

MCS Ontology: Human Biosystem

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MCS Studies
Human Biosystem
Primary Collections
systems science
mathematics
computer science
information science
natural sciences
physics
chemistry
biology
engineering
biosystems
human biosystem
social sciences

Note

The number and nature of *primary collections* selected for an MCS ontology is a function of the system being studied. The choices are dependent on the complexity of the system, and the scales of resolution required.

Reading the table below

Resource entries take up at most two columns per row in the table below. The position of these columns depends on the definition (path length) of the collection in which the resource appears.

The first cell of a resource column contains the principal resource. If there is an entry in the following cell it is considered to be a supporting resource. Additional supporting resources appear below the first supporting resource in the same column.

A resource may appear in more than one collection. A resource may also be considered either as principal or supporting depending on the context.

MCS Ontology Human Biosystem Primary Collections						Progress: Principal Resource (%)	Progress: Supporting Resource (%)
systems science							
	systems thinking	design patterns	Jay W. Forrester Principles of Systems.: text and workbook media: digital format: pdf location: library location: web https://systemdynamics.org/product/principles-of-systems-1968/				
		complexity	Melanie Mitchell Complexity: a guided tour				
			Allen B. Downey Think Complexity: complexity science and computational modeling				
			Robert B. Northrop Introduction to Complexity and Complex systems ch 01: Introduction to Complexity and Complex Systems ch 02: Introduction to Large Linear Systems				
			complex adaptive systems	John H. Holland Signals and Boundaries: Building Blocks for Complex Adaptive Systems			
	signals	Aydin Akin, Luis F. Chaparro Signals and Systems Using MATLAB, 4 ed.	Maxwell Vector MATLAB fundamentals for Signals and Systems note: the author's surname is quite apropos.				
			Jiri Vlach Linear Circuit Theory: Matrices in Computer Applications note: linear circuit theory is usually a prerequisite for the study of signals and systems				
		John H. Holland Signals and Boundaries: Building Blocks for Complex Adaptive Systems					

mathematics							
	review	Peter Collier A Most Incomprehensible Thing: notes towards a very gentle introduction to the mathematics of relativity, 2nd printing Introduction ch 01: Foundation Mathematics					
	analysis	Lara Alcock How to Think About Analysis					
		Jay Cummings Proofs: a long-form mathematics textbook					
		Jay Cummings Real Analysis: a long-form mathematics textbook, 2 ed	Michael Spivak Calculus, 4 ed. note: in the second edition preface even the author agrees that this book should be titled "An introduction to analysis"				
	linear algebra	vector analysis	CREI Vector Analysis: 1713 ch 01: Definitions and Fundamental Concepts ch 02: Vector Algebra ch 03: Other Coordinate Systems and Vector Transformations note: a rather quick but comprehensive introduction to these topics				
			graphics	John Vince Vector Analysis for Computer Graphics			
				Paul Orland Math for Programmers: Part I: Vectors and Graphics			
		theory	intermediate	Marc Peter Deisenroth Mathematics for Machine Learning: Part 1 Mathematical Foundations ch 01: Linear Algebra	Alexandr Draganov Linear Algebra: an easy way to learn key concepts		
				Grant Sanderson Essence of Linear Algebra media: digital format: video location: web url: Essence of linear algebra preview publisher: https://www.3blue1brown.com/	Gilbert Strang Introduction to Linear Algebra, 4 ed. media: digital location: library note: see companion lectures at; location: web url: https://ocw.mit.edu/courses/18-06-linear-algebra-spring-2010/video-galleries/video-lectures/ note: he's been teaching this a long time so he gives out some very informative approaches and examples		
			advanced	John H. Hubbard, Barbara Burke Hubbard Vector Calculus, Linear Algebra, and Differential Forms: a unified approach, 5 ed.	John H. Hubbard, Barbara Burke Hubbard Student Solution Manual Vector Calculus, Linear Algebra, and Differential Forms: a unified approach, 5 ed.		
					Sheldon Axler Linear Algebra Done Right, 4 ed. media: print media: digital format: pdf location: LIBRARY		
		computational	python based	Philip N. Klein Coding the Matrix: linear algebra through computer science applications	Mike X Cohen Linear Algebra: theory, intuition, code		

			matlab based	Maxwell Vector MATLAB Fundamentals for Engineers media: digital format: Kindle location: Kindle library	The MathWorks Mathematics: version 7 ch 01: Matrices and Linear Algebra		
			java based	Ronald Mak The Java Programmer's Guide to Numerical Computing Part III A Matrix Package			
				EJML.org media: digital format: HTML location: web URL: https://ejml.org/wiki/index.php?title=Main_Page note: install this package so that you can use it in your Java code that requires the use of linear algebra computation. This will be the primary framework when using Java to build models			
			julia based	Lee Phillips Practical Julia: a hands on introduction for scientific minds			
		problems	Seymour Lipschutz Linear Algebra: Schaum's outline series theory and problems				
	calculus	introduction	James Stewart Calculus: early transcendentals, 8 ed. ch 01-11, 14-15, 17 note: additional topics include differential equations, parametric equations and polar coordinates, infinite sequences and series, vectors and the geometry of space, vector functions, partial derivatives, multiple integrals, vector calculus, 2nd order difEQ,	Ramamurti Shankar Basic Training in Mathematics: a fitness program for science students c: select			
	differential equations	William E. Boyce Elementary Differential Equations and Boundary Value Problems, 9 ed.	Brian R. Hunt Differential Equations with MATLAB, 2 ed.				
	advanced calculus	CREI Advanced Calculus ch 1709: Systems of Differential Equations ch 1710: Complex Variables ch 1711: Laplace Transforms ch 1712: Fourier Transforms and Bessel Functions	Mary L. Boas Mathematical Methods in the Physical Sciences, 3 ed. ch: select				
	vector calculus	CREI Vector Analysis: :ch 05: ch 04: Vector Differential and Integral Calculus ch 05: Advanced Vector Calculus					
		James Stewart Calculus: early transcendentals, 8 ed. ch 12-13, 16	H.M. Schey div, grad, curl, and all that: an informal text on vector calculus, 4 ed.				
			Daniel Fleisch A Student's Guide to Vectors and tensors				
	complex variables	Gino Mortti Functions of a Complex Variable: emphasizes practical applications, using functions of a complex variable	Murray R. Spiegel Theory and Problems of Complex Variables: with an introduction to conformal mapping and its applications				

	tensors	Rutherford Aris Vectors, Tensors, and the Basic Equations of fluid Mechanics	Daniel Fleisch A Student's Guide to Vectors and Tensors				
	tensor calculus	Taha Sochi Tensor Calculus Made Simple media: digital format: Kindle location: Kindle library	Taha Sochi Solutions of Exercises of Tensor Calculus Made Simple media: digital format: Kindle location: Kindle library				
			Daniel Fleisch A Student's Guide to Vectors and Tensors				
	differential forms	Peter Collier A Beginner's Guide to Differential Forms	Peter Collier A Most Incomprehensible Thing: notes towards a very gentle introduction to the mathematics of relativity, 2nd printing ch 04: Introducing the Manifold				
		John H. Hubbard, Barbara Burke Hubbard Vector Calculus, Linear Algebra, and Differential Forms: a unified approach, 5 ed.	John H. Hubbard, Barbara Burke Hubbard Student Solution Manual Vector Calculus, Linear Algebra, and Differential Forms: a unified approach, 5 ed.				
		differential geometry	Taha Sochi Introduction to Differential Geometry of Space Curves and Surfaces media: digital format: Kindle location: Kindle library	Taha Sochi Solutions of Exercises of Introduction to Differential Geometry of Space Curves and Surfaces media: digital format: Kindle location: Kindle library			
			Gerald Jay Sussman Functional Differential Geometry media: digital format: pdf location: library				
	discrete mathematics	Bernard Kolman Discrete Mathematical Structures, 6 ed.	Allan M. Stavely Programming and Mathematical Thinking: a gentle introduction to discrete math featuring Python				
			Arthur T. Benjamin Discrete Mathematics: media: digital format: CD publisher: The Great Courses note: selected tracks				
		logic	Patrick J. Hurley A Concise Introduction to Logic, 12 ed.				
	probability	Joseph K. Blitzstein Introduction to Probability	Philip Nelson From Photon to Neuron: light, imaging, vision Prologue: Preliminaries				
		James V. Stone Bayes' Rule: a tutorial introduction to Bayesian analysis	Jack R. Benjamin Probability, Statistics and Decision for Civil Engineers				
	statistics	John K. Kruschke Doing Bayesian Data Analysis: a tutorial with R and Bugs	J				
	graph theory	Frank Harary Graph Theory	Arthur Benjamin The Fascinating World of Graph Theory				
	chaos	Stephen H. Strogatz Nonlinear Dynamics and Chaos: with applications to physics, biology, chemistry, and engineering	Mitchal Dichter Student Solutions Manual: nonlinear dynamics and chaos				
		oscillations	Chihiro Hayashi				

			Nonlinear Oscillations in Physical Systems				
	order	synchronization	Steven Strogatz Synch: the emerging science of spontaneous order				
	numerical methods	Ronald Mak The Java Programmer's Guide to Numerical Computing					
		Mark Newman Computational Physics: revised and expanded					
		Steven C. Chapra Numerical Methods for Engineers, 7 ed.	Timothy Sauer Numerical Analysis, 3 ed.				
computer science							
	java programming language	Cay S. Horstmann Core Java for the Impatient. 4 ed. note: his Core Java classics reduced to the absolute essentials.	Paul Deitel Java for programmers with Generative AI, 5 ed.				
			Cay S. Horstmann Core Java Volume I - Fundamentals, 11 ed.				
		Joel Murach Murach's Java Programming, 6 ed.	Jeanne Boyarsky OCP Oracle Certified Professional Java SE 11 Developer Complete Study Guide note: this guide gets straight to the point in a very accessible manner. Nice complement to Horstmann's "Impatient" style. media: digital format: Kindle location: Kindle library				
		advanced java programming	Raoul-Gabriel Urma Modern Java in Action				
			Ken Arnold The Java Programming Language, 4 ed.				
			multicore programming	Maurice Naftalin Mastering Lambdas: Java programming in a multicore world			
			functional programming	Venkat Subramaniam Functional Programming in Java: harnessing the power of Java 8 Lambda expressions			
		generative AI	Paul Deitel Java for programmers with Generative AI				
		algorithms	Robert Sedgewick Algorithms, 4 ed.				
		network programming	Elliott Rusty Harold Java Network Programming				
	python programming language	Allen Downey Think Python: how to think like a computer scientist					
		Ben Stephenson The Python Workbook: a brief introduction with exercises and solutions, 2 ed. note: Chapters are short, to the point, and organized by the command structure so you can easily reference Python's syntax.	Philip N. Klein Coding the Matrix: linear algebra through computer science applications sec 0.5: Lab: Introduction to Python: sets, lists, dictionaries, and comprehensions note: good complement for math applications				
		Charles Severance Python for Everybody: exploring data in Python 3					
		object oriented programming	Steven F. Lott Python Object Oriented				

			Programming: build robust and maintainable object-oriented Python applications and libraries, 4 ed.				
	julia programming language	Lee Phillips Practical Julia: a hands on introduction for scientific minds note: with applications including a significant discussion of plotting features					
		Erik Engheim Julia as a Second Language: general purpose programming with a taste of data science					
	r programming language	Norman Matloff The Art of R Programming: a tour of statistical software design					
	matlab	MathWorks Matlab Help Center media: digital format: HTML sec: MATLAB location: web url: https://www.mathworks.com/help/matlab/index.html?s_tid=hc_panel publisher: MathWorks	Maxwell Vector MATLAB Fundamentals for Engineering media: digital format: Kindel location: Kindel library				
	program design	uml	Russ Miles Learning UML 2.0: a pragmatic introduction to UML ch 04-06 note: class and object diagrams	Martin Fowler UML Distilled: applying the standard object modeling language			
			Grady Booch The Unified Modeling Language User Guide				
	graphics	John Vince Vector Analysis for Computer Graphics					
		excel	Microsoft Support Excel Help and Learning sec: Import and analyze media: digital format: HTML location: web url: https://support.microsoft.com/en-us/excel?utm_source=chatgpt.com publisher: Microsoft				
		matlab	MathWorks Matlab Help Center Graphics media: digital format: HTML sec: MATLAB location: web url: https://www.mathworks.com/help/matlab/index.html?s_tid=hc_panel publisher: MathWorks				
		python	Matplotlib.org Matplotlib: visualization with Python media: visual format: HTML location: web url: https://matplotlib.org/ publisher: Matplotlib development team	Paul Orland Math for Programmers Part I Vectors and Graphics			
		java	knowm,org XChart media: java code				

			format: print location: C:\Program Files \Java\jchart-3.8.8 source: https://knowm.org/open-source/jchart/?utm_source=chatgpt.com publisher: KNOWM				
		julia	Lee Phillips Practical Julia: a hands on introduction for scientific minds ch 04: The Plotting system				
	windows os	Pavel Yosifovich Windows Internals Part 1: system architecture processes, threads, memory management and more, 7 ed.					
information science	James V. Stone Information Theory: a tutorial introduction						
	David G. Luenberger Information Science						
	causality	Paul Davies The Demon in the Machine: how hidden webs of information are solving the mystery of life					
		Judea Pearl Causality: models, reasoning, and inference, 2 ed.					
		Sara Imari Walker, ed. From Matter to Life: information and causality					
	decision theory	Charles A. Holloway Decision Making Under Uncertainty: models and choices	Jack R. Benjamin Probability, Statistics and Decision for Civil Engineers				
	operations research	Frederick S. Hillier Operations Research note: selected chapters					
	analysis	Lara Alcock How to Think About Analysis					
		optimization	David G. Luenberger Optimization by Vector Space Methods				Optimization
			Philip E. Gill Practical Optimization				
natural sciences							
	physics	mechanics	Anders Malthe-Sørensen Elementary Mechanics Using Python: a modern course combining analytical and numerical techniques note: the same computations should also be done in Java				
			John R. Taylor Classical Mechanics	T.M. Helliwell Modern Classical Mechanics			
				Dare A. Wells Theory and Problems of Lagrangian Dynamics: Schaum's outline series			
			fluid mechanics	Rutherford Aris Vectors, Tensors, and the Basic Equations of fluid Mechanics			
				Ron Darby Chemical Engineering Fluid Mechanics, 2 ed.			
				David A. Rubenstein			

				Biofluid Mechanics: an introduction to fluid mechanics, macrocirculation, and microcirculation, 2 ed.			
			oscillations	Chihiro Hayashi Nonlinear Oscillations in Physical Systems			
		thermodynamics	M Scott Shell Thermodynamics and Statistical Mechanics	Michael M. Abbott Thermodynamics Theory and Problems: Schaum's outline series			
			statistical thermodynamics	Ken A. Dill Molecular Driving Forces: statistical thermodynamics in biology, chemistry, physics, and nanoscience, 2 ed.			
			biological thermodynamics	Donald T. Haynie Biological Thermodynamics			
		electromagnetism	Dale Corson and Paul Lorrain Introduction to Electromagnetic Field and Waves	David J. Griffiths Introduction to Electrodynamics, 4 ed. ch 01: Vector Analysis			
			light	Philip Nelson From Photon to Neuron: light, imaging, vision			
			electronics	Dennis F. Shaw An Introduction to Electronics			
		molecular physics	Ken A. Dill Molecular Driving Forces: statistical thermodynamics in biology, chemistry, physics, and nanoscience, 2 ed.				
		quantum mechanics	Walter Fox Smith Waves and Oscillations: a prelude to quantum mechanics				
			David J. Griffiths Introduction to Quantum Mechanics, 3 ed.				
	chemistry	Adran Dingle The Elements: a tour of the periodic table					
		inorganic	Peter Atkins Chemical Principles: the quest for Insight, 5th ed.	Ron B. Davis, Jr. Chemistry and Our Universe: how it all works media: video format: DVD publisher: The Great Courses			
			reaction kinetics	Michael J. Pilling Reaction Kinetics			
		organic	William Brown Introduction to Organic Chemistry, 4 ed.	Ron B. Davis, Jr. Foundations of Organic Chemistry media: video format: DVD publisher: The Great Courses			
		biochemistry	Reginald H. Garrett Biochemistry, 6 ed.	Kevin Ahern Biochemistry and Molecular Biology media: video format: DVD publisher: The Great Courses			
		physical chemistry	Peter Atkins Physical Chemistry: thermodynamics, structure, and change, 10 ed.				
		quantum chemistry	Attila Szabo Modern Quantum Chemistry: introduction to advanced electronic				

			structure theory				
	biology	Jane B. Reece Campbell Biology, 10 ed.					
		cell biology	Bruce Alberts Essential Cell Biology, 6 ed.	Bruce Alberts Molecular Biology of the Cell, 6 ed.		17/761=0.0223 2025-06-16	
			Rob Phillips, Ron Milo Cell Biology: by the numbers				
			physical biology	Rob Phillips Physical Biology of the Cell, 2 ed.			
			cell signaling	Friedrich Marks Cellular Signal Processing: an introduction to the molecular mechanisms of signal transduction, 2 ed.	Wendell Lim Cell Signaling: principles and mechanisms		
				James E. Ferrell Systems Biology of Cell Signaling: recurring themes and quantitative models			
			immunology	Judith A. Owen Kuby Immunology, 7 ed.			
		molecular biology	David P. Clark Molecular Biology, 3 ed.	Kevin Ahern Biochemistry and Molecular Biology media: video format: DVD publisher: The Great Courses			
			John Kuriyan The Molecules of Life: physical and chemical principles	David S. Goodsell The Machinery of Life, 2 ed.			
			proteins	Alan Fersht Structure and Mechanism in Protein Science: a guide to enzyme catalysis and protein folding media: digital format: pdf location: Kindle Library			
				Amit Kessel Introduction to Proteins: structure, function, and motion, 2 ed.			
			virology	Jane Flint Principles of Virology Volume I: Molecular Biology, 4 ed.			
				Alan J. Cann Principles of Molecular Virology, 6 ed.			
		genetics	Benjamin A. Pierce Genetics: a conceptual approach, 6 ed.				
			genetic analysis	Anthony J.F. Griffiths Introduction to Genetic Analysis, 12 ed.			
		epigenetics	Nessa Carey The Epigenetics Revolution: how modern biology is rewriting our understanding of genetics, disease, and inheritance				
		developmental biology	Scott F. Gilbert Developmental Biology, 10 ed.	Lewis Wolpert Principles of Development, 6 ed.			
		evolution	Andreas Wagner The Origins of Evolutionary Innovations: a theory of transformative change in living systems				
			computational	Allen B. Downey Think Complexity: complexity science and computational modeling			

				ch 06: Game of Life ch 11: Evolution			
				Martin A. Nowak Evolutionary Dynamics: exploring the equations of life			
		biotechnology	David P. Clark Biotechnology: the technological applications of genetics and genomics, 3 ed.				
			data analysis	Sorin Drăghici Statistics and Data Analysis for Microarrays Using R and Bioconductor			
engineering							
	conceptualization	Sanjoy Mahajan The Art of Insight in Science and Engineering: mastering complexity	Sanjoy Mahajan Street -Fighting Mathematics: the art of educated guessing and opportunistic problem solving				
		Richard W. Hamming The Art of Doing Science and Engineering, 4 ed.					
	mechanical	biofluids	David A. Rubenstein Biofluid Mechanics: an introduction to fluid mechanics, macrocirculation, and microcirculation, 2 ed.				
	electrical	linear circuit theory	Steven T. Karris Circuit Analysis I with MATLAB applications	Jiri Vlach Linear Circuit Theory: matrices in computer applications			
		electronics	Jacob Millman Electronic Devices and Circuits	Dennis F. Shaw An Introduction to Electronics			
			digital	Jacob Millman Pulse, Digital, and Switching Waveforms			
	systems	signals	Aydin Akin, Luis F. Chaparro Signals and Systems Using MATLAB, 4 ed.	Maxwell Vector MATLAB fundamentals for Signals and Systems			
			Robert B. Northrup Signals and Systems Analysis in Biomedical Engineering, 2 ed.				
		feedback control systems	Joseph J. DiStefano Feedback and Control Systems, 3 ed				
			George J. Thaler Analysis and design of nonlinear feedback control systems				
		modeling	Frank R. Giordano A First Course in Mathematical Modeling				
			Hiroki Sayama Introduction to the Modeling and Analysis of Complex Systems				
			finite element method	Daryl L. Logan A First Course in the Finite Element Method, 5 ed.	A.J.M. Ferreira MATLAB Codes for Finite Element Analysis		
	networks	Narsingh Deo Graph Theory with Applications To Engineering and Computer Science					
		M.E.J. Newman Networks: an introduction					
		algorithms	Robert Sedgewick Algorithms in Java Part 5: graph algorithms				
		queueing	Edward D. Lazowska Quantitative System	Edward D. Lazowska Quantitative System			

			Performance: computer system analysis using queueing network models ch 01-04	Performance: computer system analysis using queueing network models media: digital format: html location: web url: https://homes.cs.washington.edu/~lazowska/gsp/			
biosystems							
	information	Sara Imari Walker From Matter to Life: information and causality					
	biophysics	Philip Nelson Biological Physics: Energy, Information, Life					
		Thomas M. Nordlund Quantitative Understanding of Biosystems: an introduction to biophysics, 2 ed.					
		biofluid mechanics	David A. Rubenstein Biofluid Mechanics: an introduction to fluid mechanics, macrocirculation, and microcirculation, 2 ed.				
		biological thermodynamics	Donald T. Haynie Biological Thermodynamics				
	systems biology	Eberhard O. Voit A First Course in Systems Biology					
		Thomas Sauter, Marco Albrecht Introduction to Systems Biology: workbook for flipped-classroom teaching					
		virology	Jane Flint Principles of Virology Volume II: Pathogenesis and Control, 4 ed.				
		modeling	Jesse M. Kinder, Philip Nelson A Student's Guide to Python For Physical Modeling, 2 ed. note: Code samples, data sets, updates, errata, and more are available at http://physicalmodelingwithpython.blogspot.co note: good complement for modeling applications				
			Kim Sneppen Models of Life: dynamics and regulation in biological systems				
			Joseph DiStefano Dynamic Systems Biology Modeling and Simulation				
			Joseph DiStefano Dynamic Biosystem Modeling & Simulation, 3 ed.				
			cell signaling	James E. Ferrell Systems Biology of Cell Signaling: recurring themes and quantitative models			
			networks	Uri Alon An introduction to Systems Biology: design principles of biological circuits, 2 ed.			
				Hamid Bolouri Computational Modeling of Gene Regulatory Networks			
			mathematical	Philip Nelson Physical Models of Living systems			

				Brian P. Ingalls Mathematical Modeling in Systems Biology			
				Alan Garfinkel Modeling Life: the mathematics of biological systems			
				Karthik Raman An Introduction to Computational Systems Biology: systems level modelling of cellular networks			
human biosystem							
	anatomy	Frederic H. Martini Anatomy & Physiology, 9 ed.					
		Irving P. Herman Physics of the Human Body, 2 ed.					
		Jack H. Wilmore Physiology of Sport and Exercise, 8 ed. ch: selected					
		musculoskeletal system	Benno M. Nigg, edt. Biomechanics of the Musculo-skeletal System, 3 ed.	Margareta Nordin Basic Biomechanics of the Musculoskeletal System, 5 ed.			
			Jack H. Wilmore Physiology of Sport and Exercise, 8 ed. ch: selected	Irving P. Herman Physics of the Human Body, 2 ed. ch: selected			
		spine	Fabio Galbusera Biomechanics of the spine: Basic Concepts, Spinal Disorders, and Treatments				
		eye	Philip Nelson From Photon to Neuron: light, imaging, vision				
	physiology	Frederic H. Martini Anatomy & Physiology, 9 ed.					
		John E. Hall Guyton and Hall Textbook of Medical Physiology, 14 ed.					
		exercise physiology	Jack H. Wilmore Physiology of Sport and Exercise, 8 ed.				
	immunology	Judith A. Owen Kuby Immunology, 7 ed.	Massoud Mahmoudi Immunology: made ridiculously simple				
	aging	Roger B. McDonald Biology of Aging					
		Venki Ramakrishnan Why We die: the new science of aging and quest for immortality					
		Andrew Steele Ageless: the new science of getting older without getting old					
	medical science	Siddhartha Mukherjee The Song of the Cell" an exploration of medicine and the new human					
		health maintenance	nutrition	foods	Graham Lawton The science revealing how the right diet can add a decade to your life media: digital format: HTML location: web URL: https://www.newscientist.com/article/2494953-the-science-revealing-how-the-		

					right-diet-can-add-a-decade-to-your-life/ publisher: New Scientist date: 2025-09-16		
					New Scientist How to live to 100 media: print, digital format: Journal, HTML location: web URL: https://www.newscientist.com/issue/3561/ publisher: New Scientist date: 2025-09-20		
					George Mateljan The World's Healthiest Foods, 2 ed.		
					Jonny Bowden The 150 Healthiest Foods On Earth		
				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		
			fitness	exercise	Caroline Williams The exercises you need to do to reach 100 in great shape media: digital format: HTML location: web URL: https://www.newscientist.com/article/2494852-the-exercises-you-need-to-do-to-reach-100-in-great-shape/ publisher: New Scientist date: 2025-09-16		
			sleep	Matthew Walker Why We Sleep: unlocking the power of sleep and dreams			
		disorders	systems approach	Uri Alon Systems Medicine: physiological circuits and the dynamics of disease			
				Joseph Loscalzo, ed. Network Medicine: complex systems in human disease and therapeutics			
			viruses	Jane Flint Principles of Virology Volume II: Pathogenesis and Control, 4 ed.			
			cancer	Robert Weinberg The Biology of Cancer, 2 ed.			
				Lauren Pecorino Molecular Biology of Cancer: mechanisms, targets, and therapeutics			
				modeling	Vittorio Cristini Multiscale Modeling of Cancer: an integrated experimental and mathematical modeling approach		
					Vittorio Cristini An Introduction to Physical Oncology: how mechanistic mathematical modeling can improve cancer therapy outcomes		

					note: TBO		
					Emmanuel Barillot Computational Systems Biology of Cancer		
			neuromuscular	Eva L. Feldman Atlas of Neuromuscular Diseases			
				sarcopenia	Kunihiro Sakuma, Ed. Sarcopenia: Molecular Mechanism and Treatment Strategies		
					Alfonso J. Cruz-Jentoft, Ed. Sarcopenia, 2 ed.		
					Chad Cox, Ed. Clinical Nutrition and Aging: Sarcopenia and Muscle Metabolism		
			cardiovascular	Jonny Bowden, Stephen Sinatra The Great Cholesterol Myth: why lowering your cholesterol won't prevent heart disease			
			rheumatic	John H. Klippel, Ed. Primer on the Rheumatic Diseases, 13 ed.			
			stress	Gregory L. Fricchione The Science of Stress: living under pressure			
			spinal	Fabio Galbusera Biomechanics of the spine: Basic Concepts, Spinal Disorders, and Treatments			
			genetic	Lynn B. Jorde Medical Genetics, 6 ed.			
		diagnostics	Lisa Sanders Diagnosis: solving the most baffling medical mysteries	Lisa Sanders Diagnosis: solving the most baffling medical mysteries media: digital format: TV location: Netflix			
			Eric Topol The Patient Will See You Now: the future of medicine is in your hands				
			cardiovascular	Expert LPN Guides ECG Interpretation			
		therapeutics	Joseph Loscalzo, ed. Network Medicine: complex systems in human disease and therapeutics				
			Scott Hogan Built From Broken: a science based guide to healing painful joints, preventing injuries, and rebuilding your body				
			Jonny Bowden The Most Effective Natural Cures On Earth				
			virology	Jane Flint Principles of Virology Volume II: Pathogenesis and Control, 4 ed.			
			cardiology	atherosclerosis	Jonny Bowden The Great Cholesterol Myth: why lowering your cholesterol won't prevent heart disease - and the statin free plan that will		
			sarcopenia	Joseph Tieri Reverse Sarcopenia			
				Chad Cox, Ed. Clinical Nutrition and Aging: Sarcopenia and Muscle Metabolism			
			cancer	Lauren Pecorino			

				Molecular Biology of Cancer: mechanisms, targets, and therapeutics			
			spinal	Fabio Galbusera Biomechanics of the spine: Basic Concepts, Spinal Disorders, and Treatments			
			nutrition	David L. Katz Nutrition in Clinical Practice, 3 ed.			
			exercise	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			
				Marilyn Moffat Body Maintenance and Repair: hundreds of stretches and exercises for every part of the human body			
				fitness	Marilyn Moffat Age-Defying Fitness		
	biomedical engineering	modeling	Robert B. Northrop Introduction to Complexity and Complex systems ch 03: Introduction to biochemical oscillators and complex, nonlinear biochemical systems				
			Boris Ja. Kogan Introduction to Computational Cardiology: mathematical modeling and computer simulation				
			K. Anand Solomon Molecular Modeling and Drug Design				
			Robert B. Northrup Signals and Systems Analysis in Biomedical Engineering, 2 ed.				
		machine learning	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, 6 ed.				
social sciences							
	human behavior	Edward O. Wilson On Human Nature					
		B. F. Skinner Science and Human Behavior					
	Intelligence	Daniel Goleman Emotional Intelligence: when it can matter more than IQ					
		Daniel Goleman Social Intelligence: the new science of human relationships					
		anti-intellectualism	Richard Hofstadter Anti-intellectualism in American Life				
			Susan Jacoby The Age of American				

			Unreason				
	learning	David Epstein Range: why generalists triumph in a specialized world					
	economics	macroeconomics	Thomas Piketty Capital: in the twenty-first century				
			economic equality	Thomas Piketty Equality: what it means and why it matters			
				Joseph E. Stiglitz The Price of Inequality: how today's divided society endangers our future			
			employment	Erik Brynjolfsson Race Against the Machine: how the digital revolution is accelerating innovation, driving productivity, and irreversibly transforming employment and the economy			
		microeconomics	Ross d. Eckert The Price System and Resource Allocation, 10 ed.				
			finance	Javier Estrada Finance in a Nutshell: a no-nonsense companion to the tools and techniques of finance			
	values	Mark Carney Value(s): building a better world for all					
		Charles Handy The Hungry Spirit: beyond capitalism: a quest for policy analysis in the modern world					
	policy design	policy analysis	David L. Weimer Policy Analysis				
		persuasion	Lee Hartley Carter Persuasion: convincing others when facts don't seem to matter				