American River College

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This manual for the first-year physics laboratory course offers a wide range of class-tested experiments designed specifically for use in small to mid-size lab programs. A series of integrated experiments emphasizes the use of computerized instrumentation and includes a set of "computer-assisted experiments" that allow students to gain experience with modern equipment. By analyzing data through two different methods, learners gain a greater understanding of the concepts behind the experiments. The Eighth Edition includes new economical labs and Pre-Lab Demonstrations, designed to capture interest prior to the lab and requiring only widely available materials and items.



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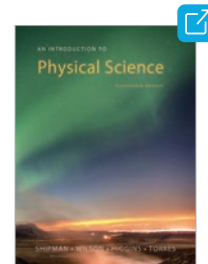
### An Introduction to Physical Science

14th Edition

**James T. Shipman**, Ohio University  
**Jerry D. Wilson**, Lander University  
**Charles A. Higgins<sup>^</sup> Jr.**, Middle Tennessee State University

© 2015 | 800pp | 9781305079137

*An Introduction to Physical Science* presents content in such a way that students develop the critical reasoning and problem-solving skills that are needed in an ever-changing technological world. The authors emphasize fundamental concepts as they progress through the five divisions of physical sciences: physics, chemistry, astronomy, meteorology, and geology. Ideal for a non-science course, topics are treated both descriptively and quantitatively, providing instructors the flexibility to emphasize whichever approach works best for their students.



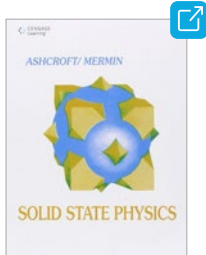
## Solid State Physics

### Solid State Physics

**Neil W. Ashcroft**, Cornell University  
**N. David Mermin**, Cornell University

© 1976 | 848pp | 9780030839931

In this first edition of Ashcroft and Mermin's *Solid State Physics* (1976) the authors aim at exploring the variety of phenomena associated with the major forms of crystalline matter, while laying the foundation for a working understanding of solids through clear, detailed and elementary treatments of fundamental theoretical concepts. This book is designed for introductory courses at either the undergraduate or graduate level. Statistical mechanics and the quantum theory lie at the heart of solid state physics.



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### Foundations of Astronomy

**Michael A. Seeds**, Joseph A. Grundy Observatory  
**Dana Backman**, Stratospheric Observatory for Infrared Astronomy (SOFIA) / SETI Institute & NASA Ames Research Center

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Fascinating, engaging and extremely visual, *Foundations of Astronomy*, 14th Edition, emphasizes the scientific method throughout as it guides students to answer two fundamental questions: What are we? And how do we know? Authors Seeds and Backman discuss the interplay between evidence and hypothesis, providing both factual information and a conceptual framework for understanding the logic of science.



## Mechanics

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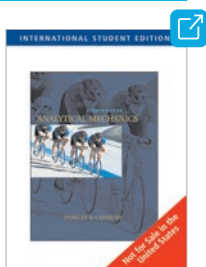
International Edition

7th Edition

**Grant R. Fowles**, University of Utah  
**George L. Cassiday**, University of Utah

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With the direct, accessible, and pragmatic approach of Fowles and Cassiday's *Analytical Mechanics*, 7th Edition, thoroughly revised for clarity and concision, students will grasp challenging concepts in introductory mechanics. A complete exposition of the fundamentals of classical mechanics, this proven and enduring introductory text is a standard for the undergraduate Mechanics course. With numerical worked examples, textual discussions and specific cases.



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WebAssign for Physics and Astronomy provides engaging resources for active classrooms, extensive content, instant assessment, and question randomisation to support independent study.

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### Biology

The Unity and Diversity of Life  
15th Edition

**Cecie Starr**  
**Ralph Taggart**, Michigan State University  
**Christine Evers**

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*Biology, 15th Edition*, reveals the biological world in wondrous detail. Packed with eye-catching photos and images, this text engages students with applications and activities that encourage critical thinking. Chapter-opening Core Concepts help students focus on the topics that matter most in every chapter. Each section within a chapter begins with clear Learning Objectives and section-ending Take Home Messages reinforce these key concepts. Links to Earlier Concepts help students make important connections and appreciate how living systems are interconnected and interacting.



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10th Edition

**Cecie Starr**  
**Lisa Starr**  
**Christine Evers**

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Should there be warning labels on fast foods? Should employers be allowed to require drug testing? This introductory text teaches students basic concepts of biology in context of critical issues. The Tenth Edition of *Biology* was developed in partnership with the National Geographic Society, known for its eye-opening photography and legacy of inspiring people. The result is a text that combines clear explanations with unparalleled visuals to introduce the process of science and core concepts of biology. By continuously challenging students to question what they read and to apply the concepts they learn, this edition and the accompanying MindTap digital resources hone critical thinking skills as students gain scientific literacy.



## Laboratory Manuals

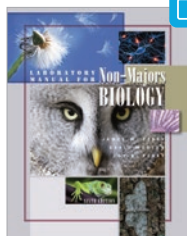
### Laboratory Manual for Non-Majors Biology

6th Edition

**James W. Perry**, University of Wisconsin  
**David Morton**, Frostburg State University  
**Joy B. Perry**, University of Wisconsin

© 2012 | 752pp | 9780840053800

With its 46 lab exercises and hundreds of color photos and illustrations, this laboratory manual is your students' guide to a better understanding of biology. Most exercises can be completed within two hours, and answers to the exercises are included in the Instructor's Manual. The perfect companion to Starr and Taggart's *Biology: The Unity and Diversity of Life*, as well as Starr's *Biology: Concepts and Applications* and *Biology Today and Tomorrow*, this lab manual can also be used with any introductory biology text.



## General Biology (Majors)

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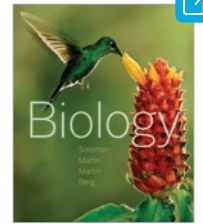
### Biology

11th Edition

**Eldra P. Solomon**, University of South Florida  
**Charles E. Martin**, Rutgers University  
**Diana W. Martin**, Rutgers University

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Solomon, Martin, Martin and Berg's integrated, inquiry-based learning system guides students through every chapter, starting with key concepts at the beginning of each chapter and learning objectives for each section. End-of-section Checkpoint questions encourage students to review key points before moving on. A chapter summary further reinforces learning objectives, followed by an opportunity for students to test their understanding. The eleventh edition offers expanded integration of the text's five guiding themes of Biology--the evolution of life, the transmission of biological information, the flow of energy through living systems, interactions among biological systems and the inter-relationship of structure and function.



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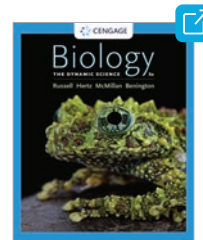
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The Dynamic Science  
5th Edition

**Peter J. Russell**, Reed College  
**Paul E. Hertz**, Barnard College

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*Biology, 5th Edition* teaches Biology the way scientists practice it, by emphasizing and applying science as a process. Students learn not only what scientists know, but how they know it, and what they still need to learn. The authors explain complex ideas clearly and describe how biologists collect and interpret evidence to test hypotheses about the living world. The text provides engaging applications, develops quantitative analysis and mathematical reasoning skills, and builds conceptual understanding.



### Laboratory Manual for Majors General Biology

**James W. Perry**, University of Wisconsin  
**David Morton**, Frostburg State University  
**Joy B. Perry**, University of Wisconsin

© 2008 | 720pp | 9780495115052

Featuring a clear format and a wealth of illustrations, this lab manual helps biology students learn science by doing it. It includes numerous inquiry-based experiments, relevant activities, and supporting questions that assess recall, understanding, and application. The exercises support any biology text used in a majors course.



## Human Physiology

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### Human Physiology

From Cells to Systems

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Lauralee Sherwood, West Virginia University

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Organized around the central theme of homeostasis, *Human Physiology, 9th Edition* helps students appreciate the integrated functioning of the human body. Author Lauralee Sherwood uses clear, straightforward language, analogies, and frequent references to everyday experiences to help students learn and relate to physiology concepts. The vibrant art program and empowering digital resources enable students to visualize important concepts and processes. By focusing on core principles and sharing her enthusiasm for the subject matter, Sherwood helps students develop a solid foundation for future study and careers.

## Human Biology

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### Human Biology

11th Edition

Cecie Starr,  
Beverley McMillan,

© 2015 | 608pp | 9781305112100



Clear, engaging, and visually compelling, Starr and McMillan's *Human Biology, 11th Edition* teaches students the core concepts of human biology. Each chapter opens with an interesting application that highlights the relevance of biology and motivates the study of the topic. Students then learn basic concepts which help them think critically about these issues. Useful pedagogy, such as section-ending "Take-Home Messages" and a running glossary, ensure students understand key concepts. New "Focus on Human Impact" boxes and chapter-ending "Your Future" and "Explore on Your Own" sections demonstrate to students the impact and personal relevance of the content on their lives.

## Genetics

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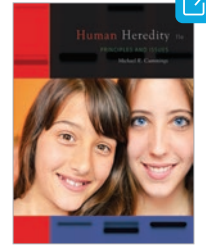
### Human Heredity

Principles and Issues

11th Edition

Michael Cummings, Illinois Institute of Technology

© 2015 | 496pp | 9781305251052



*Human Heredity* engages non-Biology majors with concepts and examples that they can apply to themselves, their families, and their work environment. Author Michael Cummings uses clear, concise language to explain the origin, nature, and amount of genetic diversity present in the human population and how that diversity has been shaped by natural selection. Examining the social, cultural, and ethical implications associated with the use of genetic technology, Cummings prepares students to become well-informed consumers and providers of genetic-based health care services.

## Environmental Science

NEW EDITION

Available with MINDTAP

### Living in the Environment

20th Edition

G. Tyler Miller Jr., Earth Education and Research  
Scott Spoolman, Earth Education and Research

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In the 20th Edition of *Living in the Environment*, authors Miller and Spoolman worked with the National Geographic Society in developing a text that equips students with the inspiration and knowledge they need to make a difference in solving today's environmental issues. Using sustainability as the integrating theme, it provides clear introductions to multiple environmental problems and balanced discussions to evaluate potential solutions. New Core Case Studies bring important real-world stories to the forefront; questions added to the captions of figures that involve data graphs give students additional practice in evaluating data; and a new focus on learning from nature highlights principles and applications of biomimicry. The MindTap edition offers additional exclusive National Geographic content and includes a new Think Like an Environmental Scientist activity that introduces important research topics.

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### Environmental Science

16th Edition

G. Tyler Miller Jr., Earth Education and Research  
Scott Spoolman, Earth Education and Research

© 2018 | 544pp | 9781337569613

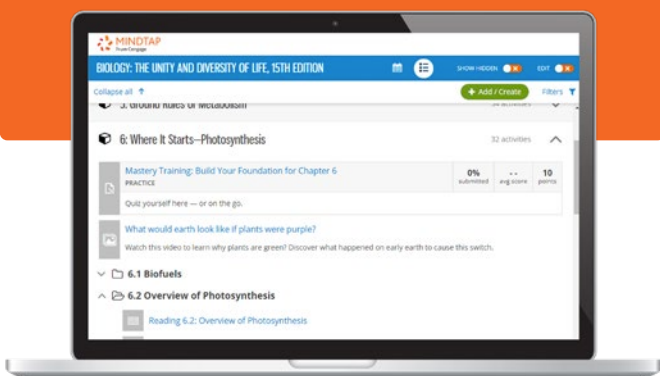


Partnering with National Geographic Learning, Miller and Spoolman deliver a text that equips students with the inspiration and knowledge to help solve modern environmental issues. *Environmental Science, 16th Edition*, highlights important work of scientists and citizens, while photos, maps and illustrations bring course content to life. A concept-centered approach transforms complex topics into key concepts students understand. Using sustainability as their central theme, the authors emphasize natural capital, natural capital degradation, solutions, trade-offs and the importance of individuals. Students learn how nature works, how they interact with it and how humanity can continue to sustain its relationship with the earth by applying nature's lessons to economies and individual lifestyles.

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MindTap for General Biology includes Mastery Training, an adaptive learning tool that uses distributed practice to help students master core concepts.



## INTRODUCTION TO NUTRITION

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### Nutrition Concepts & Controversies

15th Edition

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**Eleanor Noss Whitney**, Nutrition and Health Associates  
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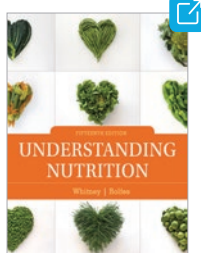
A market leader for nearly four decades, this text balances important scientific research and nutrition fundamentals with applications to real life and general well-being. Authors Sizer and Whitney's conversational tone and their coverage of controversial topics engage students and help them sort through various fads, facts and misconceptions, empowering them to make good food choices.

Available with MINDTAP

### Understanding Nutrition

15th Edition

**Eleanor Noss Whitney**, Nutrition and Health Associates  
**Sharon Rady Rolfes**, Florida State University  
 © 2020 | 848pp | 9781337392693



The bestselling *Understanding Nutrition* makes the science of nutrition meaningful and memorable. Updated with the latest available research, the 15th Edition emphasizes active learning and prepares students for their future careers. Authors Whitney and Rolfes draw readers into the study of nutrition with a lively and approachable writing style--dispelling students' existing misconceptions and empowering them to make better nutrition choices and enact lasting behavior change.

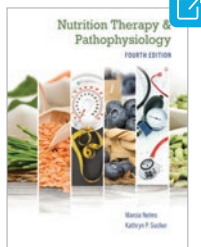
## NUTRITION COUNSELING

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### Nutrition Therapy & Pathophysiology

4th Edition

**Marcia Nahikian Nelms**, The Ohio State University  
**Kathryn P. Sucher**, San Jose State University  
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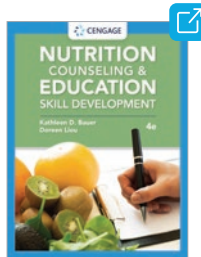
A powerful all-in-one resource for students, clinicians and researchers, *Nutrition Therapy & Pathophysiology*, 4th Edition, clearly connects nutrition therapy practices and expected outcomes to underlying disease processes at every level--from cells to organ systems. It's the ideal text for instructors who want to focus on "clinical" or "diet therapy" topics without basic nutrition chapters.

NEW EDITION Available with MINDTAP

### Nutrition Counseling And Education Skill Development

4th Edition

**Kathleen D. Bauer**, Montclair State University  
**Doreen Liou**, Montclair State University  
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*Nutrition Counseling and Education Skill Development* helps entry-level nutritional professionals develop a solid foundation in counseling and education principles and evaluation methodologies. Taking a clear, step-by-step approach, the book includes case studies and first-person accounts and gives students opportunities in every chapter to practice new skills.

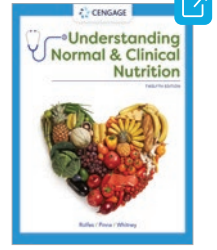
## NUTRITION AND DIET THERAPY

NEW EDITION Available with MINDTAP

### Understanding Normal & Clinical Nutrition

12th Edition

**Sharon Rady Rolfes**, Florida State University  
**Kathryn Pinna**  
**Eleanor Noss Whitney**, Nutrition and Health Associates  
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The 12th Edition of *Understanding Normal and Clinical Nutrition* presents the fundamentals of nutrition and nutrition therapy along with their practical applications to daily life and clinical settings. Starting with normal nutrition, the authors introduce nutrients and their physiological impacts, as well as nutritional guidelines for good health and disease prevention. Coverage of clinical nutrition includes the latest information on pathophysiology and dietary changes for treating a variety of medical conditions, from obesity and pregnancy to cardiovascular diseases, diabetes, and HIV. Known for a consistent and student-friendly narrative, the book includes systematic "How To" discussions, clinical case studies, review questions, and in-depth "Highlight" sections.

## LIFE SPAN NUTRITION

Available with MINDTAP

### Nutrition Through the Life Cycle

7th Edition

**Judith E. Brown**, University of Minnesota  
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Written by one of the most influential authors in the field, Brown's *Nutrition Through the Life Cycle* illustrates how nutrition impacts healthy people as they grow, develop and function through life stages. More student friendly than ever, its signature layered approach progresses from preconception to the end stages of the life cycle--alternating chapters between normal and clinical nutrition to give the complete picture of each topic. Including insight from leading experts, it reflects the latest research in its comprehensive coverage of nutritional needs, nutrition and disease outcomes, model programs, healthful diets, gene variants, nutrient-gene interactions and more.

## ADVANCED NUTRITION

Available with MINDTAP

### Advanced Nutrition and Human Metabolism

7th Edition

**Sareen S. Gropper**, Auburn University  
**Jack L. Smith**, University of Delaware  
**Timothy P. Carr**, University of Nebraska-Lincoln  
 © 2018 | 640pp | 9781305627857



The 7th Edition continues to set the standard through the authors' ability to clearly and accurately explain even the most complex metabolic processes and concepts, while staying at an undergraduate level. It gives students a solid understanding of digestion, absorption, and metabolism of fat, protein, and carbohydrates; examines the structures and functions of water-soluble and fat-soluble vitamins including their regulatory roles in metabolism; and provides information on vitamin and mineral food sources, recommended intakes, deficiency, and toxicity.

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