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Science & Math

2021, Asia

An exciting new collection of titles recommended for 2021

Anatomy & Physiology: An Integrative Approach
Micheal McKinley, Valerie O'Loughlin, Theresa Bidle, Edition 4
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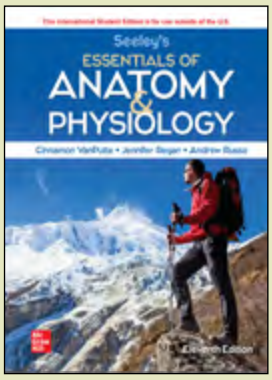

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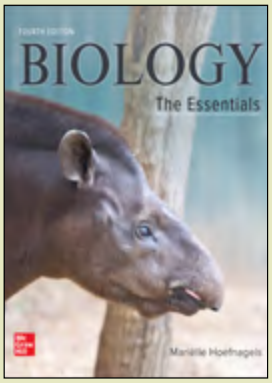

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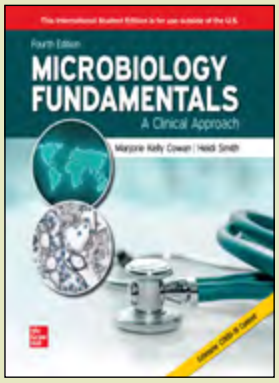

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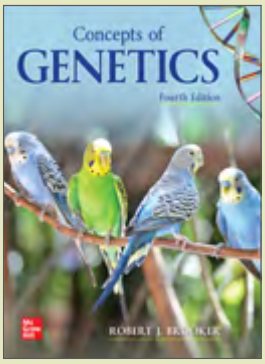

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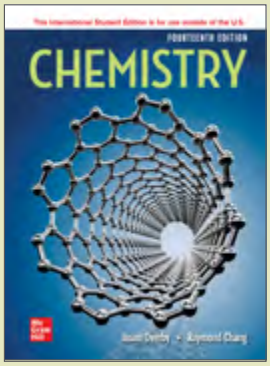

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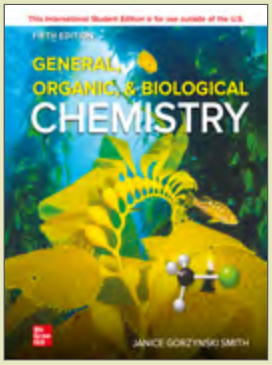

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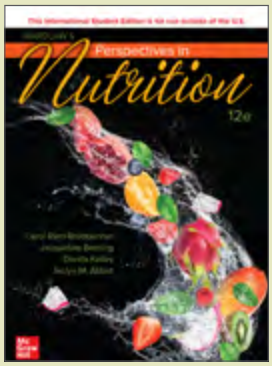

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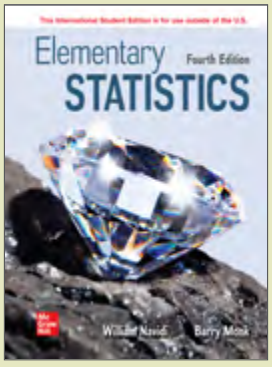

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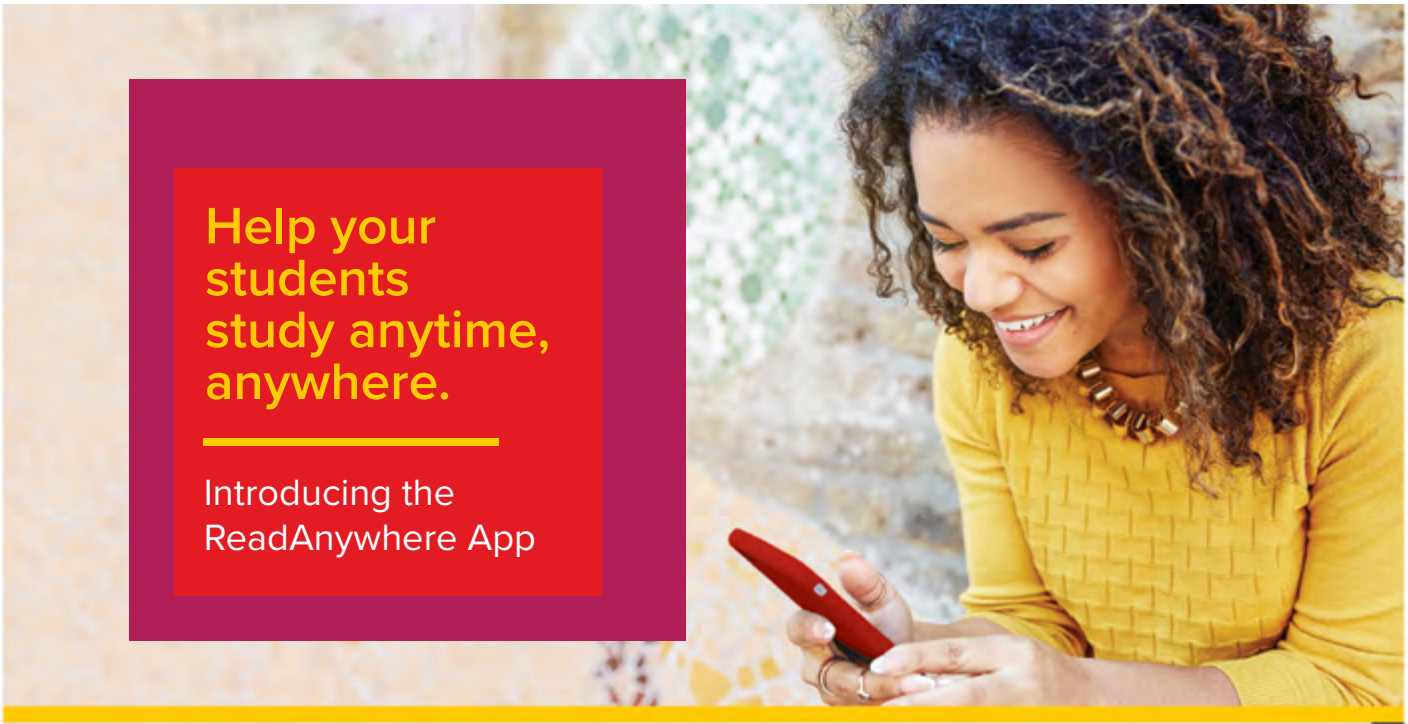

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connect + proctorio

McGraw-Hill Academic Integrity

Remote Proctoring & Browser Locking Capabilities

McGraw-Hill and Proctorio have partnered to incorporate learning integrity tools within Connect®.

Remote proctoring and browser locking capabilities are seamlessly integrated within Connect® to offer more control over the integrity of online assessments. A mix of live and fully-automated remote proctoring services provide scalable and cost-effective solutions to protect institutional accreditation, increase the value of online degrees and help institutions grow their programs.

Instructors can enable security options that restrict browser activity, monitor student behavior, and verify the identity of each student. Instant and detailed reporting gives instructors an at-a-glance view of potential academic integrity concerns, avoiding personal bias and supporting evidence-based claims.

What's Included?

Exam Proctoring
Automated Proctoring
Live Proctoring

Browser Locking
Force Full Screen
Only One Screen
Disable Tabs

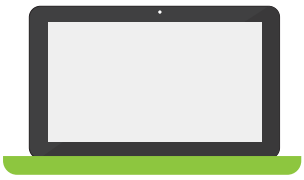
ID Verification
Live and Automated
ID Verification

Content Protection
Distribution Prevention
No Copy/Print/Download
Restrictions

Learning Integrity Platform

Connect® include options for customizable, secure exam settings, including new remote proctoring options and live ID verification to allow institutions to set-up unscheduled, on-demand proctoring specific to their assessment needs. This ensures fairness for test-takers by increasing accountability, securing exam content, deterring cheating, and promoting a culture of integrity while improving learning outcomes.

Our Advantages



Integration
Seamless integration between Connect®, Proctorio, and your LMS.

Limitless
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Secure
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Lowest bandwidth requirements.

Simplicity
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Insight
Reports provide suspicious indicators allowing faculty to pinpoint where questionable activity occured.

Support
Built-in 24/7/365 support for instructors and students.

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OUR PARTNERSHIP WITH THE ONLINE LEARNING CONSORTIUM

Bringing expertise to institutions looking to ensure their online learning programs are designed, facilitated, and evaluated according to best practices.

Supporting College Instructors and Administrators

As online learning expands due to COVID-19, McGraw Hill has partnered with the Online Learning Consortium (OLC), a higher education community dedicated to advancing quality digital teaching and learning experiences, to help transition in-person courses to hybrid or online delivery.

Certifying Faculty Consultants as Online Learning Specialists and Course Builders

The partnership includes a co-branded Quality in Online Learning Certification Program, completed by McGraw Hill Faculty Consultants and staff to help support, mentor, and provide virtual coaching to faculty. Coaching on effective practices of quality online learning includes course design, facilitation, and assessment.

Providing Free On-Demand Toolkits for Development of Online Courses

Instructors and administrators will also have access to free on-demand toolkits to guide them through the process of designing and facilitating online courses and assessing student learning. These resources will be available on the SupportAtEveryStep.com webpage.

Implementing High-Quality Online Instruction and Assessment through Preconfigured Courseware

In consultation with OLC and our certified Faculty Consultants, McGraw Hill has created pre-configured courseware using OLC's quality scorecard to align with best practices in online course delivery. This turnkey courseware contains a combination of formative assessments, summative assessments, homework and application activities, and can easily be customized to meet an individual's needs and course outcomes.

For more information, visit these webpages:

McGraw Hill http://bit.ly/MHEOLCPartnership | **OLC** https://onlinelearningconsortium.org

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Virtual Labs

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Introducing the new Connect® Virtual Labs! Your students will be better prepared for lab, more efficient, and retain more of the fundamental skills necessary for a successful laboratory experience.

Connect Virtual Labs is a fully online lab solution that can be used as an online lab replacement, preparation, supplement or make-up lab to bridge the gap between lab and lecture. These simulations help a student learn the practical and conceptual skills needed, then check for understanding and provide feedback. With adaptive pre-lab and post-lab assessment available, instructors can customize each assignment.

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- **Easy-to-follow on-screen instructions.**
- **Student progress is automatically saved.**
- **Visible progress bar.**

For more information, please contact your personal Learning Technology Representative or visit https://www.mheducation.com/highered/connect/virtual-labs.

List of Connect® Virtual Labs

Tutorial:
- Virtual Labs Tutorial

Scientific Method:
- Applying the Scientific Method: Pillbug Preference

How Enzymes Function:
- Effect of Temperature
- Enzyme Activity
- Effect of pH
- Effect of Concentration

Osmosis:
- Movement of Water Across a Selectively Permeable Membrane
- Tonicity in Red Blood Cells
- Tonicity in Elodea Cells
- Tonicity in Potato Strips

Skeletal Muscle:
- Shoulder and Elbow Movement Exercise
- Electrical Stimulation

Nervous System:
- Demonstrate Monosynaptic Reflexes

Diffusion:
- Effect of Concentration on the Rate of Diffusion in a Semisolid
- Effect of Density of Media on the Rate of Diffusion
- Effect of Molecular Weight on the Rate of Diffusion in Air
- Diffusion Across a Selectively Permeable Membrane

DNA Biology and Technology:
- Isolation of DNA
- Gel Electrophoresis

Lab Safety:
- Hand Washing Procedure
- Personal Safety

Microscopy:
- Operation of a Brightfield Microscope
- Oil Immersion
- Pond Water Wet Mount

Human Genetics:
- Chromosomal Inheritance During Meiosis
- Genetic Inheritance

Metric Measurement:
- Length
- Weight
- Volume
- Temperature

Electromyography:
- Motor Unit Recruitment
- Time to Fatigue

Coming:
*Dec. 2020; **Jan. 2021

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- Effects of Blood Glucose Level

Mendelian Genetics:
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- Fruit Fly Characteristics
- Monohybrid Fruit Fly Cross
- Dihybrid Plant Cross
- Dihybrid Fruit Fly Cross
- X-Linked Fruit Fly Cross

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- Determining Rate in White Light
- Monitoring Photosynthesis with Carbon Dioxide Uptake

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- Hemoglobin Content
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- Blood Pressure
- Electrocardiography

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****Urinary System:**
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- Test for Sugars
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- Emulsification of Lipids
- Test for Fat
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- Measuring Energy Production in Plants

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- Antibiotic-Resistant Bacteria
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- Antimicrobial Sensitivity Testing: Kirby-Bauer

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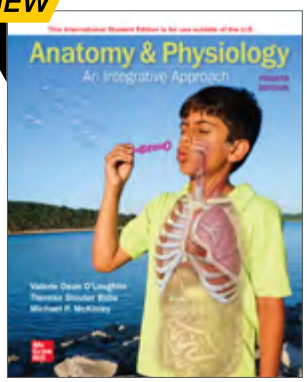
- Connective Tissue Histology
- Muscle Tissue Histology
- Nervous Tissue Histology

****pH Balance:**
- Function of Buffers
- Antacids as Buffers

ANATOMY AND PHYSIOLOGY

NEW



Anatomy & Physiology: An Integrative Approach

Michael McKinley, Valerie O'Loughlin, Theresa Bidle

Edition: 4
2022©
1,272 Pages
Mar 2021
Print: 9781260598179
Connect: 9781264265404

OVERVIEW

McKinley/O'Loughlin/Bidle's Anatomy and Physiology: An Integrative Approach, 4th edition brings many elements of the study of A&P together in unique ways to maximize understanding. Anatomy and physiology are covered within each chapter, emphasizing the interdependence of body systems by weaving prior coverage of one system into textual explanations of how other systems work. All figures are carefully designed to support the text narrative, and carry brief textual explanations, which make figures self-contained study tools. The text helps students apply chapter content by using clinical examples that show students what can go wrong in the body, crystalizing their understanding of the "norm."

FEATURES

- Concept Overview Figures from the textbook have been transformed into interactive study modules. Concept Overview Interactives are available for the following topics:
- Membrane Transport, Muscle Contraction, Neuron Physiology, Endocrine System (New), Cardiac Cycle, Blood Pressure (New), Innate Immunity (New), Adaptive Immunity (New), Respiration, Glomerular Filtration, Tubular Resorption/Secretion- Revisions and Content Updates Throughout: Content in every chapter has been updated where appropriate to keep the text current with the latest research, and new findings have been incorporated.
- **Ph.I.L.S. 4.0** (Physiology Interactive Lab Simulations) software is the perfect way to reinforce key physiology concepts with powerful lab experiments.
- **Practice Atlas for A&P** is an interactive tool that pairs images of common anatomical models with stunning cadaver photography, allowing students to practice naming structures on both models and human bodies, anytime, anywhere.
- **Connect Virtual Labs** helps connect the dots between lab and lecture, boosts student confidence and knowledge, and improves student success rates.
- **Anatomy & Physiology Revealed® 4.0** is an interactive cadaver dissection tool to enhance lecture and lab that students can use anytime, anywhere.

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26. Digestive System
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28. Reproductive System
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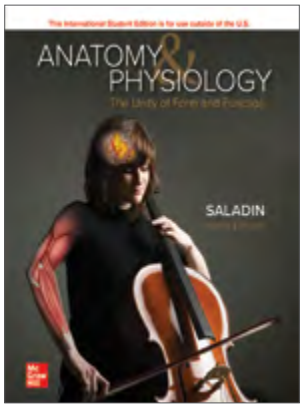

Anatomy and Physiology: The Unity of Form and Function

Kenneth Saladin

Edition: 9
2021©
752 Pages
Print: 9781260571295
Connect: 9781264203277

OVERVIEW

Anatomy & Physiology: The Unity of Form and Function tells a story comprised of many layers, including core science, clinical applications, the history of medicine, and the evolution of the human body. Saladin combines this humanistic perspective on anatomy and physiology with vibrant photos and art to convey the beauty and excitement of the subject to beginning students. To help students manage the tremendous amount of information in this introductory course, the narrative is broken into short segments, each framed by expected learning outcomes and self-testing review questions.

FEATURES

- While new science has been added, keeping up with such growth also means pruning back topics discredited by newer literature. For this edition, these include adult cerebral neurogenesis; endorphins and runner's high; human pheromones; pineal tumors and precocial puberty; prophylactic use of low-dose aspirin.
- New Deeper Insight sidebar essays have been added on cardiac tamponade; biopsy; stem-cell therapy; regenerative medicine; osteomalacia and rickets; vertebral disc herniation; rotator cuff injury; carpal tunnel syndrome; shinsplints etc.
- This edition features new drawings of epidermal histology, flat bone structure, lever mechanics, Parkinson disease, lumbar puncture, hand innervation, Bell palsy, etc.
- New photos in this edition include digital subtraction angiography, molecular-scale cryo-EM imaging, diabetic gangrene, embryonic stem cells, albinism, jaundice, osteocyte SEM, rickets, muscle fiber histochemistry, diffusion tensor imaging of the brain connectome, shingles, cataracts, glaucoma, forelimb veins used for phlebotomy, kidney stones, gallstones.
- Within all A&P Connect product products we offer Smartbook®, PracticeAtlas®, Anatomy & Physiology Revealed 4.0®, and Ph.I.L.S 4.0®.

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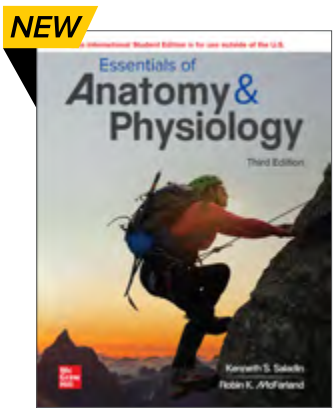

Essentials of Anatomy and Physiology

Kenneth Saladin, Robin McFarland

Edition: 3
2022©
784 Pages
Print: 9781260598193
Connect: 9781264349838

OVERVIEW

Essentials of Anatomy & Physiology is a text that blends up-to-date science stimulating writing high-quality art and cutting-edge educational technology to provide the most effective teaching and learning

program available in the one-semester anatomy and physiology courses. The distinctive pedagogy of the text revolves around the theme of "Elevate Learning". From "Base Camp" to "Assess Your Learning Outcomes" the student experiences a clear sense of the path ahead a convenient means of charting progress and a satisfying sense of accomplishment at the end.

FEATURES

- Captivating Art and Photography A&P is a highly visual subject; beautiful illustrations pique the curiosity and desire to learn. Essentials of Anatomy & Physiology's illustrations set a new standard in the A&P.
- **Ph.I.L.S. 4.0** (Physiology Interactive Lab Simulations) software is available which is a perfect way to reinforce key physiology concepts with powerful lab experiments.
- **Practice Atlas for A&P** is an interactive tool that pairs images of common anatomical models with stunning cadaver photography, allowing students to practice naming structures on both models and human bodies, anytime, anywhere.
- **Connect Virtual Labs** helps connect the dots between lab and lecture, boosts student confidence and knowledge and improves student success rates.
- **Anatomy & Physiology Revealed® (APR) 4.0** is an interactive cadaver dissection tool to enhance lecture and lab that students can use anytime, anywhere.

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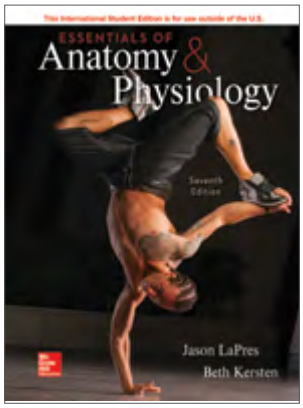


Essentials of Anatomy and Physiology

Jason H LaPres, Beth Ann Kersten

Edition: 7
2019©
1,272 Pages
Print: 9781260566109
Connect: 9781260316902

OVERVIEW

Designed for an introductory, one-semester course, the scope, organization, writing style, depth of presentation, and pedagogical aspects of this text have been tailored to meet the needs of students preparing for a career in allied health. This text does not assume any prior science knowledge on the part of the student and effectively presents students with the fundamentals of anatomy and physiology.

It's the only one-semester text available with a built-in study guide/workbook.

A hallmark feature of this text is the author's presentation of A&P concepts that are accurate but presented at a level that is appropriate for virtually all students. The new author team highlights the relationships between structure and function of body parts and the mechanisms of homeostasis. In addition, interrelationships of the organ systems are noted where appropriate and useful.

FEATURES

- The end-of-chapter summary headings have been numbered and major points have been bulleted, making this study tool easier to read.
- All chapters have been revised per reviewer input. Terminology has been updated via the Terminology Anatomica and new information on clinical disorders has been added.
- A new art program with numerous new and/or revised pieces of art, all in the same style, have been added to this edition. Gunstream's art is simple, uncluttered, has only the necessary amount of labels, and focuses on conveying key concepts to students.
- New chapter introductions have been written to provide the setting and reflection of the content for the chapter and its place with the recurring theme of Homeostasis.

CONTENTS

Part 1: Organization of the Body

1. Introduction to the Human Body
2. Chemical Aspects of Life
3. Cell
4. Tissues and Membranes

Part 2: Covering, Support, and Movement of the Body

5. Integumentary System
6. Skeletal System
7. Muscular System

Part 3: Integration and Control

8. Nervous System
9. Senses
10. Endocrine System

Part 4: Maintenance of the Body

11. Blood
12. Heart and Blood Vessels
13. Lymphatic System and Defenses Against Disease
14. Respiratory System
15. Digestive System
16. Urinary System

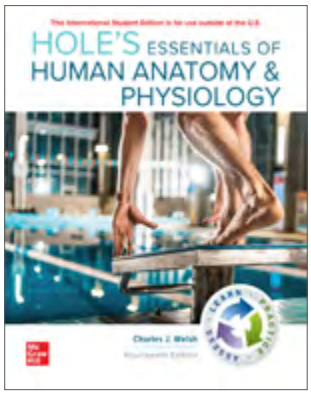
Part 5:- Reproduction

17. Reproductive Systems
18. Pregnancy, Prenatal Development, and Genetics

Part 6: Study Guides

Appendices

A. Keys to Medical Terminology
B. Answers to Self-Review Questions



Hole's Essentials of Human Anatomy & Physiology

Charles Welsh, Cynthia Prentice-Craver

Edition: 14
2021©
832 Pages
Print: 9781260575217
Connect: 9781260425819

OVERVIEW

Designed for the one-semester anatomy and physiology course, Hole's Essentials of Human Anatomy and Physiology assumes no prior science knowledge and supports core topics with clinical applications, making difficult concepts relevant to students pursuing careers in the allied health field. The Learn, Practice, and Access system is used throughout the text and digital content for immediate application. "Learning" outcomes begin the chapter and set the stage for what students will learn, "Practice" questions conclude each major section and help students recall the information they've consumed, and "Assess" end-of-chapter resources allow students to confirm their accurate recall of what they learned and practiced. The learn, practice, and assess system is highly effective in providing students with a solid understanding of the important concepts in anatomy and physiology.

FEATURES

- **"Of Interest" (previously "Facts of Life") boxes** provide interesting bits of anatomy and physiology information, adding a touch of wonder to chapter topics.
- **Boxed material**: Small boxes have been integrated into the text for better flow or have been transformed into Clinical Application boxes
- **Anatomy and Physiology Revealed (APR)**: This multimedia tool is designed to help students learn and review using a virtual human cadaver! The Anatomy & Physiology REVEALED® (APR) icon at the beginning of each chapter tells you which system in APR applies to this chapter.

CONTENTS

Unit 1: Levels of Organization

1. Introduction to Human Anatomy and Physiology
2. Chemical Basis of Life
3. Cells
4. Cellular Metabolism
5. Tissues

Unit 2: Support and Movement
6. Integumentary System
7. Skeletal System
8. Muscular System

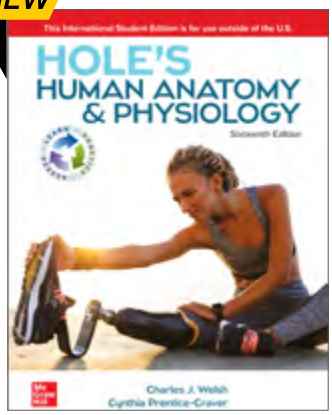
Unit 3: Integration and Coordination
9. Nervous System
10. The Senses
11. Endocrine System

Unit 4: Transport
12. Blood
13. Cardiovascular System
14. Lymphatic System and Immunity

Unit 5: Absorption and Excretion
15. Digestion and Nutrition
16. Respiratory System
17. Urinary System
18. Water, Electrolyte, and Acid-Base Balance

Unit 6: : The Human Life Cycle
19. Reproductive Systems
20. Pregnancy, Growth, Development, and Genetics

NEW



Hole's Human Anatomy & Physiology

Charles Welsh, Cynthia Prentice-Craver

Edition: 16
2022©
1,040 Pages
Mar 2021
Print: 9781260598186
Connect: 9781264262830

OVERVIEW

Perfect for introductory level students, Hole's Human Anatomy and Physiology assumes no prior science knowledge by focusing on the fundamentals. This new edition updates a great A&P classic, while offering greater efficiencies to the user including the tried and true Learn, Practice, Assess method throughout the text. The 16th edition focuses on helping students master core themes in anatomy and physiology, which are distilled down into key concepts and underlying mechanisms. A new author team who is active in the classroom brings career relevance and more concise language, while updated and enhanced figures provide clarity.

FEATURES

- New Art in some cases line art has been added to help clarify key principles. In other cases micrographs have been replaced for clarity and visual impact.
- **Connect Virtual Labs** helps connect the dots between lab and lecture, boosts student confidence and knowledge and improves student success rates.
- Increased quantity of higher level Bloom's questions in Connect to allow for more flexibility in assignment creation.-Practice Atlas for A&P is an interactive tool that pairs images of common anatomical models with stunning cadaver photography, allowing students to practice naming structures on both models and human bodies, anytime, anywhere.
- **Anatomy & Physiology Revealed® 4.0** is an interactive cadaver dissection tool to enhance lecture and lab that students can use anytime, anywhere.
- **Ph.I.L.S. 4.0** (Physiology Interactive Lab Simulations) software is the perfect way to reinforce key physiology concepts with powerful lab experiments.

CONTENTS

1. Introduction to Human Anatomy and Physiology
2. Chemical Basis of Life
3. Cells
4. Cellular Metabolism
5. Tissues
6. Integumentary System
7. Skeletal System
8. Joints of the Skeletal System
9. Muscular System
10. Nervous System I — Basic Structure and Function
11. Nervous System II — Divisions of the Nervous System
12. Nervous System III: Senses
13. Endocrine System
14. Blood
15. Cardiovascular System
16. Lymphatic System and Immunity
17. Digestive System
18. Nutrition and Metabolism
19. Respiratory System
20. Urinary System
21. Water, Electrolyte, and Acid-Base Balance
22. Reproductive Systems
23. Pregnancy, Growth, and Development
24. Genetics and Genomics

Human Anatomy

Michael McKinley, Valerie O'Loughlin, Elizabeth Pennefather-O'Brien

Edition: 6
2021©
1,040 Pages
Print: 9781260570649
Connect: 9781260443790

OVERVIEW

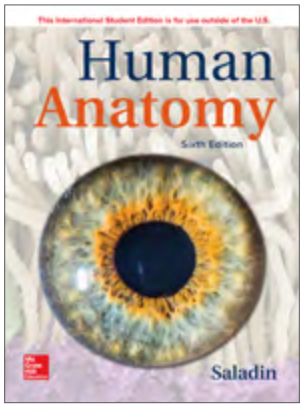
Human Anatomy stands apart from other texts as it guides students on a clearly written and expertly illustrated beginner's path through the human body. High-quality photographs paired with brilliantly rendered illustrations help students visualize, understand, and appreciate the wonders of human anatomy. The author team incorporates their combined 70 years of teaching experience into student-friendly learning strategies that are built around a pedagogical framework designed to foster retention and encourage the application of knowledge and understanding.

FEATURES

- Brilliant illustrations bring the study of anatomy to life. Drawn by a team of medical illustrators, all figures have been carefully rendered to convey realistic, three-dimensional detail.
- **What Do You Think?** These critical thinking questions actively engage students in application or analysis of the chapter material and encourage students to think more globally about the content. Answers to What Do You Think? questions are given at the end of each chapter, allowing students to evaluate the logic used to solve the problem.
- **Clinical View**: Sometimes an example of what can go wrong in the body helps crystallize understanding of the "norm." Clinical Views provide insights into health or disease processes. These essays expand upon topics covered in the text and provide relevant background information for students pursuing health-related careers.

CONTENTS

1. A First Look at Anatomy
2. The Cell: Basic Unit of Structure and Function
3. Embryology
4. Tissue Level of Organization
5. Integumentary System Skeletal System
6. Cartilage and Bone
7. Axial Skeleton
8. Appendicular Skeleton
9. Articulations Muscular System
10. Muscle Tissue and Organization
11. Axial Muscles
12. Appendicular Muscles
13. Surface Anatomy Nervous System
14. Nervous Tissue
15. Brain and Cranial Nerves
16. Spinal Cord and Spinal Nerves
17. Pathways and Integrative Functions
18. Autonomic Nervous System
19. Senses: General and Special
20. Endocrine System Cardiovascular System
21. Blood
22. Heart
23. Vessels and Circulation
24. Lymphatic System
25. Respiratory System
26. Digestive System
27. Urinary System
28. Reproductive System



Human Anatomy

Kenneth S. Saladin

Edition: 6
2020©
1,040 Pages
Print: 9781260566000
Connect: 9781260399738

OVERVIEW

From the most pedagogically sound organisation to the exceptional art to the integration of text with technology Saladin has formed a teaching system that will both motivate and enable students to understand and appreciate the wonders of human anatomy. This distinctive text was developed to stand apart from all other anatomy texts with an approach borne out of more than 30 years of teaching unparalleled art and a writing style that has been acclaimed by reviewers.

Designed for a one–semester college anatomy course Saladin requires no prior knowledge of chemistry or cell biology.

FEATURES

- Attending scientific conferences, subscribing to several scientific and medical journals, and engaging in online forums and answering public questions on anatomy, physiology, and health

helps Ken Saladin stay abreast of advances in the field. In this edition, he introduces newly discovered functions of osteocytes, astrocytes, dendritic cells, the greater omentum, the corneal epithelium, and even eyelashes. He reports new research insights on peroxisome production, tracing white matter tracts of the brain, and endocrine disruptors; new discoveries of cerebral lymphatics, pulmonary production of blood platelets, and adult hippocampal neurogenesis; and clinical advances in asthma and cancer mortality and survival, cord blood transplants, stem-cell harvesting, and regenerative medicine. These and more examples are listed chapter by chapter later in this section.

- The sixth edition has more concise treatments of gametogenesis, sperm capacitation, fertilization, aneuploidy, and embryology of the sense organs, cardiovascular system, and digestive tract. The muscle chapters are reorganized for better flow, with chapter 10 focusing on the cellular level; chapter 11 on whole-muscle organization, accessory connective tissues, musculoskeletal biomechanics, and the axial musculature; and chapter 12 on the appendicular musculature. Ken has also upgraded some of the book's pedagogic features. There are new, challenging thought questions, and the Study Guide section presents "What's Wrong with These Statements?"—ten statements that all have subtle errors, prompting students to identify what is wrong with them.
- This 6th edition details enhancements to topics already in the previous edition, including new anatomical imaging techniques, ethnic variations in anatomy, osteon structure and microfractures, vascular aging and hypertension, the scope of the immune system, T cell selection, clinical importance of the cricothyroid ligament, and more.

CONTENTS

Part 1: Organization of the Body

1. The Study of Human Anatomy
2. Cytology — The Study of Cells
3. Histology — The Study of Tissues
4. Human Development

Part 2: Support and Movement

5. The Integumentary System
6. The Skeletal System I — Bone Tissue
7. The Skeletal System II — Axial Skeleton
8. The Skeletal System III — The Appendicular Skeleton
9. The Skeletal System IV — Joints
10. The Muscular System I — Introduction
11. The Muscular System II — Axial Musculature
12. The Muscular System III — Appendicular Musculature Atlas of Regional and Surface Anatomy

Part 3: Integration and Control

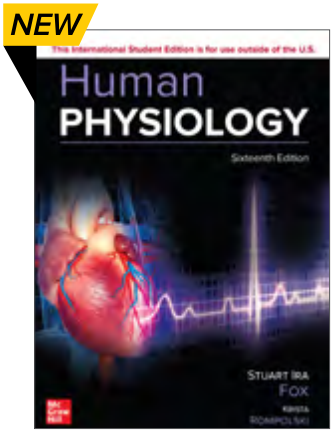
13. The Nervous System I—Nervous Tissue
14. The Nervous System II—Spinal Cord and Spinal Nerves
15. The Nervous System III—Brain and Cranial Nerves
16. The Nervous System IV—The Autonomic Nervous System and Visceral Reflexes
17. The Nervous System—Sense Organs
18. The Endocrine System

Part 4: Maintenance

19. The Circulatory System I—Blood
20. The Circulatory System II—The Heart
21. The Circulatory System III — Blood Vessels
22. The Lymphatic System and Immunity
23. The Respiratory System
24. The Digestive System
25. The Urinary System

Part 5: Reproduction

26. The Reproductive System



Human Physiology

Stuart Ira Fox,
Krista Rompolski

Edition: 16
2022©
832 Pages
Mar 2021
Print: 9781260597660
Connect: 9781264354719

OVERVIEW

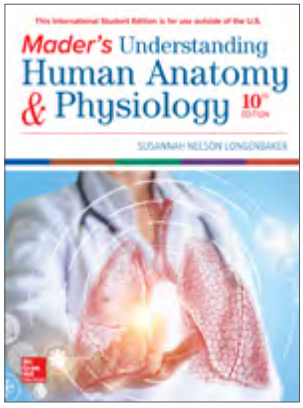
Fox's Human Physiology, was created for the one-semester Human Physiology course, often taken by allied health and biology students. Clear explanations and a solid learning framework based on integrating clinically germane information with knowledge of the body's physiological processes have made Human Physiology a market-leading text. The new 16th edition continues the author's tradition of readability and currency of information with the most updated, concise, and student-oriented presentation. This revision brings a new perspective from co-author, Krista Rompolski, an active physiology educator.

FEATURES

- Clinical Investigations have corresponding question in Connect. Students are alerted to this in the text.
- **Lifestyle Application Boxes** are readings that explore physiological principles as applied to well-being, sports medicine, exercise physiology, and aging. They are also placed at the relevant points in the text to highlight concepts just covered in the chapter.
- **Anatomy and Physiology Revealed (APR) online**: APR Icons are found on many figures within the text alerting students to the fact that there is as corresponding figure found in APR 4.0!
- **Revisions and Content Updates Throughout:** Content in every chapter has been updated where appropriate to keep the text current with the latest research, and new findings have been incorporated.

CONTENTS

1. The Study of Body Function
2. Chemical Composition of the Body
3. Cell Structure and Genetic Control
4. Enzymes and Energy
5. Cell Respiration and Metabolism
6. Interactions Between Cells and the Extracellular Environment
7. The Nervous System
8. The Central Nervous System
9. The Autonomic Nervous System
10. Sensory Physiology
11. Endocrine Glands
12. Muscle
13. Blood, Heart and Circulation
14. Cardio Output, Blood Flow, and Blood Pressure
15. The Immune System
16. Respiratory Physiology
17. Physiology of the Kidneys
18. The Digestive System
19. Regulation of Metabolism
20. Reproduction



Mader's Understanding Human Anatomy & Physiology

Susannah N. Longenbaker

Edition: 10
2020©
784 Pages
Print: 9781260565997
Connect: 9781260410808

OVERVIEW

Mader's Understanding Human Anatomy and Physiology continues to be the perfect text for a one-semester course, because it was designed for this audience from the very first edition. The text is celebrating its tenth anniversary with a complete facelift, which I believe makes texciting. Each chapter now begins with an infographic that details fascinating facts about the chapters subject.

FEATURES

- New interior design layout refreshes the text with the goal of aligning figures/tables closer to in-text references
- New design for the Human Systems Work Together feature. The new line art and design provides clarity on how each body system works with the main system covered in the chapte
- Explore Everyday A&P. The goal is to make it a catch-all for the "cool stuff" previously covered in Focus on Forensics, What's New and previous chapter opening stories (related to history); appealing to non-clinical A&P students.
- New chapter opener is a one page Infographic facts that highlights fun facts and myth busters as it applies to the context of the chapter. The author wanted to utilize the Infographic facts as a way to engage the students and pull them into the content for the chapter
- New design for the Human Systems Work Together feature. The new line art and design provides clarity on how each body system works with the main system covered in the chapter.

CONTENTS

Part 1: Human Organization

1. Organization of the Body
2. Chemistry of Life
3. Cell Structure and Function
4. Body Tissues and Membranes

Part 2: Support, Movement, and Protection

5. The Integumentary System
6. The Skeletal System
7. The Muscular System

Part 3: Integration and Coordination

8. The Nervous System
9. The Sensory System
10. The Endocrine System

Part 4: Maintenance of the Body

11. Blood
12. The Circulatory System
13. The Lymphatic System and Body Defense
14. The Respiratory System
15. The Digestive System

16. The Urinary System and Excretion

Part 5: Reproduction and Development

17. The Reproductive System
18. Human Development and Birth
19. Human Genetics

Appendix A Reference Figures: The Human Organism

Appendix B Understanding Medical Terminology

Seeley's Anatomy & Physiology

Cinnamon VanPutte, Jennifer Regan, Andrew F. Russo, Rod R. Seeley

Edition: 12
2020©
896 Pages
Pages: 9781260565966
Connect: 9781260399028

OVERVIEW

This text is written for the two semester Anatomy & Physiology course. Seeley's A&P's writing is comprehensive, providing the depth necessary for those courses not requiring prerequisites, and yet, is presented with such clarity that it nicely balances the thorough coverage. Clear descriptions and exceptional illustrations combine to help students develop a firm understanding of the concepts of anatomy and physiology and to teach them how to use that information. Great care has been taken to select important concepts and to perfectly describe the anatomy of cells, organs, and organ systems. To emphasize the concepts of anatomy and physiology, the Seeley A&P's authors provide explanations of how the systems respond to aging, changes in physical activity, and disease, with a special focus on homeostasis and the regulatory mechanisms that maintain it. This text has more clinical content than any other A&P book on the market.

FEATURES

- Answers to even-numbered Predict questions can now be accessed by instructors in Connect, allowing instructors to assign these questions if desired. Answers to odd-numbered Predict questions appear in Appendix E.
- Seeley's A&P has a problem-solving critical thinking system, as a hallmark feature of the text.
- Pedagogy like "in-chapter review questions", in-chapter PREDICT questions, end-of-chapter Review and Comprehension questions and End-of-chapter Critical Thinking questions comprise the problem solving critical thinking system.
- Seeley's A&P has more clinical coverage than any other textbook in the market!
- Systems Pathology boxes explore a disease or disorder related to a body system. Integrated PREDICT questions and systems interactions summarize how conditions impact each body system. Students get Problem Solving when they need
- **Seeley A&P incorporates, Visuals, Text and Cadaver photos:** It is Seeley's A&P's goal to "spark interest and facilitate understanding" with its illustration program. Seeley uses cadaver images mixed with illustrations to draw students in. Art and figures have been through hundreds of accuracy reviews. All artwork features multi-level perspective, realistic Anatomical art, combination art, self-contained process figures, and homeostasis summary.
- **Genetics Coverage:** To prepare students to understand the relationship between genetics and many of the cases they may encounter in health-related careers, the basics of genetics is covered in Chapter 29.

CONTENTS

Part 1: Organization of the Human Body

1. The Human Organism
2. The Chemical Basis of Life
3. Cell Biology
4. Tissues

Part 2: Support and Movement

5. Integumentary System
6. Skeletal System — Bones and Bone Tissue
7. Skeletal System — Gross Anatomy
8. Joints and Movement
9. Muscular System — Histology and Physiology
10. Muscular System — Gross Anatomy

Part 3: Integration and Control Systems

11. Functional Organization of Nervous Tissue
12. Spinal Cord and Spinal Nerves
13. Brain and Cranial Nerves
14. Integration of Nervous System Functions
15. The Special Senses
16. Autonomic Nervous System
17. Functional Organization of the Endocrine System
18. Endocrine Glands

Part 4: Regulation and Maintenance

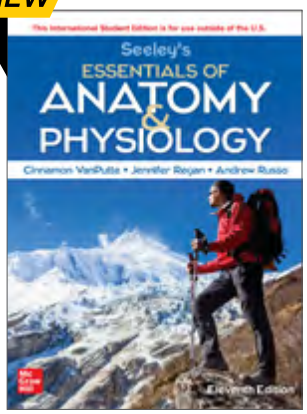
19. Cardiovascular System — Blood

20. Cardiovascular System — The Heart
21. Cardiovascular System — Blood Vessels and Circulation
22. Lymphatic System and Immunity
23. Respiratory System
24. Digestive System
25. Nutrition, Metabolism, and Temperature Regulation
26. Urinary System
27. Water, Electrolyte, and Acid-Base Balance

Part 5: Reproduction and Development

28. Reproductive System
29. Development, Growth, Aging, and Genetics

NEW



Seeley's Essentials of Anatomy and Physiology

Cinnamon VanPutte, Jennifer Regan, Andrew F. Russo

Edition: 11
2022©
752 Pages
Mar 2021
Print: 9781265348441
Connect: 9781264131266

OVERVIEW

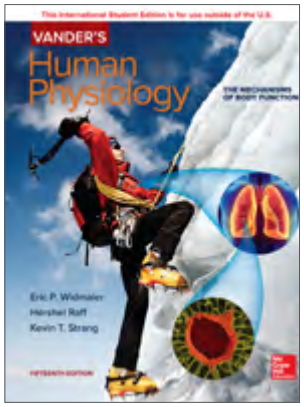
Designed for the one-semester A&P course, Seeley's Essentials of Anatomy & Physiology is designed to help students develop a solid, basic understanding of essential concepts in anatomy and physiology. Critically important information is presented in a way that maximizes understanding. With an emphasis on critical thinking, students build a knowledge base for solving problems. Clinical Impact features throughout the text bring relevance to the reader, while instructive artwork promotes interest and clarifies ideas.

FEATURES

- **Connect Virtual Labs** helps Connect the dots between lab and lecture, boosts student confidence and knowledge and improves student success rates.
- **Systems Pathology boxes** are found in each System chapter, and explore a specific condition related to the covered body system. An included diagram shows how each body System is influenced by the condition described in the case study. Systems Pathology boxes now feature a 'Representative Diseases and Disorders' table for the covered System and include An Apply It question to stimulate application of the concepts utilized in the case.
- Clinical Emphasis has been maintained and strengthened through updating of the stories and any necessary Content of the case in Point readings, untitled Clinical Asides, and Clinical Impact features.
- New information applicable to the discipline has been researched and included where appropriate.
- Learning Outcomes are closely linked with in-chapter Apply It and Learn to Apply It questions as well as the Summary, Critical Thinking, and Review and Comprehension questions. These carefully designed Learning aids assist students in reviewing chapter Content, evaluating their grasp of key concepts and utilizing what they've learned.
- **Microbes in Your body** helps students to understand the important role Microbes play in helping various Systems of the body to maintain homeostasis.
- **Clinical Impact readings** are boxed pathologies include current research, sports medicine, exercise Physiology, pharmacology, and Clinical applications. They are designed to not only illustrate the chapter Content but also to stimulate interest.

CONTENTS

1. Human Organism
2. Chemical Basis of Life
3. Cell Structures and Their Functions
4. Tissues
5. Integumentary System
6. Skeletal System: Bones and Joints
7. Muscular System
8. Nervous System
9. Senses
10. Endocrine System
11. Blood
12. Heart
13. Blood Vessels and Circulation
14. Lymphatic System and Immunity
15. Respiratory System
16. Digestive System
17. Nutrition, Metabolism, and Body Temperature Regulation
18. Urinary System and Fluid Balance
19. Reproductive System
20. Development, Heredity, and Aging



Vander's Human Physiology

Eric P. Widmaier,
Hershel Raff,
Kevin T. Strang

Edition: 15
2019©
768 Pages
Print: 9781260085228
Connect: 9781260231526

OVERVIEW

Eric Widmaier (Boston University), Hershel Raff (Medical College of Wisconsin), and Kevin Strang (University of Wisconsin) have taken on the challenge of maintaining the strengths and reputation of Vander's Human Physiology: The Mechanisms of Body Function. Moving beyond the listing of mere facts, it stresses the causal chains of events that constitute the mechanisms of body function.

The fundamental purpose of this textbook is to present the principles and facts of human physiology in a format that is suitable for undergraduates regardless of academic background or field of study. Vander's Human Physiology, fifteenth edition, carries on the tradition of clarity and accuracy, while refining and updating the content to meet the needs of today's instructors and students. The new edition offers an integrated package of textual and digital material to help deliver basic and clinical content, real-life applications, and educational technologies to students of physiology. With the 15th edition of Vander's Human Physiology, all these pieces come together to facilitate learning and enthusiasm for understanding the mechanisms of body function.

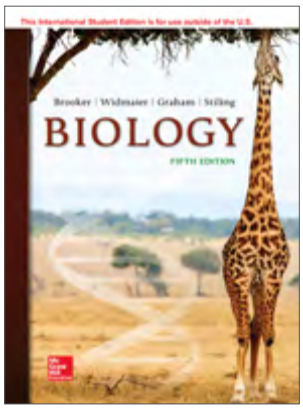
FEATURES

- Revised dozens of pieces of art and added several new visuals in the text to maximize the instructional value of the illustrations and to provide updated information that reflects the exciting discoveries in physiology that continually demonstrate the dynamic nature of this field of science.
- Understanding how to think critically about data is a core competency central to mastering human physiology. For this new edition, we added new graphing questions and interactives to help visual and tactile learners grasp challenging concepts such as equilibrium potential, resting membrane potential, synaptic integration, and the effects of vessel diameter on resistance and flow.
- New for Connect A&P:
  - Physiology Interactives: Blood, Endocrine, Adaptive Immunity and Innate Immunity
  - SmartBook with Learning Resources and sub-section assignability
  - New Connect Assessment content for Vander's Human Physiology 15 edition with 30% of questions in each chapter being Bloom's level 3 and higher.

CONTENTS

1. Homeostasis — A Framework for Human Physiology
2. Chemical Composition of the Body
3. Cellular structure, proteins, and Metabolism
4. Movement of Molecules Across Cell Membranes
5. Control of Cells by Chemical Messengers
6. Neuronal Signaling and the Structure of the Nervous System
7. Sensory Physiology
8. Consciousness, the Brain, and Behavior
9. Muscle
10. Control of Body Movement
11. The Endocrine System
12. Cardiovascular Physiology
13. Respiratory Physiology
14. The Kidneys and Regulation of Water and Inorganic Ions
15. The Digestion and Absorption of Food
16. Regulation of Organic Metabolism and Energy Balance
17. Reproduction
18. Defense Mechanisms of the Body
19. Medical Physiology — Integration Using Clinical Cases

BIOLOGY



Biology

Robert Brooker,
Eric Widmaier,
Linda Graham, Peter Stiling

Edition: 5
2020©
1,184 Pages
Print: 9781260569988
Connect: 9781260487862

OVERVIEW

Over the course of five editions the ways in which biology is taught have dramatically changed. We have seen a shift away from the memorization of details

which are easily forgotten and a movement toward emphasizing core concepts and critical thinking skills. The previous edition of Biology strengthened skill development by adding two new features called CoreSKILLS and BioTIPS (described later) which are aimed at helping students develop effective strategies for solving problems and applying their knowledge in novel situations. In this edition we have focused our pedagogy on the five core concepts of biology as advocated by "Vision and Change" and introduced at a national conference organized by the American Association for the Advancement of Science.

FEATURES

- **Modeling Challenges**: A growing trend is the use of models in biology education. Students are asked to interpret models and to create models based on data or a scenario. Furthermore, using models and simulations is one of the core skills that is emphasized by "Vision and Change." The author team has added a new feature called Modeling Challenge that asks students to create a model or to interpret a model they are given.
- **Core Concepts**: As mentioned, the five core concepts are introduced in Chapter 1 Throughout Chapters 2 through 60, these core concepts are emphasized by a Vision and Change icon, placed next to headings of particular subsections and beneath certain figure legends.
- **Core Skills**: Six core skills are also introduced in Chapter 1. In Chapters 2 through 60, these core skills are emphasized by a Vision and Change icon, , placed next to headings of particular subsections such as Feature Investigations, and beneath certain figure legends. To distinguish them from the Core Concepts, the Core Skills are highlighted in blue type. In addition, the designator CoreSKILLS has been added to certain learning outcomes and end-of-chapter questions that emphasize skills needed in the study of biology.
- **Feature Investigations**: The emphasis on skill development continues in the Feature Investigations, which provide complete descriptions of experiments.
- **BioTIPS**: A feature that was added to the previous edition is aimed at helping students improve their problem-solving skills. Chapters 2 through 60 contain solved problems called BioTIPS, where "TIPS" stands for Topic, Information, and Problem-Solving Strategy. These solved problems follow a consistent pattern in which students are given advice on how to solve problems in biology using 11 different problem-solving strategies.

CONTENTS

1. An Introduction to Biology

Unit 1: Chemistry

2. The Chemical Basis of Life I: Atoms, Molecules, and Water
3. The Chemical Basis of Life II: Organic Molecules

Unit 2: Cell

4. General Features of Cells
5. Membrane Structure, Synthesis, and Transport
6. An Introduction to Energy, Enzymes, and Metabolism
7. Cellular Respiration, Fermentation, and Secondary Metabolism
8. Photosynthesis
9. Cell Communication
10. Multicellularity

Unit 3: Genetics

11. Nucleic Acid Structure, DNA Replication, and Chromosome Structure
12. Gene Expression at the Molecular Level
13. Gene Regulation
14. Mutation, DNA Repair, and Cancer
15. The Eukaryotic Cell Cycle, Mitosis, and Meiosis
16. Simple Patterns of Inheritance
17. Complex Patterns of Inheritance
18. Genetics of Viruses and Bacteria
19. Developmental Genetics
20. Genetic Technology
21. Genomes, Proteomes, and Bioinformatics

Unit 4: Evolution

22. The Origin and History of Life
23. An Introduction to Evolution
24. Population Genetics
25. Origin of Species and Macroevolution
26. Taxonomy and Systematics

Unit 5: Diversity

27. Bacteria and Archaea
28. Protists
29. Plants and the Conquest of Land
30. The Evolution and Diversity of Modern Gymnosperms and Angiosperms
31. Fungi
32. An Introduction to Animal Diversity
33. The Invertebrates
34. The Vertebrates

Unit 6: Plants

35. An Introduction to Flowering Plant Form & Function
36. Flowering Plants — Behavior
37. Flowering Plants — Nutrition
38. Flowering Plants — Transport

39. Flowering Plants — Reproduction

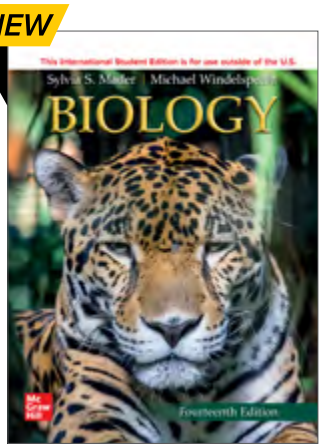
Unit 7: Animals

40. Introduction to Animal Form and Function
41. Neuroscience I — Cells of the Nervous System
42. Neuroscience II — Evolution and Function of the Brain and Nervous Systems
43. Neuroscience III — Sensory Systems
44. The Muscular-Skeletal System and Locomotion
45. Nutrition, Digestion, and Absorption
46. Control of Energy Balance, Metabolic Rate, and Body Temperature
47. Circulatory Systems
48. Respiratory Systems
49. Excretory Systems and Salt and Water Balance
50. Endocrine Systems
51. Animal Reproduction
52. Animal Development
53. Immune Systems

Unit 8: Ecology

54. An Introduction to Ecology and Biomes
55. Behavioral Ecology
56. Population Ecology
57. Species Interactions
58. Community Ecology
59. Ecosystems Ecology
60. Biodiversity and Conservation Biology

NEW



Biology

Sylvia S. Mader, Michael Windelspecht

Edition: 14
2022©
992 Pages
Mar 2021
Print: 9781260597622
Connect: 9781266240102

OVERVIEW

Biology is a traditional, comprehensive introductory biology textbook, with coverage from cell structure and function to the conservation of biodiversity. The book, which centers on the evolution and diversity of organisms, is appropriate for any one-or two-semester biology course. Biology uses concise, precise writing to present the material as succinctly as possible, enabling students--even non-majors--to master the foundational concepts before coming to class.

FEATURES

- **Relevancy Modules:** A series of relevancy modules have been designed to accompany each unit in Biology. These modules demonstrate the connections between biological content and topics that are of an interest to society as a whole. These modules are available as a supplementary eBook to the existing text within Connect and may be assigned by the instructor for use in a variety of ways in the classroom.
- **Digital Story:** The authoring team recognizes that today's students are digital learners. Therefore, not only has the content been developed in tandem with the text, but the author team has been actively involved at all levels of digital content development.
- **Ricochet Science Website:** The RicochetScience.com website, managed by Michael Windelspecht, provides updates on news and stories that are interesting to science and nonscience majors alike. The PopScience articles on this site provide an excellent focus for classroom discussions on topics that are currently being debated in society. The site also features videos and tutorial animations to assist the students in recognizing the relevancy of what they are learning in the classroom.
- **BioNow Videos:** Narrated and produced by educator Jason Carlson, provide a relevant, applied approach that allows students to feel they can actually do and learn biology themselves. While tying directly to the content of an introductory biology course, the videos help students relate their daily lives to biological concepts and then connect what they learn back to their lives.
- **Connect Virtual Labs** helps connect the dots between lab and lecture, boosts student confidence and knowledge, and improves student success rates.

CONTENTS

1. Biology: The Study of Life

Unit 1: The Cell

2. Basic Chemistry
3. The Chemistry of Organic Molecules
4. Cell Structure and Function
5. Membrane Structure and Function
6. Metabolism: Energy and Enzymes
7. Photosynthesis
8. Cellular Respiration

Unit 2: Genetic Basis of Life

9. The Cell Cycle and Cellular Reproduction
10. Meiosis and Sexual Reproduction
11. Mendelian Patterns of Inheritance
12. Molecular Biology of the Gene
13. Regulation of Gene Activity

14. Biotechnology and Genomics

Unit 3: Evolution

15. Darwin and Evolution
16. How Populations Evolve
17. Speciation and Macroevolution
18. The Origin and History of Life
19. Taxonomy, Systematics, and Phylogeny

Unit 4: Microbiology and Evolution

20. Viruses, Bacteria, and Archaea
21. Protist Evolution and Diversity
22. Fungi Evolution and Diversity

Unit 5: Plant Evolution and Biology

23. Plant Evolution and Diversity
24. Flowering Plants: Structure and Organization
25. Flowering Plants: Nutrition and Transport
26. Flowering Plants: Control of Growth Responses
27. Flowering Plants: Reproduction

Unit 6: Animal Evolution and Diversity

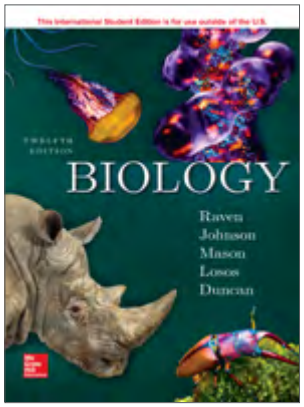
28. Invertebrate Evolution
29. Vertebrate Evolution
30. Human Evolution

Unit 7: Comparative Animal Biology

31. Animal Organization and Homeostasis
32. Circulation and Cardiovascular Systems
33. The Lymphatic and Immune Systems
34. Digestive Systems and Nutrition
35. Respiratory Systems
36. Body Fluid Regulation and Excretory Systems
37. Neurons and Nervous Systems
38. Sense Organs
39. Locomotion and Support Systems
40. Hormones and Endocrine Systems
41. Reproductive Systems
42. Animal Development and aging
43. Animal Behavior

Unit 8: Ecology

44. Population Ecology
45. Community and Ecosystem Ecology
46. Major Ecosystems of the Biosphere
47. Conservation of Biodiversity



Biology

Peter Raven,
George Johnson,
Kenneth Mason,
Jonathan Losos,
Tod Duncan

Edition: 12
2020©
992 Pages
Print: 9781260565959
Connect: 9781260494655

OVERVIEW

The Raven & Johnson's Biology author team is committed to continually improving the text, keeping the student and learning foremost. The integrated pedagogical features expand the students' learning process and enhance their learning experience. This latest edition of the text maintains the clear, accessible, and engaging writing style of past editions with the solid framework of pedagogy that highlights an emphasis on evolution and scientific inquiry that have made this a leading textbook for students majoring in biology. This emphasis on the organizing power of evolution is combined with an integration of the importance of cellular, molecular biology and genomics to offer our readers a text that is student friendly and current.

FEATURES

- The 12th edition continues to employ the aesthetically stunning art program that the Raven and Johnson Biology text is known for. Complex topics are represented clearly and succinctly, helping students to build the mental models needed to understanding biology.
- Using Student Data to Revise Content: The previous editions of Biology were supported by LearnSmart, the adaptive learning tool that offers individualized and adaptable assessment support for the students. Based on student data using LearnSmart in the previous editions, the authors were able to tailor the revision to the topics that are more challenging for the students. Based on anonymous student usage data, the authors were able to see what topic areas proved more challenging for students and focus their revisions on those topics. Called “heat-mapping” these reports show the content areas in the chapter where student performed more poorly in LearnSmart. Knowing these are challenging content areas, the authors evaluated the material in the chapter and revise the content where relevant to better explain those concepts.

CONTENTS

Part 1: The Molecular Basis of Life

1. The Science of Biology
2. The Nature of Molecules and the Properties of Water
3. The Chemical Building Blocks of Life

Part 2: Biology of the Cell

4. Cell Structure
5. Membranes
6. Energy and Metabolism

7. How Cells Harvest Energy
8. Photosynthesis
9. Cell Communication
10. How Cells Divide

Part 3: Genetic and Molecular Biology

11. Sexual Reproduction and Meiosis
12. Patterns of Inheritance
13. Chromosomes, Mapping and the Meiosis — Inheritance Connection
14. DNA — The Genetic Material
15. Genes and How They Work
16. Control of Gene Expression
17. Biotechnology
18. Genomics
19. Cellular Mechanisms of Development

Part 4: Evolution

20. Genes Within Populations
21. The Evidence for Evolution
22. The Origin of Species
23. Systematics, Phylogenetics, and Comparative Biology
24. Genome Evolution

Part 5: Diversity of Life on Earth

25. Origin and Diversity of Life
26. Viruses
27. Prokaryotes
28. Protists
29. Seedless Plants
30. Seed Plants
31. Fungi
32. Animal Diversity & the Evolution of Body Plans
33. Protostomes
34. Deuterostomes

Part 6: Plant Form and Function

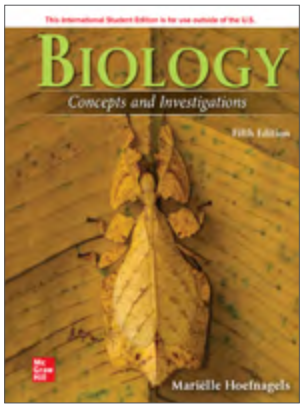
35. Plant Form
36. Transport in Plants
37. Plant Nutrition and Soils
38. Plant Defense Responses
39. Sensory Systems in Plants
40. Plant Reproduction

Part 7: Animal Form and Function

41. The Animal Body and Principles of Regulation
42. The Nervous System
43. Sensory Systems
44. The Endocrine System
45. The Musculoskeletal System
46. The Digestive System
47. The Respiratory System
48. The Circulatory System
49. Osmotic Regulation and the Urinary System
50. The Immune System
51. The Reproductive Systems
52. Animal Development

Part 8: Ecology and Behavior

53. Behavioral Biology
54. Ecology of Individuals and Populations
55. Community Ecology
56. Dynamics of Ecosystems
57. The Biosphere and Human Impacts
58. Conservation Biology



Biology: Concepts and Investigations

Mariëlle Hoefnagels

Edition: 5
2021©
496 Pages
Print: 9781260575880
Connect: 9781260542226

OVERVIEW

Mariëlle Hoefnagels' passion as a classroom instructor is evident in Biology: Concepts and Investigations, an introductory biology textbook written to explain the general concepts of biology at a level of detail that allows students to understand concepts rather than memorize details.

FEATURES

- Concept maps help students see the big picture. "Survey the Landscape " concept maps at the start of each chapter illustrate how the pieces of the entire unit fit together. These new figures integrate with the existing "Pull It Together" concept maps in the chapter summary
- Pull It Together concept maps integrate chapter content. Follow-up questions ask students about relationships shown in the map
- Scientific Literacy questions reveal why biology matters to everyone
- Digital Content- Videos embedded in the ebook narrative bring relevance, clarity, and motion to difficult concepts
- Digital-only tables, mini glossaries, and figures expand on content from the print textbook

CONTENTS

Unit 1: Science, Chemistry, and Cells

1. The Scientific Study of Life
2. The Chemistry of Life
3. Cells
4. The Energy of Life

5. Photosynthesis
6. Respiration and Fermentation

Unit 2: DNA, Inheritance, and Biotechnology

7. DNA Structure and Gene Function
8. DNA Replication, Binary Fission, and Mitosis
9. Sexual Reproduction and Meiosis
10. Patterns of Inheritance
11. DNA Technology

Unit 3: The Evolution of Life

12. The Forces of Evolutionary Change
13. Evidence of Evolution
14. Speciation and Extinction
15. The Origin and History of Life

Unit 4: The Diversity of Life

16. Viruses
17. Bacteria and Archaea
18. Protists
19. Plants
20. Fungi
21. Animals

Unit 5: Plant Life

22. Plant Form and Function
23. Plant Nutrition and Transport
24. Reproduction and Development of Flowering Plants

Unit 6: Animal Life

25. Animal Tissues and Organ Systems
26. The Nervous System
27. The Senses
28. The Endocrine System
29. The Skeletal and Muscular Systems
30. The Circulatory System
31. The Respiratory System
32. Digestion and Nutrition
33. Regulation of Temperature and Body Fluids
34. The Immune System
35. Animal Reproduction and Development

Unit 7: The Ecology of Life

36. Animal Behavior
37. Populations
38. Communities and Ecosystems
39. Biomes
40. Preserving Biodiversity

Biology: The Essentials

Mariëlle Hoefnagels

Edition: 4
2022©
704 Pages
Feb 2021
Print: 9781260597615
Connect: 9781264386659

OVERVIEW

Biology: The Essentials epitomizes what the market has come to recognize as Mariëlle Hoefnagels distinct and student-friendly writing-style. Mariëlle presents up-to-date information through What's the Point?, Why We Care, and Burning Questions; which are pedagogical tools designed to demonstrate to readers, and her own students, that biology is everywhere. Biology: The Essentials offers a broader and more conceptual introduction to biology, simplifying the more complex biological content to the essential elements that students need to act as framework for the details.

FEATURES

- **Survey the Landscape**: These new concept maps at the start of each chapter illustrate how the pieces of the entire unit fit together. Survey the Landscape integrates with the existing Pull It Together concept maps in the chapter summary to help students see the big picture.
- **Science Literacy**: This addition to the end-of-chapter questions helps students understand where biology intersects with ethics, politics, and social issues.
- **What's the Point?** This brief introduction helps explain the importance of the chapter topic. A companion feature is What's the Point? Applied, which appears near the end of each chapter and builds on the chapter's content by explaining a wide-ranging topic that is relevant to your life.
- **Learn How to Learn:** Each chapter in this book contains a tip that focuses on study skills that build understanding. Don't try to implement them all at once; choose one that appeals to you and add more as you determine what works best for you.
- **Connect Virtual Labs** is a fully online solution for lab preparation or replacement and is now automatically included in Connect for all Biology products!

CONTENTS

Unit 1: Science, Chemistry, and Cells

1. Scientific Study of Life
2. The Chemistry of Life
3. Cells
4. The Energy of Life
5. Photosynthesis
6. Respiration and Fermentation

Unit 2: DNA, Inheritance, and Biotechnology

7. DNA Structure and Gene Function
8. DNA Replication and Cell Division
9. Sexual Reproduction and Meiosis
10. Patterns of Inheritance
11. DNA Technology

Unit 3: Evolution and Diversity

12. Forces of Evolutionary Change
13. Evidence of Evolution
14. Speciation and Extinction
15. Evolution and Diversity of Microbial Life
16. Evolution and Diversity of Plants
17. Evolution and Diversity of Animals

Unit 4: Ecology

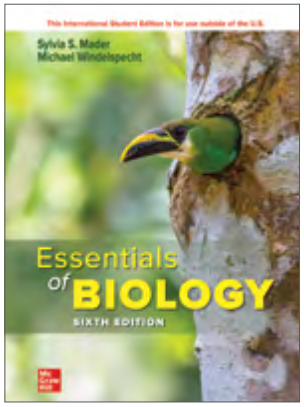
18. Populations
19. Communities and Ecosystems
20. Preserving Biodiversity

Unit 5: Plant Anatomy and Physiology

21. Plant Form and Function
22. Reproduction and Development of Flowering Plants

Unit 6: Animal Physiology

23. Animal Tissues and Organ Systems
24. The Nervous System and the Senses
25. The Endocrine System
26. The Skeletal and Muscular Systems
27. The Circulatory and Respiratory Systems
28. The Digestive and Urinary Systems
29. The Immune System
30. Animal Reproduction and Development



Essentials of Biology

Sylvia S. Mader,
Michael Windelspecht

Edition: 6
2021©
1,184 Pages
Print: 9781260570540
Connect: 9781260779998

OVERVIEW

Essentials of Biology, sixth edition is designed to provide students who are not majoring in science with a fundamental understanding of the science of biology. Even though these students are not scientists, an understanding of how science can help identify, analyze, and offer solutions to the many challenges facing human society is critical to our species' health and survival.

FEATURES

- Updated chapter openers and readings within the text to reflect more recent discoveries, or topics of interest, in the life sciences.
- Update statistics, maps, and tables to reflect changes in our scientific understanding of the topics in the chapters.
- **Relevancy Modules**: We have authored a series of relevancy modules that supplement the content found within Essentials of Biology. These modules demonstrate the connections between biological content and topics of interest to society as a whole.
- **BioNOW Videos**: The BioNOW series of videos, narrated and produced by educator Jason Carlson, provide a relevant, applied approach that allows your students to feel they can actually do and learn biology themselves. While tying directly to the content of your course, the videos help students relate their daily lives to the biology you teach, and then connect what they learn back to their lives.
- **RicochetScience Website:** The RicochetScience.com website, managed by Dr. Michael Windelspecht, provides content that is of interest to students who are not majoring in the sciences. For example, the PopScience articles on this site provide an excellent focus for classroom discussions on topics that are currently being debated in society, such as vaccines.

CONTENTS

1. Biology: The Science of Life

Unit 1: The Cell

2. The Chemical Basis of Life
3. The Organic Molecules of Life
4. Inside the Cell
5. The Dynamic Cell
6. Energy for Life
7. Energy for Cells

Unit 2: Genetics

8. Cellular Reproduction
9. Meiosis and the Genetic Basis of Sexual Reproduction
10. Patterns of Inheritance
11. DNA Biology
12. Biotechnology and Genomics

13. Mutations and Genetic Testing

Unit 3: Evolution

14. Darwin and Evolution
15. Evolution on a Small Scale
16. Evolution on a Large Scale

Unit 4: Diversity of Life

17. Viruses, Bacteria, and Protists
18. Plants and Fungi
19. Animals

Unit 5: Plant Structure and Function

20. Plant Anatomy and Growth
21. Plant Responses and Reproduction

Unit 6: Animal Structure and Function

22. Being Organized and Steady
23. The Transport Systems
24. The Maintenance Systems
25. Digestion and Human Nutrition
26. Defenses Against Disease
27. The Control Systems
28. Sensory Input and Motor Output
29. Reproduction and Embryonic Development

Unit 7: Ecology

30. Ecology and Populations
31. Communities and Ecosystems
32. Human Impact on the Biospher

Essentials of The Living World

George B Johnson

Edition: 6
2020©
672 Pages
Print: 9781260566017
Connect: 9781260494761

OVERVIEW

George Johnson has written this non-majors textbook from the ground up to be an engaging and accessible learning tool with an emphasis on "how things work and why things happen the way they do." Essentials of The Living World focuses on concepts rather than terminology and technical information, and features a straightforward, clear writing style and a wide variety of media assets to enhance the content of the textbook.

FEATURES

- **Focus on the Essentials** –
  This edition was edited to focus more clearly on the essential topics a non-major's biology student needs to know to be an informed citizen in today's society. Content has been trimmed into smaller chunks with more frequent subheadings to increase comprehension and retention.
- **New Readings**-
  New Answering Your Questions About readings and numerous new full-page readings throughout the text focus on topics of interest to students including vaping, energy drinks, nutrition, being LGBTQ, and the opioid epidemic.
- **Relevancy eBook**-
  The Relevancy Module eBook demonstrates the connections between biological content and topics that are of an interest to society as a whole. Each module consists of an overview of basic scientific concepts and then a closer look at the application of these concepts to the topic. Assessment questions, specific to the module, are also available.
- **BioNow Videos**-
  Like the Inquiry & Analysis feature at the end of each chapter of Essentials of the Living World, BioNow videos, narrated and produced by educator Jason Carlson, provide a relevant, applied approach that allows your students to feel they can actually do and learn biology themselves. While tying directly to the content of your course, the series of videos help students relate their daily lives to the biology you teach, and then connect what they learn back to their lives.

CONTENTS

Studying Biology

Part 1: The Study of Life

1. The Science of Biology

Part 2: The Living Cell

2. The Chemistry of Life
3. Molecules of Life
4. Cells
5. Energy and Life
6. Photosynthesis: Acquiring Energy from the Sun
7. How Cells Harvest Energy from Food

Part 3: The Continuity of Life

8. Mitosis
9. Meiosis
10. Foundations of Genetics
11. DNA: The Genetic Material
12. How Genes Work
13. The New Biology

Part 4: The Evolution and Diversity of Life

14. Evolution and Natural Selection
15. Exploring Biological Diversity
16. Evolution of Microbial Life
17. Evolution of Plants

18. Evolution of Animals

Part 5: The Living Environment

19. Populations and Communities
20. Ecosystems
21. Behavior and the Environment
22. How Humans Influence the Living World

Part 6: Animal Life

23. The Animal Body and How It Moves
24. Circulation and Respiration
25. The Path of Food Through the Animal Body
26. Maintaining the Internal Environment
27. How the Animal Body Defends Itself
28. The Nervous System
29. Chemical Signaling Within the Animal Body
30. Reproduction and Development

Part 7: Plant Life

31. Plant Form and Function
32. Plant Reproduction and Growth

Human Biology

Sylvia S. Mader,
Michael Windelspecht

Edition: 16
2020©
960 Pages
Print: 9781260547603
Connect: 9781260482720

OVERVIEW

Instructors consistently ask for a Human Biology textbook that helps students understand the main themes of biology through the lens of the human body. Mader's Human Biology accomplishes the goal of improving scientific literacy, while establishing a foundation of knowledge inhuman biology and physiology. The text integrates a tested, traditional learning system with modern digital and pedagogical approaches designed to stimulate and engage today's student. Dr. Michael Windelspecht represents the new generation of digital authors. Through the integration of an array of multimedia resources, Michael has committed to delivering the tried-and-true content of the Mader series to the new generation of digital learners. A veteran of the online, hybrid, and traditional teaching environments, Michael is well-versed in the challenges facing the modern student and educator.

FEATURES

- Updated chapter openers, featured readings, and Connections content to focus on issues and topics important to this generation of students.
- Integrated more information on emerging diseases (such as Zika) and new technologies (for example, CRISPR).
- **Relevancy eBook** Relevancy modules have been authored to accompany each unit in Mader/ Windelspecht Human Biology. These modules demonstrate the connections between biological content and topics that are of an interest to society as a whole. Each module consists of an introductory video, an overview of basic scientific concepts, and then a closer look at the application of these concepts to the topic. Discussion and assessment questions, specific to the modules, are also available.
- **BioNow Videos**: Narrated and produced by educator Jason Carlson, provide a relevant, applied approach that allows your students to feel they can actually do and learn biology themselves. While tying directly to the content of your course, the videos help students relate their daily lives to the biology you teach and then connect what they learn back to their lives.
- **RicochetScience Website**: The RicochetScience.com website, managed by Dr. Michael Windelspecht, provides content that is of interest to students who are not majoring in the sciences. For example, the PopScience articles on this site provide an excellent focus for classroom discussions on topics that are currently being debated in society, such as vaccines. The content is organized by the same topic areas that are the focus of the relevancy modules, making it simple for instructors to find and utilize these resources. The site also features videos and tutorial animations to assist the students in recognizing the relevancy of what they are learning in the classroom.

CONTENTS

1. Exploring Life and Science

Unit 1: Human Organization

2. Chemistry of Life
3. Cell Structure and Function
4. Organization and Regulation of Body Systems

Unit 2: Maintenance of the Human Body

5. Cardiovascular System: Heart and Blood Vessels
6. Cardiovascular System: Blood
7. The Lymphatic and Immune Systems
8. Biology of Infectious Diseases
9. Digestive System and Nutrition
10. Respiratory System
11. Urinary System

12. Skeletal System

Unit 3: Movement and Support in Humans

13. Muscular System
14. Nervous System

Unit 4: Integration and Coordination in Humans

14. Nervous System
15. Senses
16. Endocrine System

Unit 5: Reproduction in Humans

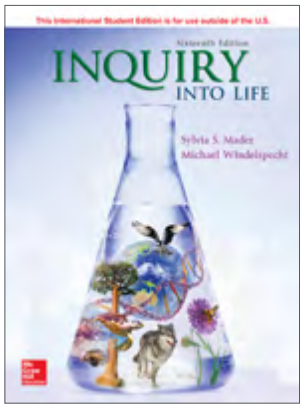
17. Reproductive System
18. Development and Aging

Unit 6: Human Genetics

19. Patterns of Chromosome Inheritance
20. Cancer
21. Genetic Inheritance
22. DNA Biology and Technology

Unit 7: Human Evolution and Ecology

23. Human Evolution
24. Ecology and the Nature of Ecosystems



Inquiry into Life

Sylvia S. Mader,
Michael Windelspecht

Edition: 16
2020©
1,408 Pages
Print: 9781260547597
Connect: 9781260482546

OVERVIEW

Dr. Sylvia Mader's text, Inquiry into Life, was originally developed to reach out to science-shy students. The text now represents one of the cornerstones of introductory biology education. Inquiry into Life was founded on the belief that teaching science from a human perspective, coupled with human applications, would make the material more relevant to the student. This text, along with the Inquiry Into Life 15.1 edition, represent an ongoing project in the development of a continuously-updated textbook. As scientists and educators, the authors of this text are well aware that scientific discovery is a dynamic process. Fortunately, the advances in digital publishing are allowing authors to update content on an ongoing basis, which in turn is promoting the ability to update content on a regular basis. This text represents the prototype of those efforts.

FEATURES

- Updated chapter openers and readings within the text to reflect more recent discoveries or topics in interest in the life sciences.
- Updated statistics, maps and tables to reflect changes in our scientific understanding of the topic
- **Relevancy eBook** Relevancy modules have been authored to accompany each unit in Mader/ Windelspecht Inquiry into Life. These modules demonstrate the connections between biological content and topics that are of an interest to society as a whole. Each module consists of an introductory video, an overview of basic scientific concepts, and then a closer look at the application of these concepts to the topic. Discussion and assessment questions, specific to the modules, are also available.
- **BioNow Videos**: Narrated and produced by educator Jason Carlson, provide a relevant, applied approach that allows your students to feel they can actually do and learn biology themselves. While tying directly to the content of your course, the videos help students relate their daily lives to the biology you teach and then connect what they learn back to their lives.
- **RicochetScience Website**: The RicochetScience.com website, managed by Dr. Michael Windelspecht, provides content that is of interest to students who are not majoring in the sciences. For example, the PopScience articles on this site provide an excellent focus for classroom discussions on topics that are currently being debated in society, such as vaccines. The content is organized by the same topic areas that are the focus of the relevancy modules, making it simple for instructors to find and utilize these resources. The site also features videos and tutorial animations to assist the students in recognizing the relevancy of what they are learning in the classroom.

CONTENTS

1. The Study of Life

Unit 1: Cell Biology

2. The Molecules of Cells
3. Cell Structure and Function
4. Membrane Structure and Function
5. Cell Division
6. Metabolism: Energy and Enzymes
7. Cellular Respiration

Unit 2: Plant Biology

8. Photosynthesis
9. Plant Organization and Function
10. Plant Reproduction and Responses

Unit 3: Maintenance of the Human Body

11. Human Organization
12. Cardiovascular System
13. Lymphatic and Immune Systems
14. Digestive System and Nutrition

15. Respiratory System
16. Urinary System and Excretion

Unit 4: Integration and Control of the Human Body

17. Nervous System
18. Senses
19. Musculoskeletal System
20. Endocrine System

Unit 5: Continuance of the Species

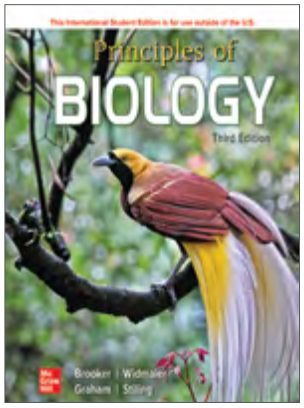
21. Reproductive System
22. Development and Aging
23. Patterns of Gene Inheritance
24. Chromosomal Basis of Inheritance
25. DNA Structure and Gene Expression
26. Biotechnology and Genomics

Unit 6: Evolution and Diversity

27. Evolution of Life
28. Microbiology
29. Protists and Fungi
30. Plants
31. Animals — The Invertebrates
32. Animals — Chordates and Vertebrates

Unit 7: Behaviour and Ecology

33. Behavioral Ecology
34. Population and Community Ecology
35. Nature of Ecosystems
36. Major Ecosystems of the Biosphere
37. Conservation Biology



Principles of Biology

Robert Brooker, Eric Widmaier, Linda Graham, Peter Stiling

Edition: 3
2021©
832 Pages
Print: 9781260571325
Connect: 9781260708295

OVERVIEW

Principles of Biology is reflective of the shift taking place in the majors biology course from large and detail rich to short and conceptual, with a focus on new, cutting-edge science. A succinct and inviting text focused on central concepts, Principles of Biology helps students connect fundamental principles while challenging them to develop and hone critical thinking skills.

FEATURES

- **Modeling Challenge**: A growing trend is the use of models in biology education. Students are asked to interpret models and to create models based on data or a scenario. Furthermore, using models and simulations is one of the core skills that is emphasized by "Vision and Change." The author team has added a new feature called a Modeling Challenge, which asks students to create a model or to interpret a model they are given. Possible answers to the Modeling Challenges are provided in Connect.
- **BioConnections** found in selected figure legends in each chapter, inform students of how a topic in one chapter is connected to a topic in another.
- **Evolutionary Connections** provides an understanding and examines the evolutionary implications of scientific research.
- **Quantitative Analysis and Crunching the Numbers**: Quantitative Analysis explores the quantitative aspect of biology, walking students through the quantitative components of biological concepts. Then Crunching the Numbers provide a sample problem that test the students understanding.
- **Concept Checks** appear in figure legends throughout the text asking students to apply or interpret information presented in illustrations.
- **SCISKILLS**: The beginning of each section of every chapter contains a set of Learning Outcomes that inform students of concepts they should understand. Many sections contain skills-based Learning Outcomes, labeled as SCISKILLS. These Learning Outcomes are specific to the skills that students will acquire when mastering the material and provide a specific understanding of how such skills may be assessed. SCISKILLS are mental actions such as analyzing data, forming hypotheses, making predictions, or performing calculations. These are skills that scientists generally rely on and students should practice.
- **Critical-Thinking Questions at the End of Each Chapter.** In the third edition of Principles of Biology, we have completely reorganized our end-of-chapter questions and have a new category of questions called Critical-Thinking Skills. These are largely new questions that are primarily at Bloom's levels 3 (applying) and 4 (analyzing).

CONTENTS

1. An Introduction to Biology

Unit 1: Chemistry

2. The Chemical Basis of Life I — Atoms, Molecules, and Water
3. The Chemical Basis of Life II — Organic Molecules

Unit 2: Chemistry

4. The Evolutionary Origin of Cells and their

General Features
5. Membranes — The Interface between Cells and Their Environment
6. How Cells Utilize Energy
7. How Cells Capture Energy via Photosynthesis
8. How Cells Communicate with Each Other and with the Environment

Unit 3: Genetics

9. The Information of Life — Structures of DNA, RNA, and Chromosomes, and DNA Replication
10. The Expression of Genetic Information via Genes I — Transcription and Translation
11. The Expression of Genetic Information via Genes II — Non-coding RNAs
12. The Control of Genetic information via Gene Regulation
13. Altering the Genetic Material — Mutation, DNA Repair, and Cancer
14. How Eukaryotic Cells Sort and Transmit their Chromosomes — Mitosis and Meiosis
15. Transmission of Genetic Information from Parents to Offspring I — Patterns that Follow Mendel's Laws
16. Transmission of Genetic Information from Parents to Offspring II — Epigenetics, Linkage, and Extranuclear Inheritance
17. The Simpler Genetic Systems of Viruses and Bacteria
18. Genetic Technologies — How Biologists Study Genes and Genomes

Unit 4: Evolution

19. Evolution of Life I — How Populations Change from Generation to Generation
20. Origin of Species and Macroevolution
21. Evolution of Life II — The Emergence of New Species
22. The History of Life on Earth and Human Evolution

Unit 5: Diversity

23. Diversity of Microbial Life — Bacteria, Archaea, Protists, and Fungi
24. Microbiomes — Microbial Systems On and Around Us
25. Plant Evolution — How Plant Diversification Changed Planet Earth
26. Invertebrates — The Vast Array of Animal Life without a Backbone
27. Vertebrates — Fishes, Reptiles and Mammals

Unit 6: Flowering Plants

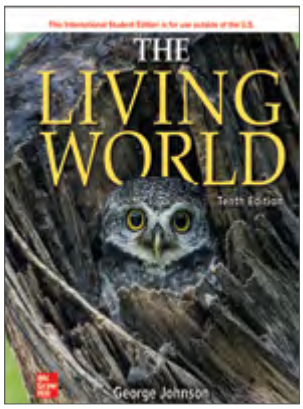
28. An Introduction to Flowering Plant Form and Function
29. How Flowering Plants Sense and Interact with Their Environments
30. How Flowering Plants Obtain and Transport Water, Mineral Nutrients, and Organic Compounds
31. How Flowering Plants Reproduce and Develop

Unit 7: Animals

32. General Features of Animal Bodies, and Homeostasis as a Key Principle of Animal Biology
33. Neuroscience I: The Structure, Function, and Evolution of Nervous Systems
34. Neuroscience II: How Sensory Systems Allow Animals to Interact with the Environment
35. How Muscles and Skeletons are Adaptations for Movement, Support, and Protection
36. Circulatory and Respiratory Systems: Transporting Solute sand Exchanging Gases
37. Digestive Systems and Excretory Systems: Maintaining Nutrient, Water, and Energy balance and removing waste
38. How Endocrine Systems Influence the Activities of all Other Organ Systems
39. The Production of Offspring: Reproduction and Development
40. Immune Systems: How Animals Defend Against Pathogens and Other Dangers
41. Integrated Responses of Animal Organ Systems to a Challenge to Homeostasis

Unit 8: Ecology

42. Behavioral Ecology: the Struggle to Find Food, Mates and to Pass on Genes
43. Population Growth and Species Interactions
44. Communities and Ecosystems: Ecological Organization at Larger Scales
45. Biomes: How Climate Affects the Distribution of Species on Earth
46. The Age of Humans
47. Biodiversity and Conservation Biology



The Living World

George Johnson

Edition: 10
2021©
832 Pages
Print: 9781260575965
Connect: 9781260494914

OVERVIEW

The Living World is often considered a student favorite. George Johnson has written this introductory biology textbook from the ground up to be an engaging and

accessible learning tool with an emphasis on "how things work and why things happen the way they do". The Living World focuses on concepts rather than terminology and technical information, and features a straight forward, clear writing style and a wide variety of media assets to enhance the content of the textbook. George believes that 'relevancy is the window' in which students can learn biology. This is shown through every chapter of this 10th edition, which is focused directly on the relevance of its content to today's students. When the discussion of a topic is linked to a student's own experience, it does not seem so unapproachable, and the utility of learning it is far easier to accept.

FEATURES

- **Relevancy Readings:** Biology and Staying Healthy Many aspects of biology will impact your own health, and are worth a closer look. They include what you eat -- diets like the currently popular Paleo diet, and chemicals like the bisphenol A found in the clear plastic lining of canned foods. Protecting your genes from DNA-attacking chemicals in cigarettes and DNA-damaging UV radiation in tanning booths will be very important to your healthy future.
- **Relevancy Readings:** Today's Biology Many of today's advances in biology are affecting society in important and interesting ways. They allow you to trace your family history with DNA, eat test-tube hamburgers, meet babies with three parents, and look for life on other planets.
- **Relevancy Readings**: A Closer Look Sometimes it's fun to take a closer look. A Day In the Life of Your Body, for example, lets you see how often you heat beats and how much blood it pumps, how often your lungs inhale and how much air moves in and out, how fast your hair and fingernails grow, and other fascinating events. A Sense of Where You Are teaches you how LeBron James is able to sink a jump shot without looking at the basket.
- **Relevancy Videos**: BioNow Like the Inquiry & Analysis feature at the end of each chapter of The Living World, BioNow videos narrated and produced by educator Jason Carlson provide a relevant, applied approach that allows students to feel they can actually do and learn biology themselves. While tying directly to the content of your course, the series of videos helps you relate your daily life to the biology you are learning.

CONTENTS

0. Studying Biology

Unit 1: The Study of Life

1. The science of Biology

Unit 2: The Living Cell

2. The Chemistry of Life
3. Molecules of Life
4. Cells
5. Energy and Life
6. Photosynthesis: Acquiring energy from the sun
7. How Cells Harvest energy from Food

Unit 3: The Continuity of Life

8. Mitosis
9. Meiosis
10. Foundations of Genetics
11. DNA: the Genetic Material
12. How Genes Work
13. Genomics and Biotechnology

Unit 4: The Evolution and Diversity of Life

14. Evolution and natural selection
15. How We name Living things
16. Prokaryotes: the First single-Celled Creatures
17. Protists: Advent of the eukaryotes
18. Fungi Invade the Land

Unit 5: Evolution of Animals

19. Evolution of the Animal Phyla
20. History of the Vertebrates
21. How Humans evolved

Unit 6: Animal Life

22. The Animal Body and How It Moves
23. Circulation
24. Respiration
25. The Path of Food through the Animal Body
26. Maintaining the Internal environment
27. How the Animal Body Defends Itself
28. The nervous system
29. The senses
30. Chemical signaling Within the Animal Body
31. Reproduction and Development

Unit 7: Plant Life

32. Evolution of Plants
33. Plant Form and Function
34. Plant Reproduction and Growth

Unit 8: The Living Environment

35. Populations and Communities
36. Ecosystems
37. Behavior and the environment
38. Human Influences on the Living World

Understanding Biology

Kenneth A. Mason,
Tod Duncan, Jonathan Losos

Edition: 3
2021©
648 Pages
Print: 9781260570588
Connect: 9781260470826

OVERVIEW

A concise and engaging biology text for biology majors, Understanding Biology partnered with Connect emphasizes fundamentals concepts to help students better understand biology and focus on developing scientific skills.; This approach utilizes the Vision and Change guidelines of Core Concepts and Core Skills while helping students begin the process of becoming a scientist. Condensed chapters are centered on a learning path that serves to connect concepts within a chapter. The learning path begins with learning outcomes, which help students understand the core skills and concepts they should develop. Inquiry and Analysis cases help students build scientific skills, while scaffold end of chapter assessment ensures they not only grasp core concepts, but can also critically analyze and apply what they've learned. "Connecting the Concepts," a synthesis feature that ends every part, helps students understand the connections between biological concepts, thus helping them "see" the big picture.

FEATURES

- **Concept Learning Objectives**: Chapters are divided into sections for ease of use. Each section begins with Concept Learning Objectives that clearly state the skills or ideas students are to master.
- **Understand, Apply and Synthesize**: Understand, Apply and Synthesize questions, located at the end of chapter, are organized according to the levels of Blooms - Understand questions assess base knowledge of concepts; Apply questions assess the student's ability to apply the information to different situations; and Synthesize questions assess the student's ability to think more critically about the topics covered in the chapter.

CONTENTS

Part 1: : The Molecular Basis of Life
1. The Science of Biology
2. The Nature of Moleculars and the Properties of Water
3. The Chemical Building Blocks of Life

Part 2: The Biology of the Cell
4. Cell Structure
5. Membranes
6. Energy and Metabolism
7. How Cells Harvest Energy
8. Photosynthesis
9. Cell Communication
10. How Cells Divide

Part 3: Genetic and Molecular Biology
11. Sexual Reproduction and Meiosis
12. Patterns of Inheritance
13. The Chromosomal Basis of Inheritance
14. DNA: The Genetic Material
15. Genes and How They Work
16. Control of Gene Expression
17. Biotechnology
18. Genomics

Part 4: Evolution
19. Genes Within Populations
20. The Evidence for Evolution
21. The Origin of Species

Part 5: The Diversity of Life
22. Systematics and Phylogeny
23. Prokaryotes and Viruses
24. Protists
25. Fungi
26. Plants
27. Animal Diversity
28. Vertebrates

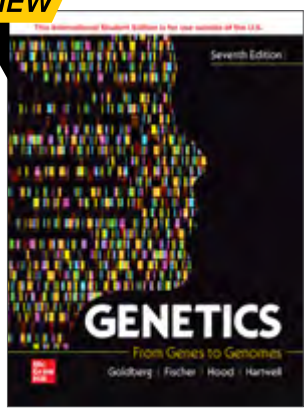
Part 6: Plant Form and Function
29. Plant Form
30vFlowering Plant Reproduction
31. The Living Plant

Part 7: Animal Form and Function
32. The Animal Biology and How It Moves
33. The Nervous System
34. Fueling the Body's Metabolism
35. Maintaining Homeostasis
36. Reproduction and Development

Part 8: Ecology and Behavior
37. Behavioral Biology
38. Ecology of Individuals and Populations
39. Community Ecology and Ecosystem Dynamics
40. The Living World

CELL/ MOLECULAR, MICROBIOLOGY AND GENETICS

NEW



Genetics: From Genes to Genomes

Michael Goldberg, Janice Fischer, Leroy Hood,Leland Hartwell

Edition: 7
2021©
880 Pages
Nov 2020
Print: 9781260575828
Connect: 9781260444032

OVERVIEW

Genetics: From Genes to Genomes is a cutting-edge, introductory genetics text authored by an unparalleled author team, including Nobel Prize winner, Leland Hartwell. This edition continues to build upon the integration of Mendelian and molecular principles, providing students with the links between the early understanding of genetics and the new molecular discoveries that have changed the way the field of genetics is viewed.

FEATURES

- 100 new end-of-chapter problems
- More than 30 new figures and tables and revised many more in addition!
- Interactive Web Tools: Social & Ethical Questions; engaging web activity; Model Organism Portrait Chapters; Interactive Web Exercises
- Student Friendly Features: One Voice Genetics; friendly and engaging reading style; Highly specialized art program providing the most engaging visual presentations of genetics available; Problem Sets, Solved Problems, and Review Problems carefully created by the authors to facilitate development of strong problem solving skills that are vital for every genetics student

CONTENTS

Part 1: Basic Principles: How Traits Are Transmitted

1. Mendel's Principles of Heredity
2. Extensions to Mendel's Laws
3. Chromosomes and Inheritance
4. Sex Chromosomes
5. Linkage, Recombination, and Gene Mapping

Part 2: What Genes Are and What They Do

6. DNA Structure, Replication, and Recombination
7. Mutation
8. Using Mutations to Study Genes
9. Gene Expression: The Flow of Information from DNA to RNA to Protein

Part 3: Analysis of Genetic Information

10. Digital Analysis of DNA
11. Genome Annotation
12. Analyzing Genomic Variation

Part 4: How Genes Travel on Chromosomes

13. The Eukaryotic Chromosome
14. Chromosomal Rearrangements
15. Ploidy
16. Bacterial Genetics
17. Organellar Inheritance

Part 5: How Genes Are Regulated

18. Gene Regulation in Prokaryotes
19. Gene Regulation in Eukaryotes
20. Epigenetics

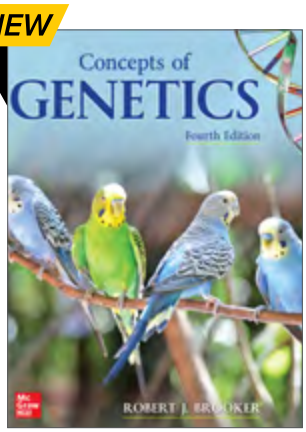
Part 6: Using Genetics

21. Manipulating the Genomes of Eukaryotes
22. The Genetic Analysis of Development
23. The Genetics of Cancer

Part 7: Beyond the Individual Gene and Genome

24. Variation and Selection in Populations
25. Genetic Analysis of Complex Traits

NEW



Concepts of Genetics

Robert J. Brooker

Edition: 4
2022©
720 pages
Oct 2021
Print: 9781265017811
Connect: 9781265124564

OVERVIEW

Concepts of Genetics is a one semester introductory genetics text that explains genetics concepts in a concise, engaging and up-to-date manner. Rob Brooker, author of market leading texts in Genetics and Intro Biology for majors, brings his clear and accessible writing style to this briefer genetics text. He employs the use of experimentation and stresses the fundamentals of the Scientific Method in presenting genetics concepts, then further engages the reader through the use of formative assessment to assist the student in understanding the core genetic principles.

FEATURES

- Learning Outcomes at the section level followed by section-related review questions
- Genetics TIPS to help develop problem-solving skills
- A rich balance of End of Chapter problem sets

CONTENTS

Part 1: Introduction

1. Overview of Genetics

Part 2: Patterns of Inheritance

2. Reproduction and Chromosome Transmission
3. Mendelian Inheritance
4. Sex Determination and Sex Chromosomes
5. Extensions of Mendelian Inheritance
6. Extranuclear Inheritance, Imprinting, and Maternal Effect
7. Genetic Linkage and Mapping in Eukaryotes
8. Variation in Chromosome Structure and Number
9. Genetics of Bacteria
10. Genetics of Viruses

Part 3: Molecular Structure and Replication of the Genetic Material

11. Molecular Structure of DNA and RNA
12. Molecular Structure and Organization of Chromosomes and Transportation
13. DNA Replication and Recombination

Part 4: Molecular Properties of Genes

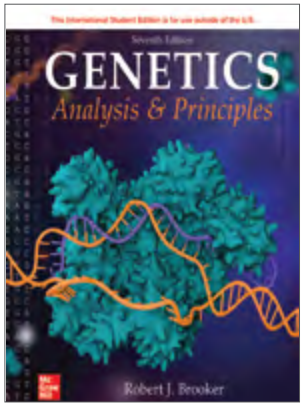
14. Gene Transcription and RNA Modification
15. Translation of mRNA
16. Gene Regulation in Bacteria
17. Gene Regulation in Eukaryotes
18. Non-Coding RNAs
19. Gene Mutation and DNA Repair

Part 5: Genetic Technologies

20. Molecular Technologies
21. Genomics

Part 6: Genetic Analysis of Individuals and Populations

22. Medical Genetics and Cancer
23. Population Genetics
24. Quantitative Genetics



Genetics: Analysis and Principles

Robert Brooker

Edition: 7
2021©
848 Pages
Print: 9781260571226
Connect: 9781260473018

OVERVIEW

Genetics: Analysis and Principles is a one-semester, introductory genetics textbook that takes an experimental approach to understanding genetics. By weaving one or two experiments into the narrative of each chapter, students can simultaneously explore the scientific method and understand the genetic principles that have been learned from these experiments. The pedagogy of Genetics: Analysis and Principles has been designed to foster student learning. Instead of being a collection of facts and figures, this text is intended to be an engaging and motivating textbook in which formative assessment allows students to move ahead and learn the material in a productive way.

FEATURES

- **Genes to Traits**: Because genetics is such a broad discipline, ranging from the molecular level to populations, many instructors have told us that it is a challenge for students to see both "the forest and the trees." It is commonly mentioned that students often have trouble connecting the concepts they have learned in molecular genetics with the traits that occur at the level of a whole organism (e.g., What does transcription have to do with blue eyes?). To try to make this connection more meaningful, certain figure legends in each chapter, designated Genes to Traits, remind students that molecular and cellular phenomena ultimately lead to the traits that are observed in each species.
- **Learning Outcomes**: Each section of every chapter begins with a set of learning outcomes. These outcomes help students understand what they should be able to do once they have mastered the material in that section.
- **Formative Assessment**: When students are expected to learn textbook material on their own, it is imperative that they are regularly given formative assessment so they can gauge whether they are mastering the material. Formative assessment is a major feature of this textbook and is bolstered by Connect—a state-of-the art digital assignment and assessment platform.

CONTENTS

Part 1: Introduction

1. Overview of Genetics

Part 2: Patterns of Inheritance

2. Mendelian Inheritance
3. Chromosome Transmission During Cell Division and Sexual Reproduction
4. Extensions of Mendelian Inheritance

5. Non-Mendelian Inheritance
6. Genetic Linkage and Mapping in Eukaryotes
7. Genetic Transfer and Mapping in Bacteria
8. Variation in Chromosome Structure and Number

Part 3: Molecular Structure & Replication of the Genetic Material

9. Molecular Structure of DNA and RNA
10. Molecular Structure of Chromosomes and Transposable Elements
11. DNA Replication

Part 4: Molecular Properties of Genes

12. Gene Transcription and RNA Modification
13. Translation of mRNA
14. Gene Regulation in Bacteria
15. Gene Regulation in Eukaryotes I: Transcriptional and Translation Regulation
16. Gene Regulation in Eukaryotes II: Epigenetics
17. Non-coding RNAs
18. Genetics of Viruses
19. Gene Mutation, DNA Repair, and Recombination

Part 5: Genetic Technologies

20. Molecular Technologies
21. Biotechnology
22. Genomics I: Analysis of DNA
23. Genomics II: Functional Genomics, Proteomics, and Bioinformatics

Part 6: Genetic Analysis of Individuals and Populations

24. Medical Genetics
25. Genetics Basis of Cancer
26 Developmental Genetics
27. Population Genetics
28. Complex and Quantitative Traits
29. Evolutionary Genetics

NEW

Human Genetics

Ricki Lewis

Edition: 13
2021©
496 Pages
Nov 2020
Print: 9781260570465
Connect: 9781260539264

OVERVIEW

Today, human genetics is for everyone. It is about variation more than about illnesses, and increasingly about the common rather than about the rare. Once an obscure science or an occasional explanation for an odd collection of symptoms, human genetics is now part of everyday conversation. By coming to know genetic backgrounds, people can control their environments in more healthy ways. Genetic knowledge is, therefore, both informative and empowering.

FEATURES

- Changes to enhance learning include better contrast in figures, particularly for chromosomes; additional subheads; new figures, tables, and end-of-chapter questions; and key terms with definitions at the ends of chapters.
- Clear human focus: Compelling, human interest examples from the author's extensive experience as a genetic counselor and hospice volunteer keep students interested in the narrative through stories about real people dealing with real genetic issues.
- Case studies at the beginning of each chapter and Reading boxes provide students with real-life applications of the concepts to be discussed in the chapter. Individuals tell of their experience with genetic conditions through In Their Own Words essays.
- Bioethics: Choices for the Future Boxes, found at the ends of appropriate chapters, encourage students to ask difficult questions of themselves, and to predict how the new science of genetics might impact their lives.
- Accurate and updated: Cutting-edge scientific coverage is incorporated throughout the book. Dr. Lewis experience as a scientific journalist enables her to keep current with breaking topics in genetics, giving students the most up-to-date human genetics text on the market.

CONTENTS

Part 1: Introduction

1. What Is in a Human Genome?
2. Cells
3. Meiosis, Development, and Aging

Part 2: Transmission Genetics

4. Single-Gene Inheritance
5. Beyond Mendel's Laws
6. Matters of Sex
7. Complex Traits
8. Genetics of Behavior

Part 3: DNA and Chromosomes

9. DNA Structure and Replication
10. Gene Action: From DNA to Protein
11. Gene Expression and Epigenetics
12. Gene Mutation
13. Chromosomes14 Genomes

Part 4: Population Genetics

15. Constant Allele Frequencies
16. Changing Allele Frequencies
17. Human Ancestry and Evolution
18. The Genetics of Identity

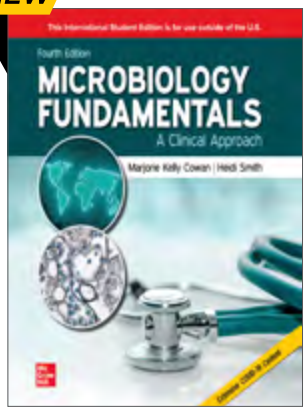
Part 5: Immunity and Cancer

19. Genetics of Immunity
20. Cancer Genetics and Genomics

Part 6: Genetic Technology

21. DNA Technologies
22. Genetic Testing and Treatment
23. Reproductive Technologies

NEW



Microbiology Fundamentals: A Clinical Approach

Marjorie Kelly Cowan, Heidi Smith

Edition: 4
2022©
768 Pages
Mar 2021
Print: 9781265222642
Connect: 9781260786040

OVERVIEW

Cowan's Microbiology Fundamentals: A Clinical Approach is a perfect fit for your microbiology course. The author team includes a practicing Registered Nurse who shows students how the content on each page relates to their lives and future career. Connect is aligned with the text and provides a highly reliable, easy-to-use homework and learning management solution that embeds learning science and award-winning adaptive tools to improve student results.

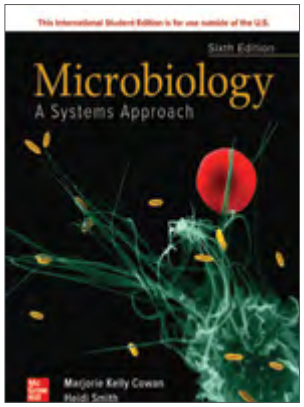
FEATURES

- **SmartGrid**- In place of traditional end-of-chapter questions, Kelly Cowan has created a grid made up of 3 columns and 7 rows, for a total of 21 questions. The rows contain the 6 major curricular guidelines (and the competency of scientific thinking) from the American Society for Microbiology. The columns represent increasing levels of Bloom's Taxonomy of learning. Each question is carefully constructed of material from the chapter that meets both the ASM guideline and the Bloom's level indicated. Instructors can assign a row (to emphasize a curriculum guideline) or a column (asking a variety of questions at a particular Bloom's level). The questions in column 3 (Bloom's level 5 and 6) can easily be used for group problem-solving and other higher-order learning activities.
- **Microbiome information** in every chapter and also as a separate boxed feature at the end of the chapter. These features also walk students through how to critically analyze the onslaught of studies and findings.
- **New infographic-style visual summaries** that students can relate to.
- A new visual feature in each disease chapter (chapters 16 through 21) places the microbes from that chapter in context with respect to communicability and deadliness.
- **NCLEX® Style Questions**: These questions found throughout each chapter are application oriented and written in the form of NCLEX questions. They are designed to help students learn the microbiology information they will eventually need to pass the NCLEX. Students will begin learning to think critically, apply information, and over time, prep themselves for the NCLEX. In addition, we offer NCLEX Prep and Nursing Career Prep questions through Connect for you to assign.
- **Medical Moment:** Gives students an opportunity to go deeper into the clinical application of the concepts. Written by a practicing RN, students will easily see how the chapter material relates to their future career.
- **Streamlined Contents**, Solid Coverage of all Core Concepts: This book has been written to truly fit a one-semester course in allied health microbiology. It makes it clear to students what the important concepts are, with enough detail to make it meaningful, and to help students retain the information for the long term.
- More clinical content than any other microbiology book helps students see how the material relates to their lives and future careers! A practicing nurse authored many of the clinical features.

CONTENTS

1. Introduction to Microbes and Their Building Blocks
2. Tools of the Laboratory — Methods for the Culturing and Microscopic Analysis of Microorganisms
3. Bacteria and Archaea
4. Eukaryotic Cells and Microorganisms
5. Viral Structure and Life Cycles
6. Microbial Nutrition and Growth
7. Microbial Metabolism
8. Microbial Genetics and Genetic Engineering
9. Physical and Chemical Control of Microbes
10. Antimicrobial Treatment
11. Interactions Between Microbes and Humans
12. Host Defenses I — Overview and Nonspecific Defenses

13. Host Defenses II — Specific Immunity and Immunization
14. Disorders in Immunity
15. Diagnosing Infections
16. Infectious Diseases Affecting the Skin and Eyes
17. Infectious Diseases Affecting the Nervous System
18. Infectious Diseases Affecting the Cardiovascular and Lymphatic Systems
19. Infectious Diseases Affecting the Respiratory Systems
20. Infectious Diseases Affecting the Gastrointestinal Tract
21. Infectious Diseases Affecting the Genitourinary System
22. One Health: The Interconnected Health of the Environment, Humans, and Other Animals



Microbiology: A Systems Approach

Marjorie Kelly Cowan, Heidi Smith

Edition: 6
2021©
864 Pages
Print: 9781260571516
Connect: 9781260451252

OVERVIEW

Cowan's, Microbiology: A Systems Approach is the perfect book for all students. Whether your students have prerequisite knowledge of biology or chemistry, this textbook will help them learn the fascinating world of microbiology. Students interested in allied health or nursing, will love this book for its balanced coverage of the basics and clinical applications. The sixth edition art program will help students understand the key concepts of microbiology. Connect Microbiology features interactive questions, animations, laboratory simulations and state-of-the art technology tailored to the ASM curriculum guidelines

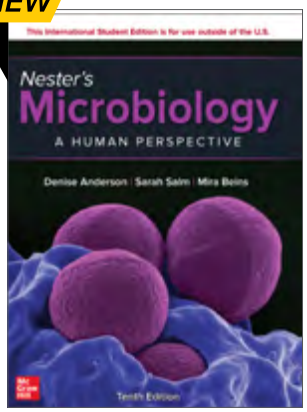
FEATURES

- The end-of-chapter materials now include the SmartGrid—21 questions probing chapter content with respect to the ASM curriculum concepts and Bloom's taxonomy. Also, each chapter contains a simple guide for students to engage in face-to-face or virtual group study. This is called Study Smarter: Better Together.
- Visual feature on the difference between the deadliness and the contagiousness of various microbes that appears in every disease chapter
- **"Disease Connection"**: Sometimes it is difficult for students to see the relevance of basic concepts to their chosen professions. So the basic science chapters contain Disease Connections, very short boxes that relate esoteric topics such as pH and growth phase to clinical situations
- Disease Tables now indicate the taxonomy of each microorganism. In all disease tables, each organism is denoted as "B, V, F, P, or H"—indicating bacterium, virus, etc. When bacterial, the table also indicates G+ or G-.
- Many art pieces have been turned into infographics, a form of data visualization 21st-century learners are comfortable with.

CONTENTS

1. The Main Themes of Microbiology
2. The Chemistry of Biology
3. Tools of the Laboratory: Methods for the Culturing of Microscopic Analysis of Microorganisms
4. Bacteria and Archaea
5. Eukaryotic Cells and Microorganisms
6. Viruses and Prions
7. Microbial Nutrition and Growth
8. Microbial Metabolism: The Chemical Crossroads of Life
9. Microbial Genetics
10. Genetic Analysis and Genetic Engineering
11. Physical and Chemical Control of Microbes
12. Antimicrobial Treatment
13. Microbe-Human Interactions: Health and Disease
14. Host Defenses I: Overview and Nonspecific Defenses
15. Host Defenses II: Specific Immunity and Immunization
16. Disorders in Immunity
17. Diagnosing Infections
18. Infectious Diseases Affecting the Skin and Eyes
19. Infectious Diseases Affecting the Nervous System
20. Infectious Diseases Affecting the Cardiovascular and Lymphatic Systems
21. Infectious Diseases Affecting the Respiratory System
22. Infectious Diseases Affecting the Gastrointestinal Tract
23. Infectious Diseases Affecting the Genitourinary System
24. Microbes and the Environment
25. Applied Microbiology and Food and Water Safety

NEW



Nester's Microbiology: A Human Perspective

Denise G. Anderson, Sarah Salm, Deborah Allen

Edition: 10
2022©
896 Pages
Mar 2021
Print: 9781265062316
Connect: 9781264341979

OVERVIEW

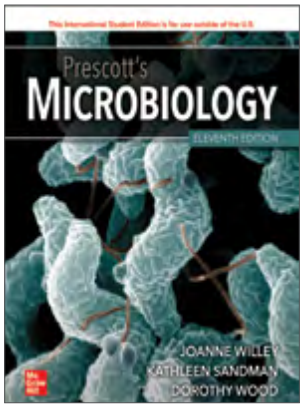
Perfect for the non-major/allied health student (and also appropriate for mixed majors courses), this text provides a rock solid foundation in microbiology. It has a concise and readable style, covers the most current concepts, and gives students the knowledge and mastery necessary to understand advances of the future. By carefully and clearly explaining the fundamental concepts, using a body systems approach in the coverage of disease, and offering vivid and appealing instructional art, Microbiology: A Human Perspective draws students back to their book again and again!

FEATURES

- Added information about COVID-19 and SARS-CoV-2.
- **Connect Virtual Labs** helps connect the dots between lab and lecture, boosts student confidence and knowledge, and improves student success rates
- Focus on a Disease boxes introduce a general category of disease (pneumonia, diarrheal disease, meningitis, sexually transmitted infections), giving students a framework for understanding specific diseases.
- Focus on the Future boxes describe pending challenges facing current and future microbiologists.
- Focus Your Perspective boxes show how microorganisms and their products influence our lives in many different ways.
- Focus on a Case boxes describe realistic clinical, veterinary, or environmental situations, along with questions and discussions designed to highlight the relevance of the information.
- Learning Outcomes are found at the beginning of each numbered section, allowing organization, evaluation, and assessment of instruction.

CONTENTS

1. Humans and the Microbial World
2. The Molecules of Life
3. Microscopy and Cell Structure
4. Dynamics of Microbial Growth
5. Control of Microbial Growth
6. Microbial Metabolism: Fueling Cell Growth
7. The Blueprint of Life, from DNA to Protein
8. Bacterial Genetics
9. Biotechnology and Recombinant DNA
10. Identifying and Classifying Microorganisms
11. The Diversity of Bacteria and Archaea
12. The Eukaryotic Members of the Microbial World
13. Viruses, Viroids and Prions
14. The Innate Immune Response
15. The Adaptive Immune Response
16. Host-Microbe Interactions
17. Immunologic Disorders
18. Applications of Immune Responses
19. Epidemiology
20. Antimicrobial Medications
21. Respiratory System Infections
22. Skin Infections
23. Wound Infections
24. Digestive System Infections
25. Blood and Lymphatic Infections
26. Nervous System Infections
27. Genitourinary Tract Infections
28. Microbial Ecology
29. Environmental Microbiology — Treatment of Water, Wastes, and Polluted Habitats
30. Food Microbiology



Prescott's Microbiology

Joanne Willey, Linda Sherwood, Christopher J. Woolverton

Edition: 11
2020©
1,104 Pages
Print: 9781260570021
Connect: 9781260297683

OVERVIEW

The author team of Prescott's Microbiology continues the tradition of past editions by providing a balanced comprehensive introduction to all major areas of microbiology. This balance makes Microbiology appropriate for microbiology majors and mixed majors courses. The authors have introduced a number of pedagogical elements designed to facilitate student

learning. They also remain focused on readability artwork and the integration of several key themes (including evolution ecology and diversity) throughout the text making an already superior text even better.

FEATURES

- **Broad Coverage of Microbial Ecology**: The importance and multi-disciplinary nature of microbial ecology is demonstrated by content that ranges from global climate change to the human microbiome.
- **An Introduction to the Entire Microbial World Covered in chapters 3 to 6**, separate chapters on the structure and function of bacteria and archaea are followed by the discussion of eukaryotic cells and viruses
- **Metagenomics and the Human Microbiome**: The importance of metagenomics in understanding the role of microbes in all environments and in exploring symbionts of invertebrates is threaded throughout the text. A new chapter, The Microbe-Human Ecosystem, explores the human microbiome.
- **Laboratory Safety Reflecting recommendations** from the Centers for Disease Control and Prevention, along with the American Society for Microbiology, chapter 37 provides specific guidance for laboratory best practices to help instructors provide safe conditions during the teaching of laboratory exercises.
- **Molecular Microbiology and Immunology**: The eleventh edition includes updates on genetics, biotechnology, genomics and metagenomics, immunology and the human microbiome. A streamlined discussion of immunity, with enhanced detail between innate and adaptive linkages, helps students grasp the complexity and specificity of immune responses. A new chapter, The Microbe-Host Ecosystem, introduces students to the development and impact of the human microbiome.

CONTENTS

Part 1: Introduction to Microbiology
1. The Evolution of Microorganisms and Microbiology
2. Microscopy
3. Bacterial Cell Structure
4. Archaeal Cell Structure
5. Eukaryotic Cell Structure
6. Viruses and Other Acellular Infectious Agents

Part 2: Microbial Nutrition, Growth, and Control
7. Bacterial and Archaeal Growth
8. Control of Microorganisms in the Environment
9. Antimicrobial Chemotherapy

Part 3: Microbial Metabolism
10. Introduction to Metabolism
11. Catabolism: Energy Release and Conservation
12. Anabolism: The Use of Energy in Biosynthesis

Part 4: Microbial Molecular Biology and Genetics
13. Bacterial Genome Replication and Expression
14. Regulation of Bacterial Cellular Processes
15. Eukaryotic and Archaeal Genome Replication and Expression
16. Mechanisms of Genetic Variation
17. Microbial DNA Technologies
18. Microbial Genomics

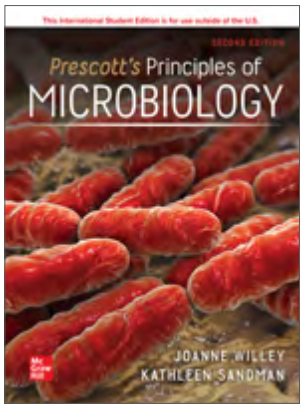
Part 5: The Diversity of the Microbial World
19. Microbial Taxonomy and the Evolution of Diversity
20. Archaea
21. Nonproteobacterial Gram-Negative Bacteria
22. Proteobacteria
23. Gram-Positive Bacteria
24. Protists
25. Fungi
26. Viruses

Part 6: Ecology and Symbiosis
27. Microbial Interactions
28. Biogeochemical Cycling and Global Climate Change
29. Methods in Microbial Ecology
30. Microorganisms in Marine and Freshwater Ecosystems
31. Microorganisms in Terrestrial Ecosystems

Part 7: Pathogenicity and Host Response
32. Innate Host Resistance
33. Adaptive Immunity
34. The Microbe-Human Ecosystem
35. Infection and Pathogenicity

Part 8: Microbial Diseases, Detection, and Their Control
36. Epidemiology and Public Health Microbiology
37. Clinical Microbiology and Immunology
38. Human Diseases Caused by Viruses and Prions
39. Human Diseases Caused by Bacteria
40. Human Diseases Caused by Fungi and Protists

Part 9: Applied Microbiology
41. Microbiology of Food
42. Biotechnology and Industrial Microbiology
43. Applied Environmental Microbiology



Prescott's Principles of Microbiology

Joanne Willey, Christopher J. Woolverton, Linda Sherwood

Edition: 2
2021©
896 Pages
Print: 9781260575552
Connect: 9781260805628

OVERVIEW

Prescott's Principles of Microbiology provides a balanced, comprehensive introduction to all major areas of microbiology. Because of this balance, Prescott's Principles of Microbiology is appropriate for microbiology majors and mixed majors' courses. The authors have focused on readability, artwork, and the integration of several key themes, including evolution, ecology and diversity, throughout the text, making an already superior text even better.

FEATURES

- **Evolution as a Framework**: Introduced immediately in chapter 1 and used as an overarching theme throughout, evolution helps unite microbiological concepts and provides a framework upon which students can build their knowledge.
- **Molecular Microbiology and Immunology**: The second edition includes comprehensive coverage of genetics, biotechnology, genomics and metagenomics, immunology, and the human microbiome. A streamlined discussion of immunity, with enhanced coverage of innate and adaptive linkages, helps students grasp the complexity and specificity of immune responses. A new chapter, The Human Microbiome and Host Interactions, introduces students to the development and impact of the human microbiome.
- **Metagenomics and the Human Microbiome**: The importance of metagenomics in understanding the role of microbes in all environments and in exploring symbionts of invertebrates is threaded throughout the text. Chapter 24 is new and focuses exclusively on the human microbiome and its interaction with the host.
- **Special Interest Essays**: Organized into four themes-Microbial Diversity & Ecology, Techniques & Applications, Historical Highlights, and Disease these focused and interesting essays provide additional insight into relevant topics.
- **Active Learning**: Includes questions based on examples from the current literature; designed to stimulate analytical problem-solving skills.

CONTENTS

Part 1: Introduction to Microbiology
1. The Evolution of Microorganisms and Microbiology
2. Microscopy
3. Bacterial and Archaeal Cell Structure
4. Eukaryotic Cell Structure
5. Bacterial and Archaeal Growth

Part 2: Microbial Metabolism
6. Introduction to Metabolism
7. Catabolism: Energy Release and Conservation
8. Anabolism: The Use of Energy in Biosynthesis

Part 3: Microbial Molecular Biology and Genetics
9. Genome Replication
10. Gene Expression
11. Regulation of Cellular Processes
12. Mechanisms of Genetic Variation

Part 4: The Diversity of the Microbial World
13. Gram-Positive Bacteria
14. Proteobacteria
15. Nonproteobacterial Gram-Negative Bacteria
16. Archaea
17. Eukaryotic Microbes
18. Viruses and Other Acellular Infectious Agents

Part 5: Ecology and Symbiosis
19. Microbial Infections
20. Biogeochemical Cycling and Global Climate Change
21. Microorganisms in Natural Ecosystems

Part 6: Host Defense and Pathogenicity
22. Innate Host Resistance
23. Adaptive Immunity
24. The Human Microbiome and Host Interactions
25. Infection and Pathogenicity

Part 7: Applied Microbiology
26. Epidemiology and Public Health Microbiology
27. Control of Microorganisms in the Environment
28. Antimicrobial Chemotherapy
29. Microbiology of Food
30. Industrial and Environmental Microbiology

Part 8: Methods in Microbiology
31. Microbial DNA Technologies
32. Microbial Genomics
33. Methods in Microbial Biology
34. Clinical Microbiology and Immunology

Talaro's Foundations in Microbiology

Barry Chess

Edition: 11
2021©
944 Pages
Print: 9781260575378
Connect: 9781260451320

OVERVIEW

Foundations in Microbiology is an allied health microbiology text with a taxonomic approach to the disease chapters. It offers an engaging and accessible writing style through the use of case studies and analogies to thoroughly explain difficult microbiology concepts.

FEATURES

- **Chapter-Opening Case Studies**: Each chapter opens with a two-page introduction. On the left is a synopsis of the chapter's contents, while the right side contains the first part of the Case Study, which has been carefully chosen to exhibit microbiology in real-world situations. Line art and micrographs are all part of the chapter-opening pages to help students see the big picture and grasp the relevance of the material they're about to study. Questions appearing after the chapter opener serve as prompts to the most important aspects of the case, providing students with touchstones to lean on as they learn. The chapter concludes with the second part of the Case Study, which resolves the microbiological (and occasionally social, political, and economic) aspects of the case.
- **Pathogen Profiles**: Pathogen Profiles are abbreviated snapshots of the major pathogens in each disease chapter. The pathogen is featured in a micrograph, along with a description of the microscopic morphology, identification descriptions, habitat information, and virulence factors.
- End-of-chapter questions in the style of the TEAS and NCLEX exams have been added.

CONTENTS

1. The Main Themes of Microbiology
2. The Chemistry of Biology
3. Tools of the Laboratory: Methods of Studying Microorganisms
4. A Survey of Prokaryotic Cells and Microorganisms
5. A Survey of Eukaryotic Cells and Microorganisms
6. An Introduction to Viruses, Viroids, and Prions
7. Microbial Nutrition, Ecology, and Growth
8. An Introduction to Microbial Metabolism: The Chemical Crossroads of Life
9. An Introduction to Microbial Genetics
10. Genetic Engineering: A Revolution in Molecular Biology
11. Physical and Chemical Agents for Microbial Control
12. Drugs, Microbes, Host--The Elements of Chemotherapy
13. Microbe-Human Interactions: Infection, Disease, and Epidemiology
14. An Introduction to Host Defenses and Innate Immunities
15. Adaptive, Specific Immunity and Immunization
16. Disorders in Immunity

Talaro's Foundations in Microbiology: Basic Principles

Barry Chess

Edition: 11
2021©
640 Pages
Print: 9781260575385
Connect: 9781260451320

OVERVIEW

Foundations in Microbiology is an allied health microbiology text with a taxonomic approach to the disease chapters. It offers an engaging and accessible writing style through the use of case studies and analogies to thoroughly explain difficult microbiology concepts.

FEATURES

- **Chapter-Opening Case Studies**: Each chapter opens with a two-page introduction which has been carefully chosen to exhibit microbiology in real-world situations. Line art and micrographs are all part of the chapter-opening pages to help students see the big picture and grasp the relevance of the material they're about to study. Questions appearing after the chapter opener serve as prompts to the most important aspects of the case, providing students with touchstones to lean on as they learn. The chapter concludes with the second part of the Case Study, which resolves the microbiological (and occasionally social, political, and economic) aspects of the case. Once again, questions follow, helping students to reinforce their newfound knowledge, and use it to develop a more inquisitive view of the broader world.

- **Learn and Practice**: Succinctly answering every student's "What do I need to know?" question, each numbered section in the book opens with learning outcomes (Learn) and closes with assessment questions (Practice). The learning outcomes are tightly correlated to digital materials and instructors can easily measure student learning in relation to the specific learning outcomes used in their course. You can also assign Practice questions to students through McGraw-Hill's Connect.
- **Pathogen Profiles**: Pathogen Profiles are abbreviated snapshots of the major pathogens in each disease chapter. The pathogen is featured in a micrograph, along with a description of the microscopic morphology, identification descriptions, habitat information, and virulence factors. Artwork displays the primary infections/ disease, as well as the organs and systems primarily impacted. Each Pathogen Profile also includes a System Profile that presents the pathogen in relation to organ systems affected
- Pedagogy designed for varied learning styles: Case Study Analysis, On the Test, Writing Challenge, and End-of-Chapter Questions End-of-chapter questions in the style of the TEAS (Test of Essential Academic Skills) and NCLEX (National Council Licensure Examination) exams have been added.

CONTENTS

1. The Main Themes of Microbiology
2. The Chemistry of Biology
3. Tools of the Laboratory: Methods of Studying Microorganisms
4. A Survey of Prokaryotic Cells and Microorganisms
5. A Survey of Eukaryotic Cells and Microorganisms
6. An Introduction to Viruses, Viroids, and Prions
7. Microbial Nutrition, Ecology, and Growth
8. An Introduction to Microbial Metabolism: The Chemical Crossroads of Life
9. An Introduction to Microbial Genetics
10. Genetic Engineering: A Revolution in Molecular Biology
11. Physical and Chemical Agents for Microbial Control
12. Drugs, Microbes, Host--The Elements of Chemotherapy
13. Microbe-Human Interactions: Infection, Disease, and Epidemiology
14. An Introduction to Host Defenses and Innate Immunities
15. Adaptive, Specific Immunity and Immunization
16. Disorders in Immunity
17. Procedures for Identifying Pathogens and Diagnosing Infections

CHEMISTRY

Chemistry

Julia Burdge

Edition: 5
2020©
1,152 Pages
Print: 9781260565850
Connect: 9781260506853

OVERVIEW

Chemistry Fifth Edition by Julia Burdge offers a clear writing style written with the students in mind. Julia uses her experience of teaching hundreds of general chemistry students per year and creates content to offer more in-depth explanation in areas where she knows they have problems. Continuing in the Burdge tradition the fifth edition balances the necessary fundamental concepts with engaging real-life examples and applications while utilizing a consistent step-by-step problem-solving approach and an innovative art and media program.

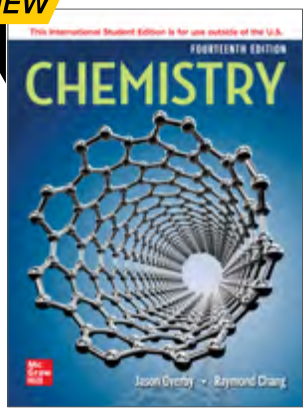
FEATURES

- New End-of-Chapter Problems in response to user comments. These include additional conceptual problems, additional problems with limiting-reactant components, and updates of information in topical questions.
- Continued development of truly comprehensive and consistent Problem-Solving. Hundreds of worked examples (Sample Problems) help students get started learning how to approach and solve problems.
- Updated Table of Contents reflecting changes discussed in reviews and focus groups. The introduction of nomenclature has been reordered to put ionic compounds first—increasing the clarity of the subject for students.
- SmartBook with Learning Resources. McGraw Hill's adaptive SmartBook has been supplemented with additional learning resources tied to each learning objective to provide point-in-time help to students who need it.
- Student Heat Maps used to improve presentation specifically based on student performance.

CONTENTS

1. Chemistry — The Central Science
2. Atoms, Molecules, and Ions
3. Stoichiometry — Ratios of Combination
4. Reactions in Aqueous Solutions
5. Thermochemistry
6. Quantum Theory and the Electronic Structure of Atoms
7. Electronic Configuration and the Periodic Table
8. Chemical Bonding I — Basic Concepts
9. Chemical Bonding II — Molecular Geometry and Bonding Theories
10. Gases
11. Intermolecular Forces and the Physical Properties of Liquids and Solids
12. Modern Materials
13. Physical Properties of Solutions
14. Chemical Kinetics
15. Chemical Equilibrium
16. Acids and Bases
17. Acid-Base Equilibria and Solubility Equilibria
18. Entropy, Free Energy, and Equilibrium
19. Electrochemistry
20. Nuclear Chemistry
21. Environmental Chemistry
22. Coordination Chemistry
23. Organic Chemistry
24. Online Only Chapter — Metallurgy and the Chemistry of Metals
25. Online Only Chapter — Nonmetallic Elements and Their Compounds

NEW



Chemistry

Jason Overby, Raymond Chang

Edition: 14
2022©
1,184 Pages
Aug 2021
Print: 9781265577568
ALEKS 360: 9781264243631

OVERVIEW

Chang's best-selling general chemistry textbook takes a traditional approach and is often considered a student and teacher's 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.

FEATURES

- The new edition is available in ALEKS®. ALEKS provides flexibility and control when shaping your course to help you reach every student regardless of background. Rooted in research and analytics, ALEKS identifies what your student know , that they don't know, and what they are ready to learn. In order to reach all students, you need a system that supports them individually but also allows you to create assignments that align to your course goals. In a single platform, ALEKS provides a balance of adaptive practice for skill mastery and non-adaptive assignments for application and assessment.
- Worked examples follow a proven step-by-step strategy and solution.
- Problem statement is the reporting of the facts needed to solve the problem based on the question posed.
- Strategy is a carefully thought-out plan or method to serve as an important function of learning.
- Solution is the process of solving a problem given in a stepwise manner.
- Check enables the student to compare and verify with the source information to make sure the answer is reasonable.
- Practice Exercise provides the opportunity to solve a similar problem in order to become proficient in this problem type.
- Molecular art appears in various formats to serve different needs. Molecular models help to visualize the three-dimensional arrangement of atoms in a molecule. Electrostatic potential maps illustrate the electron density distribution in molecules. Finally, there is the macroscopic to microscopic art helping students understand processes at the molecular level.

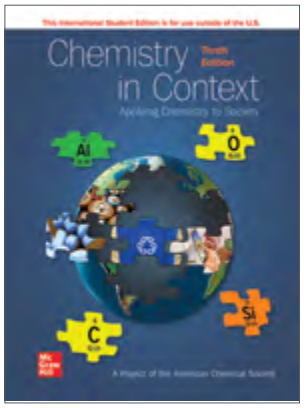
CONTENTS

1. Chemistry — The Study of Change
2. Atoms, Molecules, and Ions
3. Mass Relationships in Chemical Reactions
4. Reactions in Aqueous Solutions
5. Gases
6. Thermochemistry
7. Quantum Theory and the Electronic Structure of Atoms
8. Periodic Relationships Among the Elements
9. Chemical Bonding I — Basic Concepts
10. Chemical Bonding II — Molecular Geometry and Hybridization of Atomic Orbitals
11. Intermolecular Forces and Liquids and Solids
12. Physical Properties of Solutions

13. Kinetics
14. Chemical Equilibrium
15. Acids and Bases
16. Acid-Base Equilibria and Solubility Equilibria
17. Entropy, Free Energy, and Equilibrium
18. Electrochemistry
19. Nuclear Chemistry
20. Chemistry in the Atmosphere
21. Metallurgy and the Chemistry of Metals
22. Nonmetallic Elements and Their Compounds
23. Transition Metals Chemistry and Coordination Compounds
24. Organic Chemistry
25. Synthetic and Natural Organic Polymers

Appendices

1. Derivation of the Names of the Elements
2. Units for the Gas Constant
3. Thermodynamic Data at 1 atm & 25 degrees C
4. Mathematical Operation



Chemistry in Context

American Chemical Society

Edition: 10
2021©
736 Pages
Print: 9781260570816
Connect: 9781260497052

OVERVIEW

Following in the tradition of the first nine editions, the goal of this successful, issues-based textbook, Chemistry in Context is to establish chemical principles on a need-to-know basis for non-science majors, enabling them to learn chemistry in the context of their own lives and significant issues facing science and the world. The non-traditional approach of Chemistry in Context reflects today's technological issues and the chemistry principles within them. Global warming, alternate fuels, nutrition and genetic engineering are examples of issues that are covered in Chemistry in Context.

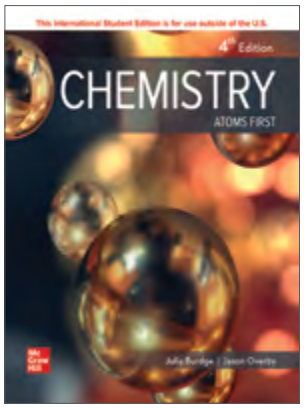
FEATURES

- The 10th edition of Chemistry in Context represents a significant update to the breadth of digital assets. Each chapter now contains a variety of new features such as videos, interactive features, and PhET activities, each designed to keep the reader engaged and assist with mastery of content.
- Added more activities to the 10th edition. These activities are woven throughout each chapter that direct students to search the Internet to find appropriate data or reports to draw their own conclusions regarding current worldwide issues.
- The order of chapters has been altered to improve the flow of contexts. In particular, the water chemistry chapter has been moved up in the sequence to immediately follow climate change.
- All chapters have been revised to improve the flow of topics while incorporating new scientific developments, changes in policies, energy trends, and current world events.
- Each chapter of the 10th edition of Chemistry in Context now contains a variety of new features such as videos, interactive figures, and PhET activities, each designed to keep the reader engaged and assist with mastery of content.
- All chapters have been revised to improve the flow of topics while incorporating new scientific developments, changes in policies, energy trends, and current world events.
- Each chapter begins with a video that introduces the context, with a “Reflect” activity for students to ponder before reading the chapter. This is immediately followed by a new section “Compelling Questions,” which identifies the main questions that are addressed in the chapter.

CONTENTS

1. Portable Electronics — The Periodic Table in the Palm of Your Hand
2. The Air We Breathe
3. Radiation from the Sun
4. Climate Change
5. Energy from Combustion
6. Energy from Alternative Sources
7. Energy Storage
8. Water Everywhere — A Most Precious Resource
9. The World of Polymers and Plastics
10. Brewing and Chewing
11. Nutrition
12. Health and Medicine
13. Genes and Life
14. Who Killed Dr. Thompson? A Forensic Mystery

Appendix 1: Measure for Measure - Conversion Factors and Constants
Appendix 2: The Power of Exponents
Appendix 3: Clearing the Logjam
Appendix 4: Answers to Your Turn Questions Not Answered in the Text
Appendix 5: Answers to Selected End-of-Chapter Questions



Chemistry: Atoms First

Julia Burdge, Jason Overby

Edition: 4
2021©
1,216 Pages
Print: 9781260571349
Connect: 9781260475944

OVERVIEW

The Atoms First approach provides a consistent and logical method for teaching general chemistry. This approach starts with the fundamental building block of matter, the atom, and uses it as the stepping-stone to understand more complex chemistry topics. Once mastery of the nature of atoms and electrons is achieved, the formation and properties of compounds are developed. Only after the study of matter and the atom will students have sufficient background to fully engage in topics such as stoichiometry, kinetics, equilibrium, and thermodynamics. Thus, the Atoms First approach empowers instructors to present the most complete and compelling story of general chemistry. Far from a simple re-ordering of topics, this is a book that will truly meet the needs of the growing atoms-first market. The fourth edition continues to build on the innovative success of the previous three editions. Changes to this edition include specific refinements intended to augment the student-centered pedagogical features that continue to make this book effective and popular both with professors, and with their students.

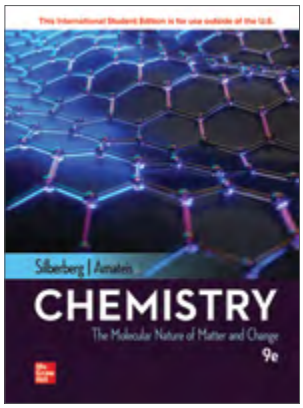
FEATURES

- The most significant change to Chapter 3, Quantum Theory and the Electronic Structure of Atoms, is a splitting of the content for a more manageable and systematic approach to quantum mechanics. While continuing the successful flow of material from previous editions, we now conclude this chapter with coverage of the quantum mechanical approach to the hydrogen atom—moving coverage of multi-electron atoms to the beginning of Chapter 4.
- Added a new series of vignettes in the form of boxed features titled Environmental Aspects. Each of the first twenty chapters of the text contains one of these boxes, which provides instructors an opportunity to include timely, environmentally focused material within the context of each chapter. To encourage student engagement with the Environmental Aspects material, many of the boxes have accompanying end-of-chapter problems associated with them.
- Updated all Section Review questions to reimagined or completely new questions. Students report benefiting from these self-evaluation questions as they assess their level of mastery of the material in one section before proceeding to the next.
- There is a significant number of new or revised end-of-chapter problems.
- In accordance with the IUPAC recommendation for numbering groups on the periodic table, we have switched to the 1–18 numbering system, as have most modern chemists.

CONTENTS

1. Chemistry: The Science of Change
2. Atoms and the Periodic Table
3. Quantum Theory and the Electronic Structure of Atoms
4. Periodic Trends of the Elements
5. Ionic and Covalent Compounds
6. Representing Molecules
7. Molecular Geometry, Intermolecular Forces, and Bonding Theories
8. Chemical Reactions
9. Chemical Reactions in Aqueous Solutions
10. Energy Changes in Chemical Reactions
11. Gases
12. Liquids and Solids
13. Physical Properties of Solutions
14. Chemical Kinetics
15. Entropy and Free Energy
16. Chemical Equilibrium
17. Acids, Bases, and Salts
18. Acid-Base Equilibria and Solubility Equilibria
19. Electrochemistry
20. Nuclear Chemistry
21. Environmental Chemistry
22. Coordination Chemistry
23. Organic Chemistry
24. Modern Materials
25. ONLINE ONLY CHAPTER: Nonmetallic Elements and Their Compounds
26. ONLINE ONLY CHAPTER: Metallurgy and the Chemistry of Metals

Appendix 1 - Mathematical Operations
Appendix 2 - Thermodynamic Data at 1 ATM and 25 degrees C
Appendix 3 - Solubility Product Constants at 25 degrees C
Appendix 4 - Dissociation Constants for Weak Acids and Bases at 25 degrees C



Chemistry: The Molecular Nature of Matter and Change

Martin Silberberg, Patricia Amateis

Edition: 9
2021©
1,264 Pages
Print: 9781260575231
Connect: 9781259916151

OVERVIEW

Chemistry: The Molecular Nature of Matter and Change by Martin Silberberg and Patricia Amateis has been recognized in the general chemistry market as an unparalleled classic. The revision for the ninth edition focused on continued optimization of the text. To aid in this process, we were able to use data from literally thousands of student responses to questions in SmartBook, the adaptive learning system that assesses student knowledge of course content. The data, such as average time spent answering each question and the percentage of students who correctly answered the question on the first attempt, revealed the learning objectives that students found particularly difficult, which we addressed by revising surrounding text or adding additional learning resources such as videos and slideshows. The text still contains unprecedented macroscopic-to-microscopic molecular illustrations, consistent step-by-step worked exercises in every chapter, and an extensive range of end-of-chapter problems, which provide engaging applications covering a wide variety of interests, including engineering, medicine, materials, and environmental studies. Changes have been made to the text and applications throughout to make them more succinct, to the artwork to make it more teachable and modern, and to the design to make it more simplistic and open.

FEATURES

- Our revision for the ninth edition focused on continued optimization of the text. To aid us in this process, we were able to use data from literally thousands of student responses to questions in SmartBook probes, the adaptive learning system that assesses student knowledge of course content. With the data, such as average time spent answering each question and the percentage of students who correctly answered the question on the first attempt, we were able to both hone our text content when needed and, for particularly challenging concepts, point students to the learning resources which can elucidate and reinforce those concepts.
- Re-learning ideas with annotated illustrations. The innovative three-level figures and other art that raised the bar for molecular visualization in chemistry textbooks is still present. Several existing figures have been revised and several new ones added to create an even better teaching tool.
- An exceptionally large number of qualitative, quantitative, and molecular-scene problems end each chapter. Four types of problems are presented—three by chapter section, with comprehensive problems following. New problems were added to several chapter problem sets, providing students and teachers with abundant choices in a wide range of difficulty and real-life scenarios.
- Over 2,200 end-of-chapter problems and additional problems are available to assign within the McGraw-Hill's Connect program.
- ALEKS 360 integrates the power of ALEKS adaptive assessments with a media-rich interactive student eBook. ALEKS 360 allows students working in ALEKS to keep their eBooks open for ease of use.

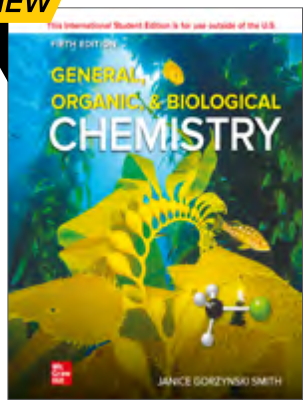
CONTENTS

1. Keys to the Study of Chemistry — Definitions, Units, and Problem-Solving
2. The Components of Matter
3. Stoichiometry of Formulas and Equations
4. The Major Classes of Chemical Reactions
5. Gases and the Kinetic-Molecular Theory
6. Thermochemistry — Energy Flow & Chemical Change
7. Quantum Theory and Atomic Structure
8. Electron Configuration and Chemical Periodicity
9. Models of Chemical Bonding
10. The Shapes of Molecules
11. Theories of Covalent Bonding
12. Intermolecular Forces — Liquids, Solids, and Phase Changes
13. The Properties of Mixtures — Solutions and Colloids
14. Periodic Patterns in the Main-Group Elements: Bonding, Structure, and Reactivity
15. Organic Compounds and the Atomic Properties of Carbon
16. Kinetics — Rates and Mechanisms of Chemical Reactions
17. Equilibrium — The Extent of Chemical Reactions
18. Acid-Base Equilibria
19. Ionic Equilibria in Aqueous Systems
20. Thermodynamics — Entropy, Free Energy, and Reaction Direction

21. Electrochemistry — Chemical Change and Electrical Work
22. The Elements in Nature and Industry
23. The Transition Elements and Their Coordination Compounds
24. Nuclear Reactions and Their Applications

Appendix A: Common Mathematical Operations in Chemistry
Appendix B: Standard Thermodynamic Values for Selected Substances
Appendix C: Equilibrium Constants at for Selected Substances
Appendix D: Standard Electrode (Half-Cell) Potentials
Appendix E: Answers to Selected Problems

NEW



General, Organic, & Biological Chemistry

Janice Gorzynski Smith

Edition: 5
2022©
1,024 Pages
Mar 2021
Print: 9781264647415
Connect: 9781264238590

OVERVIEW

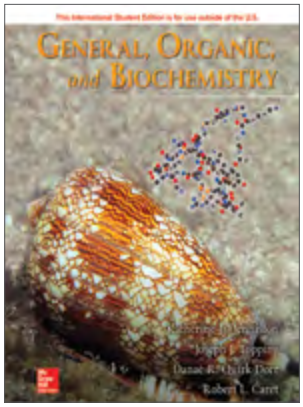
General Organic and Biological Chemistry 5e relates the fundamental concepts of chemistry to the world around us and illustrates how chemistry explains many aspects of everyday life. This textbook is written for students who have an interest in nursing nutrition environmental science food science and a wide variety of other health-related professions. The content of this book is designed for an introductory chemistry course with no chemistry prerequisite and is suitable for either a two-semester sequence or a one-semester course.

FEATURES

- Chapter Review, which replaces Chapter Highlights at the end of each chapter, consists of Key Terms that are defined in the Glossary, Key Concepts, Key Equations, Key Reactions, and Key Skills. The Key Concepts and Key Skills sections use art and chemical structures to more clearly explain the key features detailed within the chapter. Key Skills, which presents the steps needed to solve important topics within the chapter, should be especially valuable for students learning stepwise processes.
- Brief Study Tips have been added to the margins in Chapters 1, 4, 7, 11, 13, and 19 to help students develop general methods for solving recurrent types of problems, such as those that require a specific equation or drawing the products of an organic reaction.
- Over 150 new problems have been added.

CONTENTS

1. Matter and Measurement
2. Atoms and the Periodic Table
3. Ionic Compounds
4. Covalent Compounds
5. Chemical Reactions
6. Energy Changes, Reaction Rates, and Equilibrium
7. Gases, Liquids, and Solids
8. Solutions
9. Acids and Bases
10. Nuclear Chemistry
11. Introduction to Organic Molecules and Functional Groups
12. Alkanes
13. Unsaturated Hydrocarbons
14. Organic Compounds that Contain Oxygen, Halogen, or Sulfur
15. The Three-Dimensional Shape of Molecules
16. Aldehydes and Ketones
17. Carboxylic Acids, Esters, and Amides
18. Amines and Neurotransmitters
19. Lipids
20. Carbohydrates
21. Amino Acids, Proteins, and Enzymes
22. Nucleic Acids and Protein Synthesis
23. Digestion and the Conversion of Food into Energy
24. Carbohydrate, Lipid, and Protein Metabolism
25. ONLINE Chapter 25. Body Fluids



General, Organic, and Biochemistry

Katherine J Denniston, Joseph J Topping, Danae Quirk Dor

Edition: 10
2020©
944 Pages
Print: 9781260565881
Connect: 978126006105

OVERVIEW

The tenth 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. The text has been written at a level intended for students whose professional goals do not include a mastery of chemistry, but for whom an understanding of the principles and practice of chemistry is a necessity. Designed for the one- or two-semester course, this text has an easy-to-follow problem-solving pedagogy, vivid illustrations, and engaging applications.

FEATURES

- Several new Perspective boxes to help students relate the topics from the text to real-world situations were added throughout to help students see the connections between chemistry and their daily lives and future careers.
- **"Strategies for Success" sections** were added at the beginning of Chapters 1, 10, and 16 to provide students with tools for the most effective study methods to help them master the content and concepts most important to success in general, organic, and biochemistry. In-chapter questions and end-of-chapter problems have also been added to assess students' understanding of the tools and methods presented in the new Strategies sections.
- A set of Multiple Concept Problems has been added at the end of each chapter, designed to help students connect various concepts that are emphasized throughout each chapter.
- Several new Perspective boxes to help students relate the topics from the text to real-world situations were added throughout Chapter specific updates have been made throughout The Chapter Maps were also revised as necessary to better reflect key concepts emphasized in learning goals.

CONTENTS

Part 1: General Chemistry

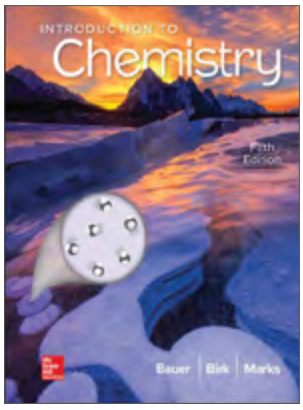
1. Chemistry — Methods and Measurement
2. The Structure of the Atom and the Periodic Table
3. Structure and Properties of Ionic and Covalent Compounds
4. Calculations and the Chemical Equation
5. States of Matter — Gases, Liquids, and Solids
6. Solutions
7. Energy, Rate, and Equilibrium
8. Acids and Bases and Oxidation-Reduction
9. The Nucleus, Radioactivity, and Nuclear Medicine

Part 2: Organic Chemistry

10. An Introduction to Organic Chemistry — The Saturated Hydrocarbons
11. The Unsaturated Hydrocarbons — Alkenes, Alkynes, and Aromatics
12. Alcohols, Phenols, Thiols, and Ethers
13. Aldehydes and Ketones
14. Carboxylic Acids and Carboxylic Acid Derivatives
15. Amines and Amides

Part 3: Biochemistry

16. Carbohydrates
17. Lipids and Their Functions in Biochemical Systems
18. Protein Structure and Function
19. Enzymes
20. Introduction to Molecular Genetics
21. Carbohydrate Metabolism
22. Aerobic Respiration and Energy Production
23. Fatty Acid Metabolism



Introduction to Chemistry

Rich Bauer, James Birk, Pamela S. Marks

Edition: 5
2019©
832 Pages
Print: 9781260085303
Connect: 9781260162660

OVERVIEW

Introduction to Chemistry, Fifth edition takes a conceptual approach to introductory chemistry. Chapters open with a scenario involving real-life students to connect abstract chemical concepts to students' lives. Math is introduced on a need-to-know basis. This conceptual approach first teaches the chemistry and then shows students how to use the math with the chemistry. We recognize how important it is for students to apply chemistry to their world and have added or expanded applications - especially medical- and environment-related applications - throughout the text, marginal notes, worked examples, and end-of-chapter problems.

FEATURES

- This textbook takes a conceptual approach, teaching the chemistry first and showing students

how to use the math with the chemistry.
- It is regarded as having the best art program in the market. A conceptual understanding of chemistry requires students to visualize molecular-level representations of macroscopic phenomena, as well as to connect macroscopic and molecular-level understandings to symbolic representations. To help students connect verbal descriptions to molecular-level representations, this book has an extensive art program. You'll notice many examples of zoomed art where pictures or other macroscopic images have close-ups that show the particular phenomena at a molecular level.
- "Consider This questions" at the end of worked examples prompt students to expand their understanding.
- Concept Review multiple-choice questions of a conceptual nature have been added to end-of-chapter questions and problems, and these questions provide students with the opportunity to practice before taking multiple-choice exams.

CONTENTS

1. Matter and Energy
2. Atoms, Ions, and the Periodic Table
3. Chemical Compounds
4. Chemical Composition
5. Chemical Reactions and Equations
6. Quantities in Chemical Reactions
7. Electron Structure of the Atom
8. Chemical Bonding
9. The Gaseous State
10. The Liquid and Solid States
11. Solutions
12. Reaction Rates and Chemical Equilibrium
13. Acids and Bases
14. Oxidation-Reduction Reactions
15. Nuclear Chemistry
16. Organic Chemistry
17: Biochemistry

Appendices

A. Useful Reference Tables and Figures
B. Math Toolboxes
C. Answers to Consider This Questions and Practice Problems
D. Answers to Selected Questions and Problems

Organic Chemistry

Francis A Carey,
Robert M. Giuliano

Edition: 11
2020©
1,248 Pages
Print: 9781260565874
Connect: 9781260506723

OVERVIEW

For eleven editions' Organic Chemistry has been designed to meet the needs of the "mainstream" two-semester undergraduate organic chemistry course. This best-selling text gives students a solid understanding of organic chemistry by stressing how fundamental reaction mechanisms function and reactions occur.

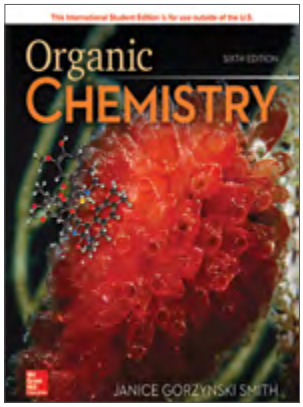
FEATURES

- Nucleophilic substitution, previously Chapters 4 and 8, is now covered in back-to-back in Chapters 5 and 6. This change makes for a tighter presentation in the early part of the book where mechanisms are first introduced.
- A new chapter on the chemistry of free radicals has been added. This change improves topic flow in the first chapter on nucleophilic substitution and allows a more unified approach to free radical chemistry.

CONTENTS

1. Structure Determines Properties
2. Alkanes and Cycloalkanes — Introduction to Hydrocarbons
3. Alkanes and Cycloalkanes — Conformations and cis–trans Stereoisomers
4. Chirality
5. Alcohols and Alkyl Halides: Introduction to Reaction Mechanisms
6. Nucleophilic Substitution
7. Structure and Preparation of Alkenes — Elimination Reactions
8. Addition Reactions of Alkenes
9. Alkynes
10. Introduction to Free Radicals
11. Conjugation in Alkadienes and Allylic Systems
12. Arenes and Aromaticity
13. Electrophilic and Nucleophilic Aromatic Substitution
14. Spectroscopy
15. Organometallic Compounds
16. Alcohols, Diols, and Thiols

17. Ethers, Epoxides, and Sulfides
18. Aldehydes and Ketones — Nucleophilic Addition to the Carbonyl Group
19. Carboxylic Acids
20. Carboxylic Acid Derivatives — Nucleophilic Acyl Substitution
21. Enols and Enolates
22. Amines
23. Carbohydrates
24. Lipids
25. Amino Acids, Peptides, and Proteins
26. Nucleosides, Nucleotides, and Nucleic Acids
27. Synthetic Polymers



Organic Chemistry

Janice Gorzynski Smith

Edition: 6
2020©
1,392 Page
Print: 9781260565843
Connect: 9781260475616

OVERVIEW

Smith's Organic Chemistry continues to breathe new life into the organic chemistry world. This new sixth edition retains its popular delivery of organic chemistry content in a student-friendly format. Janice Smith draws on her extensive teaching background to deliver organic chemistry in a way in which students learn: with limited use of text paragraphs, and through concisely written bulleted lists and highly detailed, well-labeled “teaching” illustrations. The sixth edition features a modernized look with updated chemical structures throughout. Don’t make your text decision without seeing Organic Chemistry, 6th edition by Janice Gorzynski Smith!

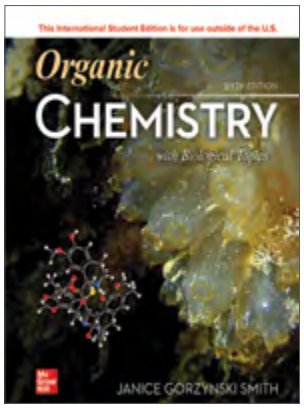
FEATURES

- Over 300 new problems have been added to the new edition, increasing the variety of problems for instructors and students alike.
- New How-To’s, Sample Problems, and illustrations have also been added throughout the new edition to clarify topics and enhance the student learning experience.
- The end-of-chapter summary sections have been expanded into parts: Key Concepts, Key Skills, Key Reactions, and Key Mechanism Concepts, with structures and examples to illustrate each part.
- Three new spectroscopy chapters have been created for the sixth edition. The revisions to the spectroscopy coverage are designed to allow for more flexibility, making these chapters more portable to accommodate various lecture and lab arrangements.

CONTENTS

Prologue
1. Structure and Bonding
2. Acids and Bases
3. Introduction to Organic Molecules & Functional Groups
4. Alkanes
5. Stereochemistry
6. Understanding Organic Reactions
7. Alkyl Halides and Nucleophilic Substitution
8. Alkyl Halides and Elimination Reactions
9. Alcohols, Ethers, and Related Compounds
10. Alkenes and Addition Reactions
11. Alkynes and Synthesis
12. Oxidation and Reduction
    Spectroscopy A Mass Spectrometry
    Spectroscopy B Infrared Spectroscopy
    Spectroscopy C Nuclear Magnetic Resonance Spectroscopy
13. Radical Reactions
14. Conjugation, Resonance, and Dienes
15. Benzene and Aromatic Compounds
16. Reactions of Aromatic Compounds
17. Introduction to Carbonyl Chemistry — Organometallic Reagents; Oxidation and Reduction
18. Aldehydes and Ketones — Nucleophilic Addition
19. Carboxylic Acids and Nitriles
20. Carboxylic Acids and Their Derivatives — Nucleophilic Acyl Substitution
21. Substitution Reactions of Carbonyl Compounds at the α-Carbon
22. Carbonyl Condensation Reactions
23. Amines
24. Carbon-Carbon Bond-Forming Reactions in Organic Synthesis
25. Pericyclic Reactions
26. Carbohydrates
27. Amino Acids and Proteins
28. Synthetic Polymers
29. Lipids (Available online)

Note: Lipids is now moved to the Smith online website.



Organic Chemistry with Biological Topics

Janice Gorzynski Smith, Heidi Vollmer-Snarr

Edition: 6
2021©
1,296 Pages
Print: 9781260575163
Connect: 9781260091434

OVERVIEW

Janice Smith's Organic Chemistry with Biological Topics; continues to breathe new life into the organic chemistry world. This new sixth edition retains its popular delivery of organic chemistry content in a student- friendly format. Janice Smith continues to draw on her extensive teaching background to deliver organic chemistry in away in which students learn: with limited use of text paragraphs, and through concisely written bulleted lists and highly detailed, well-labeled teaching illustrations. Because of the close relationship between chemistry and many biological phenomena; Organic Chemistry with Biological Topics; presents an approach to traditional organic chemistry that incorporates the discussion of biological applications that are understood using the fundamentals of organic chemistry.

FEATURES

- **New Chapter 26**: Chapter 26 provides an in-depth discussion of the structure and properties of the nucleic acids DNA and RNA. Three key processes are also presented: replication—how DNA makes copies of itself; transcription—how the genetic information in DNA is passed onto RNA; and translation—how the coded genetic information in RNA is used to synthesize proteins. The chapter concludes with discussions of manipulating DNA in the laboratory and how viruses act.
- **New Chapter 27**: Chapter 27 focuses on the biochemical reactions involved in metabolism. The discussion centers on three components: the breakdown of fats, the metabolism of the carbohydrate glucose to the three-carbon unit pyruvate by glycolysis, and the citric acid cycle, a key cyclic metabolic pathway used for amino acids, carbohydrates, and fats.
- **Spectroscopy**: The revisions to the spectroscopy coverage are designed to allow for more flexibility, making these chapters more portable to accommodate various lecture and lab arrangements. Three new spectroscopy chapters have been created for the sixth edition: Spectroscopy A Mass Spectrometry; Spectroscopy B Infrared Spectroscopy; and Spectroscopy C Nuclear Magnetic Resonance Spectroscopy.
- The Problems are followed by "More Practice," a list of end-of-chapter problems that are similar in concept. Students can find detailed solutions and verify their answers to all of the Problems from the book with the Student Study Guide/Solutions Manual for Organic Chemistry with Biological Topics.
- The end-of-chapter summary sections have been expanded into parts: Key Concepts, Key Skills, Key Reactions, and Key Mechanism Concepts, with structures and examples to illustrate each part, providing students with a broader and more detailed overview of each chapter's important concepts and skills.
- Extensive cross-referencing has also been added to connect this material with relevant Sample Problems, Problems, Figures, and Tables within the body of the chapter.

CONTENTS

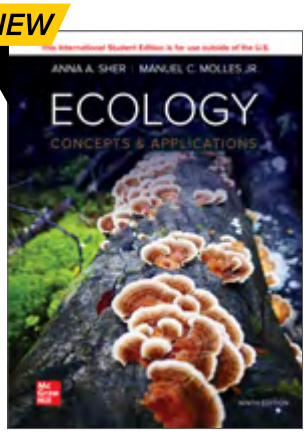
Prologue
1. Structure and Bonding
2. Acids and Bases
3. Introduction to Organic Molecules and Functional Groups
4. Alkanes
5. Stereochemistry
6. Understanding Organic Reactions
7. Alkyl Halides and Nucleophilic Substitution
8. Alkyl Halides and Elimination Reactions
9. Alcohols, Ethers, and Related Compounds
10. Alkenes andAlkynes
11. Oxidation and Reduction
12. Conjugation, Resonance, and Dienes Spectroscopy
    - A Mass SpectrometrySpectroscopy
    - B Infrared SpectroscopySpectroscopy
    - C Nuclear Magnetic Resonance Spectroscopy
13. Introduction to Carbonyl Chemistry; Organometallic Reagents; Oxidation and Reduction
14. Aldehydes and Ketones—Nucleophilic Addition
15. Carboxylic Acids and Nitriles
16. Carboxylic Acids and Their Derivatives—Nucleophilic Acyl Substitution
17. Substitution Reactions of Carbonyl Compounds at the α Carbon
18. Carbonyl Condensation Reactions
19. Benzene and Aromatic Compounds
20. Reactions of Aromatic Compounds
21. Radical Reactions
22. Amines
23. Amino Acids and Proteins

24. Carbohydrates
25. Lipids
26. Nucleic Acids and Protein Synthesis
27. Metabolism
28. Carbon—Carbon Bond-Forming Reactions in Organic Synthesis(Available Online)
29. Pericyclic Reactions (Available Online)
30. Synthetic Polymers (Available Online)

Appendices

ENVIRONMENTAL SCIENCE & ECOLOGY

NEW



Ecology: Concepts and Applications

Anna A. Sher, Manuel Molles

Edition: 9
2022©
608 Pages
Sep 2021
Print: 9781265286330
Connect: 9781264360703

OVERVIEW

Ecology: Concepts and Applications 9th edition by Sher, Molles places great emphasis on helping students grasp the main concepts of ecology while keeping the presentation more applied than theoretical. An evolutionary perspective forms the foundation of the entire discussion. The book begins with the natural history of the planet considers portions of the whole in the middle chapters and ends with another perspective of the entire planet in the concluding chapter. Its unique organization of focusing only on several key concepts in each chapter sets it apart from other ecology texts.

FEATURES

- This edition increases the emphasis on the role of evolution in ecological science. Increasingly, evolutionary science informs and guides ecological research, not just within the field of evolutionary ecology. In response to reviewers' comments on this point, we have added examples and made additional connections between ecology and evolution throughout the text. We have also expanded chapter 4 to explain the relationships between genetic diversity, evolution, and ecological consequences, including an expansion of the treatment of non-Mendelian genetics

CONTENTS

1. Introduction to Ecology — Historical Foundations and Developing Frontiers

Section 1: Natural History and Evolution

2. Life on Land
3. Life in Water
4. Population Genetics and Natural Selection

Section 2: Adaptations to the Environment

5. Temperature Relations
6. Water Relations
7. Energy and Nutrient Relations
8. Social Relation

Section 3: Population Ecology

9. Population Distribution and Abundance
10. Population Dynamics
11. Population Growth
12. Life Histories

Section 4: Interactions

13. Competition
14. Exploitative Interactions — Predation, Herbivory, Parasitism, and Disease
15. Mutualism

Section 5: Communities and Ecosystems

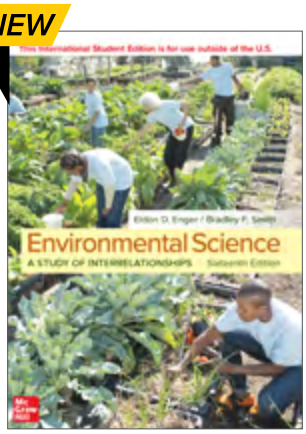
16. Species Abundance and Diversity
17. Species Interactions and Community Structure
18. Primary Production and Energy Flow
19. Nutrient Cycling and Retention
20. Succession and Stability

Section 6: Large-Scale Ecology

21. Landscape Ecology
22. Geographic Ecology
23. Global Ecology

Appendix Statistical Tables

NEW



Environmental Science

Eldon Enger, Bradley F Smith

Edition: 16
2022©
560 Pages
Mar 2021
Print: 9781265324339
Connect: 9781265093587

OVERVIEW

Environmental Science: A Study of Interrelationships is a full-color, introductory environmental science text that is known for being concise, conceptual, and value-priced. The approach and reading level cover the basic concepts without overloading students with too much detail. The authors reinforce the text's

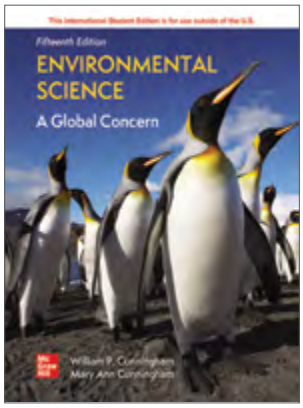
central theme of "interrelationships" by providing a historical perspective, information on economic and political realities, discuss the role of different social experiences, and integrate this with the crucial science to describe the natural world and how we affect it.

FEATURES

- **Issues & Analysis:** This feature is at the end of each chapter and presents real-world, current issues and provides questions that prompt students to think about the complex social, political and scientific interactions involved.
- **What's Your Take?**: This feature is found in each chapter and asks students to take a stand on a particular issue and develop arguments. This helps student develop and enhance their critical thinking skills.
- **Going Green boxes** describe actions that are having a positive environmental impact. Some of these actions are taken by governments, some are by corporations, and some are individual efforts.
- Acting Green is an end-of-chapter feature that asks students to consider making personal changes that are relatively simple and will have a positive environmental impact.-Revised Art Program Over 120 illustrations, graphs, and charts are new or revised to present detailed information in a form that is easier to comprehend than if that same material were presented in text form.

CONTENTS

1. Environmental Interrelationships
2. Environmental Ethics
3. Risk, Economics, and Environmental Concerns
4. Interrelated Scientific Principles: Matter, Energy, and Environment
5. Interactions: Environments and Organisms
6. Kinds of Ecosystems and Communities
7. Populations: Characteristics and Issues
8. Energy and Civilization: Patterns of Consumption
9. Nonrenewable Energy Sources
10. Renewable Energy Sources
11. Biodiversity Issues
12. Land-Use Planning
13. Soil and Its Uses
14. Agricultural Methods and Pest Management
15. Water Management
16. Air Quality Issues
17. Climate Change: A Twenty-first Century Issue
18. Solid Waste Management and Dispoal
19. Environmental Regulations: Hazardous Substances and Wastes
20. Environmental Policy and Decision Making



Environmental Science: A Global Concern

William P Cunningham, Mary Ann Cunningham

Edition: 15
2021©
640 Pages
Print: 9781260575101
Connect: 9781260486278

OVERVIEW

Environmental Science: A Global Concern is a comprehensive presentation of environmental science for non-science majors which emphasizes critical thinking, environmental responsibility, and global awareness. This book is intended for use in a one or two-semester course in environmental science, human ecology, or environmental studies at the college or advanced placement high school level.;

FEATURES

- Each chapter concludes with a new section, "Connecting the Dots," which draws together major themes of the chapter.
- This edition has thoroughly updated data, figures, and tables, as well as 16 new opening case studies that reflect new developments in the field, and over a dozen new "Exploring Science" or "What Do You Think?" boxed readings.

CONTENTS

1. Understanding Our Environment
2. Principles of Science and Systems
3. Matter, Energy, and Life
4. Evolution, Biological Communities, and Species Interactions
5. Biomes: Global Patterns of Life
6. Population Biology
7. Human Populations
8. Environmental Health and Toxicology
9 Food and Hunger
10. Farming: Conventional and Sustainable Practices
11. Biodiversity: Preserving Species
12. Biodiversity: Preserving Landscapes
13. Restoration Ecology
14. Geology and Earth Resources
15. Climate Systems and Climate Change
16. Air Pollution
17. Water Use and Management
18. Water Pollution
19. Conventional Energy

20. Sustainable Energy
21. Solid, Toxic, and Hazardous Waste
22. Urbanization and Sustainable Cities
23. Ecological Economics
24. Environmental Policy, Law, and Planning
25. What Then Shall We Do?

Principles of Environmental Science

William P Cunningham, Mary Ann Cunningham

Edition: 9
2020©
468 Pages
Print: 9781260566024
Connect: 9781260492811

OVERVIEW

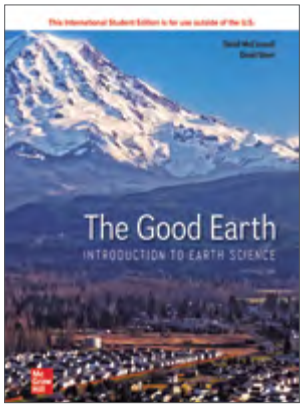
Principles of Environmental Science: Inquiry and Applications is perfect for the one-semester, non-majors environmental science course. True to its title, the goal of this concise text is to provide an up-to-date, introductory view of essential themes in environmental science along with offering students numerous opportunities to practice scientific thinking and active learning.

FEATURES

- Up-to-date information: Throughout the text, we provide the most current available data, as well as recent innovations in meeting environmental challenges. We introduce students to current developments such as establishment of Marine Protected Areas, REDD (reducing emissions through deforestation and degradation), renewable energy development in China, fertility declines in the developing world, and the impact of global food trade on world hunger.
- Exploring Science readings: These boxed readings illustrate how science is actually done as well as presenting information about important topics in environmental science. These readings exemplify the principles of scientific observation and data gathering to help students understand scientific research. Many of these readings, like the case studies, give encouraging examples of progress toward sustainability.
- Sustainability and student empowerment: This book connects readings to actions students can take to improve sustainability on campus and in their communities.

CONTENTS

1. Natural Disasters and the Human Population
2. Internal Energy and Plate Tectonics
3. Earthquake Geology and Seismology
4. Plate Tectonics and Earthquakes
5. Earthquakes Throughout the United States and Canada
6. Volcanic Eruptions: Plate Tectonics and Magmas
7. Volcano Case Histories: Killer Events
8. Tsunami Versus Wind-Caused Waves
9. External Energy Fuels Weather and Climate
10. Tornadoes, Lightning, Heat, and Cold
11. Hurricanes
12. Climate Change
13. Floods
14. Wildfire
15. Mass Movements
16. Coastal Processes and Hazards
17. Impacts with Space Objects
18. The Great Dyings



The Good Earth: Introduction to Earth Science

David A McConnell, David Steer, Katharine Owens, Catherine Knight

Edition: 5
2021©
560 Pages
Print: 9781260570632
Connect: 9781260466294

OVERVIEW

The Good Earth is the product of collaboration between the content rigor provided by Earth Science specialists and the results of research on learning. The Good Earth has been explicitly designed to be compatible with active learning teaching strategies in the college classroom. The structural elements of this text will allow the instructor to incorporate these student-centered teaching methods into their Earth Science course. The authors have tested the book's content and pedagogy in large Earth Science classes for non-majors that are populated with mostly freshmen. Their experiences show that the materials and methods in The Good Earth can improve students' learning, increase daily attendance, reduce attrition, and increase students' enthusiasm in comparison with classes taught following a traditional lecture format.

FEATURES

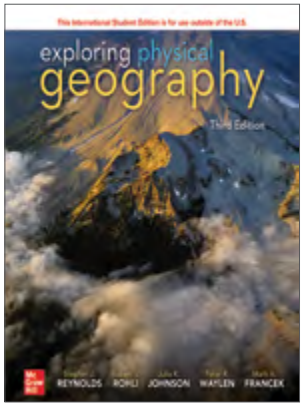
- The Good Earth is designed to be compatible with inquiry-based, active learning in the college classroom. It emphasizes "active learning" by providing ample opportunities for self-assessment throughout the text and in the accompanying instructor's manual.
- Images and figures were replaced throughout the text to better illustrate key concepts.
- Geologist's View – Numerous landscape photos have accompanying diagrams that clarify the structure and shapes that may not be recognizable to inexperienced readers.

CONTENTS

1. Introduction to Earth Science
2. Earth in Science
3. Near-Earth Objects
4. Plate Tectonics
5. Earthquakes
6. Volcanoes and Mountains
7. Rocks and Minerals
8. Geologic Time
9. Weathering and Soils
10. Landslides and Slope Failure
11. Streams and Floods
12. Groundwater and Wetlands
13. Oceans and Coastlines
14. The Atomosphere
15. Weather Systems
16. Earth's Climate System
17. Global Change

Appendix A – Conversion Factors
Appendix B – The Periodic Table of Elements
Appendix C – Answers to Selected Checkpoint Questions

GEOGRAPHY



Exploring Physical Geography

Stephen Reynolds, Robert V. Rohli, Julia Johnson, Peter Waylen, Mark Andrew Francek

Edition: 3
2021©
736 Pages
Print: 9781260571073
Connect: 9781260472509

OVERVIEW

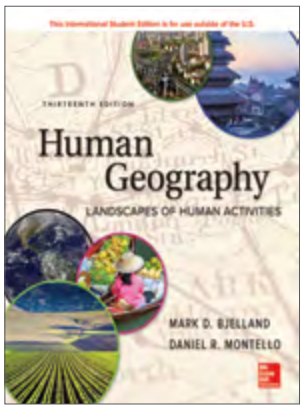
Exploring Physical Geography promotes inquiry and science as an active process. It encourages student curiosity and aims to activate existing student knowledge by posing the title of every two-page spread and every subsection as a question.

FEATURES

- This textbook contains more than 2,600 figures, which is two to three times the number in most introductory geography textbooks. One reason for this is that the book is designed to provide a concrete example of each process, environment, or landscape feature being illustrated.
- This edition contains 250 new and revised illustrations.
- Entirely new one- and two-page spreads in an Appendix designed to improve the quantitative skills of students.
- Concept Sketches - Concept sketches are an excellent way to actively engage students in class and to assess their understanding of geographic features, processes, and history.
- This text employs a Learning-Cycle Approach where student exploration precedes the introduction of geographic terms and the application of knowledge to a new situation.

CONTENTS

1. The Nature of Physical Geography
2. Atmospheric Energy and Matter
3. Atmospheric Motion
4. Atmospheric Moisture
5. Weather Systems and Severe Weather
6. Atmosphere - Ocean - Crysophere Interactions
7. World Climates
8. Water Resources
9. Understanding Landscapes
10. Plate Tectonics and Regional Features
11. Volcanoes, Deformation, and Earthquakes
12. Weathering and Mass Wasting
13. Streams and Flooding
14. Glaciers and Glacial Landforms
15. Coasts and Changing Sea Levels
16. Soils
17. Ecosystems and Biogeochemical Cycles
18. Biomes



Human Geography

Mark Bjelland,
Daniel R. Montello,
Jerome D Fellmann,
Arthur Getis, Judith Getis

Edition: 13
2020©
528 Pages
Print: 9781260566055
Connect: 9781260430479

OVERVIEW

This thirteenth edition of Human Geography retains the organization and structure of its earlier versions. Like them it seeks to introduce its users to the scope and excitement of geography and its relevance to their daily lives and roles as informed citizens. We recognize that for any student's human geography may be their first or only work in geography and this their first or only textbook in the discipline. For these students particularly we seek to convey the richness and breadth of human geography and to give insight into the nature and intellectual challenges of the field of geography itself.

FEATURES

- In addition to the specific content changes, to ensure content is up to date and current, almost 90 images have been updated and replaced with newer images. The Section headings are now identified with a section number, that correlates to the Key Concepts highlighted on the chapter opener which will tie to the SmartBook probes. The new edition will also feature a light design refresh with a updated chapter opener, feature box layout, and a refresh of the color palette for accessibility compliancy.
- New Maps- Many existing maps have been updated for the thirteenth edition of Human Geography

CONTENTS

1. Introduction — Some Background Basics

Part 1: Themes and Fundamentals of Human Geography

2. Roots and Meaning of Culture
3. Spatial Interaction and Spatial Behavior
4. Population: World Patterns, Regional Trends

Part 2: Patterns of Diversity and Unity

5. Language and Religion — Mosaics of Culture
6. Ethnic Geography — Threads of Diversity
7. Cultural Identities and Cultural Landscapes — Diversity and Uniformity

Part 3: Dynamic Patterns of the Space Economy

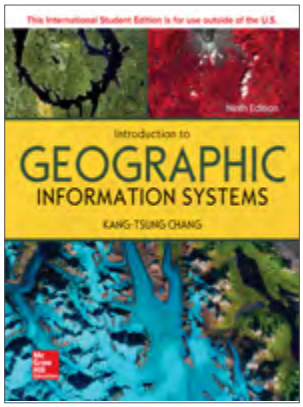
8. Economic Geography — Primary Activities
9. Economic Geography — Manufacturing & Services
10. Economic Development and Change

Part 4: Landscapes of Functional Organization

11. Urban Systems and Urban Structures
12. The Political Ordering of Space

Part 5: Human Actions & Environmental Impacts

13. Human Impacts on Natural Systems



Introduction to Geographic Information Systems

Kang-tsung Chang

Edition: 9
2019©
464 Pages
Print: 9781260092585
Connect: 9781260136371

OVERVIEW

Introduction to Geographic Information Systems, 9th edition is designed to provide students in a first or second GIS course with a solid foundation in both GIS concepts and the use of GIS. Introduction to GIS strikes a careful balance between GIS concepts and hands-on applications. The main portion of the chapter presents GIS terms and concepts and helps students learn how each one fits into a complete GIS system. At the end of each chapter, an application section with 2-7 tasks presents students with actual GIS exercises and the necessary data to solve the problem.

FEATURES

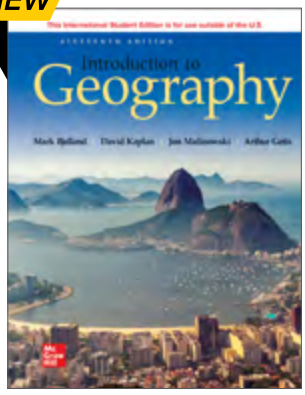
- Four new tasks have been added within chapters 2, 11, 12 and 13, bringing the total number of tasks to 87 within the text. All tasks in this edition use ArcGIS and its extensions of Spatial Analyst, 3-D Analyst, Geostatistical Analyst, Network Analyst, and ArcScan. Additionally, a challenge task is found at the end of each applications section.
- New developments in GIS (including open source and free GIS, integration of GIS with Web2.0 and mobile technology, new horizontal datums, animated maps, quality of geocoding, and regression analysis with spatial data).
- Changes in acquisition of geospatial data (such as very high resolution satellite images, LiDAR data, LiDAR-based DEMs, and global-scale data,

now possible from websites maintained by the U.S. Geological Survey, National Aeronautics and Space Administration, and other organizations).
- Careful interpretation of important GIS concepts (such as datum shift, topology, spatial database, spatial join, and map algebra closely linked to GIS operations and analyses).

CONTENTS

1. Introduction
2. Coordinate Systems
3. Vector Data Model
4. Raster Data Model
5. GIS Data Acquisition
6. Geometric Transformation
7. Spatial Data Accuracy and Quality
8. Attribute Data Management
9. Data Display and Cartography
10. Data Exploration
11. Vector Data Analysis
12. Raster Data Analysis
13. Terrain Mapping and Analysis
14. Viewshed and Watershed Analysis
15. Spatial Interpolation
16. Geocoding and Dynamic Segmentation
17. Least Cost Path and Network Analysis
18. GIS Models and Modeling

NEW



Introduction to Geography

Mark Bjelland, David H. Kaplan, Jon Malinowskion

Edition: 16
2022©
496 Pages
Apr 2021
Print: 9781260598216
Connect: 9781260430356

OVERVIEW

Getis Introduction to Geography is written to clearly and concisely convey the nature of the field of geography, its intellectual challenges, and the logical interconnections of its parts. Even if students take no further work in geography, they will have come into contact with the richness and breadth of Geography and have new insights and understandings for their present and future roles as informed adults. This new edition provides students content and scope of the subfields of geography, emphasize its unifying themes, and provide the foundation for further work in their areas of interest. A useful textbook must be flexible enough in its organization to permit an instructor to adapt it to the time and subject matter constraints of a particular course. Although Getis Introduction to Geography is designed with a one-quarter or one-semester course in mind, this text may be used in a full-year introduction to geography when employed as a point of departure for special topics and amplifications introduced by the instructor or when supplemented by additional readings and class projects.

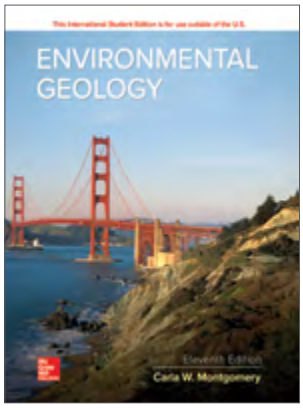
FEATURES

- Boxes and topical discussions have been revised with new content and recent events.
- Tables and figures have been reviewed and updated for accuracy and currency.
- Chapters are self-contained and don't need to be assigned in sequential order, which suits the emphasis and order preferred by the instructor.
- Interactive base maps appear in the website, showing the political boundaries of Europe, North and South America, Africa, and the Caribbean. Students can choose drag and drop exercises to test their knowledge of regions, states and key cities.

CONTENTS

1. Introduction
2. Techniques of Geographic Analysis
3. Physical Geography — Landforms
4. Physical Geography — Weather and Climate
5. Population Geography
6. Cultural Geography
7. Human Interaction
8. Political Geography
9. Economic Geography — Agriculture and Primary Activities
10. Economic Geography — Manufacturing and Services
11. An Urban World
12. The Geography of Natural Resources
13. Human Impact on the Environment

GEOLOGY



Environmental Geology

Carla W Montgomery

Edition: 11
2020©
672 Pages
Print: 9781260547795
Connect: 9781260471120

OVERVIEW

Environmental Geology, presents the student with a broad overview of environmental geology. The text looks both at how the earth developed into its present condition and where matters seem to be moving for the future. It is hoped that this knowledge will provide the student with a useful foundation for discussing and evaluating specific environmental issues, as well as for developing ideas about how the problems should be solved.

FEATURES

- **NetNotes**: A modest collection of Internet sites that provide additional information and/or images relevant to the chapter content or may serve as sources of newer data as they become available. The NetNotes should prove useful to both students and instructors. An effort has been made to concentrate on sites with material at an appropriate level for the book's intended audience and also on sites likely to be relatively stable in the very fluid world of the Internet (government agencies, educational institutions, or professional-association sites).
- **"Exploring Further"** section of each chapter includes a number of activities in which students can engage, some involving online data, and some, quantitative analysis. For example, they may be directed to examine real time stream-gaging or landslide-monitoring data, or information on current or recent earthquake activity; they can manipulate historic climate data from NASA to examine trends by region or time period; they may calculate how big a wind farm or photovoltaic array would be required to replace a conventional power plant; they can even learn how to reduce sulfate pollution by buying SO2 allowances.
- End-of-chapter material includes a brief summary of the chapter material; Terms to Remember, a collection of important terms and concepts; Exercises, which allow students to test their comprehension and apply their knowledge through review and critical thinking questions; and Suggested Readings and References. .
- **Suggested Readings/References**: Some of which can also be accessed online. These are a mix of background material and articles that feature additional ideas or examples pertinent to the chapter.

CONTENTS

Section 1: Foundations
1. Planet and Population — An Overview
2. Rocks and Minerals — A First Look

Section 2: Internal Processes
3. Plate Tectonics
4. Earthquakes
5. Volcanoes

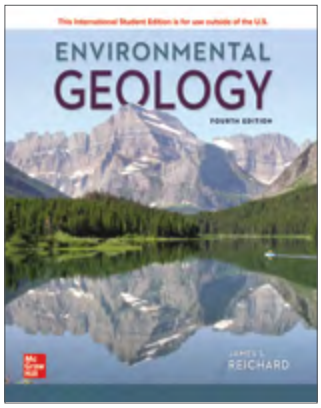
Secion 3: Surface Processes
6. Streams and Flooding
7. Coastal Zones and Processes
8. Mass Movements
9. Ice and Glaciers, Wind and Deserts
10. Climate — Past, Present, and Future

Section 4: Resources
11. Groundwater and Water Resources
12. Weathering, Erosion, and Soil Resources
13. Mineral and Rock Resources
14. Energy Resources — Fossil Fuels
15. Energy Resources — Alternative Sources

Section 5: Waste Disposal, Pollution, and Health
16. Waste Disposal
17. Water Pollution
18. Air Pollution

Section 6: Other Related Topics
19. Environmental Law and Policy
20. Land-Use Planning and Engineering Geology

Appendices
A. Geologic Time, Geologic Process Rates
B. Mineral and Rock Identification



Environmental Geology

Jim Reichard

Edition: 4
2021©
624 Pages
Print: 9781260571059
Connect: 9781260464764

OVERVIEW

Environmental Geology, 4e focuses on the fascinating interaction between humans and the geologic processes that shape the Earth's environment. This text emphasizes how human survival is highly dependent on the natural environment and students should find the topics to be quite relevant to their own lives and, therefore, more interesting.

FEATURES

- Five new case studies have been added, bringing the total to 24. Instructors commonly have students use case studies to explore chapter concepts in more detail.
- The end-of-chapter pedagogy will include Summary Points, Key Terms, Critical Thinking Questions, and Applications (hands-on activities).
- Each chapter concludes with a list of Summary Points to provide students with a list of important concepts that should be reviewed in preparation for exams.

CONTENTS

Part 1: Fundamentals of Environmental Geology

1. Humans and the Geologic Environment
2. Earth from a Larger Perspective
3. Earth Materials
4. Earth's Structure and Plate Tectonics

Part 2: Hazardous Earth Processes

5. Earthquakes and Related Hazards
6. Volcanoes and Related Hazards
7. Mass Wasting and Related Hazards
8. Streams and Flooding
9. Coastal Hazards

Part 3: Earth Resources

10. Soil Resources
11. Water Resources
12. Mineral and Rock Resources
13. Conventional Fossil Fuel Resources
14. Alternative Energy Resources

Part 4: The Health of Our Environment

15. Pollution and Waste Disposal
16. Global Climate Change

Appendices

A. Units and Conversions

Exploring Earth Science

Stephen Reynolds, Julia Johnson

Edition: 2
2019©
696 Pages
Print: 9781260092066
Connect: 9781260139884

OVERVIEW

Exploring Earth Science, Second Edition, is an innovative textbook intended for an introductory college geology course, such as earth science. This ground-breaking, visually spectacular book was designed following cognitive and educational research on how students think, learn, and study. Nearly all information in the book is built around 2,600 photographs and stunning illustrations, rather than long blocks of text. These annotated illustrations help students visualize geologic processes and concepts, and are suited to the way most instructors already teach. To alleviate cognitive load and enable students to focus on one important geologic process or concept at a time, the book consists entirely of two-page spreads organized into 20 chapters. Each chapter is a learning cycle, which begins with a visually engaging two-page spread about a compelling geologic issue. Each two-page spread is a self-contained block of information about a specific topic, emphasizing geologic concepts, processes, features, and approaches.

FEATURES

- Every chapter incorporates significant additions and improvements, including new photographs, revised figures, and reorganization.
- More than 180 new photographs represent a wider geographic diversity and provide more detail and clarity about various processes and features, whether on land, in the atmosphere, or in the water.
- New spreads and information focus on sedimentary environments and impact craters and revised coverage on climate change.
- The text reflects new ideas and provides new data on topics such as Pluto, comets, satellite temperatures, and sea-level rise.

CONTENTS

Part 1: Earth Materials and Systems

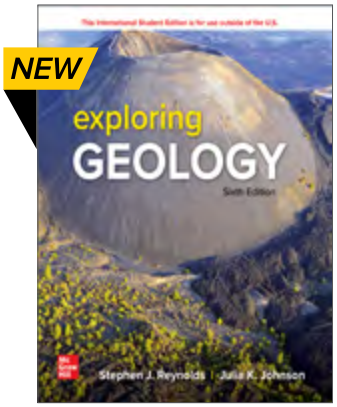
1. The Nature of Earth Science
2. Minerals and Mineral Resources
3. Earth Materials
4. Earth History

Part 2: The Dynamic Earth
5. Plate Tectonics
6. Volcanism and Other Igneous Processes
7. Deformation and Earthquakes
8. Mountains, Basins, and Continental Margins

Part 3: Landscape Processes and Evolution
9. Sculpting Landscapes
10. Soil and Unstable Slopes
11. Glaciers, Shorelines, and Changing Sea Levels
12. Streams, Lakes, and Groundwater

Part 4: Atmosphere and Oceans
13. Energy and Matter in the Atmosphere
14. Atmospheric Motion
15. Atmospheric Moisture
16. Weather and Storms
17. Oceans and Their Interactions with Other Earth Systems
18. Climates Around the World

Part 5: Solar System and Universe
19. Our Solar System
20. Our Universe



Exploring Geology

Stephen Reynolds, Julia Johnson, Paul Morin, Chuck Carter

Edition: 6
2022©
704 Pages
Mar 2021
Print: 9781265316228
Connect: 9781264887712

OVERVIEW

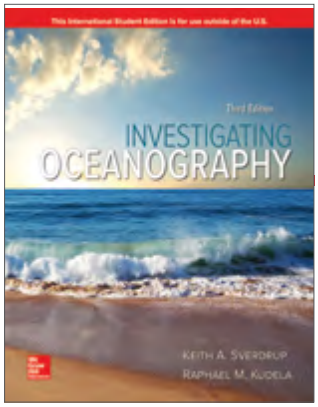
Exploring Geology by Reynolds/Johnson is an innovative textbook intended for an introductory college geology course, such as Physical Geology. This ground-breaking, visually spectacular book was designed from cognitive and educational research on how students think, learn, and study.

FEATURES

- This text uses figures and illustrations as the focus for understanding geologic processes. The 2-page spreads feature numerous photos and diagrams. A typical text is written to explain geologic process through facts and theory. The Reynolds team developed their content based on "what students need to know" (learning objectives) and then created the necessary visuals and wrote the presentation around the visuals.
- The text has been designed to encourage inquiry and provide readers with tools to think critically about geologic problems. Questions in the title, opening paragraph and topic headings are intended to get readers to think about the topic and become interested and motivated to explore the two-page spread for answers. The authors also use a learning-cycle approach in presenting topics. This approach includes three phases – exploration, introduction of terms and concepts, and connection.

CONTENTS

1. The Nature of Geology
2. Investigating Geologic Questions
3. Plate Tectonics
4. Earth Materials
5. Igneous Environments
6. Volcanoes and Volcanic Hazards
7. Sedimentary Environments and Rocks
8. Deformation and Metamorphism
9. Geologic Time
10. The Seafloor and Continental Margins
11. Mountains, Basins, and Continents
12. Earthquakes and Earth's Interior
13. Climate, Weather, and Their Influences on Geology
14. Glaciers, Shorelines, and Changing Sea Levels
15. Weathering, Soil, and Unstable Slopes
16. Streams and Flooding
17. Water Resources
18. Energy and Mineral Resources
19. Geology of the Solar System



Investigating Oceanography

Keith A Sverdrup, Raphael M Kudela

Edition: 3
2020©
528 Pages
Print: 9781260566031
Connect: 9781260504064

OVERVIEW

This introductory oceanography text is intended to teach students the tremendous influence oceans have on our lives. They are encouraged to look at oceanography as a cohesive and united discipline rather than a collection of subjects gathered under a marine umbrella. Investigating Oceanography teaches students about the historical, geological, physical,

chemical and biological characteristics of the ocean environment using remarkable images and photos. The authors have incorporated essays written by several scientists discussing topics in their fields of specialization. In addition to understanding processes and principles, the authors believe students must have a basic command of the language of marine science in order to understand the constant barrage of information concerning our planet and marine issues. By the end of this course, the authors want students to be prepared for future environmental discussions and the ability to make decisions as informed global citizens.

FEATURES

- New pedagogical features include revised/new figures and photographs that provide improved graphic illustration of ideas and issues. Data and concepts are updated throughout the text, including the addition of critical terms to the glossary and a review of the appendices. This edition is closely tied to online resources in Connect, which support studying and learning for students as well as teaching and grading for instructors.
- Resources on Connect include figures, animations, movie clips, data analysis exercises, online quizzes, and course management software.

CONTENTS

Prologue: The History of Oceanography

1. The Water Planet
2. Earth Structure and Plate Tectonics
3. The Sea Floor and Its Sediments
4. The Physical Properties of Water
5. Seawater
6. The Atmosphere and the Oceans
7. Ocean Structure and Circulation
8. The Waves
9. The Tides
10. Coasts, Beaches, and Estuaries
11. The Living Ocean
12. The Plankton, Energy, and Food Webs
13. The Nekton — Swimmers of the Sea
14. The Benthos — Living on the Sea Floor
15. Environmental Issues
16. The Oceans and Climate Disruption

Natural Disasters

Patrick Leon Abbott

Edition: 11
2020©
560 Pages
Print: 9781260566048
Connect: 9781260504224

OVERVIEW

Natural Disasters 11th edition focuses on explaining how the normal processes of Earth concentrate their energies and deal heavy blows to humans and their structures. Students have a natural curiosity about natural disasters and why they occur. This text explains why natural disasters occur by interweaving the themes of Energy sources Plate tectonics climate change Earth Processes geologic time the complexities of multiple variables operating simultaneously throughout the text. Detailed and interesting Case histories are also intertwined with current content to give students a broad historical understanding of our dynamic and evolving planet.

FEATURES

- A brief Prologue that is content rich and describes four main energy flows.
- **Volcanism**: Expanded discussion of role of flood basalts in mass extinctions.
- **Hurricane**: Added a discussion of the transformation of Hurricane Sandy into a post-tropical cyclone, and how to build coastal houses to reduce damages.
- **Mass Movements**: Expanded discussion of landslide mitigation including reshaping topography; strengthening slopes; draining water; controlling erosion.

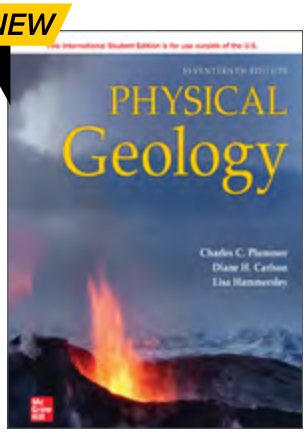
CONTENTS

Prologue: Energy Flows

1. Natural Disasters and the Human Population
2. Internal Energy and Plate Tectonics
3. Earthquake Geology and Seismology
4. Plate Tectonics and Earthquakes
5. Earthquakes throughout the United States and Canada
6. Volcanic Eruptions: Plate Tectonics and Magmas
7. Volcano Case Histories: Killer Events
8. Tsunami versus Wind-Caused Waves
9. External Energy Fuels Weather and Climate
10. Tornadoes, Lightning, Heat, and Cold

11. Hurricanes
12. Climate Change
13. Floods
14. Fire
15. Mass Movements
16. Coastal Processes and Hazards
17. Impacts with Space Objects
18. The Great Dyings

NEW



Physical Geology

Charles (Carlos) C. Plummer, Diane Carlson, Lisa Hammersley

Edition: 17
2022©
672 Pages
Mar 2021
Print: 9781265335328
Connect: 9781266070945

OVERVIEW

Physical Geology is a classic introductory text that has helped countless students learn basic physical geology concepts for over 25 years. Students taking introductory physical geology to fulfill a science elective, as well as those contemplating a career in geology, will appreciate the accessible writing style and depth of coverage in Physical Geology.

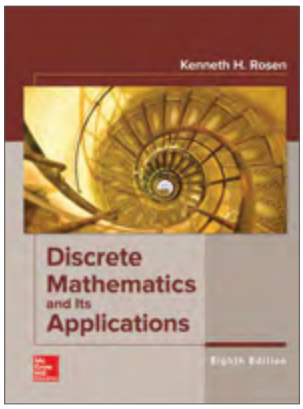
FEATURES

- **Superior Photo and Art Programs:** Geology is a visually oriented science, and one of the best ways to learn it is by studying illustrations and photographs. The outstanding photo and art programs in this text feature accuracy in scale, realism, and aesthetic appeal that provides students with the best visual learning tools available in the market.
- **Learning Objectives:** Each chapter begins with a bulleted list of learning objectives to help students focus on what they should know and understand after reading the chapter.
- **Environmental Geology Boxes:** Discuss topics that relate the chapter material to environmental issues, including impact on humans. In Greater Depth Boxes: Discuss phenomena that are not necessarily covered in a geology course.
- **Earth Systems Boxes:** Highlight the interrelationships between the geosphere, the atmosphere, and other Earth systems.
- **Planetary Geology Boxes:** Compare features elsewhere in the solar system to their Earthly counterparts.
- **A Geologist's View:** Photos accompanied by an illustration depicting how a geologist would view the scene are featured in the text.

CONTENTS

1. Introducing Geology, the Essentials of Plate Tectonics, and Other Important Concepts
2. Atoms, Elements and Minerals
3. Igneous Rocks, the Origin and Evolution of Magma, and Intrusive Activity
4. Volcanism and Extrusive Rocks
5. Weathering and Soil
6. Sediment and Sedimentary Rocks
7. Metamorphism and Metamorphic Rocks
8. Time and Geology
9. Mass Wasting
10. Streams and Floods
11. Ground Water
12. Glaciers and Glaciation
13. Deserts and Wind Action
14. Waves, Beaches, and Coasts
15. Geologic Structures
16. Earthquakes
17. Earth's Interior and Geophysical Properties
18. The Sea Floor
19. Plate Tectonics — The Unifying Theory
20. Mountain Belts and the Continental Crust
21. Global Climate Change
22: Resources
23: The Earth's Companions

HIGHER MATHEMATICS



Discrete Mathematics and Its Applications

Kenneth H Rosen

Edition: 8
2019©
1,120 Pages
Print: 9781260091991
Connect: 9781259731259

OVERVIEW

Rosen's Discrete Mathematics and its Applications presents a precise, relevant, comprehensive approach to mathematical concepts. This world-renowned best-selling text was written to accommodate the needs across a variety of majors and departments, including mathematics, computer science, and engineering.

As the market leader, the book is highly flexible, comprehensive and a proven pedagogical teaching tool for instructors. Digital is becoming increasingly important and gaining popularity, crowning Connect as the digital leader for this discipline.

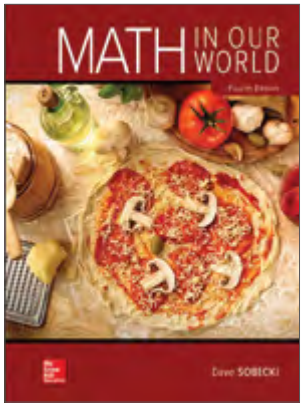
FEATURES

- Exposition has been improved throughout the book with a focus on providing more clarity to help students read and comprehend concepts
- New Examples have been added, often to meet needs identified by reviewers or to illustrate new material. Many of these examples are found in the text, but others are available only on the companion website.
- Several hundred new exercises, both routine and challenging, have been addressing needs identified by instructors or cover new material, while others strengthen and broaden existing exercise sets.

CONTENTS

1. The Foundations: Logic and Proofs
2. Basic Structures: Sets, Functions, Sequences, Sums, Matrices
3. Algorithms
4. Number Theory and Cryptography
5. Induction and Recursion
6. Counting
7. Discrete Probability
8. Advanced Counting Techniques
9. Relations
10. Graphs
11. Trees
12. Boolean Algebra
13. Modeling Computation

LIBERAL ARTS MATH/QUANTITATIVE REASONING



Math in Our World

David Sobecki

Edition: 4
2019©
912 Pages
Print: 9781260092790
Connect Math: 9781260389807

OVERVIEW

The author team of Dave Sobecki and Allan Bluman created an engaging text and digital program aimed at meeting the needs of today's liberal arts math students resulting in the third edition of Math in Our World. This revision focused on further development of critical thinking skills through several hundred revised exercises and examples still presented within the hallmark style of the Math in Our World program. Carefully chosen questions help students to form a connection between relevant examples and the mathematical concepts of the chapter. Using the engaging writing style characteristic of the text the authors support concepts through abundant examples helpful practice problems and rich exercise sets. The author team was also deeply engaged in the development of the Connect and LearnSmart online content to help ensure a consistent experience for students regardless of medium. The result is an exceptionally engaging program that is able to both effectively and creatively convey the fundamental concepts of a liberal arts math curriculum to even the most hesitant student.

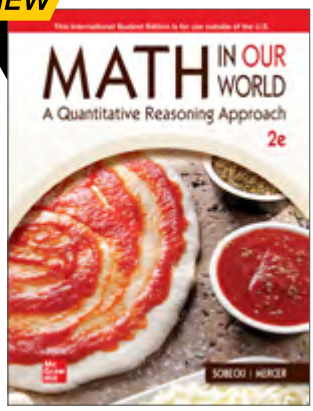
CONTENTS

1. Problem Solving
2. Sets
3. Logic
4. Numeration Systems
5. The Real Number System
6. Topics in Algebra
7. Consumer Mathematics
8. Measurement
9. Geometry
10. Probability and Counting Techniques
11. Statistics
12. Voting Methods
13. Graph Theory
14. Available online: Other Mathematical Systems
15. Summary

Appendix A. Area Under the Standard Normal Distribution

Appendix B. Available Online — Using the TI-84 Plus Graphing Calculator

NEW



Math in Our World: A Quantitative Reasoning Approach

David Sobecki, Brian Mercer

Edition: 2
2021©
912 Pages
Nov 2020
Print: 9781260575187
Connect Math: 9781264068104

OVERVIEW

This text exercises students' brains by challenging them to LEARN, not memorize formulas or mimic procedures. Students will practice reasoning skills and study situations where mathematical thinking can help them be smarter and more successful, both as students and as citizens of society. This text is comprised of a series of activities encouraging students to take responsibility for their learning, with strategically placed solved examples and support to guide them through concepts they may have a hard time discovering on their own.

FEATURES

- The Portfolio section of each lesson has been expanded to include answers to questions found in the Prep Skills portion.
- To provide students additional support with learning concepts, a solution video is now available for every exercise found in the text.
- Strategically placed solved examples have been added throughout the lessons. The authors felt adding these solved examples would be beneficial to help speed up class time and help with concepts that students might have a hard time discovering on their own.
- New units on Voting Methods, Graph Theory, and Numeration Systems have been added to the second edition.
- The math modeling unit has been expanded to include more algebraic coverage.

CONTENTS

Unit 1: Everyone Has Problems
1-1: Be Reasonable (Inductive and Deductive Reasoning)
1-2: More or Less (Estimation and Interpreting Graphs)
1-3: You Got a Problem? (Problem-Solving Strategies)

Unit 2: Managing Your Money
2-1: Giving 110 Percent (Review of Percents)
2-2: Building It Is the Easy Part . . . (Budgeting)
2-3: A Topic of Interest (Simple Interest)
2-4: Like a Snowball Rolling Downhill (Compound Interest)
2-5: Buying Stuff Without Money (Installment Buying)
2-6: Investing in Yourself (Education and Home Loans)
2-7: A Walk on Wall Street (Stocks and Bonds)
2-8: A Taxing Situation (Income Taxes)

Unit 3: Place Your Bets
3-1: So You're Saying There's a Chance . . . (Basic Probability)
3-2: Make It Count (Sample Spaces and Counting Techniques)
3-3: Combining Forces (Combinatorics)
3-4: Too Good to Be True? (Probability Using Counting Techniques)
3-5: Odds and Ends (Odds and Expected Value)
3-6: An Exclusive Club (Addition Rules for Probability)
3-7: Independence Day (Multiplication Rules and Conditional Probability)
3-8: Either/Or (Binomial Probabilities)

Unit 4: Statistically Speaking
4-1: Crunching the Numbers (Gathering and Organizing Data)
4-2: Picture This (Representing Data Graphically)
4-3: An Average Joe (Measures of Average)
4-4: Your Results May Vary (Measures of Variation)
4-5: Where Do You Rank? (Measures of Position in a Data Set)
4-6: Just a Normal Day (Normal Distributions and Z Scores)
4-7: The Way the Cookie Crumbles (Applications of the Normal Distribution)
4-8: Making Connections (Correlation and Regression Analysis)
4-9: Trust No One (Misuses of Statistics)

Unit 5: Building Models
5-1: Keeping Things in Proportion (Ratios and Proportions)
5-2: Making Some Extra Cash (The Basics of Graphing Functions)
5-3: A Slippery Slope (Modeling with Linear Functions)
5-4: Ahead of the Curve (Modeling with Quadratic Functions)
5-5: Progressing Regressively (Linear and Quadratic Regression)
5-6: Phone a Friend (Modeling with Exponential and Log Functions)

Unit 6: The Joy of Sets
6-1: Setting Up (The Basics of Working with Sets)

6-2: Busy Intersections, More Perfect Unions (Operations on Sets)
6-3: Worlds Collide (Studying Sets with Two-Circle Venn Diagrams)
6-4: A Dollar for Your Thoughts (Using Sets to Solve Problems)

Unit 7: Uncommon Sense

7-1: Opening Statements (Statements and Quantifiers)
7-2: Finding the Truth (Truth Tables)
7-3: To Be and Not to Be (Types of Statements in Logic)
7-4: Being Argumentative (Evaluating Logical Arguments)

Unit 8: How Do You Measure Up?

8-1: Going to Great Lengths (Unit Conversion, Length, and the Metric System)
8-2: New Dimensions (Measuring Area, Volume, and Capacity)
8-3: Weighty Matters (Units of Weight and Temperature)
8-4: Stocking the Shelves (Evaluating Efficiency in Packaging)

Units 9, 10, and 11 are available online. Though not included in this desk copy, they can be added to custom versions of the text built through Create or accessed in the Instructor Resources area of ALEKS.

Unit 9: Up For a Vote

9-1: State Your Preference (Preference Tables and Plurality Voting)
9-2: We're Number One! (Borda Count and Plurality with Elimination)
9-3: It's So Unfair! (Pairwise Comparison and Approval Voting)
9-4: Portion Control (Apportionment)

Unit 10: Warning: Graphic Content

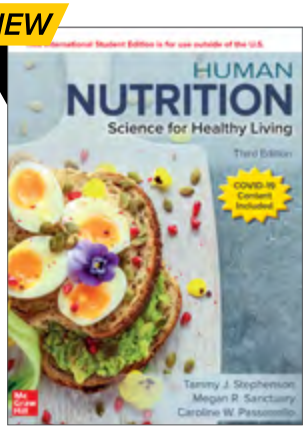
10-1: Color Your World (Basic Concepts of Graph Theory)
10-2: Efficiency Experts (Euler's Theorem)
10-3: Who Wants to Be a Zillionaire? (Hamilton Paths and Circuits)
10-4: Tree Hugging (Trees)

Unit 11: Discovering New Numbers

11-1: History Lessons (Early and Modern Numeration Systems)
11-2: Off Base (Base Number Systems)
11-3: Working Out (Operations in Base Number Systems)

NUTRITION

NEW



Human Nutrition: Science for Healthy Living

Tammy J. Stephenson

Edition: 3
2022©
832 Pages
May 2021
Print: 9781265176464
Connect: 9781260786224

OVERVIEW

Human Nutrition: Science for Healthy Living is an interesting, engaging, reliable, and evidence-based introductory textbook with a wide variety of features to promote active learning. A clinical emphasis appeals to all, but is of particular relevance to those studying nutrition, dietetics, or health science professions, including nursing. Real-life and clinical examples, statistics, and evidence from professional sources address current and controversial topics and support the key concepts of the science of nutrition.

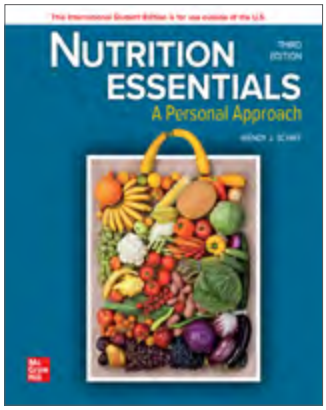
FEATURES

- **Fresh Tips** – These practical suggestions help students apply the chapter content every day – and for the rest of their lives. The Fresh Tips are also a valuable tool for future healthcare professionals to provide practical, real-life, advice to their clients. Such features include tips for eating fruits and vegetables on a budget, maintaining a healthy body weight, preventing choking in children, and keeping foods safe to eat.
- **People, Real Stories** - This feature is unique in that it provides information about people who actually have recovered from or are currently living with nutrition-related conditions such as celiac disease, Crohn's Disease, type 1 diabetes, eating disorders, hypertension, and morbid obesity. This feature is designed to help students recognize the daily challenges people with such conditions face and the role diet and physical activity play in managing health.
- For Connect® users, the ReadAnywhere App is a free, downloadable app available on iOS and Android mobile devices. It gives students mobile freedom to access their eBook anywhere, even offline, on their smartphone or tablet. Once chapters are downloaded, students can use the same tools that are available in the eBook. Any

notes or highlights they make in the eBook will sync across platforms.

CONTENTS

1. Introduction to Nutrition
2. Evaluating Nutrition Information
3. Basis of a Healthy Diet
4. Human Digestion, Absorption, and Transport
5. Carbohydrates: Sugars, Starches, and Fiber
6. Lipids: Triglycerides, Phospholipids, and Sterols
7. Proteins: Amino Acids
8. Metabolism: Energy from Food
9. Introduction to Vitamins: Fat- Soluble Vitamins
10. Water-Soluble Vitamins
11. Water and the Major Minerals
12. Trace Minerals
13. Energy Balance, Obesity, and Weight Management
14. Eating Disorders and Disordered Eating
15. Nutrition for Fitness and Sport
16. Nutrition for Pregnancy and Lactation
17. Nutrition for Infants, Children, and Adolescents
18. Nutrition for Older Adults
19. Food and Water Safety
20. Global Nutrition



Nutrition Essentials: A Personal Approach

Wendy J Schiff

Edition: 3
2021©
656 Pages
Print: 9781260571493
Connect: 9781260424928

OVERVIEW

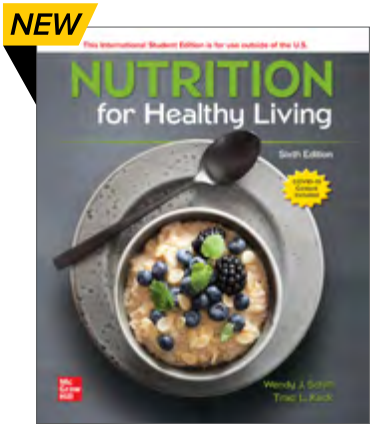
Nutrition Essentials: A Personal Approach has a consumer-oriented focus, providing practical tips for applying concepts such as ways to prepare foods to make them safer and healthier, and ways to become a savvy consumer of nutrition-related information. It also provides non-nutrition majors with the basic scientific principles of nutrition in a highly visual, engaging context.

FEATURES

- **Prep for Nutrition**: To help you level-set your classroom, we've created Prep for Nutrition. This question bank highlights a series of questions, including Basic Chemistry, Biology, Dietary Analysis, Mathematics, and Student Success, to give students a refresher on the skills needed to enter and be successful in their course.
- **Dietary Analysis Case Studies in Connect**: One of the challenges instructors face with teaching nutrition classes is having time to grade individual dietary analysis projects. To help overcome this challenge, assign auto-graded dietary analysis case studies. These tools require students to use NutritionCalc Plus to analyze dietary data, generate reports, and answer questions to apply their nutrition knowledge to real-world situations. These assignments were developed and reviewed by faculty who use such assignments in their own teaching.

CONTENTS

1. Food Is More Than Something to Eat
2. Nutrition Information: Fact or Fiction?
3. Making More Nutritious Choices
4. How Food Becomes You
5. Carbohydrates: Fuel and Fiber
6. Lipids: Focusing on Fats and Cholesterol
7. Proteins: Life's Building Blocks
8. Vitamins: Nutrients That Multitask
9. Key Minerals, Water, and the Nonnutrient Alcohol
10. Nutrition for a Healthy Weight and Fit Body
11. Nutrition for Your Life, Environment, and World



Nutrition for Healthy Living

Wendy J Schiff

Edition: 6
2022©
648 Pages
May 2021
Print: 9781265177492
Connect: 9781264342211

OVERVIEW

Completely revised and up-to-date Nutrition for Healthy Living takes an innovative approach to introductory nutrition for non-science majors. With its unique, concise organization and a distinct focus on consumerism, this engaging, fun-to-read text provides students with the scientific foundation needed to make informed nutritional decisions well beyond the classroom.

FEATURES

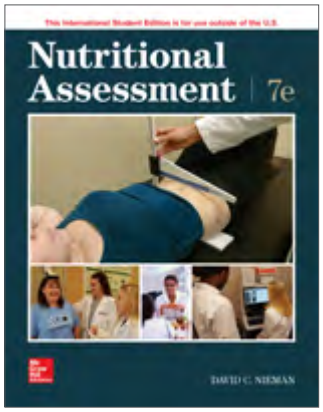
- Dietary analysis auto-graded assignments within Connect. One of the challenges many instructors face with teaching nutrition classes is having the

time to grade dietary analysis projects. To help overcome that challenge, autograded assignments that require students to use NutritionCalc Plus (NCP) and answer questions based on the generated reports have been developed. These assignments were developed and reviewed by faculty who use such assignments in their own teaching. They are designed to be relevant, current and interesting!

- For Connect® users, the ReadAnywhere App is a free, downloadable app available on iOS and Android mobile devices. It gives students mobile freedom to access their eBook anywhere, even offline, on their smartphone or tablet. Once chapters are downloaded, students can use the same tools that are available in the eBook. Any notes or highlights they make in the eBook will sync across platforms.

CONTENTS

1. The Basics of Nutrition
2. Evaluating Nutrition Information
3. Planning Nutritious Diets
4. Body Basics
5. Carbohydrates
6. Fats and Other Lipids
7. Proteins
8. Vitamins
9. Water and Minerals
10. Energy Balance and Weight Control
11. Nutrition for Physically Active Lifestyles
12. Food Safety Concerns
13. Nutrition for a Lifetime



Nutritional Assessment

David C. Nieman

Edition: 7
2019©
496 Pages
Print: 9781260084481

OVERVIEW

This text describes the four major methods of nutritional assessment (dietary, anthropometric, biometric, and clinical) in an understandable and contemporary way. It thoroughly covers assessment of the hospitalized individual, but also serves as an invaluable resource to the nutrition professional working in such areas as public health and community nutrition, corporate health, and sports medicine.

FEATURES

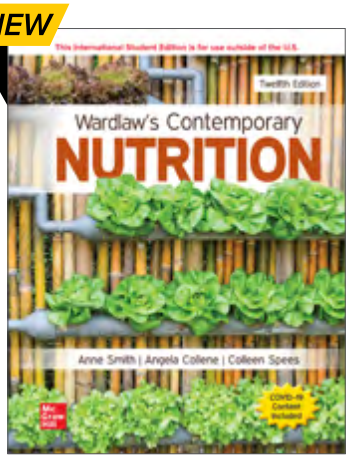
- New learning outcomes are added at the beginning of each chapter.
- Updated figures and tables to reflect the most recent data on nutritional status and health.

CONTENTS

1. Introduction to Nutritional Assessment
2. Standards for Nutrient Intake
3. Measuring Diet
4. National Dietary and Nutrition Surveys
5. Computerized Dietary Analysis Systems
6. Anthropometry
7. Assessment of the Hospitalized Patient
8. Nutritional Assessment in Disease Prevention
9. Biochemical Assessment of Nutritional Status
10. Clinical Assessment of Nutritional Status
11. Counseling Theory and Technique

Appendix A – Nutrition Assessment and Monitoring and Evaluation Terminology
Appendix B – Nutrition Diagnostic Terminology
Appendix C – Nutrition Intervention Terminology
Appendix D – Food Record Recording Form
Appendix E – Fruit and Vegetable Screener Developed by the U.S. National Cancer Institute
Appendix F – MEDFICTS Dietary Assessment Questionnaire
Appendix G - The National Institute of Health's The Diet History Questionnaire II
Appendix H - The NHANES Food Frequency Questionnaire
Appendix I – 2011 Behavioral Risk Factor Surveillance System Questionnaire
Appendix J - Suppliers of Nutritional Assessment Equipment
Appendix K - CDC Clinical Growth Charts

NEW



Wardlaw's Contemporary Nutrition

Anne M. Smith, Angela L. Collene, Colleen Spees

Edition: 12
2022©
784 Pages
May 2021
Print: 9781265160074
Connect: 9781260790030

OVERVIEW

Wardlaw's Contemporary Nutrition is a complete and balanced resource for nutrition information written at a level non-science majors can understand. Current research is at the core of the Eleventh Edition with revised statistics, incorporation of new results of clinical trials, and updated recommendations. The text provides students who lack a strong science background with the ideal balance of reliable nutrition information and practical, consumer-oriented knowledge.

FEATURES

- **COVID Corner** – In light of the COVID-19 pandemic the authors have added this feature to highlight the many ways the global outbreak both affects and is affected by food and nutrition.
- **Magnificent Microbiome** -This new feature explores relevant interactions between chapter topics and the gut microbiota.
- New and Revised Dietary Analysis Case Studies in Connect®
- **Fact or Fiction:** This new features highlight a relevant fake new topic followed by an explanation of the evidence that either supports or refutes the claim.
- **Prep for Nutrition:** This question bank highlights a series of questions, including Basic Chemistry, Biology, Dietary Analysis, Mathematics and Student Success, to give students refresher on the skills needed to enter and be successful in their course.

CONTENTS

Part 1. Nutrition: A Key to Health

1. Nutrition, Food Choices, and Health
2. Designing a Healthy Eating Pattern
3. The Human Body: A Nutrition Perspective

Part 2. Energy Nutrients and Energy Balance

4. Carbohydrates
5. Lipids
6. Proteins
7. Energy Balance and Weight Control

Part 3. Vitamins, Minerals, and Water

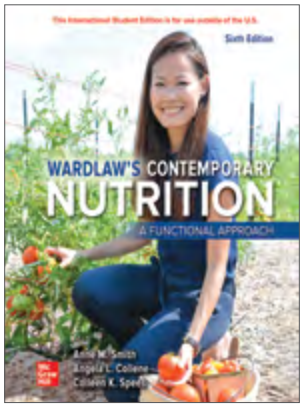
8. Vitamins
9. Water and Minerals

Part 4. Nutrition: Beyond the Nutrients

10. Nutrition: Fitness and Sports
11. Eating Disorders
12. Global Nutrition
13. Protecting Our Food Supply

Part 5. Nutrition: A Focus on Life Stages

14. Nutrition during Pregnancy and Breastfeeding
15. Nutrition from Infancy through Adolescence
16. Nutrition during Adulthood



Wardlaw's Contemporary Nutrition: A Functional Approach

Anne M Smith, Angela L Collene, Colleen Spees

Edition: 6
2021©
848 Pages
Print: 9781260575156
Connect: 9781260465013

OVERVIEW

Contemporary Nutrition: A Functional Approach is an alternate version of Smith, Collene, Spees Contemporary Nutrition, offering a unique approach by organizing vitamins and minerals within the context of physiological functions and the health conditions they influence. Current research is at the core of the fifth edition, with revised statistics, incorporation of new results of clinical trials, and updated recommendations. The text provides students who lack a strong science background the ideal balance of reliable nutrition information and practical consumer-oriented knowledge. Always looking to make the content relevant to learners, the authors highlight health conditions, medications, food products, and supplements students or members of their families may be using. With their friendly writing style, the authors act as the student's personal guide to dispelling common misconceptions and to gaining a solid foundation for making informed nutrition choices .

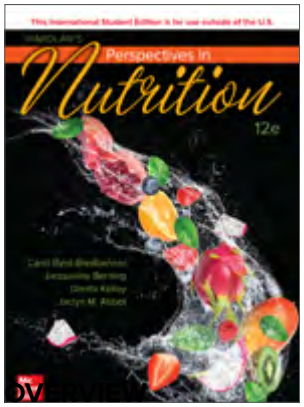
FEATURES

- **"Prep for Nutrition"** is a question bank that highlights a series of questions, including Basic Chemistry, Biology, Dietary Analysis, Mathematics, and Student Success, to give students a refresher on the skills needed to enter and be successful in their course.

- **Assess My Diet- Auto-graded personalized dietary analysis**: Students are using NutritionCalc Plus to analyze their own dietary patterns. But how can instructors integrate that information into a meaningful learning experience? With Assess My Diet, instructors can now assign autograded, personalized dietary analysis questions within Connect.
- **"Farm to Fork"** feature appears in every chapter and presents practical information on how to grow, shop for, store, and prepare various fruits and vegetables to obtain and preserve their flavor and nutrients.

CONTENTS

1. Nutrition, Food Choices, and Health
2. Designing a Healthy Eating Pattern
3. The Human Body: A Nutrition Perspective
4. Carbohydrates
5. Lipids
6. Proteins
7. Energy Balance and Weight Control
8. Overview of The Micronutrients and Phytochemicals
9. Fluid and Electrolyte Balance
10. Nutrients Involved in Body Defenses
11. Nutrients Involved in Bone Health
12. Micronutrient Function in Energy Metabolism
13. Nutrients that Support Blood and Brain Health
14. Nutrition: Fitness and Sports
15. Eating Disorders
16. Global Nutrition
17. Protecting Our Food Supply
18. Nutrition During Pregnancy and Breastfeeding
19. Nutrition from Infancy Through Adolescence
20. Nutrition During Adulthood



Wardlaw's Perspectives in Nutrition

Carol Byrd-Bredbenner, Gaile Moe, Jacqueline Berning, Danita Kelley

Edition: 12
2022©
992 Pages
May 2021
Print: 9781265175535
Connect: 9781260788563

Wardlaw's Perspectives in Nutrition has the richly deserved reputation of providing an accurate, current, in-depth, and thoughtful introduction to the dynamic field of nutrition, and the eleventh edition has been enhanced for both students and instructors.

FEATURES

- Personalized Approach. The authors provide ample opportunities for students to apply nutrition concepts and guidelines to their own lives through real-life examples and individualized activities, such as "Case Studies" and "Take Action" activities.
- Pedagogical features have been crafted to capture students' interest and enhance the flow of the reading: Student Learning Outcomes at the beginning of each chapter allow students to better measure how well they have achieved the goals of the chapter. They have been written to include higher-level learning skills. Clinical Perspectives boxes delve into clinical and medical aspects of nutrition. These features help students apply the science of nutrition to their own lives, and particularly appeal to those students interested in health professions. Some topics include: Ch. 5, Diabetes; Ch. 6, Cardiovascular Disease, and many more.
- **Connect Nutrition** allows instructors and students to use art and animations from the text for assignments and lectures. Instructors now have access to a variety of new resources including assignable and gradable interactive questions, SmartBook animation learning

CONTENTS

Part 1: Nutrition Fundamentals

1. The Science of Nutrition
2. Tools of a Healthy Diet
3. The Food Supply
4. Human Digestion and Absorption

Part 2: Energy-Yielding Nutrients and Alcohol

5. Carbohydrates
6. Lipids
7. Protein
8. Alcohol

Part 3: Metabolism and Energy Balance

9. Energy Metabolism
10. Energy Balance, Weight Control, and Eating Disorders
11. Nutrition, Exercise, and Sports

Part 4: Vitamins and Minerals

12. The Fat-Soluble Vitamins
13. The Water-Soluble Vitamins
14. Water and Major Minerals
15. Trace Minerals

Part 5: Nutrition Applications in the Life Cycle

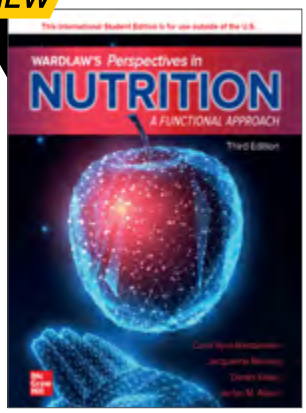
16. Nutritional Aspects of Pregnancy and Breastfeeding

17. Nutrition during the Growing Years
18. Nutrition during the Adult Yeays

Appendices

A. Human Physiology: A Tool for Understanding Nutrition
B. Chemistry: A Tool for Understanding Nutrition
C. Detailed Descriptions of Glycolysis, Citric Acid Cycle, Electron Transport Chain, Classes of Eicosanoids, and Homocysteine Metabolism
D. Dietary Advice for Canadians
E. The Food Lists for Diabetes: A Helpful Menu Planning Tool
F. Fatty Acids, Including Omega-3 Fatty Acides, in Foods
G. Metropolitan Life Insurance Company Height-Weight Table and Determination of Frame Size
H. English-Metric Conversions and Nutrition Calculations
I. Caffeine Content of Beverages, Foods, and Over-the-Counter Drugs
J. Dietary Reference Intakes (DRI)
K. CDC Growth Charts
L. Sources of Nutrition Information
M. Dietary Intake and Energy Expenditure Assessment
N. Food Composition Table

NEW



Wardlaw's Perspectives in Nutrition: A Functional Approach

Carol Byrd-Bredbenner, Gaile Moe, Jacqueline Berning, Danita Kelley

Edition: 3
2022©
992 Pages
May 2021
Print: 9781265215767
Connect: 9781260791228

OVERVIEW

In this Edition, the authors have organized the presentation of vitamins and minerals around key functions. The author team has taken a garden-fresh approach to revising this highly regarded text. Every paragraph has been scrutinized to ensure that students are exposed to scientific content and concepts that are explained accurately and precisely, and in high-interest fashion that will draw students into their first study of nutrition science. Students will benefit from a carefully crafted text that brings them up-to-date scientific thinking and research blended with dynamic activities that will allow them to apply their knowledge to their own lives and future careers.

FEATURES

- A hallmark of Wardlaw's Perspectives in Nutrition: A Functional Approach continues to be the authors' ability to provide the solid nutrition science background necessary for students at this level. All scientific coverage was carefully reexamined in this edition to ensure that the material is accurate and clear to students studying nutrition for the first time. The text reflects the latest scientific knowledge in the field and addresses topics of emerging interest.
- Personalized Approach. The authors provide ample opportunities for students to apply nutrition concepts and guidelines to their own lives through real-life examples and individualized activities, such as "Case Studies" and "Take Action" activities.
- Pedagogical features have been crafted to capture students' interest and enhance the flow of the reading: Student Learning Outcomes at the beginning of each chapter allow students to better measure how well they have achieved the goals of the chapter. They have been written to include higher-level learning skills. Clinical Perspectives boxes delve into clinical and medical aspects of nutrition. These features help students apply the science of nutrition to their own lives, and particularly appeal to those students interested in health professions. Some topics include: Ch. 5, Diabetes; Ch. 6, Cardiovascular Disease, and many more.

CONTENTS

Part 1: Nutrition Fundamentals

1. The Science of Nutrition
2. Tools of a Healthy Diet
3. The Food Supply
4. Human Digestion and Absorption

Part 2: Energy-Yielding Nutrients and Alcohol

5. Carbohydrates
6. Lipids
7. Protein
8. Alcohol

Part 3: Metabolism and Energy Balance

9. Energy Metabolism
10. Energy Balance, Weight Control, and Eating Disorders
11. Nutrition, Exercise, and Sports

Part 4: Vitamins and Minerals

12. Micronutrients: Vitamins and Minerals
13. Micronutrients in Energy and Amino Acid Metabolism
14. Fluid Balance and Blood Health

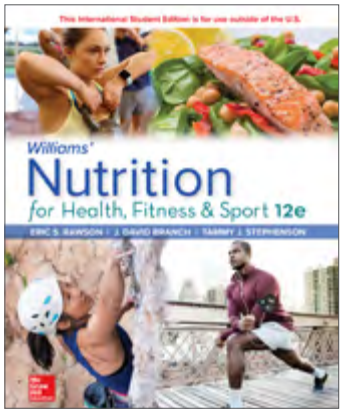
15. Bone Health and Body Defense Systems

Part 5: Nutrition Applications in the Life Cycle

16. Nutritional Aspects of Pregnancy and Breastfeeding
17. Nutrition during the Growing Years
18. Nutrition during the Adult Years

Appendixes

A. Human Physiology: A Tool for Understanding Nutrition
B. Chemistry: A Tool for Understanding Nutrition
C. Detailed Descriptions of Glycolysis, Citric Acid Cycle, Electron Transport Chain, Classes of Eicosanoids, and Homocysteine Metabolism
D. Dietary Advice for Canadians
E. The Food Lists for Diabetes: A Helpful Menu Planning Tool
F. Fatty Acids, Including Omega-3 Fatty Acides, in Foods
G. Metropolitan Life Insurance Company Height-Weight Table and Determination of Frame Size
H. English-Metric Conversions and Nutrition Calculations
I. Caffeine Content of Beverages, Foods, and Over-the-Counter Drugs
J. Dietary Reference Intakes (DRI)
K. CDC Growth Charts
L. Sources of Nutrition Information
M. Dietary Intake and Energy Expenditure Assessment
N. Food Composition Table



Williams' Nutrition for Health, Fitness and Sport

Eric Rawson, David Branch | Norfolk, Virginia, Tammy J Stephenson

Edition: 12
2020©
816 Pages
Print: 9781260547672
Connect: 9781260413885

OVERVIEW

Nutrition for Health Fitness and Sport uses a question-answer approach which is convenient when you may have occasional short periods to study such as riding a bus or during a lunch break. In addition the questions are arranged in a logical sequence the answer to one question often leading into the question that follows. Where appropriate cross-referencing within the text is used to expand the discussion. No deep scientific background is needed for the chemical aspects of nutrition and energy expenditureas these have been simplified. Instructors who use this book as a course text may add details of biochemistry as they feel necessary.

FEATURES

- New information from authoritative position statements dealing with exercise and nutrition issues has been incorporated in various chapters where relevant. These position statements have been developed by such prominent groups as the American College of Sports Medicine, the Academy of Nutrition and Dietetics, the new name for the American Dietetic Association, Dietitians of Canada, the American Medical Association, and the International Society of Sports Nutrition.
- The reference lists that provide the scientific basis for the new concepts or additional support for those concepts previously developed. These references provide greater in-depth reading materials for the interested student. Although the content of this book is based on appropriate scientific studies, a reference-citation style is not used, that is, each statement is not referenced by a bibliographic source. However, names of authors may be used to highlight a reference source where deemed appropriate.

CONTENTS

1. Introduction to Nutrition for Health, Fitness, and Sports Performance
2. Healthful Nutrition for Fitness and Sport
3. Human Energy
4. Carbohydrates — The Main Energy Food
5. Fat — An Important Energy Source during Exercise
6. Protein — The Tissue Builder
7. Vitamins — Fat-Soluble, Water-Soluble, and Vitamin-LikeCompounds
8. Minerals — The Inorganic Regulators
9. Water, Electrolytes and Temperature Regulation
10. Body Weight and Composition for Health and Sport
11. Weight Maintenance and Loss through Proper Nutrition and Exercise
12. Weight Gaining through Proper Nutrition & Exercise
13. Nutritional Supplements and Ergogenic Aids

Appendix A. Energy Pathways of Carbohydrate, Fat, and Protein
Appendix B. Determination of Healthy Body Weight
Appendix C. Units of Measurement: English System—Metric System Equivalents
Appendix D. Approximate Energy Expenditure (Kcal/Min) by Body Weight Based on the Metabolic Equivalents (METs) for Physical Activity Intensity

PHARMACOLOGY FOR HEALTH PROFESSIONS

NEW

Pharmacology: An Introduction

Michele B. Kaufman, Hannah Ariel, Yael Peimani-Lalehzarzadeh

Edition: 8
2022©
848 Pages
Apr 2021
Print: 9781260597943
Connect: 9781260470499

OVERVIEW

Pharmacology is incredibly readable, with short chapters that link theory to practice; content that is focused on the need-to-know information to not overload the reader; excellent tables and features such as Patient Administration and Monitoring Boxes; and the most up-to-date drug information.

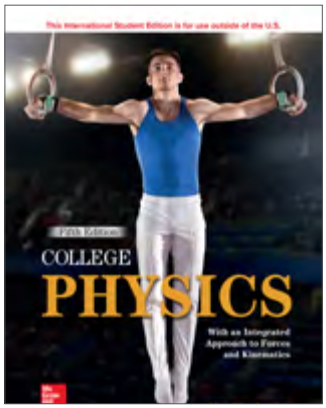
FEATURES

- Patient Administration and Monitoring boxes summarize important patient information and patient instructions about the drugs discussed in that chapter. It will expand your knowledge of medications and conditions
- Learning Outcomes present the key points you should focus on when reading the chapter. Consider this your road map to the knowledge and skills you will acquire upon studying this content.
- For Connect® users, the ReadAnywhere App is a free, downloadable app available on iOS and Android mobile devices. It gives students mobile freedom to access their eBook anywhere, even offline, on their smartphone or tablet. Once chapters are downloaded, students can use the same tools that are available in the eBook. Any notes or highlights they make in the eBook will sync across platforms.

CONTENTS

1. Pharmacology: An Introduction
2. Pharmacokinetics and Factors of Individual Variation
3. Geriatric Pharmacology
4. Math Review and Dosage Calculations
5. Introduction to the Autonomic Nervous System
6. Drugs Affecting the Sympathetic Nervous System
7. Drugs Affecting the Parasympathetic Nervous System
8. Drugs Affecting the Autonomic Ganglia
9. Skeletal Muscle Relaxants
10. Local Anesthetics
11. Introduction to the Central Nervous System
12. Sedative-Hypnotic Drugs and Alcohol
13. Antipsychotic and Antianxiety Drugs
14. Antidepressants, Psychomotor Stimulants, and Lithium
15. Psychotomimetic Drugs of Abuse
16. Antiepileptic Drugs
17. Antiparkinson Drugs
18. General Anesthetics
19. Opioid (Narcotic) Analgesics
20. Nonnarcotic Analgesics Anti-inflammatory, and Antigout Drugs
21. Review of Cardiac Physiology and Pathology
22. Treatment of Heart Failure
23. Antiarrhythmic Drugs
24. Antianginal Drugs
25. Diuretics
26. Antihypertensive Drugs
27. Anticoagulants and Coagulants
28. Nutrition and Therapy
29. Hypolipidemic Drugs
30. Respiratory Pharmacology, Treatment of Asthma, and COPD
31. Therapy of Gastrointestinal Disorders: Peptic Ulcers, GERD, and Vomiting
32. Agents That Affect Intestinal Motility
33. Introduction to the Endocrine System
34. Adrenal Steroids
35. Gonadal Hormones, Oral Contraceptives, and Erectile Dysfunction Drugs
36. Drugs Affecting the Thyroid and Para thyroid Glands and Bone Degeneration
37. Pancreatic Hormones and Antidiabetic Drugs
38. Posterior Pituitary Hormones: Antidiuretic Hormone and Oxytocin
39. Antibacterial Agents
40. Antifungal and Antiviral Drugs
41. Parasitic Infections: Antiprotozoal and Anthelmintic Drugs
42. Antiseptics and Disinfectants
43. Antineoplastic Agents
44. Immunopharmacology

PHYSICS & ASTRONOMY



College Physics

Alan Giambattista

Edition: 5
2020©
1,232 Pages
Print: 9781260547719
Connect: 9781260486766

OVERVIEW

College Physics presents a unique "forces first" approach to physics that builds a conceptual framework as motivation for the physical principles. That intuitive approach combined with a consistent problem solving strategies stunning art extensive end-of-chapter material and superior media support make Giambattista Richardson and Richardson a product that addresses the needs of TODAY's students.

FEATURES

- Review and Synthesis problems appear at the end of every chapter.
- College Physics includes some innovative organization. The authors have integrated kinematics with forces in chapters 2-4.
- Biology and medical applications and examples are throughout the text.
- Concepts and Skills to Review lists, along with Math Skills, are now more prominently featured on the chapter opener page.
- End-of-Chapter problem sets have been revised and include many new problems.

CONTENTS

Part 1: Mechanics

1. Introduction
2. Force
3. Acceleration and Newton's Second Law of Motion
4. Motion with Constant Acceleration
5. Circular Motion
6. Conservation of Energy
7. Linear Momentum
8. Torque and Angular Momentum
9. Fluids
10. Elasticity and Oscillations
11. Waves
12. Sound

Part 2: Thermal Physics

13. Temperature and the Ideal Gas
14. Heat
15. Thermodynamics

Part 3: Electromagnetism

16. Electric Forces and Fields
17. Electric Potential
18. Electric Current and Circuits
19. Magnetic Forces and Fields
20. Electromagnetic Induction
21. Alternating Current

Part 4: Electromagnetic Waves and Optics

22. Electromagnetic Waves
23. Reflection and Refraction of Light
24. Optical Instruments
25. Interference and Diffraction

Part 5: Quantum and Particle Physics and Relativity

26. Relativity
27. Early Quantum Physics and the Photon
28. Quantum Physics
29. Nuclear Physics
30. Particle Physics

Explorations: Introduction to Astronomy

Thomas T. Arny, Stephen E. Schneider

Edition: 9
2020©
592 Pages
Print: 9781260565898
Connect: 9781260432107

OVERVIEW

The Ninth edition of Explorations: An Introduction to Astronomy strives to share with students a sense of wonder about the universe and the dynamic ever-changing science of astronomy. Written for students of various educational backgrounds Explorations emphasizes current information a visually exciting art package accessible writing and accuracy. The new edition also features the most complete technology support package offered with any astronomy text.

FEATURES

- In this ninth edition of Explorations, we continue to update the art and text throughout the book in response to readers' comments and suggestions. One of the best aspects of the electronic resources for students is that they can find the links back to text and figures related to questions that they might

be having difficulty answering. The authors have closely examined these materials and worked on making sure the wording and imagery is as clear as possible. In addition to changes for clarity, there are several places where the authors have made more extensive revisions in response to recent research and requests for extra detail.

- **"Science At Work"** boxes emphasize the function of the Scientific Method in astronomy. These boxes deal with the dynamic nature of scientific models, explaining how new technologies and information lead to the evolution and refinement of our theories. Students learn the importance of the Scientific Method and how this contributes to new developments in astronomy and other sciences.
- **"Extending Our Reach"** boxes addressing challenging topics that go beyond the usual introductory astronomy coverage. These boxes offer additional learning material for students.
- **"Astronomy by the Numbers"** boxes remove the more difficult mathematical concepts from the running text, providing students with worked examples of numerical problems, and making it easier for the instructor to select the depth of math required for the course.

CONTENTS

Preview: The Cosmic Landscape
1. The Cycles of the Sky
2. The Rise of Astronomy

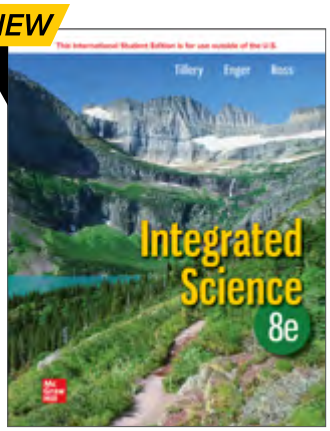
Essay 1. Backyard Astronomy
3. Gravity and Motion
4. Light and Atoms

Essay 2. Special and General Relativity
5. Telescopes
6. The Earth

Essay 3. Keeping Time
7. The Moon
8. Survey of Solar Systems
9. The Terrestrial Planets
10. The Outer Planets
11. Small Bodies Orbiting the Sun
12. The Sun, Our Star
13. Measuring the Properties of Stars
14. Stellar Evolution
15. Stellar Remnants: White Dwarfs, Neutron Stars, and Black Holes
16. The Milky Way Galaxy
17. Galaxies
18. Cosmology

Essay 4 Life in the Universe
Answers to Test Yourself
Appendix

NEW



Integrated Science

Bill W Tillery, Eldon Enger, Frederick C Ross

Edition: 8
2022©
816 Pages
Mar 2021
Print: 9781260597691
Connect: 9781264270873

OVERVIEW

Integrated Science is a straightforward, easy-to-read, but substantial introduction to the fundamental behavior of matter and energy in living and nonliving systems. It is intended to serve the needs of non-science majors who must complete one or more science courses as part of a general or basic studies requirement. Integrated Science provides an introduction to a scientific way of thinking as it introduces fundamental scientific concepts, often in historical context. Several features of the text provide opportunities for students to experience the methods of science by evaluating situations from a scientific point of view. While technical language and mathematics are important in developing an understanding of science, only the language and mathematics needed to develop central concepts are used. No prior work in science is assumed.

FEATURES

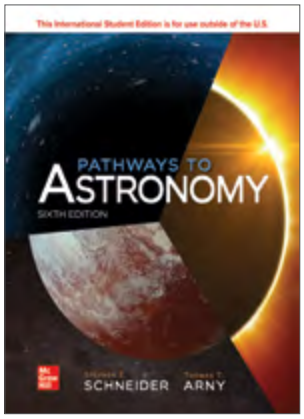
- Much of the narrative text throughout this book has been tightened and revised to improve readability and employ a more conversational style that enhances learning for a wider diversity of students.
- The chapters on energy (chapter 3) and water and solutions (chapter 10) have been updated to reflect our current understanding and include an enhanced description of global needs and current energy usage.
- Chapter 13 on the solar system has been substantially revised to reflect science's new understandings of the outer planets.
- Life science chapters on human biology have been significantly updated to reflect a contemporary view of human sexuality and reproduction.
- Chapter 17 on earth's weather has been updated to include the most recent information on global climate change, its causes, and global warming

CONTENTS

1. What Is Science?
2. Motion
3. Energy

4. Heat and Temperature
5. Wave Motions and Sound
6. Electricity
7. Light
8. Atoms and Periodic Properties
9. Chemical Reactions
10. Water and Solutions
11. Nuclear Reactions
12. The Universe
13. The Solar System
14. Earth in Space
15. Earth
16. Earth's Surface
17. Earth's Weather
18. Earth's Waters
19. Organic and Biochemistry
20. The Nature of Living Things
21. The Origin and Evolution of Life
22. The History of Life on Earth
23. Ecology and Environment
24. Human Biology — Materials Exchange and Control Mechanisms
25. Human Biology — Reproduction
26. Mendelian and Molecular Genetics

Appendix A. Mathematical Review
Appendix B. Solubilities Chart
Appendix C. Relative Humidity Table
Appendix D. Problem Solving
Appendix E. Solutions for Second Example Exercises
Appendix F. Answers for Self-Check
Appendix G. Solutions for Group A Parallel Exercises



Pathways to Astronomy

Steven Schneider

Edition: 6
2021©
800 Pages
Print: 9781260571424
Connect: 9781260445107

OVERVIEW

Pathways to Astronomy breaks down introductory astronomy into its component parts. The huge and fascinating field of astronomy is divided into 86 units. These units are woven together to flow naturally for the person who wants to read the text like a book, but it is also possible to assign them in different orders or skip certain units altogether. Professors can customize the units to fit their course needs. They can select individual units for exploration in lecture while assigning easier units for self-study or they can cover all the units in full depth in a content-rich course. With the short length of units students can easily digest the material covered in an individual unit before moving onto the next unit.

CONTENTS

Part 1: The Cosmic Landscape

1. Our Planetary Neighborhood
2. Beyond the Solar System
3. Astronomical Numbers
4. Foundations of Astronomy
5. The Night Sky
6. The Year
7. The Time of Day
8. Lunar Cycles
9. Calendars
10. Geometry of the Earth, Moon, and Sun
11. Planets: The Wandering Stars
12. The Beginnings of Modern Astronomy
13. Observing the Sky

Part 2: Probing Matter, Light, And Their Interactions

14. Astronomical Motion: Inertia, Mass, and Force
15. Force, Acceleration, and Interaction
16. The Universal Law of Gravity
17. Measuring a Body's Mass Using Orbital Motion
18. Orbital and Escape Velocities
19. Tides
20. Conservation Laws
21. The Dual Nature of Light and Matter
22. The Electromagnetic Spectrum
23. Thermal Radiation
24. Identifying Atoms by Their Spectra
25. The Doppler Shift
26. Special Relativity
27. General Relativity
28. Detecting Light
29. Collecting Light
30. Focusing Light
31. Telescope Resolution
32. The Earth's Atmosphere and Space Observatories
33. Amateur Astronomy

Part 3: The Solar System

34. The Structure of the Solar System
35. The Origin of the Solar System
36. Other Planetary Systems
37. The Earth as a Terrestrial Planet
38. Earth's Atmosphere and Hydrosphere
39. Our Moon
40. Mercury

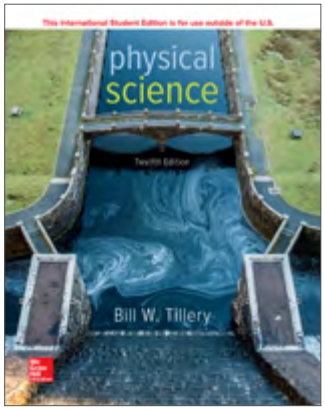
41. Venus
42. Mars
43. Asteroids
44. Comparative Planetology
45. Jupiter and Saturn
46. Uranus and Neptune
47. Satellite Systems and Rings
48. Ice Worlds, Pluto, and Beyond
49. Comets
50. Impacts on Earth

Part 4: Stars and Stellar Evolution

51. The Sun, Our Star
52. The Sun's Source of Power
53. Solar Activity
54. Surveying the Stars
55. The Luminosities of Stars
56. The Temperatures and Compositions of Stars
57. The Masses of Orbiting Stars
58. The Sizes of Stars
59. The H-R Diagram
60. Overview of Stellar Evolution
61. Star Formation
62. Main-Sequence Stars
63. Giant Stars
64. Variable Stars
65. Mass Loss and Death of Low-Mass Stars
66. Exploding White Dwarfs
67. Old Age and Death of Massive Stars
68. Neutron Stars
69. Black Holes
70. Star Clusters

Part 5: Galaxies and The Universe

71. Discovering the Milky Way
72. Stars of the Milky Way
73. Gas and Dust in the Milky Way
74. Mass and Motions in the Milky Way
75. A Universe of Galaxies
76. Types of Galaxies
77. Galaxy Clustering
78. Active Galactic Nuclei
79. Dark Matter
80. Cosmology
81. The Edges of the Universe
82. The Curvature of the Universe
83. The Beginnings of the Universe
84. Dark Energy and the Fate of the Universe
85. Astrobiology
86. The Search for Life Elsewhere



Physical Science

Bill Tillery

Edition: 12
2020©
688 Pages
Print: 9781260565928
Connect: 9781260411294

OVERVIEW

Physical Science is intended to serve the needs of non-science majors who are required to complete one or more physical science courses. It offers exceptional straight-forward writing complemented with useful pedagogical tools. Physical Science introduces basic concepts and key ideas while providing opportunities for students to learn reasoning skills and a new way of thinking about their environment. No prior work in science is assumed. The text offers students complete coverage of the physical sciences with a level of explanation and detail appropriate for all students. The sequence of chapters in Physical Science is flexible and the instructor can determine topic sequence and depth of coverage as needed. The materials are also designed to support a conceptual approach or a combined conceptual and problem-solving approach.

FEATURES

- Numerous revisions have been made to the text to update the content on current events and to make the text even more user-friendly and relevant for students.
- Throughout the text, issues and illustrations surrounding science, technology and society have been significantly updated, replacing descriptions of out-of-date technologies and replacing them with newer, more relevant ones.
- The revised Chapter 15 includes completely revised information related to Mercury, Venus and Mars based upon information from the latest space missions.
- Chapter 23 includes the most recent IPCC information on Earth's changing climate and its causes.

CONTENTS

1. What Is Science?

Physics

2. Motion
3. Energy

4. Heat and Temperature
5. Wave Motions and Sound
6. Electricity
7. Light

Chemistry

8. Atoms and Periodic Properties
9. Chemical Bonds
10. Chemical Reactions
11. Water and Solutions
12. Organic Chemistry
13. Nuclear Reactions

Astronomy

14. The Universe
15. The Solar System
16. Earth in Space

Earth Science

17. Rocks and Minerals
18. Plate Tectonics
19. Building Earth's Surface
20. Shaping Earth's Surface
21. Geologic Time
22. The Atmosphere of Earth
23. Weather and Climate
24. Earth's Waters

Appendix A Mathematical Review
Appendix B Solubilities Chart

Physics

Alan Giambattista

Edition: 5
2020©
1,312 Pages
Print: 9781260570052
Connect: 9781260486940

OVERVIEW

This Physics textbook presents the basic concepts of physics that students need to know for later courses and future careers. This algebra-based text helps students learn that physics is a tool for understanding the real world and to teach transferable problem-solving skills that students can use throughout their entire lives. Some of the most important enhancements in this edition include: inclusion of math topic reviews new/updated MCAT exam coverage added and on online review and synthesis problems added new biomedical applications lists of biomedical applications at the beginning of each chapter new ranking tasks checkpoints and collaborative problems. Connections have also been enhanced to help students see the bigger picture.

FEATURES

- Review & Synthesis problems appear at the end of every chapter.
- Many of the figures and figure legends have been expanded to help students learn more from the illustrations.
- Concepts and Skills to Review lists, along with Math Skills, are now more prominently featured on the chapter opener page.
- ALEKS Math Prep for College Physics is a web-based program that provides targeted coverage of critical mathematics material necessary for student success in College Physics. ALEKS uses artificial intelligence and adaptive questioning to assess precisely a student's preparedness and deliver personalized instruction on the exact topics the student is most ready to learn. Through comprehensive explanations, practice, and feedback, ALEKS enables students to quickly fill individual knowledge gaps to build a strong foundation of critical math skills. The author contributed to a major revision by selecting learning objectives that align with specific math skills most used in College Physics courses

.

CONTENTS

1. Introduction

Part 1: Mechanics

2. Motion Along a Line
3. Motion in a Plane
4. Force and Newton's Laws of Motion
5. Circular Motion
6. Conservation of Energy
7. Linear Momentum
8. Torque and Angular Momentum
9. Fluids
10. Elasticity and Oscillations
11. Waves
12. Sound

Part 2: Thermal Physics

13. Temperature and the Ideal Gas
14. Heat
15. Thermodynamics

Part 3: Electromagnetism

16. Electric Forces and Fields
17. Electric Potential
18. Electric Current and Circuits
19. Magnetic Forces and Fields
20. Electromagnetic Induction

21. Alternating Current

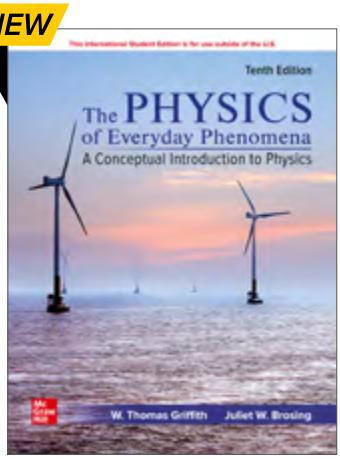
Part 4: Electromagnetic Waves and Optics

22. Electromagnetic Waves
23. Reflection and Refraction of Light
24. Optical Instruments
25. Interference and Diffraction

Part 5: Quantum and Particle Physics

26. Relativity
27. Early Quantum Physics and the Photon
28. Quantum Physics
29. Nuclear Physics
30. Particle Physics

NEW



Physics of Everyday Phenomena

W. Thomas Griffith, Juliet Prosing

Edition: 10
2022©
544 Pages
Mar 2021
Print: 9781260597714
Connect: 9781264121250

OVERVIEW

The Physics of Everyday Phenomena introduces students to the basic concepts of physics, using examples of common occurrences in everyday life. Intended for use in a one-semester or two-semester course in conceptual physics, this book is written in a narrative style, frequently using questions designed to draw the reader into a dialogue about the ideas of physics. This inclusive style allows the book to be used by anyone interested in exploring the nature of physics and explanations of everyday physical phenomena.

FEATURES

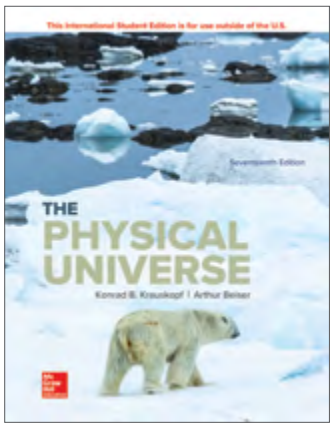
- Concept videos, narrated by one of the authors, have been added into the Connect question bank. These videos explain how physics is involved in everyday situations, so question content has likewise been authored and enhanced to showcase the everyday application of physics.
- Additional conceptual questions and exercises have been developed and made available as Connect online homework.
- For maximum flexibility, the test bank is available in both the Connect question bank and Test Builder. Found in Connect under the Library Tab, Test Builder is a cloud-based tool that enables instructors to format tests that can be printed or administered within a Learning Management System.

CONTENTS

1. Physics, the Fundamental Science
2. Describing Motion
3. Falling Objects and Projectile Motion
4. Newton's Laws — Explaining Motion
5. Circular Motion, the Planets, and Gravity
6. Energy and Oscillations
7. Momentum and Impulse
8. Rotational Motion of Solid Objects
9. The Behavior of Fluids
10. Temperature and Heat
11. Heat Engines and the Second Law of Thermodynamics
12. Electrostatic Phenomena
13. Electric Circuits
14. Magnets and Electromagnetism
15. Making Waves
16. Light Waves and Color
17. Light and Image Formation
18. The Structure of the Atom
19. The Nucleus and Nuclear Energy
20. Relativity
21. Looking Deeper into Everyday Phenomena

Appendices

A. Using Simple Algebra
B. Decimal Fractions, Percentages, and Scientific Notation
C. Vectors and Vector Addition
D. Answers to Selected Questions, Exercises, and Synthesis Problems
E. Conversion Factors and Periodic Table of Elements



The Physical Universe

Konrad B Krauskopf, Arthur Beiser

Edition: 17
2020©
512 Pages
Print: 9781260565904
Connect: 9781260466072

OVERVIEW

The Physical Universe by Konrad Krauskopf and Arthur Beiser is an outstanding text with a long history that has been updated and given a fresh look. This edition is also accompanied by a strong media component

with the Connect online homework system and LearnSmart Smartbook. Aimed at presenting the essentials of physics chemistry earth science and astronomy in a clear easy-to-understand way, The Physical Universe shows students how science works how scientists approach problems and why science constantly evolves in its search for understanding.

FEATURES

- The Krauskopf/Beiser text is more conceptual than most physical science texts, in particular emphasizing the scientific method of inquiry - how scientists think. The conceptual approach will help students grasp the difficult to understand, scientific concepts and also provide them with problem solving and critical thinking skills that can be applied to other courses.
- Superb pedagogy includes biographies of important scientists, worked examples, high-interest sidebars applying science to everyday life, chapter summaries with important terms, ideas, and highlighted formulas, end of chapter multiple choice questions and conceptual as well as quantitative exercises, and answers to all odd-numbered exercises in the back of the book. These pedagogical features provide students with various inroads into the study of science, relate science to their everyday experiences, and provide practice to build critical thinking and problem-solving skills.
- For the seventeenth edition, real student data points and input, derived from thousands of our LearnSmart users, were used to guide the revision. LearnSmart Heat Maps provided clear visual snapshots of usage of portions of the text and the relative difficulty students experienced in mastering the content. With these data, the text content was honed.

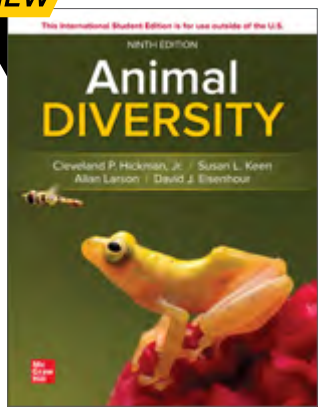
CONTENTS

1. The Scientific Method
2. Motion
3. Energy
4. Energy and the Future
5. Matter and Heat
6. Electricity and Magnetism
7. Waves
8. The Nucleus
9. The Atom
10. The Periodic Law
11. Crystals, Ions, and Solutions
12. Chemical Reactions
13. Organic Chemistry
14. Atmosphere and Hydrosphere
15. The Rock Cycle
16. The Evolving Earth
17. The Solar System
18. The Stars
19. The Universe

Math Refresher
The Elements
Answers to Multiple-Choice Questions and Odd-Numbered Exercises

PLANTS AND ANIMALS

NEW



Animal Diversity

Cleveland Hickman, Jr., Larry Roberts, Susan Keen, Allan Larson, David Eisenhour

Edition: 9
2021©
512 Pages
Print: 9781260575859
Connect: 9781260443127

OVERVIEW

This text provides a concise introduction to the field of animal biology. Readers discover general principles of evolution ecology animal body plans and classification and systematics. After these introductory chapters readers delve into the biology of all groups of animals. The basic features of each group are discussed along with evolutionary relationships among group members. Chapter highlights include newly discovered features of animals as they relate to ecology conservation biology and value to human society. Regular updates to the phylogenies within the book keep it current.

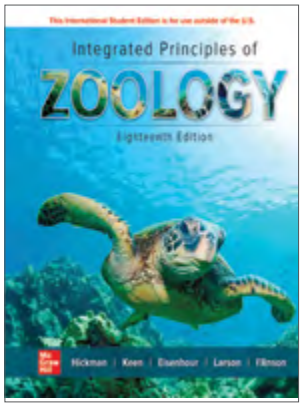
FEATURES

- Learning Objectives: Each chapter begins with a list of learning objectives that identify the major organizing principles of each section of the chapter. Chapter summaries are likewise arranged to correspond to each section of the chapter. Students enhance their understanding by using these guiding principles as they read a chapter's detailed material.
- For Review: Each chapter ends with a concise summary and review questions. The review questions enable students to test themselves for

retention and understanding of the more important chapter material. A list of annotated selected references is available online for each of the chapters, followed by a list of general references.
- For Connect® users, the ReadAnywhere App is a free, downloadable app available on iOS and Android mobile devices. It gives students mobile freedom to access their eBook anywhere, even offline, on their smartphone or tablet. Once chapters are downloaded, students can use the same tools that are available in the eBook. Any notes or highlights they make in the eBook will sync across platforms.

CONTENTS

1. Science of Zoology and Evolution of Animal Diversity
2. Animal Ecology
3. Animal Architecture
4. Taxonomy and Phylogeny of Animals
5. Unicellular Eukaryotes
6. Sponges: Phylum Porifera
7. Cnidarians and Ctenophores
8. Acoelomorpha, Platyzoa, and Mesozoa — Flatworms, Gastrotrichs, Gnathiferans, and Mesozoans
9. Polyzoa and Kryptrochozoa — Cycliophora, Entoprocta, Ectoprocta, Brachiopoda, Phoronida, and Nemertea
10. Molluscs
11. Annelids and Allied Taxa
12. Smaller Ecdysozoans
13. Arthropods
14. Chaetognaths, Echinoderms, and Hemichordates
15. Vertebrate Beginnings — The Chordates
16. Fishes
17. The Early Tetrapods and Modern Amphibians
18. Amniote Origins and Nonavian Reptiles
19. Birds
20. Mammals



Integrated Principles of Zoology

Cleveland Hickman, Jr., Susan Keen, David Eisenhour, Allan Larson, Helen I'Anson

Edition: 18
2020©
928 Pages
Print: 9781260565973
Connect: 9781260411133

OVERVIEW

Emphasizing the central role of evolution in generating diversity this best-selling text describes animal life and the fascinating adaptations that enable animals to inhabit so many ecological niches. Featuring high quality illustrations and photographs set within an engaging narrative. Integrated Principles of Zoology is considered the standard by which other texts are measured. With its comprehensive coverage of biological and zoological principles mechanisms of evolution diversity physiology and ecology organized into five parts for easy access this text is suitable for one- or two-semester introductory courses.

FEATURES

- To aid in student learning, several pedagogical features have been retained: opening chapter prologues drawn from the chapter's theme; chapter summaries and review questions to aid in comprehension and study; concise and visually appealing illustrations; chapter notes and essays that offer interesting sidelights to the narrative; literature citations; and an extensive glossary providing pronunciations, derivations, and definitions of terms used in the text.
- Starting with this edition, a list of Learning Objectives opens each chapter. These objectives are organized according to the chapter's main sections.
- The extensive cross-referencing of material among the different parts of the book now uses section numbers, with live links available in electronic versions of the text.

CONTENTS

Part 1. Introduction to Living Animals

1. Life: Biological Principles and the Science of Zoology
2. The Origin and Chemistry of Life
3. Cells as Units of Life
4. Cellular Metabolism

Part 2. Continuity and Evolution of Animal Life

5. Genetics: A Review
6. Organic Evolution
7. The Reproductive Process
8. Principles of Development

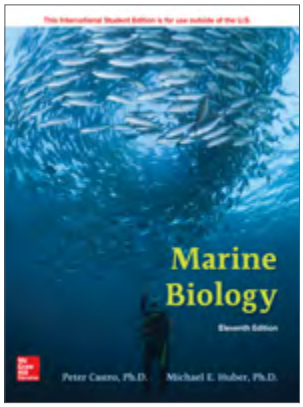
Part 3. Diversity of Animal Life

9. Architectural Pattern of an Animal
10. Taxonomy and Phylogeny of Animals
11. Unicellular Eukaryotes
12. Sponges and Placozoans
13. Radiate Animals
14. Acoelomorpha, Platyzoa, and Mesozoa
15. Polyzoa and Kryptrochozoa
16. Molluscs

17. Annelids and Allied Taxa
18. Smaller Ecdysozoans
19. Trilobites, Chelicerates, and Myriapods
20. Crustaceans
21. Hexapods
22. Chaetognaths, Echinoderms, and Hemichordates
23. Chordates
24. Fishes
25. Early Tetrapods and Modern Amphibians
26. Amniote Origins and Nonavian Reptiles
27. Birds
28. Mammals

Part 4. Activity of Life

29. Support, Protection, and Movement
30. Homeostasis: Osmotic Regulation, Excretion, and Temperature Regulation
31. Homeostasis: Internal Fluids and Respiration



Marine Biology

Peter Castro,
Michael E. Huber

Edition: 11
2019©
496 Pages
Print: 9781260085105
Connect: 9781260162547

OVERVIEW

Marine Biology covers the basics of marine biology with a global approach, using examples from numerous regions and ecosystems worldwide. This introductory, one-semester text is designed for non-majors. Authors Castro and Huber have made a special effort to include solid basic science content needed in a general education course, including the fundamental principles of biology, the physical sciences, and the scientific method. This science coverage is integrated with a stimulating, up-to-date overview of marine biology.

FEATURES

- Much of the data presented in the eleventh edition has been updated to the latest information available at the time of writing. Updates include, among others, numbers of known species in various taxonomic groups, conservation status and population sizes of many threatened species, shark-attack frequency, data on global and regional climate, sea level, CO2, hypoxic zones, paralytic shellfish poisoning, and the Antarctic ozone hole.
- The “Eye on Science” boxes, which have proven to be very popular among students and instructors alike, have been extensively updated. We have also added new Eye on Science boxes on a symbiosis between a barnacle and cyanobacteria in the intertidal, sea star wasting disease, coral reef resilience, and microplastic pollution.
- Many chapters in the eleventh edition include more information on the effects of global change on species and ecosystems in addition to the Special Report: Our Changing Planet. The coverage also in many cases reflects increasing scientific certainty regarding global change and its effects on the ocean.
- Many of the eleventh edition’s figures have been extensively revised and redesigned by Bill Ober and Claire Garrison to their usual standard of excellence.

CONTENTS

1. The Science of Marine Biology
2. The Sea Floor
3. Chemical and Physical Features of Seawater and the World Ocean
4. Fundamentals of Biology
5. The Microbial World
6. Multicellular Primary Producers — Seaweeds and Plants
7. Marine Animals Without a Backbone
8. Marine Fishes
9. Marine Reptiles, Birds, and Mammals
10. An Introduction to Marine Ecology
11. Between the Tides
12. Estuaries: Where Rivers Meet the Sea
13. Life on the Continental Shelf
14. Coral Reefs
15. Life Near the Surface
16. The Ocean Depths
17. Resources from the Sea
18. The Impact of Humans on the Marine Environment

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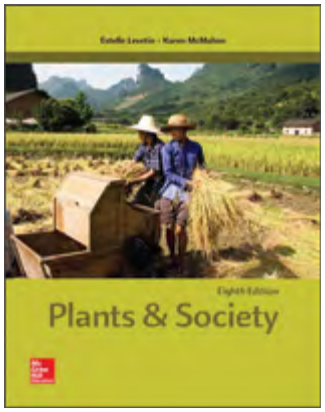


Plants and Society

Estelle Levetin,
Karen McMahon

Edition: 8
2020©
672 Pages
Print: 9781260085112
Connect: 9781260773163

OVERVIEW

This introductory, one-semester text takes a multi-disciplinary approach to studying the relationship between plants and people. The authors strive to stimulate interest in plant science and encourage students to further their studies in botany. Also, by exposing students to society's historical connection to plants, Levetin and McMahon hope to instill a greater appreciation for the botanical world. Plants and Society covers basic principles of botany with strong emphasis on the economic aspects and social implications of plants and fungi.

FEATURES

- Plants and Society focuses primarily on how humans interact with plants in their lives instead of the more typical general botany topics of A&P, diversity, and ecology. Eight introductory, general botany chapters (2-9) provide the instructor with plenty of foundational material before moving on to the engaging applied chapters.
- Numerous learning aids for students include chapter outlines, key concepts, boxed readings, summaries, review questions, and glossary.

CONTENTS

Part 1: Plants and Society — The Botanical Connections to Our Lives

1. Plants in Our Lives

Part 2: Introduction to Plant Life — Botanical Principles

2. The Plant Cell
3. The Plant Body
4. Plant Physiology
5. Plant Life Cycle — Flowers
6. Plant Life Cycle — Fruits and Seeds
7. Genetics
8. Plant Systematics and Evolution
9. Diversity of Plant Life

Part 3: Plants as a Source of Food

10. Human Nutrition
11. Origins of Agriculture
12. The Grasses
13. Legumes
14. Starchy Staples
15. Feeding a Hungry World

Part 4: Commercial Products Derived from Plants

16. Stimulating Beverages
17. Herbs and Spices
18. Materials — Cloth, Wood, and Paper

Part 5: Plants and Human Health

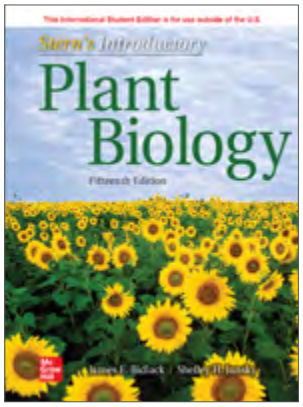
19. Medicinal Plants
20. Psychoactive Plants
21. Poisonous and Allergy Plants

Part 6: Algae and Fungi — The Impact of Algae and Fungi on Human Affairs

22. The Algae
23. Fungi in the Natural Environment
24. Beverages and Foods from Fungi
25. Fungi that Affect Human Health

Part 7: Plants and the Environment

26. Plant Ecology



Stern's Introductory Plant Biology

James Bidlack,
Shelley Jansky,
Kingsley Stern

Edition: 15
2021©
640 Pages
Print: 9781260571042
Connect: 9781260488616

OVERVIEW

Bidlack, Sterns Introduction to Plant Biology includes sufficient information for some shorter introductory botany courses open to both majors and non-majors. It is arranged so that certain sections can be omitted without disrupting the overall continuity of the course and emphasizes current interests while presenting basic botanical principles.

FEATURES

- A list of the scientific names of all organisms mentioned throughout the text is given in Appendix 1. Appendix 2 deals with biological controls and companion planting. Appendix 3 includes wild edible plants, poisonous plants, medicinal plants, hallucinogenic plants, spices, tropical fruits, and natural dye plants. Appendix 4 gives

horticultural information on house plants, along with brief discussions on how to cultivate vegetables. Nutritional values of the vegetables are included. Appendix 5 covers metric equivalents and conversion tables.
- A chapter outline, review questions, discussion questions, and additional reading lists are provided for each chapter.
- New terms are defined as they are introduced, and those that are boldfaced are included, with their pronunciation, in a glossary.

CONTENTS

1. What Is Plant Biology
2. The Nature of Life
3. Cells
4. Tissues
5. Roots and Soils
6. Stems
7. Leaves
8. Flowers, Fruits, and Seeds
9. Water in Plants
10. Plant Metabolism
11. Growth and Development
12. Meiosis and Alternation of Generations
13. Genetics and Molecular Biology
14. Plant Breeding, Propagation, and Biotechnology
15. Evolution
16. Plant Names and Classification
17. Domain (Kingdom) Bacteria, Domain (Kingdom) Archaea, and Viruses
18. Kingdom Protista
19. Kingdom Fungi
20. Introduction to the Plant Kingdom — Bryophytes
21. The Seedless Vascular Plants — Ferns and Their Relatives
22. Introduction to Seed Plants — Gymnosperms
23. Seed Plants: Angiosperms
24. Flowering Plants and Civilization
25. Ecology
26. Biomes

Appendices

1. Scientific Names of Organisms Mentioned in the Text
2. Biological Controls
3. Useful and Poisonous Plants, Fungi, and Algae
4. House Plants and Home Gardening
5. Metric Equivalents and Conversion Tables
6. Periodic Table of the Elements

Zoology

Stephen A Miller, Todd A. Tupper

Edition: 11
2019©
640 Pages
Print: 9781260085099
Connect: 9781260161991

OVERVIEW

The 11th edition of Zoology continues to offer students an introductory general zoology text that is manageable in size and adaptable to a variety of course formats. It is a principles-oriented text written for the non-majors or the combined course, presented at the freshman and sophomore level.

FEATURES

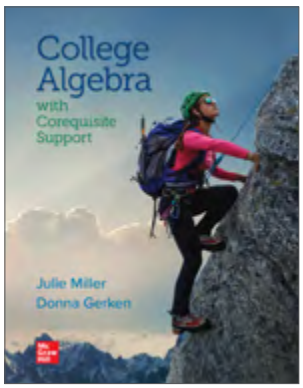
This text features an evolutionary and ecological focus, believing that these perspectives captivate students and are fundamental to understanding the unifying principles of zoology and the remarkable diversity within the animal kingdom. In this revision, the authors have taken a conservative, yet up-to-date, position on taxonomic and other challenges to traditional interpretations of zoological data.

CONTENTS

1. Zoology — An Evolutionary & Ecological Perspective
2. The Structure and Function of Animal Cells
3. Cell Division and Inheritance
4. Evolution — History and Evidence
5. Evolution and Gene Frequencies
6. Ecology — Preserving the Animal Kingdom
7. Animal Taxonomy, Phylogeny, and Organization
8. Animal Origins and Phylogenetic Highlights
9. The Basal Animal Phyla
10. The Smaller Lophotrochozoan Phyla
11. Molluscan Success
12. Annelida — The Metameric Body Form
13. The Smaller Ecdysozoan Phyla
14. The Arthropods — Blueprint for Success
15. The Pancrustacea — Crustacea and Hexapoda
16. Ambulacraria — Echinoderms and Hemichordates
17. Chordata — Urochordata and Cephalochordata
18. The Fishes — Vertebrate Success in Water
19. Amphibians — The First Terrestrial Vertebrates
20. Nonavian Reptiles — Diapsid Amniotes
21. Birds — The Avian Reptiles

22. Mammals — Synapsid Amniotes
23. Protection, Support, and Movement
24. Communication I — Nervous and Sensory Systems
25. Communication II — The Endocrine System and Chemical Messengers
26. Circulation and Gas Exchange
27. Nutrition and Digestion
28. Temperature and Body Fluid Regulation
29. Reproduction and Developmen

PRECALCULAS AND COLLEGE ALGEBRA



College Algebra with Corequisite Support

Julie Miller

Edition: 1
2021©
960 Pages
Print: 9781260576023
Connect Math: 9781260867107

OVERVIEW

The only product built from the ground up with the corequisite student in mind, authors Julie Miller and Donna Gerken present College Algebra with Corequisite Support, 1st edition. Based on extensive feedback from today's corequisite math instructors, this book thoughtfully interweaves support-level and college algebra concepts, providing options for both comprehensive and just-in-time review; To compliment this new approach, unique pedagogical features were created to fit the needs of this changing student audience. These include "expanded examples" that ensure sample problems don't leave out any important steps as well as an increased number of examples overall to help reinforce the skills students will build on throughout the course. Additionally, "for review" boxes can be found throughout the text to provide just-in-time review of important prerequisite concepts precisely where students need it; With an emphasis on consistency between the text, technology, and supplementary resources, College Algebra with Corequisite Support is accompanied by a new suite of videos and online homework problems, as well as print resources such as lecture notes and a full corequisite skills workbook; The end result is a comprehensive package of content and valuable resources that provide a seamless and flexible experience to fit a variety of teaching and learning styles.

FEATURES

- **Expanded Examples:** To support students of all levels, previously implicit steps have been added to expand out example problems. Combined with additional annotation, these examples provide a clear and understandable template to apply on practice problems. Additional examples have also been added to ensure a more gradual increase in rigor across a chapter.
- **"For Review" Boxes:** Throughout the text, just-in time tips and reminders of prerequisite skills appear in the margin alongside the concepts for which they are needed. References to prior sections are given for cases where more comprehensive review is available earlier in the text.
- **Prerequisite Review Exercises:** Within the end-of section exercise sets, additional prerequisite review exercises have been added to ensure sufficient practice on the skills required for success within the section exercises.
- **Detailed Chapter Summaries:** In order to solidify retention of key concepts and ensure that students can efficiently and effectively prepare for exams, care has been taken to add details and examples to every chapter summary along with references to where in the chapter the topic was covered.
- **Corequisite Workbook:** Available in print form or through downloadable files in ALEKS, the corequisite workbook contains just-in-time prerequisite review exercise sets designed to be worked prior to the section for which the worksheet is intended. Additional worksheets focused on individual prerequisite concepts are also available.
- **Corequisite Video Study Guide:** For fundamental concepts, worksheets tied to video lessons give students a guided framework for self-study, filling gaps in knowledge and preparation.
- **ALEKS with Enhanced Homework:** ALEKS is the ideal corequisite companion; it provides instructors the flexibility to determine what content is critical for a student to succeed in the credit-bearing course and helps deliver individualized preparation in the corequisite support course. In addition to the dynamic learning path personalized to each student, ALEKS now offers homework assignments with textbook-specific problems. Blending these two learning environments in one platform provides the utmost flexibility to support your teaching style. No matter where a student starts on their corequisite journey, ALEKS helps you guide them down the most efficient and effective learning path possible.

CONTENTS

R. Review of Prerequisites Section
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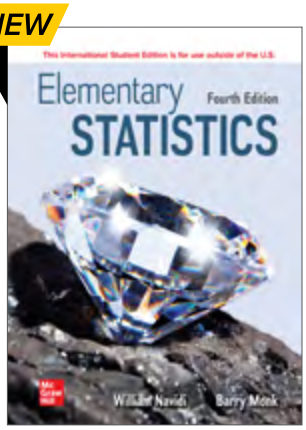
2. Polynomials
3. Quadratic Equations
4. More Expressions and Equations
5. Functions and Relations
6. Transformations and Analysis of Functions
7. Polynomial Functions
8. Rational Functions
9. Exponential and Logarithmic Functions
10. Systems of Equations and Inequalities
11. Matrices and Determinants and Applications
12. (Online). Analytic Geometry
13. (Online). Sequences, Series, Induction, and Probability

STATISTICS & PROBABILITY

NEW



Elementary Statistics

William Navidi, Barry Monk

Edition: 4
2022©
848 Pages
Mar 2021
Print: 9781264417001
Connect: 9781264136384

OVERVIEW

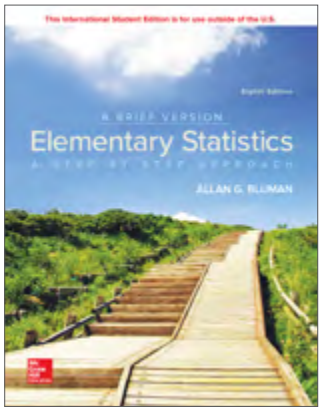
Elementary Statistics 4e was developed around three central themes – Clarity Quality and Accuracy. The authors paid close attention to how material is presented to students ensuring that the content in the text is very clear concise and digestible. High quality exercises examples and integration of technology are important aspects of an introductory statistics text. The authors have provided robust exercise sets that range in difficulty. They have also focused keen attention to ensure that examples provide clear instruction to students.

FEATURES

- Discussions of the investigative process of statistics have been added, in accordance with recommendations of the GAISE report.
- In-class activities have been added to each chapter.
- A new objective on the reasoning used in hypothesis testing has been added.
- New conceptual exercises regarding assumptions in constructing confidence intervals and performing hypothesis tests have been added.
- A large number of new exercises have been included, many of which involve real data from recent sources.

CONTENTS

1. Basic Ideas
2. Graphical Summaries of Data
3. Numerical Summaries of Data
4. Summarizing Bivariate Data
5. Probability
6. Discrete Probability Distributions
7. The Normal Distribution
8. Confidence Intervals
9. Hypothesis Testing
10. Two-Sample Confidence Intervals
11. Two-Sample Hypothesis Tests
12. Tests with Qualitative Data
13. Inference in Linear Models
14. Analysis of Variance
15. Nonparametric Statistics



Elementary Statistics: A Brief Version

Allan G. Bluman

Edition: 8
2019©
752 Pages
Print: 9781260092554
Digital: 9781260387018

OVERVIEW

Elementary Statistics: A Brief Version was written as an aid in the beginning Statistics course for students whose mathematical background is limited to basic algebra. The book follows a non-theoretical approach without formal proofs, explaining concepts intuitively and supporting them with abundant examples. The applications span a broad range of topics including problems in business, sports, health architecture, education, entertainment, political science, psychology, history, criminal justice, and many more. While a number of important changes have been made in this next edition, the learning system remains untouched and provides students with a useful framework in which to learn and apply concepts.

FEATURES

- Over 1200 exercises are located at the end of major sections within each chapter
- Hypothesis-Testing Summaries are found at the end of Chapter 9 (z, t, x, and F tests for testing means, proportions, and variances) and Chapter 11 (correlation, chi-square, and ANOVA) show students the different types of hypotheses and the types of tests to use.
- A Data Bank listing various attributes (educational level, cholesterol level, gender, etc.) for 100 people and several additional data sets using real data are included and referenced in various exercises and projects throughout the book.
- An updated reference card containing the formulas and the z, t, x, and PPMC tables is included with this textbook.

CONTENTS

1. The Nature of Probability and Statistics
2. Frequency Distributions and Graphs
3. Data Description
4. Probability and Counting Rules
5. Discrete Probability Distributions
6. The Normal Distribution
7. Confidence Intervals and Sample Size
8. Hypothesis Testing
9. Testing the Difference Between Two Means, Two Proportions, and Two Variances
10. Correlation and Regression
11. Chi-Square and Analysis of Variance (ANOVA)

Appendix A: Tables A
Appendix B: Data Bank
Appendix C: Glossary
Appendix D: Selected Answers
Additional Topics Online
Algebra Review
Writing the Research Report
Bayes' Theorem Alternate Approach to the Standard Normal Distribution

Elementary Statistics: A Step by Step Approach

Allan Bluman

Edition: 10
2018©
880 Pages
Print: 9781259922015
Connect Math: 9781260041774

OVERVIEW

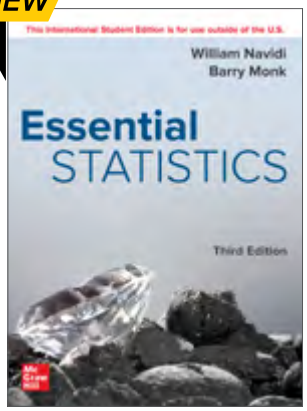
The author takes a non-theoretical approach to teaching the course. Statistics is the language of today's world and Bluman's marketing-leading Step-by-Step Approach makes it easy to learn and understand. Helping students move from the computational to the conceptual, Bluman provides all the support your students need to grasp the fundamentals of statistics and make that connection.

CONTENTS

1. The Nature of Probability and Statistics
2. Frequency Distributions and Graphs
3. Data Description
4. Probability and Counting Rules
5. Discrete Probability Distributions
6. The Normal Distribution
7. Confidence Intervals and Sample Size
8. Hypothesis Testing
9. Testing the Difference Between Two Means, Two Variances, and Two Proportions
10. Correlation and Regression
11. Other Chi-Square Tests
12. Analysis of Variance
13. Nonparametric Statistics
14. Sampling and Simulation

Appendix A: Tables
Appendix B: Data Bank
Appendix C: Glossary
Appendix D: Photos Credits
Appendix E: Selected Answers

NEW



Essential Statistics

William Navidi, Barry Monk

Edition: 3
2022©
656 Pages
Apr 2021
Print: 9781260598209
Connect Math: 9781260492194

OVERVIEW

Essential Statistics 3rd Edition is designed for an introductory course in statistics. The mathematical prerequisite is basic algebra. In addition to presenting the mechanics of the subject, the authors have endeavored to explain the concepts behind them in a straightforward, clear, and engaging writing style. As practicing statisticians, the authors have done everything possible to ensure that the material is accurate and correct. This text will enable instructors to explore statistical concepts in depth yet remain easy for students to read and understand.

FEATURES

- A large number of new exercises have been included, many of which involve real data from recent sources.
- A new section on multiple testing has been added.
- In-class activities have been added to each chapter.
- New conceptual exercises regarding assumptions in constructing confidence intervals and performing hypothesis tests have been added.
- Several of the case studies have been updated.

CONTENTS

1. Basic Ideas
2. Graphical Summaries of Data
3. Numerical Summaries of Data
4. Probability
5. Discrete Probability Distributions
6. The Normal Distribution
7. Confidence Intervals
8. Hypothesis Testing
9. Inferences on Two Samples
10. Tests with Qualitative Data
11. Correlation and Regression

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Our vision is to unlock the full potential of each learner.

Our mission is to accelerate learning through intuitive, engaging, efficient and effective experiences — grounded in research.

At McGraw-Hill Education, we're passionate about learning. It's embedded in our DNA. We know that the passion to learn is very personal. Learning something new might enable you to take a new path in life. Or to launch your career, taking you on a whole new trajectory. When you are passionate about learning, the possibilities are endless.

Where the Science of Learning Meets the Art of Teaching

Educators always will be at the heart of the learning experience. We partner with educators around the globe to develop better experiences for learners. We help drive success by harnessing content, technology and data to ignite the spark between teaching and learning. And it's working. Our solutions are proven to improve pass rates, elevate grades and deepen engagement for each individual learner while improving outcomes for all.

We are a learning science company.

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Why? Because learning changes everything®.

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