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  The Physical Universe, 12e 152
  ISBN-13: 978-0-07-331275-0 / MHID: 0-07-331275-4

Intro to Physical Science

NEW

THE PHYSICAL UNIVERSE
12th Edition
By Konrad Krauskopf (Deceased), Arthur Beiser, formerly New York University
2008 (January 2007)
ISBN-13: 978-0-07-331275-0 / MHID: 0-07-331275-4

This is an outstanding text with a long history that has been updated and given a fresh look, including worked examples pulled out of the text into numbered boxes. The text is now also accompanied by stronger media support with "CPS" eInstruction student response system questions, more extensive online quizzing, and PowerPoint lectures. 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. The text can also be packaged with its long time companion student study guide, which includes a review of chapter terms and concepts; self quizzing for extra practice; and solved problems from the text.

NEW TO THIS EDITION

- Mathematical support of topics is included where it can enhance the understanding of the concepts. It is designed to be optional so that an instructor can choose to leave out the more mathmatical emphasis, without disrupting the flow and coverage of the concepts in the text. Although this material is NOT marked as "optional" in the text (so as to not confuse the students), a section has been added to each chapter of the 12th edition Instructor's Manual to identify this slightly more difficult computational material as "optional": material that can be left-out without affecting the conceptual coverage of the course.

- There will be approximately 200 new end-of-chapter Questions and Problems for the 12th edition (approximately 30 replacement and 170 new/additional). The end of chapter Questions and Problems will also be organized by-section for the 12th edition.

- Chapter Goals will be added back into the 12th edition text as part of the chapter opener content.

- The ARIS site provide online, grade-able homework using the problems from the text. This site also includes instructor resources, such as the instructor's manual, digital images from the text, PowerPoint lectures, CPS eInstruction questions, daily concept quizzes (for JiTT) and professional resources for the instructor. For the student, it contains self quizzing, animations, web links, a glossary.

FEATURES

- Superb pedagogy: updated "A Scientist at Work" essays, biographies of important scientists, worked examples and exercises, chapter summaries, conceptual questions and problems, high-interest sidebars applying science to everday life, and answers to all odd-numbered questions and problems.

- Emphasis on environment, structure of matter, science of life.

- The Krauskopf/Beiser text is more conceptual than most physical science texts in particular emphasizing the scientific method of inquiry--how scientists think.

- Additional in-text, numbered worked examples will be added to the 12th edition. This addition in the 11th edition was very popular. The worked examples are pulled out and set apart from the textual presentation while still appearing where they should fall in the flow of the text.

- Math Refresher at the back of the book. This self-contained section provides back ground information for all of the math used in the book.

- Questions for student response systems and Daily Concept Quizzes to assist with Just in Time Teaching (JiTT) are included on the Online Learning Center and Instructor's Testing & Resource CD-ROM.

- Text-specific Student Study Guide (SSG)

- Digital Content Manager (DCM) housing instructor presentation tools: jpeg images of ALL 4-color line art (~430), ALL photos (~340), ALL tables (~40), and ALL worked examples (~60) from the text; a collection of animations (~150); and Powerpoint Lectures (18 chapters).

- Instructors Testing and Resource CD-ROM contains 1) EZ Test Test Bank with over 900 questions and problems; 2) Word and PDF files of the Instructor's Manual, Test Bank, and Student Study Guide 3) Word files of the quizzes from ARIS 4) CPS eInstruction Questions in CPS database and PowerPoint.

- Overhead Transparencies: over 100 full color transparencies featuring images from the text. NOTE: This is the 11E set RELABELED to accompany the 12E with a correlation sheet for figure numbers.

CONTENTS

1 The Scientific Method: How Scientists Study Nature / The Solar System / Universal Gravitation / How Many of What **2 Motion:** Describing Motion / Acceleration of Gravity / Force and Motion / Gravitation **3 Energy:** Work / Energy / Momentum / Relativity / Energy and Civilization **4 Matter and Heat:** Temperature and Heat / Fluids / Kinetic Theory of Matter / Changes of State / Energy Transformations **5 Electricity and Magnetism:** Electric Charge / Electricity and Matter / Electric Current/ Magnetism / Using Magnetism **6 Waves:** Wave Motion / Sound Waves / Wave Behavior **7 The Nucleus:** Atom and Nucleus / Radioactivity / Nuclear Energy / Fission and Fusion/ Elementary Particles **8 The Atom:** Quantum Theory of Light / Matter Waves / The Hydrogen Atom / Quantum Theory of the Atom **9 The Periodic Law:** Elements and Compounds / The Periodic Law / Atomic Structure / Chemical Bonds **10 Crystals, Ions, and Solutions:** Solids / Solutions / Acids and Bases **11 Chemical Reactions:** Quantitative Chemistry / Chemical Energy / Fuels / Reaction Rates / Oxidation and Reduction **12 Organic Chemistry:** Carbon Compounds / Structures of Organic Molecules / Organic Compounds / Chemistry of Life **13 Atmosphere and Hydrosphere:** The Atmosphere / Weather / Climate / The Hydrosphere **14 The Rock Cycle:** Rocks / Within the Earth / Erosion / Vulcanism **15 The Evolving Earth:** Tectonic Movement / Plate Tectonics / Methods of Historical Geology / Earth History **16 The Solar System:** The Family of the Sun / The Inner Planets / The Outer Planets / The Moon **17 The Stars:** Tools of Astronomy / The Sun / The Stars / Life Histories of the Stars **18 The Universe:** Galaxies / The Expanding Universe / Evolution of the Universe / Extraterrestrial Life

NEW

CHEMISTRY (CHAPTERS 1, 8-13)
7th Edition
By Bill Tillery, Arizona State University-Tempe
2007 (May 2006) / 286 pages
ISBN-13: 978-0-07-329818-4 / MHID: 0-07-329818-2

CONTENTS

Preface / 1 What Is Science? Chemistry 8 Atoms and Periodic Properties 9 Chemical Bonds 10 Chemical Reactions 11 Water and Solutions 12 Organic Chemistry 13 Nuclear Reactions Appendices A-D Glossary Credits Index Table of Atomic Weights

NEW

CHEMISTRY AND PHYSICS SPLIT PREPACK
7th Edition
By Bill Tillery, Arizona State University-Tempe
2007 (May 2006)
ISBN-13: 978-0-07-329850-4 / MHID: 0-07-329850-6

(Details unavailable at press time)

NEW

LAB MANUAL TO ACCOMPANY PHYSICAL SCIENCE
7th Edition
By Bill Tillery, Arizona State University-Tempe
2007 (March 2006)
ISBN-13: 978-0-07-304993-9 / MHID: 0-07-304993-X

FEATURES

- Written and classroom tested by the author

- There are laboratory exercises that require measurement, data analysis, and thinking in a more structured learning environment.

- There are also alternative laboratory exercises. The more open-ended "Invitations to Inquiry" are provided for instructors who would like a less structured approach.

- The instructor's edition of the laboratory manual can be found on ARIS for Physical Science and on the ITR CD.

CONTENTS

Introduction / Materials Required for Each Experiment / Experiments / 1. Graphing 2. Ratios 3. Motion 4. Free Fall 5. The Pendulum 6. Projectile Motion 7. Newton's Second Law 8. Conservation of Momentum 9. Rotational Equilibrium 10. Centripetal Force 11. Archimedes' Principle 12. Boyle's Law 13. Work and Power 14. Friction 15. Hooke's Law 16. Thermometer Fixed Points 17. Absolute Zero 18. Specific Heat 19. Static Electricity 20. Electric Circuits 21. Series and Parallel Circuits 22. Ohm's Law 23. Magnetic Fields 24. Electromagnets 25. Standing Waves 26. Speed of Sound in Air 27. Reflection and Refraction 28. Physical and Chemical Change 29. Hydrogen 30. Oxygen 31. Conductivity of Solutions 32. Percentage Composition 33. Metal Replacement Reactions 34. Producing Salts by Neutralization 35. Identifying Salts 36. Solubility Curves 37. Natural Water 38. Measurement of pH 39. Amount of Water Vapor in the Air 40. Nuclear Radiation 41. Growing Crystals 42. Properties of Common Minerals 43. Density of Igneous Rocks 44. Latitude and Longitude 45. Topographic Maps 46. Telescopes 47. Celestial Coordinates 48. Motions of the Sun 49. Phases of Moon 50. Power Output of Sun 51. Special Project **Appendix** I. The Simple Line Graph II. The Slope of a Straight Line III. Experimental Error IV. Significant Figures V. Conversion of Units VI. Scientific Notation

International Edition

NEW

PHYSICAL SCIENCE
7th Edition
By Bill W Tillery, Arizona State University--Tempe
2007 (March 2006)
ISBN-13: 978-0-07-325647-4 / MHID: 0-07-325647-1
ISBN-13: 978-0-07-110948-2 / MHID: 0-07-110948-X [IE]
Website: *http://www.mhhe.com/tillery*

Physical Science, Seventh Edition, is a straightforward, easy-to-read, but substantial introduction to the fundamental behavior of matter and energy. It 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, complimented with useful pedagogical tools. Tillery 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. With laboratory studies, the text contains enough material for the instructor to select a sequence for a two-semester course. It can also serve as a text in a one-semester physics and chemistry course.

NEW TO THIS EDITION

- Science & Society boxes relate the chapter's content to current societal issues.

- New Myths, Mistakes, and Misunderstandings boxes

- Invitation to Inquiry exercises have been added to the end of each chapter.

- For Further Analysis exercises have also been added to the end of each chapter.

- McGraw-Hill's ARIS for Physical Science is a complete, online electronic homework and course management system, designed for greater ease of use than any other system available. Free on adoption of any McGraw-Hill physical science text, instructors can create and share course materials and assignments with colleagues with a few clicks of the mouse. All PowerPoint lectures, assignments, quizzes, and animations are directly tied to text-specific materials in Physical Science, but instructors can also edit questions, import their own content, and create announcements and due dates for assignments. ARIS has automatic grading and reporting of easy-to-assign homework, quizzing, and testing. All student activity within McGraw-Hill's ARIS is automatically recorded and available to the instructor through a fully integrated grade book that can be downloaded to Excel.

- People Behind the Science biographical boxes have been revised.

- Applying the Concepts multiple-choice questions were revised.

FEATURES

- Professors have the option of creating a customized version of the text by selecting only the chapters they cover in lecture, allowing students a savings in book costs. Customization can occur in three ways:

- Physics and Chemistry chapter splits

- Chapter-by-chapter color customization (printed book).

- Primis Online--choose the appropriate chapters and mix and match with other items on Primis Online, allowing maximum choice and flexibility. Choose between two delivery formats: custom printed books (in black and white) or custom eBooks (in color).

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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 **Appendixes** A Mathematical Review B Solubilities Chart C Relative Humidity Table D Solutions for Group A Parallel Exercises

International Edition NEW

PHYSICS (CHAPTERS 1-7)

7th Edition

By Bill Tillery, Arizona State University-Tempe

2007 (May 2006) / 320 pages

ISBN-13: 978-0-07-329817-7 / MHID: 0-07-329817-4

Physical Science, Seventh Edition, is a straightforward, easy-to-read, but substantial introduction to the fundamental behavior of matter and energy. It 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, complimented with useful pedagogical tools. Tillery 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. With laboratory studies, the text contains enough material for the instructor to select a sequence for a two-semester course. It can also serve as a text in a one-semester physics and chemistry course.

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DICTIONARY OF PHYSICS

3rd Edition

By McGraw-Hill

2003 / 483 pages

ISBN-13: 978-0-07-141048-9 / MHID: 0-07-141048-1

[A Professional Publication]

CONTENTS

Preface / Staff / How to Use the Dictionary / Fields and Their Scope / Pronunciation Key / A-Z Terms / Appendix

SCHAUM'S OUTLINE OF PHYSICAL SCIENCE

2nd Edition

By Arthur Beiser, formerly of New York University

1988 / 368 pages

ISBN-13: 978-0-07-004419-7 / MHID: 0-07-004419-8

[A Schaum Professional Publication]

CONTENTS

Physical Quantities. / Motion in a Straight Line. / The Laws of Motion. / Circular Motion and Gravitation. / Energy. / Momentum. / Relativity. / Fluids. / Heat. / Kinetic Theory of Matter. / Thermodynamics. / Electricity. / Electric Current. / Magnetism. / Electromagnetic Induction. / Waves. / Lenses. / Quantum Physics. / The Nucleus. / Radioactivity and Elementary Particles. / Theory of the Atom. / The Periodic Law. / Molecules and Solids. / Formulas and Equations. / Stoichiometry. / Gas Stoichiometry. / Solutions. / Acids and Bases. / Oxidation and Reduction. / Electrochemistry. / Chemical Energy. / Reaction Rates and Equilibrium. / Organic Chemistry. / The Atmosphere. / Weather. / The Oceans. / Earth Materials. / Erosion and Sedimentation. / Vulcanism and Diastrophism. / The Earth's Interior. / Continental Drift. / Earth History. / Earth and Sky. / The Solar System. / The Sun. / The Stars. / The Universe.

SCHAUM'S OUTLINE OF LAGRANGIAN DYNAMICS

By Dave Wells, University of Texas

1967 / 368 pages

ISBN-13: 978-0-07-069258-9 / MHID: 0-07-069258-0

[A Schaum Professional Publication]

CONTENTS

Background Material. / Lagrange's Equations of Motion of a Single Particle. / Lagrange's Equations of Motion for a System of Particles. / Conservative Systems. / Dissipative Forces. / General Treatment of Moments and Products of Inertia. / Lagrangian Treatment of Rigid Body Dynamics. / The Euler Method of Rigid Body Dynamics. / Small Oscillations about Positions of Equilibrium. / Small Oscillations about Steady Motion. / Forces of Constraint. / Driving Forces Required to Establish Known Motions. / Effects of Earth's Figure and Daily Rotation on Dynamical Problems. / Application of Lagrange's Equations to Electrical and Electromechanical Systems. / Hamilton's Equations of Motion. / Hamilton's Principle. / Basic Equations of Dynamics in Vector and Tensor Notation. / Appendix: Relations between Direction Cosines.

Integrated Sciences

International Edition

NEW

INTEGRATED SCIENCE
3rd Edition

By Bill W Tillery, Arizona State University-Tempe, Eldon Enger, Delta College and Robert S Ross, California State University-Chico

2007 (Sept 2005)
ISBN-13: 978-0-07-322273-8 / MHID: 0-07-322273-9
ISBN-13: 978-0-07-110798-3 / MHID: 0-07-110798-3 [IE]
Website: *http://www.mhhe.com/tillery*

Integrated Science, Third Edition is a straightforward, easy-to-read, yet substantial introduction to the fundamental behavior of matter and energy in living and nonliving systems. The authors provide even, well-integrated coverage of chemistry, physics, earth science, biology, and astronomy. The book is intended to serve the needs of non-science majors who are required to complete one or more science courses as part of a general or basic studies requirement. This edition continues to introduce 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 language, as well as the mathematics, is as simple as can be practical for a college-level science course.

NEW TO THIS EDITION

- A core concept map has been added to the beginning of each chapter.
- New Science & Society boxes added.
- New Myths, Mistakes, and Misunderstandings boxes added.
- Invitation to Inquiry exercises have been added to the end of each chapter.
- For Further Analysis exercises have also been added to the end of each chapter.
- Some computational examples have been added back into the Third Edition.
- The Lab Manual has been revised for this edition. Emphasis has been placed on making the manual more inquiry-oriented and increasing the number of biology labs.

FEATURES

- An outline and introduction of concepts at the beginning of each chapter. Chapter Outlines include all the major topic headings and subheadings within the body of the chapter. The Introductory Overview previews the chapter's contents and what the student can expect to learn from that chapter.
- Boxed features called "Concepts Applied"
- New design: more open, less text intense presentation.
- Even coverage of chemistry, physics, earth science, biology, and astronomy.
- A Closer Look and Connection boxes contain information on topics of special interest to the general population as well as the science community. This is supplemental reading material. The information contained in them goes "beyond" the boundaries of the required text material.
- Summary of Equations: reinforce the retention of equations in the text.
- Applying the Concepts Quiz
- Questions for Thought: Designed to challenge the student to demonstrate comprehension of the topics.
- Parallel Exercise Sets

CONTENTS

NEW

LAB MANUAL TO ACCOMPANY INTEGRATED SCIENCE
3rd Edition

By Bill Tillery, Arizona State University-Tempe, Eldon Enger and Frederick Ross of Delta College

2007 (September 2005)
ISBN-13: 978-0-07-299682-1 / MHID: 0-07-299682-X

NEW TO THIS EDITION

- Each lab begins with an open-ended "Invitations to Inquiry," designed to peak student interest in the lab concept. This is followed by laboratory exercises that require measurement and data analysis for work in a more structured learning environment.

FEATURES

- The laboratory manual has been written and classroom-tested by the authors.
- There is also an instructor's edition lab manual available for instructors on the OLC and the ITR CD.

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Conceptual Physics

International Edition

NEW

PHYSICS OF EVERYDAY PHENOMENA
5th Edition

By Thoms Griffith, Pacific University

2007 (June 2006) / 576 pages
ISBN-13: 978-0-07-325315-2 / MHID: 0-07-325315-4
ISBN-13: 978-0-07-110320-6 / MHID: 0-07-110320-1 [IE]

The Physics of Everyday Phenomena, Fifth Edition, introduces students to the basic concepts of physics using examples of common occurrences. Intended for use in a one-semester or two-quarter 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. Beginning students will benefit from the large number of student aids and the reduced math content. Professors will appreciate the organization of the material and the wealth of pedagogical tools.

NEW TO THIS EDITION

- NEW "Secrets to Success" introduction, found in the To the Student section at the start of the book, helps students see how to use the text and its resources to master physics.

- UPDATED AND REVISED chapter exercises continue to offer students practice in applying the concepts presented.

- UPDATED AND ADDITIONAL Everyday Phenomenon boxes throughout the text analyze common phenomena in more detail to promote a better understanding of everyday events in students' lives. These boxes emphasize the main theme of the text and give relevance to the concepts being presented.

- Approximately 5 EOC Conceptual Questions Answers per chapter are provided to students in the text, with approximately another 5 per chapter online. Color is used to highlight question numbers that have answers available to students (at the EOB or online).

FEATURES

- Instead of traditional titles for each section, leading questions introduce the material.

- Effective pedagogy includes unit openers and chapter overviews that alert students to the most important concepts. Internal summaries clarify and remind students of what is most important. The pedagogy and end-of-chapter student aids present a learning system to guide students through the course.

CONTENTS

1 Physics, the Fundamental Science **The Newtonian Revolution** 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 **Fluids and Heat** 9 The Behavior of Fluids 10 Temperature and Heat 11 Heat Engines and the Second Law of Thermodynamics **Electricity and Magnetism** 12 Electrostatic Phenomena 13 Electric Circuits 14 Magnets and Electromagnetism **Wave Motion and Optics** 15 Making Waves 16 Light Waves and Color 17 Light and Image Formation **The Atom and Its Nucleus** 18 The Structure of the Atom 19 The Nucleus and Nuclear Energy **Relativity and Beyond** 20 Relativity 21 Beyond Everyday Phenomena

International Edition

PHYSICS FOR POETS
5th Edition

By Robert March, University of Wisconsin – Madison

2003 / 304 pages
ISBN-13: 978-0-07-247217-2 / MHID: 0-07-247217-0
ISBN-13: 978-0-07-119853-0 / MHID: 0-07-119853-9 [IE]
Website: *www.mhhe.com/physsci*

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College Physics

NEW

PHYSICS

By Alan Giambattista, Betty Richardson and Robert Richardson of Cornell University-Ithaca

2008 (January 2007)
ISBN-13: 978-0-07-332750-1 / MHID: 0-07-332750-6
ISBN-13: 978-0-07-332813-3 / MHID: 0-07-332813-8
(with ARIS Instructor QuickStart Guide)
ISBN-13: 978-0-07-332751-8 / MHID: 0-07-332751-4 (Volume 1)
ISBN-13: 978-0-07-332752-5 / MHID: 0-07-332752-2 (Volume 2)

Physics, 1st edition is the best solution for today's college physics market. With a unique, new, approach to physics that builds a conceptual framework as motivation for the physical principles, consistent problem solving coverage strategies, stunning art, extensive end-of-chapter material, and superior media support, Giambattista, Richardson, and Richardson delivers a product that addresses today's market needs with the best tools available. Physics 1st edition is a spin-off of the market leading College Physics 2nd edition text by Giambattista/Richardson/Richardson. The key difference in in College Physics there is an integrated approach of forces and kinematics, leading with forces, while in this new 1st edition, Physics covers forces in the traditional manner by leading with Kinematics and not integrating forces.

FEATURES

- Eight Review and Synthesis sections now appear throughout the text, following groups of related chapters. The MCAT® Review includes actual reading passages and questions written for the Medical College Admission Test (MCAT). The Review Exercises are intended to serve as a bridge between textbook problems that are linked to a particular chapter and exam problems that are not. These exercises give students practice in formulating a problem-solving strategy without an external clue (section or chapter number) that indicates which concepts are involved. Many of the problems draw on material from more than one chapter to help the student integrate new concepts and skills with what has been learned previously.

- Real MCAT questions included in the text.

● Unparalleled Illustration Program: Giambattista offers an incredible visual program that combines "showcase" pieces with simpler, diagrammatic pieces to aid student understanding.

● Flash-based Interactives! These "Interactives" offer a fresh and dynamic method to teach the physics basics by providing students with simulations that are completely accurate and work with real data. Interactives allow students to manipulate parameters and gain a better understanding of 16 of the more difficult physics topics by watching the effect of these manipulations. Each Interactive includes: ● Analysis Tool (interactive model) ● Tutorial describing its function with content describing its principle themes, self-test questions and explanations.

● New approach to college physics! Giambattista was developed from the notes and experiences of authors sitting next to students in study labs explaining physical principles on a daily basis. The authors found that students were able to grasp principles much more easily and completely, and to remember those principles, if they were discussed with-in the context of familiar and relative examples. The "Conceptual Framework" approach was developed, and all physics concepts are presented to students in such a fashion.

● Chapter 8, presents another great example of how the Conceptual Framework approach has influenced presentation. Rotational kinetic energy is introduced first since it usually is the easiest of the rotational quantities for the student to understand. It also leads in a very natural way, to the necessity of rotational inertia. Torque, one of the most difficult concepts for many students, is introduced after the student already has some understanding of other rotational concepts.

● Problem Solving Approach: Giambattista/Richardson/Richardson employs a consistent approach to the presentation of examples. Every example includes strategy, solution, discussion, and practice problem (with answer at end-of-chapter). Care is taken to make sure that students are equipped with tools to solve problems and that they do not just MEMORIZE STEPS to solve that one example problem.

● Extensive End-of-Chapter Material which includes: Master The Concepts (summary of CONCEPTS as well as the integrated equations) Problems–clearly, one of the most closely scrutinized portions of any college physics textbook is the end-of-chapter material including but not limited to the quality and quantity of problems. The Giambattista/Richardson/Richardson problems have consistently reviewed very well and have been quadruple checked for accuracy. The various problem types are as follows:

* Conceptual Questions;

* Multiple Choice Questions (with more on the website);

* Problems by Section (featuring paired problems);

* Problems paired by concept;

* Comprehensive Problems;

* Combination Problems (quantitative and conceptual problems combined);

* Bio/Med application problems.

● ARIS (assessment, review, and instruction system) is available with each textbook adoption. ARIS for Physics, First Edition is a complete, online tutorial, electronic homework, and course management system designed for greater ease of use than any other system available. Instructors can create and share course materials and assignments with colleagues with a few clicks of a mouse. All PowerPoint lectures, assignments, quizzes, tutorials, and interactives are directly tied to text-specific materials in Physics, First Edition. ARIS courses are customized to your textbook, but instructors can also edit questions and algorithms, import their own content, and create announcements and due dates for assignments. ARIS has automatic grading and reporting of easy-to-assign, algorithmically-generated homework, quizzing, and testing. All student activity within ARIS is automatically recorded and available to the instructor through a fully-integrated grade book that can be downloaded to Excel.

● ALEKS (Assessment and Learning in Knowledge Spaces) for College Physics is a tremendously successful math tutorial system available with this text. The program focuses on only the math operations needed for college physics. ALEKS determines students' current knowledge base, identifies where they need help, and then supplies that student with additional information and problems, allowing them to master those math concepts. This robust course management system is fast, efficient and customizable, and is available free to adopters.

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International Edition NEW

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By Alan Giambattista, Betty Richardson and Robert C. Richardson of Cornell University—Ithaca

2007 (Dec 2005)
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College Physics, Second Edition is the best solution for today's college physics market. With a unique, new, approach to physics that builds a conceptual framework as motivation for the physical principles, consistent problem solving coverage strategies, stunning art, extensive end-of-chapter material, and superior media support, Giambattista, Richardson, and Richardson delivers a product that addresses today's market needs with the best tools available.

NEW TO THIS EDITION

■ Review & Synthesis: A completely new set of problems and exercises has been added to this edition. Eight Review & Synthesis sections now appear throughout the text, following groups of related chapters. The Review & Synthesis sections contain one set of Review Exercises that ask students to combine two or more concepts learned in the previous chapters. The second set of exercises, MCAT® Review, include actual reading passages and questions written for the MCAT® exam.

■ Real MCAT questions included in the text.

■ Revisions to Problem Sets: Great care was taken by both the authors and the contributors to the Second Edition to add more variety to the end of chapter problem sets.

■ Unparalleled Illustration Program: Giambattista offers an incredible visual program that combines "showcase" pieces with simpler, diagrammatic pieces to aid student understanding. The majority of reviewers of the first edition of College Physics felt that the text's innovative illustrations and Showcase figures were an enormous improvement over the artwork in most other existing texts. However, reviewers also commented that the graphs were very similar in quality to other texts and that some of the showcase illustrations were "distracting" and "too large." Given this feedback on the art program, an art panel of experienced instructors was assembled. These instructors advised us on the most useful showcase illustrations to retain and update for the second edition of College Physics. This group also advised us on where to supply additional and improved graphs, diagrams, simpler sketches, and free-body diagrams to truly enhance the text discussions and examples.

■ Reorganization of chapters 2 through 4: 1. Based on reviewer feedback, the introduction of fundamental forces in Chapter 2 was simplified. All material involving surface tension, buoyant forces, Coulomb's law, and electric field was removed. / 2. Other reviewer feedback included comments that Chapter 2 needed more numerical examples and problems and more examples with pictures for free-body diagrams. So, the introduction of contact forces, ideal cords, and ideal springs was retained in order to have a sufficient variety of examples and problems dealing with free-body diagrams and adding forces. / 3. Some reviewers also felt that the treatment of vector addition and subtraction was "too spread out" in the first edition, so Sections 2.4 and 2.5 now provide a two-dimensional treatment of vector addition and subtraction. / 4. In an attempt to make chapter 2 more intuitive for students, 1-dimensional statics is followed by 2-dimensional statics before introducing kinematics to let students concentrate on each concept before progressing to the next. This also allows one dimensional motion to be discussed as a special case of two-dimensional motion as opposed to treating 1-D motion first, then going to 2-D, which many students find difficult. Whereas, by covering 2-D vectors first and then interspersing 1-D examples among the 2-D coverage, students seem to experience much less difficulty with comprehending the material. All sections from 2.4 to 2.9 now include worked examples of adding forces to find the net force and examples of equilibrium (net force = 0), starting very simply and gradually increasing in complexity. Material from the previous Section 4.3 is now distributed among these sections. / 5. Finally, some reviewers felt that it would be better not to introduce Newton's second law until after the definition of acceleration. General definitions of position, displacement, velocity, and acceleration (using vector diagrams in order to avoid common misconceptions that can arise when defining them first in 1D) are now presented at the beginning of Chapter 3. Examples start with 1D and then progress to 2D within each section.

■ Revision of Chapter 6: Chapter 6 has been revised to provide a presentation that gives a clearer view of the simplified model and when it is applicable, along with providing "caveats" of when the simplified model is not applicable. This provides students with varying models of problems of energy conservation. Chapter 6 now presents the big picture of the simplified model and its exceptions, rather than just a repetitious, forbidding list of warnings.

■ Revision of Chapter 15: Chapter 15 has been revised to simplify and provide more commonly-used notation.

■ Online Learning Center with ARIS is now available free with each textbook adoption. ARIS for College Physics, Second Edition is a complete, online tutorial, electronic homework, and course management system designed for greater ease of use than any other system available. Instructors can create and share course materials and assignments with colleagues with a few clicks of a mouse. All PowerPoint lectures, assignments, quizzes, tutorials, and interactives are directly tied to text-specific materials in College Physics, Second Edition. ARIS courses are customized to your textbook, but instructors can also edit questions and algorithms, import their own content, and create announcements and due dates for assignments. ARIS has automatic grading and reporting of easy-to-assign, algorithmically-generated homework, quizzing, and testing. All student activity within ARIS is automatically recorded and available to the instructor through a fully-integrated grade book that can be downloaded to Excel.

FEATURES

■ Flash-based Interactives! These "Interactives" offer a fresh and dynamic method to teach the physics basics by providing students with applets that are completely accurate and work with real data. Interactives allow students to manipulate parameters and gain a better understanding of 16 of the more difficult physics topics by watching the effect of these manipulations. Each Interactive includes: ● Analysis Tool (interactive model) ● Tutorial describing its function ● Content describing its principle themes ● Related Exercises ● Solutions to the exercises.exercises.

■ New approach to college physics; Giambattista was developed from the notes and experiences of authors sitting next to students in study labs explaining physical principles on a daily basis. The authors found that students were able to grasp principles much more easily, completely, and remember those principles, if they were discussed with-in the context of something students were already familiar with and could relate to. The "Conceptual Framework" approach was developed and all physics concepts are presented to students in such a fashion.

■ Because of the conceptual framework approach, the authors have integrated kinematics with forces in chapters 2-4.

■ This presentation uses force as the central theme and presents kinematics as a natural extension that is necessary to provide a mathematical description of motion that results from a force being applied. This prevents the material from becoming compartmentalized and viewed as something to memorize instead of understand. This approach allows for a gradual exposure to one-dimensional forces, two-dimensional and then multi-dimensional forces. Students also benefit from being exposed to vectors and their terminology much sooner, allowing them to sharpen their skills on simpler situations and then gain confidence as they continue through the force chapters.

■ Chapter 8, presents another great example of how the Conceptual Framework approach has influenced presentation. Rotational kinetic energy is now introduced first since it usually is the easiest of the rotational quantities for the student to understand. It also leads in a very natural way, to the necessity of rotational inertia. Torque, one of the most difficult concepts for many students, is introduced after the student already has some understanding of other rotational concepts.

■ Problem Solving Approach: Giambattista/Richardson/Richardson employs a consistent approach to the presentation of examples. Every example includes strategy, solution, discussion, and practice problem (with answer at end-of-chapter). Care is taken to make sure that students are equipped with tools to solve problems and that they do not just MEMORIZE STEPS to solve that one example problem.

■ Extensive End-of-Chapter Material which includes:

■ Master These Concepts (summary of CONCEPTS as well as the integrated equations)

■ Problems--clearly, one of the most closely scrutinized portions of any college physics textbook is the end-of-chapter material including but not limited to the quality and quantity of problems. The Giambattista/Richardson/Richardson problems have consistently reviewed very well and have been quadruple checked for accuracy. The various problem types are as follows:

* Conceptual Questions;

* Multiple Choice Review Questions (with more on the website);

* Problems by Section (featuring paired problems)

* Comprehensive Problems;

* Combination Problems (quantitative and conceptual problems combined)

* Bio/Med application problems

* Problems paired by concept

■ ALEKS (Assessment and Learning in Knowledge Spaces) for College Physics is a tremendously successful math tutorial system available with this text. The program focuses on only the math operations needed for college physics. ALEKS determines students' current knowledge base,

identifies where they need help, and then supplies that student with additional information and problems, allowing them to master those math concepts. This robust course management system is fast, efficient and customizable, and is available free to adopters.

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SCHAUM'S OUTLINE OF COLLEGE PHYSICS
10th Edition

By Frederick J Bueche, University of Dayton-Emeritus and Eugene Hecht, Adelphi University
2006 (Nov 2005) / 448 pages
ISBN-13: 978-0-07-144814-7 / MHID: 0-07-144814-4
[A Schaum Professional Publication]

An introduction to physics that you don't need to be a math whiz to understand. Schaum's Outline of College Physics, Tenth Edition, is a clear, easily understood review of introductory noncalculus-based physics. It is especially helpful if you do not have a strong background in mathematics.

RELATIVITY DEMYSTIFIED

By David McMahon and Paul Alsing
2006 (December 2005) / 344 pages
ISBn-13: 978-0-07-145545-9 / MHID: 0-07-145545-0
(A Professional Publicaition)

In Relativity Demystified a physicist explains Einstein's theory of relativity in layman's terms, minus heavy-duty discussion or formal mathematics. Author David McMahon gradually builds up readers' practical skills to a point where they can eventually solve real problems in the field of general relativity. The book offers examples that vary in complexity from textbook-like problems to real-world situations from actual current research. Relativity Demystified also focused on quick definitions and demonstrations of procedures needed to solve problems.

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International Edition

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ELECTRICITY AND MAGNETISM
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2007(January 2007) / 400 pages
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2003 / 336 pages
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By Terry Jones, University of Minnesota and Jeanne Hanson
2007 (December 2006) / 352 pages
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By Steven Schneider and Thomas Arny of University of Mass-Amherst
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By Steven Schneider and Thomas Arny of University of Mass-Amherst
2007 (April 2006) / 620 pages
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2006 (Feb 2005)
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By John D. Fix, University of Alabama – Huntsville
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Stars, Galaxies, and Planets, Update

By Thomas T. Arny, University of Massachusetts—Amherst
2004
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