

Resource Database 2024-04-01

Monday, April 1, 2024 4:16 PM

FIELD	SUBJECT	TOPIC	SUBTOPICS	PRINCIPAL RESOURCES	SUPPORTING RESOURCES	NOTES	
Systems Science	Complex Systems			John H. Holland Complexity: a very short introduction			
				Melanie Mitchell Complexity: a guided tour			
				Allen B. Downey Think Complexity: complexity science and computational modeling			
				Robert B. Northrup Introduction to Complexity and Complex Systems ch 01: Introduction to Complexity and Complex Systems ch 02: Introduction to Large Linear Systems			
			Networks		M.E.J. Newman Networks: an introduction		
				Queueing Networks	Edward D. Lazowska Quantitative System Performance: computer system analysis using queueing network models ch 01-04 media: web: https://homes.cs.washington.edu/~lazowska/qsp/		
				System Dynamics	Jay W. Forrester Principles of Systems.: text and workbook chapters 1 through 10 media: pdf		
		Synchronization	Steven Strogatz SYNC: the emerging science of spontaneous order				
	Complex Adaptive Systems			John H. Holland Adaptation in Natural and Artificial Systems: an introductory analysis with applications to biology, control, and artificial intelligence			
				John H. Holland Signals and Boundaries: building blocks for complex adaptive systems			
Mathematics	Overview			Steven Strogatz The Joy of X: a guided tour of math from one to infinity	George Lakoff Where Mathematics Comes From: how the embodied mind brings mathematics into being		
					Joseph Mazur Enlightening Symbols: a short history of mathematical notation and its hidden powers		
					Keith Devlin Introduction to Mathematical Thinking		
			Studying		Lara Alcock How to Study as a Mathematics Major		
		Logic	Inductive Logic		Patrick J. Hurley Logic: a concise introduction, 12 ed. Part III: Inductive Logic		
		Analysis	Real Analysis		Lara Alcock How to Think About Analysis		
			Complex Analysis		Kwong-Tin Tang Mathematical Methods for Engineers and Scientists 1: complex analysis and Linear Algebra media: pdf		
		Linear Algebra			Mike X. Cohen Linear Algebra: theory, intuition, code	Philip N. Klein Coding the Matrix: linear algebra through computer science applications	
					Paul Orland Math for Programmers: 3D graphics, machine learning, and simulations with Python ch 01: Vectors and graphics	Marc Peter Deisenroth Mathematics for Machine Learning Ch 01: Introduction and Motivation Ch 02: Linear Algebra	
						Kwong-Tin Tang Mathematical Methods for Engineers and Scientists 1: complex analysis and Linear Algebra media: pdf	

	Discrete Mathematics			Bernard Kolman Discrete Mathematical Structures, 6 ed.	Arthur T. Benjamin Discrete Mathematics: course guidebook media: video CD, The Great Courses	
	Calculus			Michael Spivak Calculus, 4 ed.	Steven Strogatz Infinite Powers: how calculus reveals the secrets of the universe	
				Paul Orland Math for Programmers: 3D graphics, machine learning, and simulations with Python ch 02: Calculus and Physical Simulation		
		Differential Calculus		William E. Boyce Elementary Differential Equations and Boundary Value Problems, 9 ed.		
				Brian R. Hunt Differential Equations with MATLAB, 2 ed.		
				Anil G. Ladde An Introduction to Differential Equations: deterministic modeling, methods and analysis		
				Anil G. Ladde An Introduction to Differential Equations: stochastic modeling, methods and analysis		
	Numerical Analysis			Timothy Sauer Numerical Analysis, 3 ed.		
	Numerical Methods			Steven C. Chapra Numerical Methods for Engineers, 7 ed.		
				Ronald Mak The Java Programmer's Guide to Numerical Computing		
				Mark Newman Computational Physics: revised and expanded		
	Probability			Joseph K. Blitzstein Introduction to Probability		
	Statistics	Classical		Lyman Ott An Introduction to Statistical Methods and Data Analysis, 1 ed.	Jordan Ellenberg How Not To Be Wrong: the power of mathematical thinking	Ott's first edition is preferable because it includes vector notation easily implemented in MATLAB
				Sam Kash Kachigan Multivariate Statistical Analysis: a conceptual introduction, 2 ed.	Sam Kash Kachigan Statistical Analysis: an interdisciplinary introduction to univariate & multivariate methods	
		Bayesian Data Analysis		James V Stone Bayes' Rule: a tutorial introduction to Bayesian Analysis		
				John K. Kruschke Doing Bayesian Data Analysis: a tutorial with R and Bugs		
		Causal Inference		Judea Pearl Causal Inference in Statistics: a primer		
				Judea Pearl Causality: models, reasoning and inference, 2 ed.		
				Judea Pearl Probabilistic Reasoning in Intelligent Systems: networks of plausible inference, rev. 2nd printing		
		Inductive Reasoning		John H. Holland Induction: processes of inference, learning, and discovery		
		Computational		Norman Matloff The Art of R Programming: a tour of statistical software design		Includes downloadable reference to R software
	Number Theory			Marty Lewinter Elementary Number Theory with Programming		
	Graph Theory			Arthur Benjamin The Fascinating World of Graph Theory		
				Frank Harary Graph Theory		
		Networks		Mark E. Newman Networks: an introduction		
	Advanced Mathematics			Francis J. Flanigan Linear and Nonlinear Functions		
		Complex Variables		Gino Moretti		

				Functions of a Complex Variable		
				Mark Newman Computational Physic: revised and expanded	Thomas A. Garrity All the Math You Missed: but need to know for graduate school	
					Mary L. Boas Mathematical Methods in the Physical Sciences, 3 ed.	
				Francis B. Hildebrand Advanced Calculus for Applications		
			Quaternions	John Vince Quaternions for Computer Graphics		
		Vector Analysis		Paul Orland Math for Programmers	H. M. Schey div, grad, curl, and all that: an informal text on vector calculus	
			Tensors	Daniel Fleisch A Student's Guide to Vectors and Tensors		
				Francois Chollet Deep Learning with Python		
		Machine Learning		Marc Peter Deisenroth Mathematics for Machine Learning		
	Estimation Theory			Sanjoy Mahajan Street-Fighting Mathematics: the art of educated guessing and opportunistic problem solving		
				Benjamin Kuipers Qualitative Reasoning: modeling and simulation with incomplete knowledge		
	Computational Mathematics			Mark Newman Computational Physics: revised & expanded ch 07 Fourier transforms ch 08 Ordinary differential equations ch 09: Partial differential equations ch 10: Random processes and Monte Carlo methods ch 11: Using what you have learned	Amit Saha Doing Math with Python: use programming to explore algebra, statistics, calculus, and more!	
				Bruce E. Shapiro Scientific Computation: Python 3 hacking for math junkies, 4 ed.		
Computer Science	Development Tools	IDEs	Visual Studio Code	Microsoft Visual Studio Code media: web: https://visualstudio.microsoft.com/#vscode-section		
				Real Python media: web: RealPython.com		
		Command Prompt Window		Brian Knittel Guide to Scripting, Automation, and Command Line Tools		
		Jupyter Notebook		April Speight Visual Studio Code: for Python Programmers ch 07: Jupyter Notebook		
	Java Programming Language	Development Environment		Joel Murach Murach's Java Programming, 6 ed. ch 01: An Introduction to Java: an introduction to Java development		See the wib "Methodology" on the MCS website for a complete description of how to set up the Java development environment
		Introduction		Robert Sedgewick Computer Science: an interdisciplinary approach ch 01: Elements of Programming ch 02: Functions and Modules ch 03: Object Oriented Programming ch 04: Algorithms and Data Structures	Robert Sedgewick Introduction to Programming in Java	The first four chapters of "Computer Science ..." comprise the entire contents of "Introduction to Programming in Java"
				Joel Murach Murach's Java Programming, 6 ed.	Cay S. Horstmann Core Java for the Impatient. 3 ed.	
					Cay S. Horstmann Core Java: Volume I—Fundamentals, 11 ed.	

		Modules		Cay S. Horstmann Core Java for the Impatient. 3 ed. ch 15: The Java platform module system		
		Numerical Computing		Ronald Mak Java Number Cruncher: the Java programmer's guide to numerical computing		
		Network Programming		Elliote Rusty Harold Java Network Programming		
		Advanced Java Programming	Lambdas, Streams and Functional Programming	Raoul-Gabriel Urma Java 8 In Action	Cay S. Horstmann Core Java: Volume II—Advanced Features, 11 ed.	
					Joel Murach Murach's Java Programming, 6 ed. Ch 16: How to work with Lambda expressions and streams	
				Venkat Subramaniam Functional Programming in Java		
			Multithreading	Maurice Naftalin Mastering Lambdas: Java programming in a multicore world		
	Python Programming Language	Development Environment		David Amos Python Basics: a practical Introduction to Python 3, 4 ed. ch 01: Introduction ch 02: Setting up Python ch 11: Modules and packages ch 13: Installing packages with "pip"	Michael Urban Murach's Python Programming, 2 ed.	See the web "Methodology" on the MCS website for a complete description of how to set up the Python development environment
		Overview		Bruce Shapiro Scientific Computation: Python 3 hacking for math junkies Part I: Getting Started ch 01 - 09:	Charles Severance Python for Everybody: exploring data in Python3	
		Introduction		Robert Sedgewick Introduction to Programming in Python ch 01: Elements of programming ch 02: Functions and modules ch 03: Object Oriented programming ch 04: Algorithms and data structures		
				David Amos Python Basics: a practical Introduction to Python 3, 4 ed. media: book, web: tutorial: https://realpython.com/		Read the book before watching the tutorial
				Real Python Tutorials media: web: https://realpython.com/		
				Mark Newman Computational Physics: revised and expanded Ch 01: Introduction Ch 02: Python programming for physicists Ch 03: Graphics and visualization Ch 04: Accuracy and speed		
		Object Oriented Programming		Steven F. Lott Python Object Oriented Programming: build robust and maintainable object-oriented Python applications and libraries, 4 ed,	David Amos Python Basics: A Practical Introduction to Python 3 ch 10: Object Oriented Programming (OOP)	Lott's book is a comprehensive treatment. Chapter treatments are far too brief.
		Advanced Python Programming	Lambdas, Streams and Functional Programming	Real Python media: web: https://realpython.com/		
			Multithreading	Real Python media: web: https://realpython.com/		
			Physical Modeling	Philip Nelson A Student's Guide to Python for Physical Modeling, 2 ed.		
			Data Science	Charles Severance Python for Everybody: exploring data in Python 3	Ian Eyre Using Python for Data Analysis media: web: https://realpython.com/python-for-data-analysis/	
	JavaScript Programming			Mary Delamater Murach's JavaScript and jQuery, 4 ed.	Cay S. Horstmann Modern JavaScript for the Impatient	

	Language					
	MATLAB			MathWorks MATLAB media: web https://www.mathworks.com/products/matlab.html		
	R			Norman Matloff The Art of R Programming: a tour of statistical software design		
	Algorithms			Robert Sedgewick Algorithms, 4ed		
		Graphs		Robert Sedgewick Algorithms, 4 ed. ch 04: Graphs	Robert Sedgewick Algorithms in Java, 3 ed. Part 5: Graph Algorithms	
		Networks		Allen B. Downey Think Complexity: complexity science and computational modeling ch 01: Complexity Science ch 02: Graphs ch 03: Small World Graphs ch 04: Scale Free Networks	M.E.J. Newman Networks: an introduction	
	Numerical Computing			Ronald Mak The Java Programmer's Guide to Numerical Computing		
	Machine Learning			Cao Xiao Introduction to Deep Learning for Healthcare		
				Ian Goodfellow Deep Learning		
				Tom M. Mitchell Machine Learning		
		Neural Networks	Deep Learning	Francois Chollet Deep Learning with Python		Probably the best intro to deep learning out there
		Genetic Algorithms		David E. Goldberg Genetic Algorithms: in search, optimization, & Machine Learning		
	Program Design			Russ Miles Learning UML 2.0	Martin Fowler UML Distilled: applying the standard object modeling language	You need read only the sections dealing with classes and objects
				Steven John Metsker Design Patterns Java Workbook		
	Website Development			Zak Ruvalcaba Murach's HTML and CSS, 5 ed.		
				Mary Delamater Murach's JavaScript and jQuery, 4 ed.		
	Operating Systems	Windows	User Interface	Mike Wang Windows 11: tips and tricks to master Microsoft's new operating system		
				Ed Bott Windows 11 Inside Out		
			Internals	Pavel Yosifovich Windows Internals Part 1: system architecture, processes, threads, memory management, and more, 7ed.		
				Andrea Allievi Windows Internals Part2: system architecture, processes, threads, memory management, and more, 7ed.		
	Security			Michael Goodrich Introduction to Computer Security		
	Quantum Computing			Chris Bernhardt Quantum Computing for Everyone		
information Science	Introduction			Luciano Floridi Information: a very short introduction		
				David G. Luenberger Information Science		
				James V. Stone Information Theory: a tutorial introduction		
	Informatics			Charles Severance Python for Everybody: exploring data in Python3	Ian Eyre Using Python for Data Analysis	

					media: https://realpython.com/
				Steven L. Brunton Data Driven Science and Engineering, 2 ed.	
	Decision Theory			Charles A. Holloway Decision Making Under Uncertainty: models and choices	
		Risk		Allison Schragger An Economist Walks Into A Brothel	
Natural Sciences	Biology			Stephen Nowicki Biology: the science of life media: cd: video: The Great Courses	Jane B. Reece Campbell Biology, 10 ed.
		Life		Erwin Schrödinger What is Life?: the physical aspect of the living cell	
				Paul Nurse What is Life?: five great ideas in biology	
				Andreas Wagner Paradoxical Life: meaning, matter, and the power of human choice	
				Sara Imari Walker From Matter to Life: information and causality	
				Manfred Eigen Steps Towards Life: a perspective on evolution	
				Peter M. Hoffmann Life's Ratchet: how molecular machines extract order from chaos	
				Eberhard O. Voit The Inner Workings of Life: vignettes in system biology	
				Charles S. Cockell The Equations of Life: how physics shapes evolution	
				David S. Goodsell The Machinery of Life	
				Paul Davies The Demon in the machine: how hidden webs of information are solving the mystery of life	
				Thomas Lin, ed. Alice and Bob Meet the Wall of Fire: the biggest ideas in science from Quanta Sec IV What is Life?	
		Cell Biology		Rob Phillips Physical Biology of the Cell, 2 ed.	
				Ron Milo, Rob Phillips Cell Biology: by the numbers	
				Bruce Alberts Essential Cell Biology, 6 ed.	Terence Allen The Cell: a very short introduction
				Siddhartha Mukherjee The Song of the Cell	
			Stem Cells		Jonathan Stack Stem Cells: a very short introduction
			Cell Signaling	Wendell Lim Cell Signaling: principles and mechanisms	
				Friedrich Marks Cellular Signal Processing: an introduction to the molecular mechanisms of signal transduction, 2 ed.	
				James Ferrell Systems Biology of Cell Signaling: recurring themes and quantitative models	
		Plant Biology		Peter H. Raven Biology of Plants, 7 ed.	
				Daniel Chamovitz What a Plant Knows: a field guide to the senses	
		Human Biosystem	Anatomy & Physiology	Frederic H. Martini Anatomy & Physiology, 9 ed	
				Alan Jasanoff The Biological Mind: how brain, body, and environment collaborate to make us who we are	
			Musculo-skeletal System	Benno M. Nigg Biomechanics of the Musculo-skeletal System 3 ed.	
				Jack H. Wilmore	

				Physiology of Sport and Exercise, 4 ed.		
			Aging	Roger B. McDonald Biology of Aging		
			Nutrition	Sareen S. Gropper Advanced Nutrition and Human Metabolism, 5 ed.		
			Fitness	Marilyn Moffat Age-Defying Fitness		
				Jack H. Willmore Physiology of Sport and Exercise, 4 ed.		
		Microbiology		Gerard J. Tortora Microbiology: an introduction, 12 ed.		
		Virology		Dorothy H. Crawford Viruses: a very short introduction		
				Jane Flint Principles of Virology: volume I molecular biology, 4 ed.	Alan J. Cann Principles of molecular virology, 6 ed.	
				Jane Flint Principles of Virology, volume II pathogenesis and control, 4 ed.		
		Immunology		Paul Klenerman The Immune System: a very short introduction		
				Judith A. Owen Kuby Immunology, 7 ed.		Print Edition 2013
				Sharon Stranford Kuby Immunology, 8 ed.		Digital Edition 2023 Includes COVID-19
			Biological	Donald T. Haynie Biological Thermodynamics		
		Molecular Biology		David P. Clark Molecular Biology		
				Bruce Alberts Molecular Biology of The Cell, 6 ed.	Aysha Divan Molecular Biology: a very short introduction	
				Bruce Alberts Molecular Biology of The Cell, 8 ed.		
				John Kuriyan The Molecules of Life: physical and chemical principals		
			Data Analysis Methods, Historical Perspective	Michael S. Waterman Introduction to Computational Biology: maps, sequences and genomes		
		Proteins		Alan Fersht Structure and Mechanism in Protein Science, reprint 2017 media: digital: Kindle		
		Genetics		Benjamin A. Pierce Genetics: a conceptual approach, 7 ed.	Jonathan Slack Genes: a very short introduction	look for new 8 ed. of Pierce
			Genetic Analysis	Introduction to Genetic Analysis Anthony J.F. Griffiths, 12 ed.		
			Gene Regulatory Networks	Hamid Bolouri, ed. Computational Modeling of Gene Regulatory Networks		
			Genomics	John Archibald Genomics: a very short introduction		
			Medical	Lynn B. Jorde Medical Genetics, 6 ed.		
			Epigenetics	Nessa Carey The Epigenetics Revolution: how modern biology is rewriting our understanding of genetics disease, and inheritance		
		Evolution		The Annotated Origin: a facsimile of the first edition of On the Origin of Species James T. Costa, Charles Darwin		
				Verne Grant The Origin of Adaptations	Adaptation Bruce Wallace	
				Sean B. Carroll The Serengeti Rules: the quest to discover how life works and why it matters		
				Andreas Wagner Arrival of the Fittest: solving evolution's greatest puzzle		

				Andreas Wagner The Origins of Evolutionary Innovations: a theory of transformative change in living systems	
				Martin A Nowak Evolutionary Dynamics: exploring the equations of life	
				David Quammen The Tangled Tree: a radical new history of life	
			Developmental Biology	Scott F. Gilbert Developmental Biology, 10 ed.	
				Alfonso Martinez Arias Principles of Development, 6 ed.	
				Alfonso Martinez Arias The Master Builder: how the new science of the cell is rewriting the story of life	
			Epigenetics	Nessa Carey The Epigenetics Revolution: how modern biology is rewriting our understanding of genetics, disease, and inheritance	
			Paleontology	Kermit Pattison Fossil Men: the quest for the oldest skeleton and the origins of humankind	
		Quantum Biology		Eudenilson L. Albuquerque Quantum Chemistry Simulation of Biological Molecules	
				JohnJoe McFadden Life on the Edge: the coming of age of quantum biology	
		Biophysics		Thomas P. Norland Quantitative Understanding of Biosystems: an introduction to biophysics, 2 ed.	
				Philip Nelson Biological Physics: energy, information, life	
				Charles S. Cockell The Equations of Life: how physics shapes evolution	
				Martin A Nowak Evolutionary Dynamics: exploring the equations of life	
			Biofluid Mechanics	David A. Rubenstein Biofluid Mechanics: an introduction to fluid mechanics, macrocirculation, and microcirculation, 2 ed.	
		Systems Biology		Uri Alon An Introduction to Systems Biology: design principles of biological circuits	
				Eberhard O. Voit A First Course in Systems Biology	Eberhard O. Voit The Inner Workings of Life: Vignettes in Systems Biology
				Pablo A. Iglesias, , Brian P. Ingalls, ed. Control Theory and Systems Biology	
				Carlo Cosentino Feedback Control in Systems Biology	
		Computational Biology		Brian P. Ingalls Mathematical Modeling in Systems Biology	
				Philip Nelson Physical Models of Living Systems	
				Michael S. Waterman Introduction to Computational Biology: maps, sequences and genomes	
				Kim Sneppen Models of Life: Dynamics and regulation in biological systems	
				Andreas Kremling Systems Biology: mathematical modeling and modeling analysis	
				Pablo A. Iglesias, , Brian P. Ingalls, ed. Control Theory and Systems Biology	
				Eudenilson L. Albuquerque Quantum Chemistry Simulation of Biological Molecules	
				Robert B. Northrup	

				Introduction to Complexity and Complex Systems	
			Gene Regulatory Networks	Hamid Bolouri, ed. Computational Modeling of Gene Regulatory Networks	
		Biotechnology		David P. Clark Biotechnology, 2 ed.	
				Bernard R. Glick Molecular Biotechnology: principles and applications of recombinant DNA, 6 ed.	
	Chemistry	Inorganic		Peter Atkins Chemical Principals: the quest for Insight, 5th ed.	Peter Atkins Chemistry: a very short introduction
				Ron B. Davis, Jr. Chemistry and Our Universe: how it all works media: video CD: The Great Courses	
		Organic		William Brown Introduction to Organic Chemistry, 4 ed.	Graham Philips Organic Chemistry: a very short introduction
				Ron B. Davis Jr. Foundations of Organic Chemistry Media: video CD: The Great courses	
		Biochemistry		Reginald H. Garrett Biochemistry	Mark Lorch Biochemistry: a very short introduction
				Kevin Ahern Biochemistry and Molecular Biology media: video CD: The Great Courses	
		Physical Chemistry		Peter Atkins Physical Chemistry: thermodynamics, structure, and change	Peter Atkins Physical Chemistry: a very short introduction
		Quantum Chemistry		Attila Szabo Modern Quantum Chemistry: introduction to advanced electronic structure theory	
			Biological	Eudenilson L. Albuquerque Quantum Chemistry Simulation of Biological Molecules	
	Physics	Mechanics		John R. Taylor Classical Mechanics	
			Harmonic Motion	Walter Fox Smith Waves and Oscillations: a prelude to quantum mechanics	
			Fluid Mechanics	Ron Darby Chemical Engineering Fluid Mechanics: revised and expanded, 2 ed.	
				David A. Rubenstein Biofluid Mechanics: an introduction to fluid mechanics, macrocirculation, and microcirculation, 2 ed.	
		Thermodynamics		Peter Atkins The Laws of Thermodynamics: a very short introduction	
			Biological	Donald T. Haynie Biological Thermodynamics	
			Statistical	Ken A. Dill Molecular Driving forces: statistical thermodynamics in biology, chemistry, physics, and nanoscience, 2 ed.	
		Electromagnetism		Dale Corson Introduction to Electromagnetic Fields and Waves	
			Light	Philip Nelson From Photon to Neuron: light, imaging, vision	
		Quantum Mechanics		David J. Griffiths Introduction to Quantum Mechanics. 3 ed.	
Engineering	Electrical	Linear Circuit Theory		Steven T. Karris Circuit Analysis I with MATLAB applications	Jiri Vlach Linear Circuit Theory: matrices in computer applications
		Signals and Systems		Luis F. Chaparro Signals and Systems Using MATLAB	
		Feedback Control Systems		Joseph J. DiStefano Feedback and Control Systems, 3 ed.	
		Systems Modeling	Modeling Complex Systems	Michael R. Goodman Study Notes in System Dynamics	

				Allen B. Downey Think Complexity: complexity science and computational modeling	
				Hiroki Sayama Introduction to the Modeling and Analysis of Complex Systems	
				Brian P. Ingalls Mathematical Modeling in Systems Biology	
				John Marshall Atmosphere, Ocean, and Climate Dynamics: an introductory text	
				Allen B. Downey Modeling and Simulation in Python: an introduction for scientists and engineers	
		Discrete Event Modeling		Scientific and Engineering Software (SES) SES Workbench: creating models, release 3.2	
		Control Systems		Joseph J. DiStefano Feedback and Control Systems, 3 ed.	
		Deterministic Systems Modeling		Joseph DiStefano Dynamic Systems Biology Modeling and Simulation	
		Stochastic Systems Modeling		Daphne Koller Probabilistic Graphical Models: principles and techniques	
		Complex Adaptive Systems Modeling		John H. Holland Signals and Boundaries: building blocks for complex adaptive systems	
	Mathematical Modeling			Frank R. Giordano A First Course in Mathematical Modeling, 5 ed.	
				Steven H. Strogatz Nonlinear Dynamics and Chaos: with applications to physics, biology, chemistry, and engineering, 2ed.	Mitchal Dichter Student Solutions Manual Nonlinear Dynamics and Chaos: with applications to physics, biology, chemistry, and engineering, 2 ed.
				Benoit B. Mandelbrot The Fractal Geometry of Nature	
	Qualitative Modeling			Benjamin Kuipers Qualitative Reasoning: modeling and simulation with incomplete knowledge	
				Daniel McNeill Fuzzy Logic: the discovery of a revolutionary computer technology and how it is changing our world	
				Kazuo Tanaka An Introduction to Fuzzy Logic for Practical Applications	
	Biomedical Engineering			Robert B. Northrop Signals and Systems in Biomedical Engineering, 2 ed.	
		Computational Modeling		Boris Ja. Kogan Introduction to Computational Cardiology: mathematical modeling and computer simulation	
				Vittorio Cristini Multiscale Modeling of Cancer: an integrated experimental and mathematical modeling approach	
			Machine Learning	Cao Xiao Introduction to Deep Learning for Healthcare	
Health Science	Health Maintenance	Nutrition	Foods	Jonny Bowden The 150 Healthiest Foods On Earth	
				George Mateljan The World's Healthiest Foods, 2 ed.	
			Food Preparation	Jonny Bowden The Healthiest Meals On Earth	
				George Mateljan The World's Healthiest Foods, 2 ed.	
			Advanced Nutrition	Sareen S. Gropper Advanced Nutrition and Human Metabolism	
	Aging			Roger B. McDonald Biology of Aging	
		Anti-Aging		Andrew Steele Ageless: the new science of getting older without	

				getting old	
		Fitness	Exercise	Marilyn Moffat Age-Defying Fitness	
Medical Science	Systems Approach			Robert B. Northrup Introduction to Complexity and Complex System	
	Disorders	Neuromuscular		Eva L. Ayatems Feldman Atlas of Neuromuscular Diseases, 3 ed.	
			Sarcopenia	Kunihiro Sakuma, ed. Sarcopenia: Molecular Mechanism and Treatment Strategies	
				Alfonso J. Cruz-Jentoft, ed. Sarcopenia, 2 ed.	
		Rheumatic Diseases		John H. Klippel, ed. Primer on the Rheumatic Diseases, 13 ed.	
		Cancer		Robert A. Weinberg The Biology of Cancer, 2 ed.	
				Lauren Pecorino Molecular Biology of Cancer: mechanisms, targets, and therapeutics	
		Genetic		Lynn B. Jorde Medical Genetics, 6 ed.	
	Diagnosis			Lisa Sanders Diagnosis: solving the most baffling medical mysteries	Lisa Sanders Diagnosis: solving the most baffling medical mysteries media: TV: Netflix
				Eric Topol The Patient Will See You Now: the future of medicine is in your hands	
		AI Tools		Cao Xiao Introduction to Deep Learning for Healthcare	
	Therapeutics			Joseph Tieri Reverse Sarcopenia	
				Carolyn Kisner Therapeutic Exercise: foundations and techniques	
				Scott Hogan Built From Broken: a science based guide to healing painful joints, preventing injuries, and rebuilding your body	
				Lauren Pecorino Molecular Biology of Cancer: mechanisms, targets, and therapeutics	
				Jonny Bowden The Most Effective Natural Cures On Earth	
		Healthcare		Siddhartha Mukherjee The Song of the Cell" an exploration of medicine and the new human	
				Joseph Loscalzo, ed. Network Medicine: complex systems in human disease and therapeutics	
				Cao Xiao Introduction to Deep Learning for Healthcare	
		Drug Design		Raymond A. Hunt, ed. Rare Disease Drug Development	
				K. Anand Solomon Molecular Modeling and Drug Design	
				Lynn B. Jorde Medical Genetics	
		Fitness	Exercise	Carolyn Kisner Therapeutic Exercise, 7 ed.	
				Marilyn Moffat Age-Defying Fitness	
		Nutrition		David L. Katz Nutrition in Clinical Practice, 3 ed.	
				Chad Cox, Ed. Clinical Nutrition and Aging: Sarcopenia and Muscle Metabolism	
Social Sciences	Human Behavior	Education		David Epstein Range: why generalists triumph in a specialized world	
			Learning	John H. Holland	

				Induction: processes of inference, learning, and discovery		
				Leslie Valiant Probably Approximately Correct		
				Richard M. Felder Teaching and Learning STEM, 2 ed.		
		Psychology		B. F. Skinner Science and Human Behavior		
				Edward O. Wilson On Human Nature		
		Intelligence		Daniel Goleman Emotional Intelligence: why it can matter more than IQ		
				Daniel Goleman Social Intelligence: the new science of human relationships		
		Creativity		Mihaly Csikszentmihalyi Creativity: flow and the psychology of discovery and invention		
		Curiosity		Mario Livio Why: what makes us curious		
		Persuasion		Lee Hartley Carter Persuasion: convincing others when facts don't seem to matter		
				Warren G. Bennis The Planning of Change		
	Economics			Alfred Mill Economics 101		
		Finance		Javier Estrada Finance in a Nutshell: a no-nonsense companion to the tools and techniques of finance		
		Risk		Allison Schragger An Economist Walks Into A Brothel		
	Policy Analysis			David L. Weimer Policy Analysis, 5 ed.		