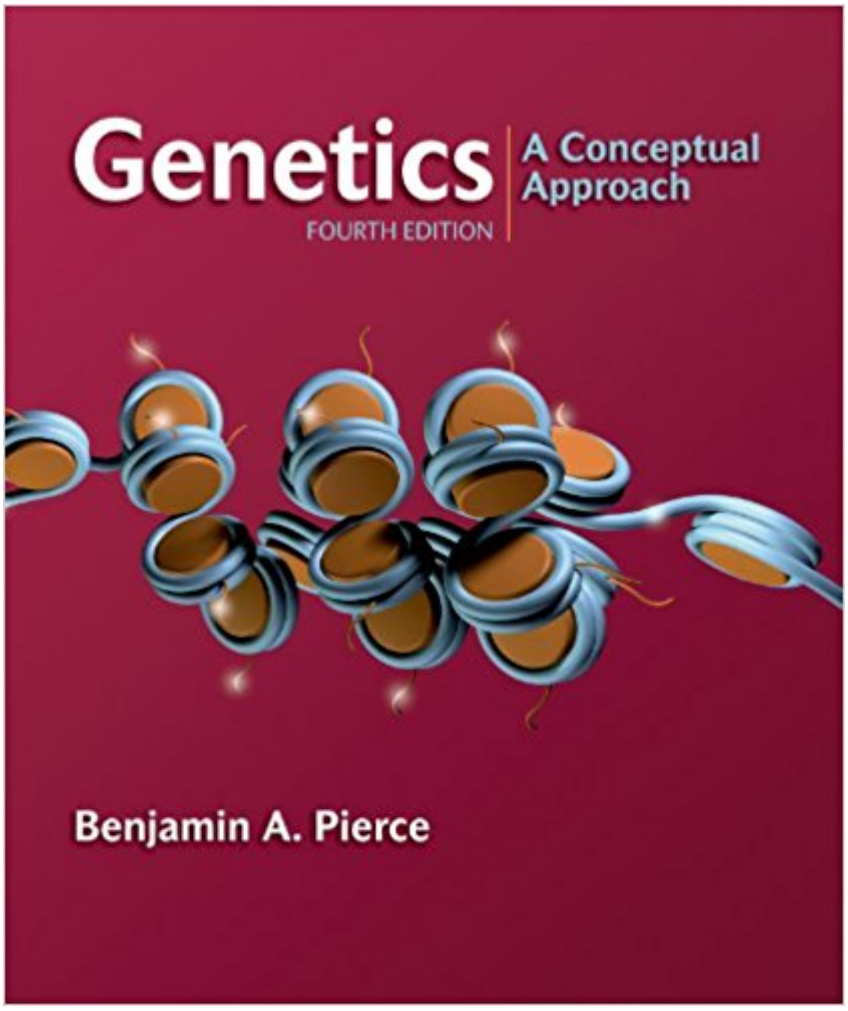
Genetics: A Conceptual Approach, 4th Edition



Synopsis

Since its inception, Genetics: A Conceptual Approach has been known for its engaging writing style and its focus on the key concepts in genetics. By presenting key concepts clearly and by helping students make connections between them, Pierce enables students to study the big picture of genetics. The fourth edition includes new coverage on epigenetics, the first synthetic organism, our relationship to Neanderthals, microRNAs, and many other updates and recent discoveries. The popular Chapter-Opening Stories engage students with interesting real-life examples and have been updated. Almost half the stories are new, including new stories on "The Strange Case of Platypus Sex", "Death Cap Poisoning", "Helping the Blind to See" and more. The end-of-chapter problems have also been revised and updated, giving students great new exercises to test their understanding. The text is supported by a companion website (www.whfreeman.com/pierce4e) which provides helpful problem-solving videos and interactive animated tutorials and podcasts on key concepts and processes. --This text refers to an out of print or unavailable edition of this title.

Book Information

Hardcover: 745 pages

Publisher: W. H. Freeman; 4th edition (December 10, 2010)

Language: English

ISBN-10: 1429232501

ISBN-13: 978-1429232500

Product Dimensions: 9.3 x 1.3 x 10.9 inches

Shipping Weight: 4.5 pounds

Average Customer Review: 4.4 out of 5 starsÂ Â See all reviewsÂ (54 customer reviews)

Best Sellers Rank: #50,045 in Books (See Top 100 in Books) #16 inÂ Books > Textbooks > Medicine & Health Sciences > Medicine > Basic Sciences > Genetics #60 inÂ Books > Medical Books > Basic Sciences > Genetics #225 inÂ Books > Science & Math > Evolution

Customer Reviews

This book provides a wonderful and comprehensive introduction to genetics. I’m not a biology major, but I found that this book is both entertaining and informative. The author describes a wide panoramic view on the genetics, and yet addresses the fundamental concepts in genetics in very clear manner. DNA structure, replication, transcription to RNA, RNA processing, and RNA translation (a.k.a. the central dogma) have been very hard to comprehend and visualize, yet the author explains it very well. Numerous detailed illustrations in the book really helps to clarify the

central dogma.All chapters start with VERY compelling REAL-WORLD cases that tantalizes you on learning the subject presented in the chapter. That makes me wanting to read for more. The writing is concise and clear. The author clearly knows his stuff.Overall, it is a great intro book. Great for both self-learners and in-class students. Definitely a must buy for those who want to get acquainted in genetics.For in depth contents: The book seems to be divided into four parts.1. It starts with principles of classical (Mendelian) genetics with its applications on chapter 1. Then it goes into cell structures, functions, and reproduction with chapter 2-4. Followed by heredity principles of reproduction and how classical genetics fit into the analysis of hereditary traits. The next chapter discusses how classical genetics is not enough -- the author presents compelling cases like lethal alleles, incomplete penetration, and so forth in chapter 5-6. This limitation brings forth extensions and modifications on the basic principles, which is also discussed. The author also discusses other analyses to detect hereditary traits, such as pedigree analysis.2. The second part is more toward modern genetics: How genes are not independently assorted as the Mendelian principles dictates. The concept of linkage, recombination, and consequently gene mapping are discussed in chapter 7. Followed by Chapter 8 is sort of intermezzo on bacterial and viral genetic systems.3. The third part is the meat of the book:Chapter 9 discusses what chromosomes are and how chromosomes abnormalities occur and what type of abnormalities.Chapter 10 discusses about DNA and RNA structure, followed by chromosome structure in chapter 11.Chapter 12 discusses DNA replication and recombination with detailed illustrations.Chapter 13 discusses transcription process, followed by chapter 14 on RNA molecules and processing.Chapter 15 discusses about genetic code and translation, followed by chapter 16: Gene expression.Chapter 17 discusses gene mutations and DNA repair.4. The fourth part is "elective" part:Chapter 18: Recombinant DNA technolocyChapter 19: Genomics (Structural, Functional, and Comparative)Chapter 20: Organelle DNAChapter 21: Various advanced topicsChapter 22: Quantitative Genetics (very basic single locus regression as an intro)Chapter 23: Population and Evolutionary Genetics

Book translates complex genetic concepts (hybrid crosses, inheritance, etc.) into easy to read figures and tables. Helped simplify what I thought were going to be difficult topics to learn. A textbook I will likely keep for my own knowledge rather than sell once the class is over.

I used this with my genetics class over the summer. The information is very clear and well organized. I found it incredibly useful. The inserts on real-world issues in genetics were very interesting as well.However, sometimes this book is quirky in an odd way. For example, one of the

chapter introductions refers to Helicobacter pylori as a 'sexy bacterium.' I'm not kidding. It's good for a laugh, but what were the authors thinking?! Nonetheless it has no effect on the material in the text, and thus I would recommend it for a genetics class.

I have this book in PDF format. I ordered the newer 3rd edition and after a quick review of the 2nd edition pdf and the 3rd edition book to compare information about VNTR's/microsattelites I ordered this 2nd version in hard copy. This book really is a gem. I took Genetics with the book Human Heredity (not suggested for the detail minded) and find this 2nd edition would have been far more helpful. The pictures, charts and figures are outstanding for visual learners. I am not sure what the previous reviewers issue is but this book is really great, especially for the current going prices starting at 6$. This book can't be beat if you need refreshing or need extreme detail to understand big picture concepts. Highly recommended!

For undergrads looking for a book that is simple with clarity, and yet adequately covers the material for intro to genetics, I would highly recommend this book. I use the 3rd edition and it is much better than Hartl's Essential Genetics(which covers unnecessary material and writes in a complicated manner to describe a simple concept). The only complaint I have is that I find the population genetics part lacking, but everything else has been great with stuff covered in my class.

Hello, I am an engineer and taught myself molecular genetics from this book. It is good and explains everything very well.I used both the 2nd and 3rd editions. I would say the 3rd is better, although the 2nd "technically" has the same information.

Surprisingly, this book doesn't make you feel bogged down with an overwhelming amount enzymes, gene names, and otherwise esoteric terms. Complex ideas are explained without using overly-technical figures of speech (although there is plenty detail for those looking for it, this book focuses mainly on learning the concepts) in a way that allows you to sit down and read the book without having to re-read every sentence 10 times because every other word is a proper noun of some sort.Overall, its a very well written and highly informative book that covers a lot of ground. Recommendable.

This is a great book for a college level Genetics class. It builds ideas, and presents them in a concise manner. I am pretty sure the new edition only has a few new graphs and tables compared

to the old edition.

Genetics: A Conceptual Approach, 4th Edition Essentials of Genetics Plus MasteringGenetics with eText -- Access Card Package (9th Edition) (Klug et al. Genetics Series) Thompson & Thompson Genetics in Medicine: With STUDENT CONSULT Online Access, 7e (Thompson and Thompson Genetics in Medicine) Medical Genetics: With STUDENT CONSULT Online Access, 4e (MEDICAL GENETICS (JORDE)) Emery's Elements of Medical Genetics: With STUDENT CONSULT Online Access, 14e (Turnpenny, Emery's Elements of Medical Genetics) The Conceptual Foundations of the Statistical Approach in Mechanics (Dover Books on Physics) Conceptual Art A&I (Art and Ideas) A Conceptual Guide to OpenOffice.org 2 for Windows and Linux Practical Guide to SAP ABAP: Part1: Conceptual Design, Development, Debugging The Poetics of Information Overload: From Gertrude Stein to Conceptual Writing From Metaphysics to Ethics: A Defence of Conceptual Analysis Conceptual Physics : The High School Physics Program Conceptual Foundations of Occupational Therapy Practice Integrative Health Promotion: Conceptual Bases For Nursing Practice Knowledge: Aspects of Conceptual Art Loving Yusuf: Conceptual Travels from Present to Past (Afterlives of the Bible) Concepts of Genetics, Books a la Carte Edition (11th Edition) Biochemistry and Genetics: Pretest Self-Assessment and Review, Fourth Edition (PreTest Basic Science) Schaum's Outline of Genetics, Fifth Edition (Schaum's Outlines) Human Molecular Genetics, Fourth Edition