



Routledge

Mechanical Engineering
Textbook Catalogue
Spring 2026

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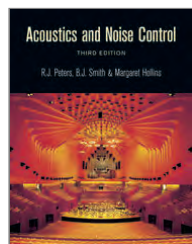
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3RD EDITION

Acoustics and Noise Control

**R J Peters**

Acoustics and Noise Control provides a detailed and comprehensive introduction to the principles and practice of acoustics and noise control. Since the last edition was published in 1996 there have been many changes and additions to standards, laws and regulations, codes of practice relating to noise, and in noise measurement techniques and noise control technology so this new edition has been fully revised and updated throughout. The book assumes no previous knowledge of the subject and requires only a basic knowledge of mathematics and physics. There are worked examples in the text to aid understanding and a range of experiments help students use complicated apparatus. Thoroughly revised to cover the latest changes in standards, codes of practice and legislation, this new edition covers much of the Institute of Acoustics Diploma syllabus and has an increased emphasis on the legal issues relating to noise control.

Routledge

June 2011 : 400pp

Pb: 978-0-273-72468-1 : **£86.99**Hb: 978-1-138-12912-2 : **£150**

eBook: 978-1-315-84714-6

* For full contents and more information, visit: www.routledge.com/9780273724681

6TH EDITION

Engineering Noise Control



David A. Bies University of Adelaide, Australia, **Colin Hansen** University of Adelaide, Australia, **Carl Howard** The University of Adelaide, Australia, **Kristy L. Hansen** Flinders University, Australia

This textbook sets out the foundations of noise control technology in detail, and can be used to solve the real world problems encountered by consultants and engineers. It covers the fundamentals of acoustics, theoretical concepts, and practical application of current noise control technology. This new edition particularly develops material on sound propagation, especially outdoor noise; subjective response to noise; resonator mufflers; and porous absorbers. Detail is added on microphones and sensors; free-field simulation; and wind turbine sound. It is well illustrated with practical examples, with further problems on www.causalsystems.com

CRC Press

August 2023 : 922pp

Pb: 978-0-367-41478-8 : **£62.99**Hb: 978-0-367-41479-5 : **£170**

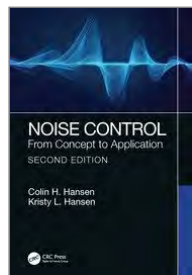
eBook: 978-0-367-81490-8

* For full contents and more information, visit: www.routledge.com/9780367414788

2ND EDITION

Noise Control

From Concept to Application



Colin H. Hansen University of Adelaide, Australia, **Kristy L. Hansen** Flinders University, Australia

The second edition of Noise Control: From Concept to Application, newly expanded and thoroughly updated, now includes 180 graded problems with solutions, plus 100 end-of-chapter problems with solutions available for instructors on the authors' website. Working from basic scientific principles, the authors show how an understanding of sound can be applied to real-world settings, working through numerous examples in detail and covering good practice in noise control for both new and existing facilities.

CRC Press

August 2021 : 482pp

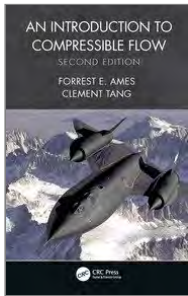
Pb: 978-1-138-36902-3 : **£69.99**Hb: 978-1-138-36901-6 : **£175**

eBook: 978-0-429-42887-6

* For full contents and more information, visit: www.routledge.com/9781138369023

2ND EDITION

An Introduction to Compressible Flow



Forrest E. Ames University of North Dakota, USA,
Clement C. Tang University of North Dakota, USA

An Introduction to Compressible Flow, Second Edition covers the material typical of a single-semester course in compressible flow. The book begins with a brief review of thermodynamics and control volume fluid dynamics, then proceeds to cover isentropic flow, normal shock waves, shock tubes, oblique shock waves, Prandtl-Meyer expansion fans, Fanno-line flow, Rayleigh-line flow, and conical shock waves. The book is intended for senior undergraduate engineering students studying thermal-fluids and practicing engineers in the areas of aerospace or energy conversion. It also provides supplemental coverage of compressible flow material in gas turbine and aerodynamics courses.

CRC Press

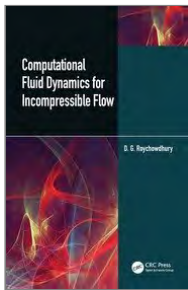
July 2023 : 296pp

Pb: 978-0-367-69779-2 : **£48.99**Hb: 978-0-367-89567-9 : **£140**

eBook: 978-1-003-04294-5

* For full contents and more information, visit: www.routledge.com/9780367697792

Computational Fluid Dynamics for Incompressible Flows



D.G. Roychowdhury

Presenting fundamental as well as advanced concepts in the field of computational fluid dynamics in an easy to understand manner, this textbook will be useful for senior undergraduate and graduate students in the field of mechanical and aerospace engineering. It discusses various finite difference methods and finite volume methods including Von Neumann's method, Lax equivalence theorem, time, dependent method, one-step method, Dufort-Frankel method, and MacCormack method.

CRC Press

February 2022 : 416pp

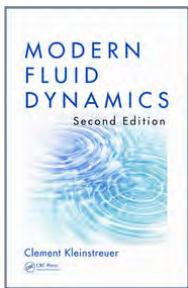
Pb: 978-0-367-52432-6 : **£52.99**Hb: 978-0-367-40806-0 : **£155**

eBook: 978-0-367-80917-1

* For full contents and more information, visit: www.routledge.com/9780367524326

2ND EDITION

Modern Fluid Dynamics



Clement Kleinstreuer

Modern Fluid Dynamics, Second Edition provides up-to-date coverage of intermediate and advanced fluids topics. The text emphasizes fundamentals and applications, supported by worked examples and case studies. Scale analysis, non-Newtonian fluid flow, surface coating, convection heat transfer, lubrication, fluid-particle dynamics, microfluidics, entropy generation, and fluid-structure interactions are among the topics covered. Part A presents fluids principles, and prepares readers for the applications of fluid dynamics covered in Part B, which includes computer simulations and project writing. A review of the engineering math needed for fluid dynamics is included in an appendix.

CRC Press

April 2018 : 459pp

Hb: 978-1-138-19810-4 : **£185**

eBook: 978-1-315-22627-9

* For full contents and more information, visit: www.routledge.com/9781138198104

3RD EDITION

Advanced Heat Transfer



Greg F. Naterer

Advanced Heat Transfer provides a single source of technical content for the prediction, solution, and analysis of advanced heat transfer problems, including conduction, convection, radiation and phase change, and chemically reactive modes of heat transfer. The book offers a comprehensive source for single and multiphase systems of heat transfer for graduate students taking courses in Advanced Heat Transfer; Multiphase Heat Transfer; Advanced Thermodynamics. With more than 20 new sections, case studies, examples, and problems, the new edition broadens the scope of thermal engineering applications, including biomedical fields, micro- and nanotechnology, and machine learning.

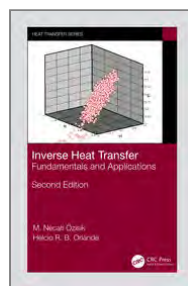
CRC Press
December 2021 : 577pp
Hb: 978-1-032-07247-0 : **£140**
eBook: 978-1-003-20612-5

* For full contents and more information, visit: www.routledge.com/9781032072470

2ND EDITION

Inverse Heat Transfer

Fundamentals and Applications



Helcio R.B. Orlande Coppe - UFRJ, Brazil

This book introduces the fundamental concepts of inverse heat transfer solutions and their application for solving problems in convective, conductive, radiative, and multi-physics problems. By modernizing the classic work of the late Dr. Ozisik, and adding new examples and problems, this new edition provides a powerful tool for instructors, researchers, and graduate students studying thermal-fluid systems and heat transfer. The textbook includes based on generalized coordinates for the solution of inverse heat conduction problems in two-dimensional regions, involving the introduction of techniques within the Bayesian framework of statistics for solution of inverse problems.

CRC Press
September 2025 : 297pp
Pb: 978-0-367-72526-6 : **£52.99**
Hb: 978-0-367-82067-1 : **£130**
eBook: 978-1-003-15515-7

* For full contents and more information, visit: www.routledge.com/9780367725266

2ND EDITION

Analytical Heat Transfer



Je-Chin Han, Lesley Wright

The book explains how to analyze and solve conduction, convection, and radiation heat transfer problems. It fills the gap between basic heat transfer undergraduate courses and advanced heat transfer graduate courses for one semester of intermediate heat transfer; advanced conduction/convection heat transfer; or radiation heat transfer. The text enables students to tackle complex engineering heat transfer problems prevalent in practice. New chapters and content include Duhamel's superposition method, Green's function method for transient heat conduction, finite-difference method for steady state and transient heat conduction in cylindrical coordinates, and laminar mixed convection.

CRC Press
December 2024 : 595pp
Pb: 978-0-367-75900-1 : **£48.99**
Hb: 978-0-367-75897-4 : **£130**
eBook: 978-1-003-16448-7

* For full contents and more information, visit: www.routledge.com/9780367759001

Phase Change Heat Transfer

Boiling and Condensation



Vijay K. Dhir

This book covers theory and experiments in heat transfer associated with boiling and condensation. It presents the basics of solid-liquid-vapor phase interactions and methods to measure surface wettability and interfacial tension between liquid and vapor. It is intended for upper-level undergraduate mechanical, aerospace, and chemical engineering students taking courses in Phase Change Heat Transfer; Boiling and Condensation; Nuclear Thermal Hydraulics; Heat and Mass Transfer. Exploring the mechanistic details of flow boiling heat transfer in a pool, it gives correlations for prediction of nucleate boiling, critical heat flux, and post-critical heat flux.

CRC Press
June 2025 : 364pp
Hb: 978-1-032-66837-6 : **£130**
eBook: 978-1-032-66843-7

* For full contents and more information, visit: www.routledge.com/9781032668376

Heat Transfer

A Systematic Learning Approach



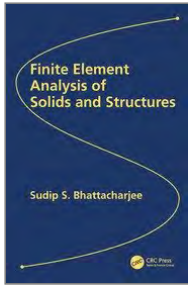
Naseem Uddin Universiti Teknologi Brunei

Heat Transfer: A Systematic Learning Approach presents valuable tools in understanding heat transfer mechanisms and provides a clear understanding of complex turbulent flows. It provides a comprehensive introduction to topics of heat transfer, including conduction, convection, thermal radiation, and nanofluids. The book includes numerous end-of-chapter problems to enhance student understanding and different solving approaches. The book is intended for senior undergraduate mechanical, aerospace, and chemical engineering students taking courses in Heat Transfer.

CRC Press
January 2024 : 534pp
Hb: 978-1-032-54982-8 : **£125**
eBook: 978-1-032-54993-4 : **£105**

* For full contents and more information, visit: www.routledge.com/9781032549828

Finite Element Analysis of Solids and Structures



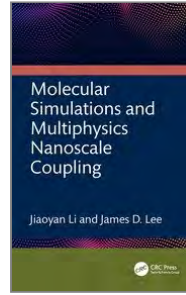
Sudip S. Bhattacharjee

This textbook combines the theory of elasticity (advanced analytical treatment of stress analysis problems) and finite element methods (numerical details of finite element formulations) into one academic course derived from author's teaching, research, and applied work in automotive product development as well as in civil structural analysis. This work contains 12 discrete chapters that can be covered in a single semester university graduate course on linear elastic finite element analysis methods. The book also serves as a reference for practicing engineers working on design assessment and analysis of solids and structures.

CRC Press
October 2024 : 340pp
Pb: 978-1-032-04158-2 : **£48.99**
Hb: 978-0-367-43705-3 : **£125**
eBook: 978-1-003-02784-3

* For full contents and more information, visit: www.routledge.com/9781032041582

Molecular Simulations and Multiphysics Nanoscale Coupling



Jiaoyan Li George Washington University, USA, **James D. Lee** University at Buffalo, USA

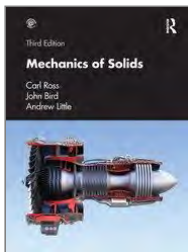
This focuses on the theoretical foundations and numerical methods for the studying the behavior of materials and the coupling of mechanical, thermal, and electromagnetic fields at the nanoscale. It covers the Principle of Objectivity, the coupling of mechanics, thermal science, and electromagnetics, it presents Sequential and Concurrent Multiscale Modeling and CGMD to apply multiscale modeling to the behaviors of materials at nanoscale. It applies analytical and numerical simulation to fracture mechanics at the microscopic level. It suits advanced undergraduate and graduate engineering courses for solid mechanics, fluid mechanics, material science, and chemical engineering.

CRC Press
August 2025 : 236pp
Hb: 978-1-032-55678-9 : **£105**
eBook: 978-1-003-43477-1

* For full contents and more information, visit: www.routledge.com/9781032556789

3RD EDITION

Mechanics of Solids



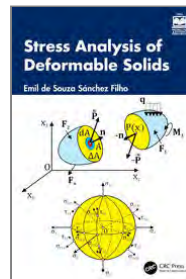
Carl Ross Professor of Structural Dynamics, University of Portsmouth, UK, **John Bird**, **Andrew Little**

This introduction to the behaviour of solid materials under loading, focuses on statics and stress analysis. As the primary recommended mechanics of solids text of the Council of Engineering Institutions for undergraduates, it covers practical stress and strain scenarios including simple stress and strain, torsion, bending, elastic failure and buckling, with examples such as thin-walled structures, beams, struts and composite structures. New chapters cover matrix algebra, fracture mechanics, and additional material considerations including creep and fatigue. The companion website offers solutions, and multiple-choice tests; and resources for adopting course instructors.

Routledge
November 2021 : 518pp
Pb: 978-0-367-65140-4 : **£66.99**
Hb: 978-0-367-65141-1 : **£170**
eBook: 978-1-003-12802-1

* For full contents and more information, visit: www.routledge.com/9780367651404

Stress Analysis of Deformable Solids



Emil de Souza Sánchez Filho

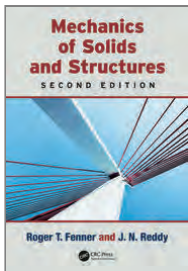
This comprehensive textbook presents fundamental concepts and detailed analysis of stress analysis in homogeneous and isotropic solids using a tensor approach. The text uniquely formulates mathematical approaches in terms of stress tensor invariants and its component tensors: hydrostatic tensor and deviator tensor. All expressions are derived in the form of Cartesian tensors, with detailed step-by-step deductions and complete demonstrations, ensuring no steps are omitted in obtaining or proving results. The book targets postgraduate as well as advanced undergraduate students in Civil, Mechanical, and Materials Engineering programs.

CRC Press
April 2026 : 242pp
Hb: 978-1-041-13196-0 : **£96.99**
eBook: 978-1-003-66857-2

* For full contents and more information, visit: www.routledge.com/9781041131960

2ND EDITION

Mechanics of Solids and Structures



Roger T. Fenner Imperial College London, UK, **J.N. Reddy** Texas A&M University, College Station, USA

Series: Applied and Computational Mechanics

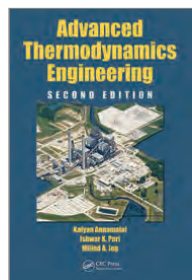
A revision of a popular textbook, this volume emphasizes the development of analysis techniques from basic principles for a broad range of practical problems, including simple structures, pressure vessels, beams, and shafts. The book integrates numerical and computer techniques with programs for carrying out analyses, facilitating design, and solving the problems found at the end of each chapter. It also presents the underlying theory and traditional manual solution methods along with these techniques. This new second edition covers relationships between stress and strain, torsion, statically determinate systems, instability of struts and columns, and compatibility equations.

CRC Press
June 2012 : 705pp
Hb: 978-1-439-85814-1 : **£140**
eBook: 978-0-429-09736-2

* For full contents and more information, visit: www.routledge.com/9781439858141

2ND EDITION

Advanced Thermodynamics Engineering



Kalyan Annamalai Texas A&M University, College Station, USA, **Ishwar K. Puri** Virginia Polytechnic Institute and State University, Blacksburg, USA, **Milind A. Jog** University of Cincinnati, Ohio, USA

Series: Applied and Computational Mechanics

Designed for readers who need to understand and apply the engineering physics of thermodynamic concepts, this volume features physical explanations along with mathematical equations so that the principles can be applied to real-world problems. Employing almost 300 illustrations to enhance clarity, the book first presents the phenomenological approach to a problem and then delves into the details. Using a self-teaching format, the authors forego esoteric material in favor of concrete examples and applications. The book includes several tables containing thermodynamic properties and other useful information, and additional material is available for download.

CRC Press

March 2011 : 1144pp

Hb: 978-1-439-80572-5 : £185

eBook: 978-0-429-19157-2

* For full contents and more information, visit: www.routledge.com/9781439805725

2ND EDITION

Automotive Accident Reconstruction

Practices and Principles, Second Edition

**Donald E. Struble , John D. Struble***Series: Ground Vehicle Engineering*

This fully updated edition presents practices and principles applicable for the reconstruction of automobile and commercial truck crashes. Like the First Edition, it starts at the very beginning with fundamental principles, information sources, and data gathering and inspection techniques for accident scenes and vehicles. It goes on to show how to analyze photographs and crash test data. The book presents tire fundamentals and shows how to use them in spreadsheet-based reverse-trajectory analysis.

CRC Press

February 2020 : 421pp

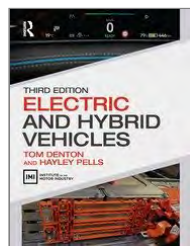
Hb: 978-0-367-41583-9 : **£140**

eBook: 978-1-003-00897-2

* For full contents and more information, visit: www.routledge.com/9780367415839

3RD EDITION

Electric and Hybrid Vehicles



Tom Denton Technical Consultant, Institute of the Motor Industry (IMI), UK, **Hayley Pells** Avia Sports Cars Ltd, UK

Endorsed by the Institute of the Motor Industry, this full colour textbook introduces the subject for further education and undergraduate students, technicians, and drivers. This edition is extensively updated, especially regarding batteries, charging and the high voltage pathway, and with new case studies and illustrations. It covers the different types of hybrid and electric vehicle, costs and emissions, and the charging infrastructure, before explaining how the vehicles work, plus the maintenance and repair procedures. It particularly suits students studying for IMI Levels 2, 3 and 4 Awards in Hybrid Electric Vehicles, IMI Accreditation, C&G and all other EV/Hybrid courses.

Routledge

January 2024 : 260pp

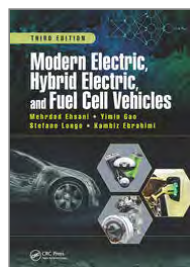
Pb: 978-1-032-55679-6 : **£41.99**Hb: 978-1-032-55680-2 : **£105**

eBook: 978-1-003-43173-2

* For full contents and more information, visit: www.routledge.com/9781032556796

3RD EDITION

Modern Electric, Hybrid Electric, and Fuel Cell Vehicles



Mehrdad Ehsani Texas A&M University, College Station, USA, **Yimin Gao** Advanced Vehicle Research Center, Danville, Virginia, USA, **Stefano Longo** Cranfield University, UK, **Kambiz Ebrahimi** Loughborough University, UK

The book deals with the fundamentals, theoretical bases, and design methodologies of conventional internal combustion engine (ICE) vehicles, electric vehicles (EVs), hybrid electric vehicles (HEVs), and fuel cell vehicles (FCVs). The design methodology is described in mathematical terms, step-by-step, and the topics are approached from the overall drive train system, not just individual components. Furthermore, in explaining the design methodology of each drive train, design examples are presented with simulation results.

CRC Press

February 2018 : 572pp

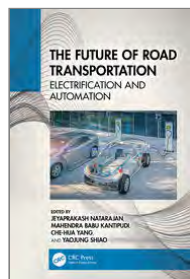
Hb: 978-1-498-76177-2 : **£155**IEPB: 978-1-138-33049-8 : **£55**

eBook: 978-0-429-50488-4

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The Future of Road Transportation

Electrification and Automation



Edited by **Jeyapragash Natarajan** China University of Mining and Technology, China, **Mahendra Babu Kantipudi** National Taipei University of Technology, Taiwan, **Che-Hua Yang** National Taipei University of Technology, Taiwan, **Yaojung Shiao** National PingTung University of Science and Technology, Taiwan

The Future of Road Transportation presents rapidly growing research towards electrified and automated vehicles. It explains the workings and drawbacks of a conventional vehicle's powertrain, braking, and steering systems before exploring ADAS equipment and driverless car technologies. The book is intended for automotive and electrical engineers and researchers working on electric vehicle technology, autonomous and automated vehicles, automotive sustainability. It will also be useful for mechanical and electrical engineering students taking courses in Automotive/Vehicle Engineering and Automotive Systems and Design.

CRC Press

December 2025 : 322pp

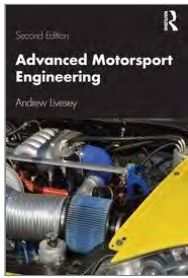
Pb: 978-1-032-40834-7 : **£52.99**Hb: 978-1-032-40833-0 : **£130**

eBook: 978-1-003-35490-1

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Advanced Motorsport Engineering



Andrew Livesey

Are you training as a technician, just starting a motorsport degree training as a technician, just starting a motorsport degree? Andrew is a practising lecturer and motorsport engineer who has trained race engineers who are working for the major motorsport teams, including McLaren and Ferrari, and their supply chains. There are hundreds of different types of jobs in motorsport, this book will help you understand both the technology and the terminology so that you can progress your career quickly, using IMI or EAL qualifications at Level 3. This book is a follow on to Basic Motorsport Engineering, also written by Andrew.

Routledge

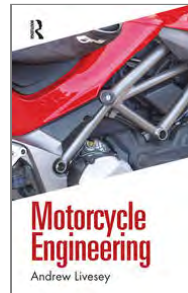
June 2026 : 160pp

Pb: 978-1-032-84125-0 : **£52.99**

Hb: 978-1-032-84734-4 : **£130**

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Motorcycle Engineering



Andrew Livesey

Motorcycle Engineering is written to give the reader a good all-round knowledge of how a motorcycle works. The complex engineering behind the machines is explained in easy-to-understand terms and supported by 350 images. It covers a range of motorcycle types, and will be particularly useful for students on motorcycle and motorsport courses such as those run by the IMI and City & Guilds, as well as BTEC programmes, and will serve as an excellent introductory text for HND and degree students on automotive type programmes.

Routledge

April 2021 : 380pp

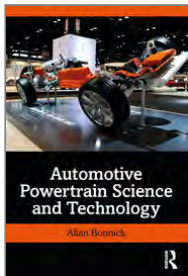
Pb: 978-0-367-41919-6 : **£52.99**

Hb: 978-0-367-41920-2 : **£155**

eBook: 978-0-367-81685-8

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Automotive Powertrain Science and Technology



Allan Bonnick

A motor vehicle's powertrain consists of the components which generate power and enable it to move – its engine, exhaust system, transmission, drive shaft, suspension and wheels. Any automotive engineering student going beyond basic mechanics will need a sound knowledge of the mathematics and scientific principles, particularly calculus and algebra, which underpin powertrain technology. This textbook supports a series of courses, for instance BTEC unit 28 "Further Mathematics for Engineering Technicians", and BTEC higher unit 25 "Engine and Vehicle Design and Performance", without giving full coverage of automotive technology.

Routledge

March 2020 : 208pp

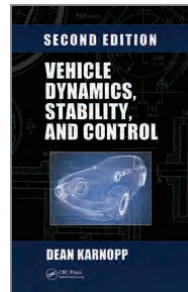
Pb: 978-0-367-33113-9 : **£51.99**

Hb: 978-0-367-33111-5 : **£105**

eBook: 978-0-429-31802-3

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Vehicle Dynamics, Stability, and Control



Dean Karnopp University of California, Davis, USA

Series: Mechanical Engineering

The second edition of a bestseller, this book applies basic dynamics concepts to vehicle dynamics and stability. It covers a wide range of vehicles - autos and other ground vehicles, railroad locomotives and cars, and aerospace vehicles. The author presents and develops mathematical models with numerous worked examples and careful explanations brought in to explain and demonstrate the equations of motion; and applied engineering situations to show practical applications. It includes chapter problems and a Solutions Manual is available to qualified adopting professors. Bond graph methods are covered in an appendix.

CRC Press

January 2013 : 326pp

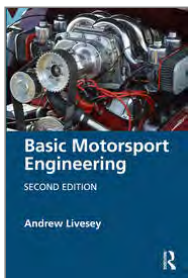
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eBook: 978-0-429-09682-2

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2ND EDITION

Basic Motorsport Engineering



Andrew Livesey

Are you just starting out on a career in motorsport, whether this is your first vocational choice, or a second career looking to be involved in something exciting? Andrew is a practising lecturer and motorsport engineer who has trained race engineers who are working for the major motorsport teams, including McLaren and Ferrari, and their supply chains. There are hundreds of different types of jobs in motorsport, this book will help you understand both the technology and the terminology so that you can progress your career quickly, using IMI or EAL qualifications at Level 2. This book is followed by Advanced Motorsport Engineering, also written by Andrew.

Routledge

November 2025 : 266pp

Pb: 978-1-032-84727-6 : **£52.99**

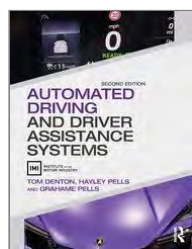
Hb: 978-1-032-84730-6 : **£130**

eBook: 978-1-003-51466-4

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2ND EDITION

Automated Driving and Driver Assistance Systems



Tom Denton Technical Consultant, Institute of the Motor Industry (IMI), UK, **Hayley Pells** Avia Sports Cars Ltd, UK, **Grahame Pells**

Automated vehicles are poised to revolutionise transportation, yet Advanced Driver Assistance Systems represent the cutting-edge technology of today. Written in accessible language, this breaks down complex concepts for automotive students at both further education and undergraduate levels, as well as for practising technicians and professionals in the automotive industry, and highlights the integration of existing systems in modern vehicles. Written in line with the UK's Autonomous Vehicles Act (2024) this heavily revised new edition offers practical insights and case studies for an international audience.

Routledge
August 2025 : 204pp
Pb: 978-1-032-93606-2 : **£52.99**
Hb: 978-1-032-93953-7 : **£120**
eBook: 978-1-003-56834-6

* For full contents and more information, visit: www.routledge.com/9781032936062

3RD EDITION

Automobile Mechanical and Electrical Systems



Tom Denton Technical Consultant, Institute of the Motor Industry (IMI), UK, **Hayley Pells** Avia Sports Cars Ltd, UK

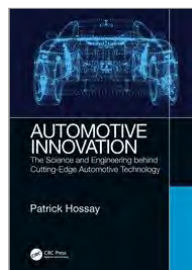
This concentrates on core technologies of how new vehicle systems work, from the engine through to the chassis and electronics. Now with fresh coverage of HVAC (heating, ventilation and air conditioning), water pumps, thermal management, EV/HV awareness, safety management and hygiene, occupant restraints, and lighting systems. It outlines the necessary tools and equipment for effective car maintenance and repair in full colour with copious photographs, diagrams, flow charts and quick reference tables with definitions, key facts and 'safety first' considerations and is supported by the author's website www.automotive-technology.org

Routledge
November 2022 : 420pp
Pb: 978-1-032-28908-3 : **£37.99**
Hb: 978-1-032-28909-0 : **£115**
eBook: 978-1-003-29906-6

* For full contents and more information, visit: www.routledge.com/9781032289083

Automotive Innovation

The Science and Engineering behind Cutting-Edge Automotive Technology



Patrick Hossay Stockton University, NJ, USA

Series: Ground Vehicle Engineering

Automotive Innovation: The Science and Engineering behind Cutting-Edge Automotive Technology provides a survey of innovative automotive technologies in the industry. Automobiles are rapidly changing, and this text explores these trends. IC engines, transmissions, and chassis are being improved, and there are breakthroughs in digital control, manufacturing, and materials. New vehicles demonstrate improved performance, safety and efficiency factors; and electric vehicles represent a new alternative; sensing technologies and computer processors redefine the nature of driving. The text explores these changes, the engineering and science behind them, and directions for the future.

CRC Press
July 2019 : 323pp
Hb: 978-1-138-61176-4 : **£105**
eBook: 978-0-429-46499-7

* For full contents and more information, visit: www.routledge.com/9781138611764

2ND EDITION

Automotive Technician Training: Theory



Tom Denton Technical Consultant, Institute of the Motor Industry (IMI), UK, **Hayley Pells** Avia Sports Cars Ltd, UK

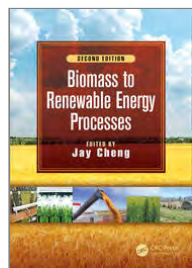
Automotive Technician Training is the definitive textbook for automotive engineering. Produced alongside the ATT online learning resources, this textbook covers all the theory and technology sections that students need to learn in order to pass levels 1, 2 and 3 automotive courses. It is recommended by the Institute of the Motor Industry and is ideal for exams run by other awarding bodies. The revised edition overhauls the coverage of workshop skills and advanced diagnostic techniques. It also includes a new chapter about electric and hybrid vehicles and advanced driver-assistance systems, along with new online learning activities.

Routledge
September 2021 : 578pp
Pb: 978-1-032-00220-0 : **£45.99**
Hb: 978-1-032-00233-0 : **£125**
eBook: 978-1-003-17323-6

* For full contents and more information, visit: www.routledge.com/9781032002200

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Edited by **Jay Cheng** North Carolina State University, Raleigh, USA

Biomass to Renewable Energy Processes, Second Edition, explains the theories of biological processes, biomass materials and logistics, and conversion technologies for bioenergy products such as biogas, ethanol, butanol, biodiesel, and synthetic gases. The book discusses anaerobic digestion of waste materials for biogas and hydrogen production, bioethanol and biobutanol production from starch and cellulose, and biodiesel production from plant oils. It addresses thermal processes, including gasification and pyrolysis of agricultural residues and woody biomass. The text also covers pretreatment technologies, enzymatic reactions, fermentation, and microbiological metabolisms and pathways.

CRC Press

October 2017 : 450pp

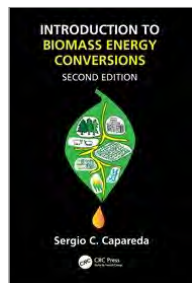
Hb: 978-1-498-77879-4 : £140

eBook: 978-1-315-15286-8

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Sergio Capareda Texas A&M University, College Station, USA

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CRC Press

November 2023 : 572pp

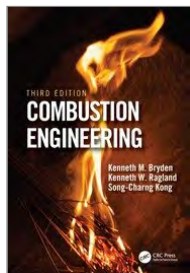
Hb: 978-1-032-27833-9 : £135

eBook: 978-1-032-27855-1 : £115

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3RD EDITION

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Kenneth Bryden , Kenneth W. Ragland University of Wisconsin, Madison, USA, **Song-Chang Kong**

Combustion Engineering, Third Edition introduces the analysis, design, and building of combustion energy systems. It discusses current global energy, climate, and air pollution challenges and considers the increasing importance of renewable energy sources, such as biomass fuels. This text is intended for undergraduate and first-year graduate mechanical engineering students taking introductory courses in combustion. Practicing heating engineers, utility engineers, and engineers consulting in energy and environmental areas will find this book a useful reference. Instructors will be able to utilize an updated Solutions Manual and figure slides for their course.

CRC Press

May 2025 : 492pp

Pb: 978-1-032-24688-8 : **£52.99**

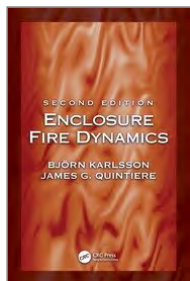
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eBook: 978-1-315-15972-0

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Björn Karlsson , James G. Quintiere University of Maryland, College Park, USA

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CRC Press

January 2026 : 384pp

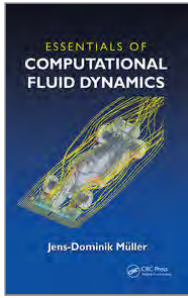
Pb: 978-1-032-28646-4 : **£49.99**

Hb: 978-1-138-05866-8 : **£140**

eBook: 978-1-315-16381-9

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Jens-Dominik Müller Queen Mary University of London, England, UK

Approaching the material from the viewpoint of a user of a commercial flow package, this book initially limits the description of the mathematics to the level that is strictly needed to make the correct choices when setting up a case in a commercial flow solver. It discusses the sources of errors in FD solutions using simple examples with finite differences, and they are demonstrated with mesh convergence studies. It focuses on the understanding of how the flow physics interact with a typical finite-volume discretization.

CRC Press

November 2015 : 238pp

Pb: 978-1-482-22730-7 : **£115**

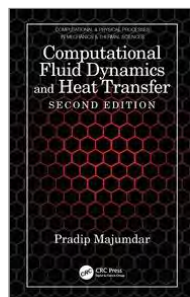
Hb: 978-1-138-40130-3 : **£195**

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Computational Fluid Dynamics and Heat Transfer



Pradip Majumdar Northern Illinois University, DeKalb, USA

Series: Computational & Physical Processes in Mechanics & Thermal Science

This book provides a thorough understanding of fluid dynamics and heat and mass transfer. It contains new chapters on mesh generation and computational modeling of turbulent flow. Combining theory and practice in classic problems and computer code, the text includes examples in ANSYS, STAR CCM+, and COMSOL. The text will be valuable to Engineering instructors and students taking courses in computational heat transfer and computational fluid dynamics. With detailed explanations on how to implement computational methodology into a computer code, students will be able to solve complex problems on their own, including problems in heat transfer, mass transfer, and fluid flows.

CRC Press

September 2025 : 696pp

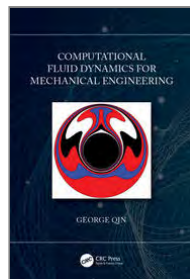
Pb: 978-1-032-04094-3 : **£55.99**

Hb: 978-1-498-70374-1 : **£170**

eBook: 978-0-429-18300-3

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Computational Fluid Dynamics for Mechanical Engineering



George Qin Cedarville University, USA

This textbook presents the basic methods, numerical schemes, and algorithms of computational fluid dynamics (CFD). Readers will learn to compose MATLAB® programs to solve realistic fluid flow problems. The textbook was written for a first course in computational fluid dynamics (CFD) taken by undergraduate students in a Mechanical Engineering major. Newer research results on stability and boundedness of various numerical schemes are incorporated. The book emphasizes large eddy simulation (LES) in the chapter on turbulent flow simulation besides the two-equation models. Volume of fraction (VOF) and related methods will be the focus of the chapter on two-phase flows.

CRC Press

October 2024 : 384pp

Pb: 978-0-367-68730-4 : **£48.99**

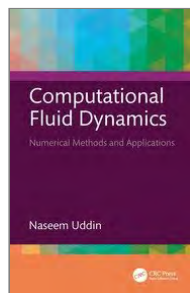
Hb: 978-0-367-68729-8 : **£96.99**

eBook: 978-1-003-13882-2

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Computational Fluid Dynamics

Numerical Methods and Applications



Naseem Uddin Universiti Teknologi Brunei

Computational Fluid Dynamics: Numerical Methods and Applications offers a comprehensive exploration of computational fluid dynamics (CFD) methods, focusing on numerical techniques for solving fluid flow problems through both finite difference and finite-volume methods. It explores numerical schemes, advection-diffusion equations, shock-capturing methods, and turbulence modeling. Emphasizing stability and accuracy preservation as part of modern CFD practice, the book addresses both laminar and turbulent regimes. Senior undergraduate aerospace and mechanical engineering students taking a CFD course will find this book particularly valuable.

CRC Press

February 2026 : 666pp

Hb: 978-1-041-12136-7 : **£125**

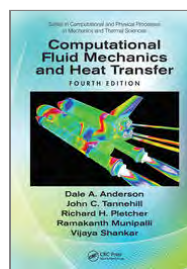
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4TH EDITION

Computational Fluid Mechanics and Heat Transfer



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John C. Tannehill Iowa State University, Ames, USA,
Richard H. Pletcher Iowa State University, Ames, USA,
Ramakanth Munipalli HyPerComp, Inc., USA, **Vijaya Shankar** HyPerComp, Inc., USA

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This book is a fully updated version of the classic text on finite-difference and finite-volume computational methods. As an introductory text for advanced undergraduates and first-year graduate students, the new edition provides the background necessary for solving complex problems in fluid mechanics and heat transfer. Divided into two parts, the text covers essential concepts in the first part, and then moves on to fluids equations in the second. Designed as a valuable resource for practitioners and students, new examples and homework problems have been added to further enhance the student's understanding of the fundamentals and applications.

CRC Press

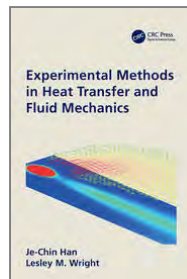
December 2020 : 974pp

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eBook: 978-1-351-12402-7

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Je-Chin Han, Lesley Wright

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CRC Press

February 2022 : 382pp

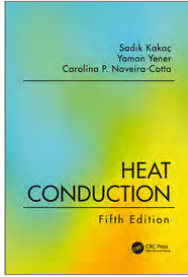
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Sadık Kakac , Yaman Yener , Carolina P. Naveira-Cotta Universidade Federal do Rio de Janeiro, Brazil

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CRC Press

July 2018 : 542pp

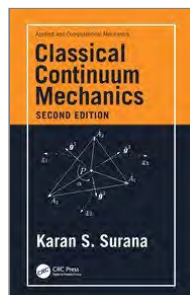
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Karan S. Surana University of Kansas, USA

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CRC Press

December 2024 : 532pp

Pb: 978-0-367-61521-5 : **£48.99**

Hb: 978-0-367-61296-2 : **£140**

eBook: 978-1-003-10533-6

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G. Thomas Mase California Polytechnic State University, San Luis Obispo, USA, **Ronald E. Smelser** University of North Carolina, Charlotte, USA, **Jenn Stroud Rossmann** Lafayette College, Easton, Pennsylvania, USA

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A bestselling textbook in its first three editions, Continuum Mechanics for Engineers, Fourth Edition provides engineering students with a complete, concise, and accessible introduction to advanced engineering mechanics. It provides information that is useful in emerging engineering areas, such as micro-mechanics and biomechanics. Through a mastery of this volume's contents and additional rigorous finite element training, readers will develop the mechanics foundation necessary to skilfully use modern, advanced design tools.

CRC Press

May 2020 : 450pp

Hb: 978-1-482-23868-6 : **£130**

eBook: 978-0-429-17439-1

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Control Systems

Classical, Modern, and AI-Based Approaches



Jitendra R. Raol Ramaiah Instof Tech, India, **Ramakalyan Ayyagari** National Institute of Technology (NIT), India

This book provides a broad and comprehensive study of the principles, mathematics, and applications for studying basic control in Mechanical, Electrical, Aerospace, and other engineering disciplines. The text builds a strong mathematical foundation of control theory, introducing linear, non-linear, digital, optimal, and robust control systems, and builds upon that foundation to address applications in emerging areas such as unmanned aircraft systems, robotic systems, and spacecraft. Numerical coverage with MATLAB® is integrated, and numerous examples and exercises are included in each chapter; and MATLAB® code will be available.

CRC Press

July 2019 : 668pp

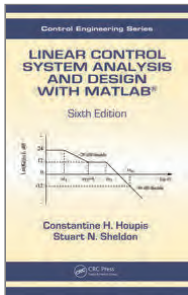
Hb: 978-0-815-34630-2 : £150

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6TH EDITION

Linear Control System Analysis and Design with MATLAB®



Constantine H. Houpsis Air Force Institute of Technology, Wright-Patterson AFB, Ohio, USA, **Stuart N. Sheldon** US Nuclear Regulatory Commission, Lisle, Illinois, USA

Series: Automation and Control Engineering

This book uses numerous in-depth explanations, diagrams, calculations, and tables to provide an intensive overview of modern control theory and control system design.

Mathematics is kept to a minimum, and engineering applications are stressed throughout. Completely updated and packed with student-friendly features, the sixth edition presents a range of updated examples using MATLAB®, as well as an appendix listing MATLAB functions for optimizing control system analysis and design. Over 75 percent of the problems presented in the previous edition have been revised or replaced.

CRC Press

October 2013 : 729pp

Hb: 978-1-466-50426-4 : £165

eBook: 978-0-429-09619-8

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2ND EDITION

Convective Heat and Mass Transfer



S. Mostafa Ghiaasiaan Georgia Tech University, Atlanta, USA

Series: Heat Transfer

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CRC Press

June 2018 : 652pp

Hb: 978-0-815-36141-1 : £195

eBook: 978-1-351-11275-8

* For full contents and more information, visit: www.routledge.com/9780815361411

3RD EDITION

Convective Heat Transfer



Sadik Kakac TOBB University of Economics and Technology, Ankara, Turkey, **Yaman Yener** Northeastern University, Boston, Massachusetts, USA, **Anchasa Pramuanjaroenkij** Kasetsart University, Sakon Nakhon, Thailand

With clear, concise coverage of the basics of convection, this textbook is written for senior/graduate students, from mechanical and other engineering majors, who have taken a basic heat transfer course. Balancing basic concepts with engineering applications, the new edition is ideal for those wanting to learn more heat transfer for research work and advanced coursework. Convective heat transfer is important for many areas, including biomedical applications and energy technologies. This third edition features a complete new chapter on microscale and nanoscale convective heat transfer, and more coverage of numerical/computer methods.

CRC Press

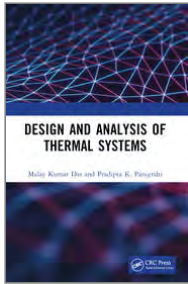
December 2013 : 622pp

Hb: 978-1-466-58344-3 : £185

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Design and Analysis of Thermal Systems



Malay Kumar Das IIT Kanpur, India, **Pradipta K. Panigrahi** IIT Kanpur, India

Thermal systems are essential features of all domestic and industrial applications involving heat and fluid flow and focus of the proposed book is on the design of thermal systems. The proposed book bridges the gap between the theories of thermal science and design of practical thermal systems. Further, it discusses thermodynamic design principle, mathematical and CFD tools that will enable students as well as professional engineers to quickly analyse and design practical thermal systems. The major emphasis is on practical problems related to contemporary energy- and environment-related thermal systems including discussion of computational fluid dynamics used in thermal system design.

CRC Press

July 2025 : 424pp

Pb: 978-0-367-50326-0 : **£52.99**

Hb: 978-0-367-50254-6 : **£145**

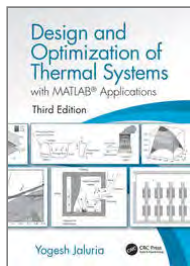
eBook: 978-1-003-04927-2

* For full contents and more information, visit: www.routledge.com/9780367503260

3RD EDITION

Design and Optimization of Thermal Systems, Third Edition

with MATLAB Applications



Yogesh Jaluria Rutgers University, Piscataway, New Jersey, USA.

Series: Mechanical Engineering

Providing systematic approaches to thermal systems design, *Design and Optimization of Thermal Systems, Third Edition*, delivers the guidance needed to solve design problems. It presents concepts and procedures for conceptual design, formulation, modeling, simulation, feasible design, and optimization. Emphasizing modeling and simulation, the Third Edition covers the areas of manufacturability, material selection, and sensitivity, genetic and gradient search methods, and knowledge-based design methodology. This edition also features many new and revised examples and problems, and coverage of computer design analysis with MATLAB.

CRC Press

September 2019 : 614pp

Hb: 978-1-498-77823-7 : £125

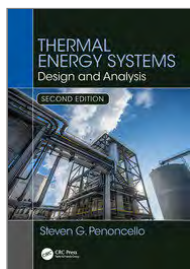
eBook: 978-0-429-08578-9

* For full contents and more information, visit: www.routledge.com/9781498778237

2ND EDITION

Thermal Energy Systems

Design and Analysis, Second Edition



Steven G. Penoncello University of Idaho, Moscow, USA

Thermal Energy Systems: Design and Analysis, Second Edition presents basic concepts for simulation and optimization, and introduces simulation and optimization techniques for system modeling. This text addresses engineering economy, optimization, hydraulic systems, energy systems, and system simulation. Computer modeling is presented, and a companion website provides specific coverage of EES and Excel in thermal-fluid design. Assuming prior coursework in basic thermodynamics and fluid mechanics, this fully updated and improved text will guide students in Mechanical and Chemical Engineering as they apply their knowledge to systems analysis and design, and to capstone design project work.

CRC Press

October 2018 : 623pp

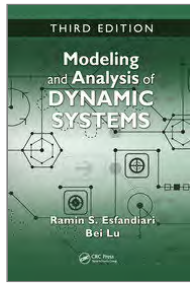
Hb: 978-1-138-73589-7 : £165

eBook: 978-1-315-18626-9

* For full contents and more information, visit: www.routledge.com/9781138735897

3RD EDITION

Modeling and Analysis of Dynamic Systems



Ramin S. Esfandiari California State University, Long Beach, USA

Modeling and Analysis of Dynamic Systems, Third Edition introduces MATLAB®, Simulink®, and Simscape™ and then utilizes them to perform symbolic, graphical, numerical, and simulation tasks. Written for senior level courses/modules, the textbook meticulously covers techniques for modeling a variety of engineering systems, methods of response analysis, and introductions to mechanical vibration, and to basic control systems. These features combine to provide students with a thorough knowledge of the mathematical modeling and analysis of dynamic systems. The Third Edition now includes Case Studies, expanded coverage of system identification, and updates to the computational tools included.

CRC Press

February 2018 : 617pp

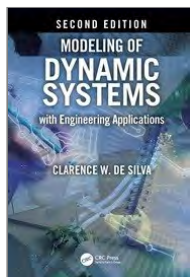
Hb: 978-1-138-72642-0 : £130

eBook: 978-1-315-19129-4

* For full contents and more information, visit: www.routledge.com/9781138726420

2ND EDITION

Modeling of Dynamic Systems with Engineering Applications



Clarence W. de Silva University of British Columbia, Canada

Providing a clear discussion of system dynamics, the book enables students and professionals to both understand and subsequently model mechanical, thermal, fluid, electrical, and multi-domain systems in a systematic, unified and integrated manner. Concepts of through- and across-variables, and flow- and effort-variables are introduced and applied, alongside tools of modeling and model-representation such as linear graphs, bond graphs, and block diagrams. The book uses and illustrates popular software tools such as SIMULINK, throughout, and additionally makes use of innovative worked examples and case studies, alongside problems and exercises based on practical situations.

CRC Press

June 2025 : 420pp

Pb: 978-0-367-64428-4 : £52.99

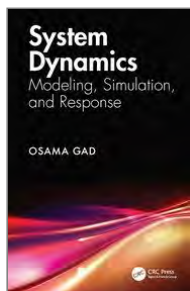
Hb: 978-0-367-64421-5 : £155

eBook: 978-1-003-12447-4

* For full contents and more information, visit: www.routledge.com/9780367644284

System Dynamics

Modeling, Simulation, and Response



Osama Gad

System Dynamics covers linearity-based modeling techniques before delving into nonlinear systems. It compares the Bond Graph technique against traditional techniques (Newton's law, Kirchhoff's law, the law of the conservation of energy, and the heat transfer law). Presenting transient response analyses of first- and second-order systems subjected to various inputs, the book provides a thorough discussion of computational analyses of transient responses using MATLAB®/Simulink and 20-sim software. The book is intended for upper-level undergraduate mechanical and aerospace engineering students taking System Dynamics courses.

CRC Press

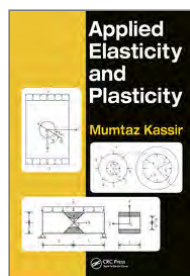
September 2024 : 549pp

Hb: 978-1-032-68563-2 : £120

eBook: 978-1-032-68566-3 : £99.99

* For full contents and more information, visit: www.routledge.com/9781032685632

Applied Elasticity and Plasticity



Mumtaz Kassir

Applied Elasticity and Plasticity is a comprehensive work that introduces graduate students and professionals in civil, mechanical, aeronautical and metallurgical engineering to the basic theories of elasticity, plasticity and their practical applications.

CRC Press

October 2017 : 564pp

Hb: 978-1-138-06191-0 : £175

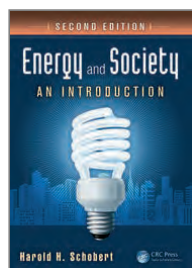
eBook: 978-1-315-16199-0

* For full contents and more information, visit: www.routledge.com/9781138061910

2ND EDITION

Energy and Society

An Introduction, Second Edition



Harold H. Schobert The Pennsylvania State University,
University Park, USA

This book covers the development of energy technology from the time of early humans through antiquity, medieval times, and the Industrial Revolution. It addresses the development of nuclear energy, energy supply and demand, geopolitics of energy, and the various environmental issues associated with energy use in general. This edition offers simple updates, as well as completely rewritten material, regarding the last decade in areas including global climate change, oil prices, renewable and alternative fuels, and diversion of civil nuclear energy programs into nuclear weapons proliferation.

CRC Press

March 2014 : 720pp

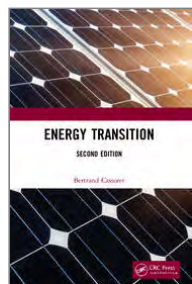
Pb: 978-1-439-82645-4 : **£105**Hb: 978-1-138-42298-8 : **£205**

eBook: 978-0-429-06769-3

* For full contents and more information, visit: www.routledge.com/9781439826454

2ND EDITION

Energy Transition



Bertrand Cassoret Université d'Artois, France

This book presents both the importance of energy transition and its associated difficulties and dangers. It discusses the current state of energy consumption and the links between the economy and energy. The book also offers commentary on energy pollution. Reviewing future energy resources, it evaluates several transition scenarios. It will interest engineers working in various fields of energy, producers of fossil, gas, oil, coal, electric, renewable, and nuclear energy. In addition, undergraduate and graduate students studying energy and power should consider the global discussion to develop better processes, from energy sources to production to consumption.

CRC Press

February 2021 : 163pp

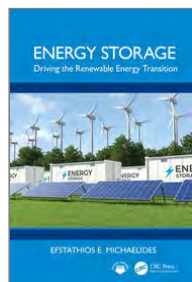
Pb: 978-0-367-54277-1 : **£66.99**Hb: 978-0-367-54278-8 : **£170**

eBook: 978-1-003-08848-6

* For full contents and more information, visit: www.routledge.com/9780367542771

Energy Storage

Driving the Renewable Energy Transition



Efstathios E. Michaelides Texas Christian University, USA

Energy Storage provides a thorough and holistic understanding of the operation and state of technology of all the energy storage options. It encompasses all the methods for energy storage, the engineering systems utilized, and the relevant applications from the small device level to the electricity grid level. Using the basis of thermodynamics, the book explains the operation and features of all the available energy storage methods that may be used for the transition to renewable energy. This book is intended for undergraduate and graduate students taking courses in Energy Conversion, Sustainability, Renewables and Energy Storage, and Energy Transition.

CRC Press

March 2025 : 306pp

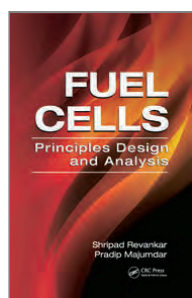
Hb: 978-1-032-46095-6 : £105

eBook: 978-1-003-38008-5

* For full contents and more information, visit: www.routledge.com/9781032460956

Fuel Cells

Principles, Design, and Analysis



Shripad T. Revankar Purdue University, West Lafayette, Indiana, **Pradip Majumdar** Northern Illinois University, Dekalb, USA

Series: Mechanical and Aerospace Engineering Series

This resource combines coverage of the basic principles, analysis, analytical techniques, and design aspects of the fuel cell. It presents fuel cell design at component and system levels, and then elaborates on analysis methods for various phenomena associated with components and systems. With its examples, problems, and simulation activities, it makes an excellent graduate text or reference for researchers, engineers, and others involved in energy development. The text guides the reader from foundations and fundamental principles through analysis methods and fuel cell design.

CRC Press

May 2014 : 750pp

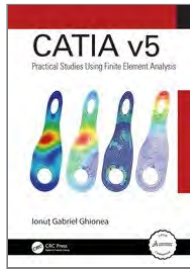
Hb: 978-1-420-08968-4 : £175

eBook: 978-0-429-16243-5

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CATIA v5

Practical Studies Using Finite Element Analysis



Ionuț Gabriel Ghionea

This tutorial textbook presents, through many CAD examples, the main characteristics and working possibilities of the modern CAD software solution CATIA v5 and step by step practical studies for FEM practice. This book is essential reading for students from faculties with a mechanical or industrial engineering profile, as well as production and design engineers from various industries (automotive, military, heavy machinery, medical technology, etc.).

CRC Press

June 2024 : 320pp

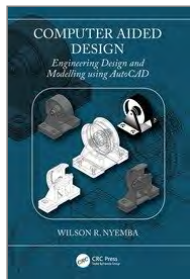
Hb: 978-1-032-71164-5 : £140

eBook: 978-1-003-42681-3

* For full contents and more information, visit: www.routledge.com/9781032711645

Computer Aided Design

Engineering Design and Modeling using AutoCAD



Wilson R Nyemba University of Zimbabwe, Zimbabwe

The text covers different aspects of computer-aided design, from the basic 2-dimensional constructions through modifications, use of layers, and dimensioning to advanced aspects such as 3-dimensional modeling and customization of the package to suit different applications and disciplines. It further discusses important concepts including orthographic projections, isometric projections, 3D wireframe modeling, 3D surface modeling, solid extrusion, and solid of revolution. It will serve as ideal study material for senior undergraduate, and graduate students in the fields of mechanical engineering, industrial engineering, aerospace engineering, and manufacturing engineering.

CRC Press

May 2026 : 314pp

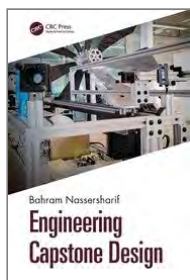
Pb: 978-1-032-26514-8 : £52.99

Hb: 978-1-032-26513-1 : £130

eBook: 978-1-032-41885-8 : £115

* For full contents and more information, visit: www.routledge.com/9781032265148

Engineering Capstone Design



Bahram Nassersharif University of Rhode Island, Kingston, USA

Structured with a practical approach, the book guides engineering students in capstone design projects. The book addresses the challenge of open-ended design projects, often in a team-based format, discussing team member roles, communication, and cooperation. The book will also interest industry professionals, who are engaged in product development or design problem solving. It incorporates accreditation requirements and provides a modern framework for working with industry, reinforced by case studies. The book covers essentials topics and steps in a capstone design sequence, including defining, conceiving, presenting, prototyping, building, testing, and redesigning.

CRC Press

January 2026 : 214pp

Pb: 978-0-367-62161-2 : £49.99

Hb: 978-0-367-62159-9 : £115

eBook: 978-1-003-10821-4

* For full contents and more information, visit: www.routledge.com/9780367621612

The Engineering Design Primer



K. L. Richards

Created to support senior-level courses/modules in product design, K. L. Richards' ENGINEERING DESIGN PRIMER reflects the author's deep experience in engineering product management and design. The combination of specific engineering design processes within the broader context of creative, team-based product design, makes this the ideal resource for project-based coursework. Starting with design concepts and tasks, the text then explores materials selection, optimisation, reliability, statistics, testing, and economic factors- all supported with real-life examples. Student readers will gain a practical perspective of the work they'll be doing as their engineering careers begin.

CRC Press

June 2024 : 324pp

Pb: 978-1-032-83885-4 : £51.99

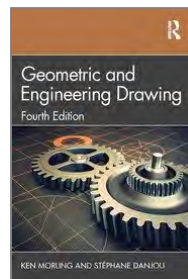
Hb: 978-0-367-21013-7 : £155

eBook: 978-0-429-26491-7

* For full contents and more information, visit: www.routledge.com/9781032838854

4TH EDITION

Geometric and Engineering Drawing



Ken Morling, Stéphane Danjou Rhine-Waal University of Applied Sciences, Germany

This introduction to descriptive geometry and contemporary drafting guides the student through the essential principles to create engineering drawings that comply with international standards of technical product specification. This heavily updated new edition now applies to CAD as well as conventional drawing. Extensive new coverage is given to international drafting conventions, methods of spatial visualisation such as multi-view projection, dimensional and geometric tolerancing, and representation of workpiece and machine elements. It is ideal for undergraduates in engineering or product design, as well as students of vocational courses in engineering communication.

Routledge

June 2022 : 422pp

Pb: 978-0-367-43123-5 : £51.99

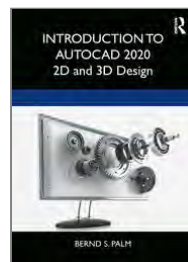
Hb: 978-0-367-43127-3 : £125

eBook: 978-1-003-00138-6

* For full contents and more information, visit: www.routledge.com/9780367431235

Introduction to AutoCAD 2020

2D and 3D Design



Bernd S. Palm

Master the complexities of the world's bestselling 2D and 3D software with Introduction to AutoCAD 2020. Ideally suited to new users of AutoCAD, this book will be a useful resource for drawing modules in both vocational and introductory undergraduate courses in engineering and construction. Experienced users will also find the updated images, commands and software information to be essential reading in order to adapt to the latest AutoCAD interface. Further education students will find this an invaluable textbook for City & Guilds AutoCAD qualifications, Computer Aided Drawing units of BTEC National Engineering, Higher National Engineering and Construction courses from Edexcel.

Routledge

February 2020 : 436pp

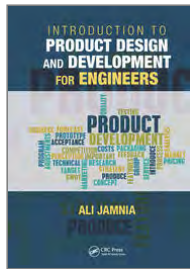
Pb: 978-0-367-41739-0 : £51.99

Hb: 978-0-367-41740-6 : £94.99

eBook: 978-0-367-81602-5

* For full contents and more information, visit: www.routledge.com/9780367417390

Introduction to Product Design and Development for Engineers



Ali Jamnia

Introduction to Product Design and Development for Engineers provides guidelines and best practices for the design, development, and evaluation of engineered products. Created to serve fourth year undergraduate students in Engineering Design modules with a required project, the text covers the entire product design process and product life-cycle, from the initial concept to the design and development stages, and through to product testing, design documentation, manufacturability, marketing, and sustainability. Reflecting the author's long career as a design engineer, this text will also serve as a practical guide for students working on their capstone design projects.

CRC Press

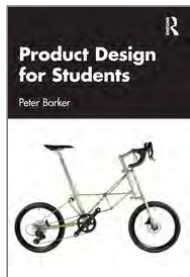
June 2018 : 445pp

Hb: 978-1-138-55421-4 : £155

eBook: 978-1-315-14893-9

* For full contents and more information, visit: www.routledge.com/9781138554214

Product Design for Students



Peter Barker University of West of England, UK

This covers the concepts and processes of professional product design through its life from the design concept and design for manufacture, with concept generation techniques, design process methodologies, the use of design thinking, user centred design and co-design, sustainable production, materials and manufacturing process selection, quality control, design for recycling, marketing and distribution. With case studies from transport design, consumer product design and service design, and the rudiments of calculation to 'feasibility study' level and 'stress testing' product design innovations. For year one undergraduate, Further Education, T level and A level students.

Routledge

October 2025 : 210pp

Pb: 978-1-032-63118-9 : £33.99

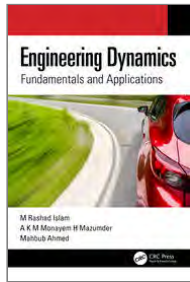
Hb: 978-1-032-63120-2 : £89.99

eBook: 978-1-032-63127-1

* For full contents and more information, visit: www.routledge.com/9781032631189

Engineering Dynamics

Fundamentals and Applications



M Rashad Islam , A K M Monayem H Mazumder , Mahbub Ahmed

This textbook is intended for the first course of engineering dynamics for undergraduate students. Engineering dynamics is a rigorous topic that typically involves the intensive use of vector mathematics and calculus. This book, however, uses plain language with less vector mathematics and calculus to introduce these topics of mathematics to students with a high school physics background. Numerous practical examples are provided with their step-by-step worked out solutions, as well as case studies to reflect the interests of new engineering and applied engineering students.

CRC Press

November 2024 : 276pp

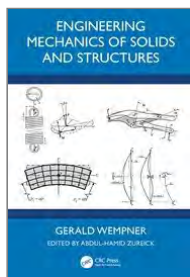
Pb: 978-1-032-25561-3 : **£48.99**

Hb: 978-1-032-25557-6 : **£125**

eBook: 978-1-003-28395-9

* For full contents and more information, visit: www.routledge.com/9781032255613

Engineering Mechanics of Solids and Structures



Gerald Wempner Georgia Institute of Technology (retired), Atlanta, USA, **Abdul-Hamid Zureick**

This textbook for advanced students in aerospace, mechanical, and civil engineering sets out the underlying concepts, methods, and theories. As well as giving the Newtonian approach to motion and equilibrium, it offers the Lagrangean criteria of work and energy as the most effective means to formulate finite elements and other discrete approximations. Thorough mathematics demonstrates the limitations of the approximations and provides the tools for more precise analyses. This can then be applied to a broad spectrum of structural and mechanical components – the analysis and design of a dome or a bridge, the hull of a ship or a spacecraft, or the mechanical component of an engine.

CRC Press

June 2026 : 650pp

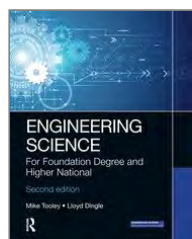
Hb: 978-1-041-12570-9 : **£130**

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2ND EDITION

Engineering Science

For Foundation Degree and Higher National

**Mike Tooley** Brooklands College, UK, **Lloyd Dingle**

Engineering Science will help you understand the scientific principles involved in engineering. Focusing primarily upon core mechanical and electrical science topics, students enrolled on an Engineering Foundation degree and Higher National Engineering qualification will find this book an invaluable aid to their learning. The second edition features new chapters on 'Materials, Properties, Testing and Failure' and 'AC Network Analysis' complete with 54 totally new drawings.

Routledge

September 2020 : 528pp

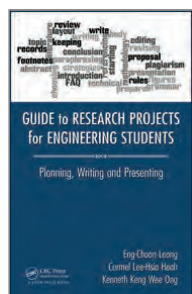
Pb: 978-0-367-43272-0 : **£52.99**Hb: 978-0-367-43273-7 : **£155**

eBook: 978-1-003-00224-6

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Guide to Research Projects for Engineering Students

Planning, Writing and Presenting



Eng Choon Leong Nanyang Technological University, Singapore, **Carmel Lee-Hsia Heah** Nanyang Technological University, Singapore, **Kenneth Keng Wee Ong** Nanyang Technological University, Singapore

For students embarking on their first research project, sieving through the vast amount of information on the Internet can be a daunting and time consuming task. Research projects require not just understanding of the research methodology, but also complementary skills including information search, technical writing, oral presentation, and software knowledge. This book is written especially for students who need a quick and concise handbook to support them in conducting research so that they can devote most of their time to their research.

CRC Press

July 2015 : 253pp

Pb: 978-1-482-23877-8 : **£41.99**Hb: 978-1-138-42428-9 : **£200**

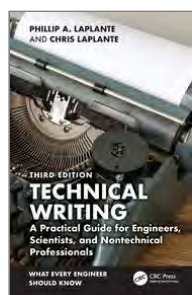
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3RD EDITION

Technical Writing

A Practical Guide for Engineers, Scientists, and Nontechnical Professionals



Philip A. Laplante The Pennsylvania State University, Malvern, USA, **Chris Laplante**

Series: What Every Engineer Should Know

This practical text enables readers to write, edit, and publish materials of a technical nature, including books, articles, reports, and electronic media. Written by experienced practicing engineers, this guide complements traditional technical writing manuals through presentation of first-hand examples that help readers understand practical considerations in writing and producing technical content. The new edition includes new and updated exercises, examples, and case studies and includes new content on software/systems documentation, popular writing tools, and technologies such as generative AI. It is aimed at students and professionals in the science and engineering domains.

CRC Press

November 2025 : 271pp

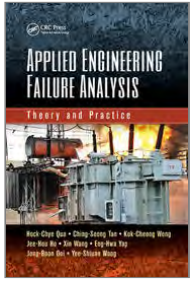
Pb: 978-1-032-84374-2 : **£47.99**Hb: 978-1-032-84375-9 : **£160**

eBook: 978-1-003-51243-1

* For full contents and more information, visit: www.routledge.com/9781032843742

Applied Engineering Failure Analysis

Theory and Practice



Hock-Chye Qua, **Ching-Seong Tan** Multimedia University, Cyberjaya, Selangor, Malaysia, **Kok-Cheong Wong** University of Nottingham-Malaysia Campus, **Jee-Hou Ho** University of Nottingham-Malaysia Campus, **Xin Wang** Monash University - Sunway Campus, Malaysia, **Eng-Hwa Yap** University College London, Australia, **Jong-Boon Ooi** Monash University - Sunway Campus, Malaysia, **Yee-Shiuan Wong**

This book fills the gap between failure analysis theory and the actual conducts of the failure cases. The book demonstrates the main methodologies that have evolved over time and includes examples from the 1970s to date. Engineering calculations and estimation of system stresses and strengths are given in the relevant chapters. It presents a wide range of cases studies, ranging from mechanical engineering, metallurgy, mining, civil/structural engineering, electrical power systems, and radiation damage.

CRC Press

July 2017 : 372pp

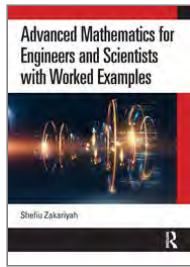
Pb: 978-1-138-74786-9 : **£80.99**

Hb: 978-1-482-22218-0 : **£220**

eBook: 978-0-429-17024-9

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Advanced Mathematics for Engineers and Scientists with Worked Examples



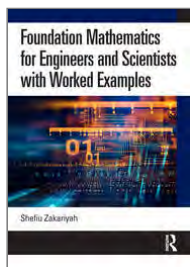
Shefiu Zakariyah University of Derby, UK

This covers core to advanced topics in mathematics, providing a comprehensive, step-by-step presentation of concepts to engineers, scientists and general readers. It moves from simple to challenging areas, with carefully tailored worked examples also of different degrees of challenge. Mathematical concepts are linked with engineering applications. It is written primarily for students at levels 3 and 4 (typically in the early stages of a degree in engineering or a related discipline) or for those undertaking foundation, access, Higher National Certificate (HND), International Foundation Year (IFY), and International Year One (IYO) courses with math modules.

Routledge
November 2024 : 844pp
Pb: 978-1-032-66327-2 : **£48.99**
Hb: 978-1-032-66510-8 : **£115**
eBook: 978-1-032-66512-2

* For full contents and more information, visit: www.routledge.com/9781032663272

Foundation Mathematics for Engineers and Scientists with Worked Examples



Shefiu Zakariyah University of Derby, UK

This provides a comprehensive, step-by-step presentation of fundamental mathematical concepts for engineers, scientists, and general readers. It moves from simple to challenging areas, with tailored worked examples. Mathematical concepts are linked with appropriate engineering applications and are aligned with topics taught in major UK and overseas curriculums. It is written primarily for students at levels 3 and 4 (typically in the early stages of a degree in engineering or a related discipline) or for those undertaking foundation, access, Higher National Certificate (HND), International Foundation Year (IFY), and International Year One (IYO) courses with math modules.

Routledge
October 2024 : 610pp
Pb: 978-0-367-46289-5 : **£48.99**
Hb: 978-0-367-46290-1 : **£115**
eBook: 978-1-003-02792-8

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A Mathematics Boot Camp for Science and Engineering Students



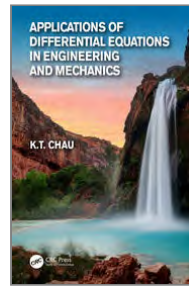
Ying Ma

Many students have difficulty applying mathematical techniques to solve problems in science and engineering, even after completing Calculus I and II. Students who are beginning core coursework in their field of study often need additional guidance on practicing, learning, and improving their problem-solving skills for application. This book offers a solution to this issue and is specifically designed to address common errors in mathematical problem-solving for undergraduate science and engineering students. This concise and practical text offers "basic training" in mathematical problem-solving skills for undergraduate students in science and engineering disciplines.

CRC Press
March 2025 : 323pp
Pb: 978-1-032-44294-5 : **£56.99**
Hb: 978-1-032-44295-2 : **£130**
eBook: 978-1-003-37148-9

* For full contents and more information, visit: www.routledge.com/9781032442945

Applications of Differential Equations in Engineering and Mechanics



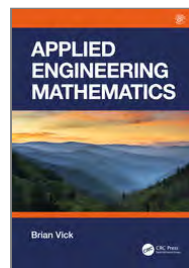
Kam-tim Chau Hong Kong Polytechnic University

This volume gives comprehensive coverage of the essential differential equations students are likely to encounter in solving engineering and mechanics problems - alongside a preliminary companion text on theory. This covers a very broad range of problems, including beams and columns, plates, shells, structural dynamics, catenary and cable suspension bridge, nonlinear buckling, transports and waves in fluids, geophysical fluid flows, nonlinear waves and solitons, Maxwell equations, Schrodinger equations, celestial mechanics and fracture mechanics and dynamics. The focus is on the mathematical technique for solving the differential equations involved.

CRC Press
December 2018 : 830pp
Pb: 978-0-367-02643-1 : **£94.99**
Hb: 978-1-498-76697-5 : **£190**
eBook: 978-0-429-47064-6

* For full contents and more information, visit: www.routledge.com/9780367026431

Applied Engineering Mathematics



Brian Vick Virginia Tech, USA

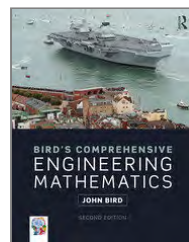
Undergraduate engineering students need good mathematics skills, and this textbook supports this with a strong emphasis on visualization and the methods and tools needed across the whole of engineering. The visual approach is emphasised, and excessive proofs and derivations are avoided. The visual images explain and teach the mathematical methods. The book's website provides dynamic and interactive codes in Mathematica to accompany the examples for the reader to explore on their own.

CRC Press
May 2020 : 246pp
Pb: 978-0-367-43276-8 : **£60.99**
Hb: 978-0-367-43277-5 : **£125**
eBook: 978-1-003-00226-0

* For full contents and more information, visit: www.routledge.com/9780367432768

2ND EDITION

Bird's Comprehensive Engineering Mathematics



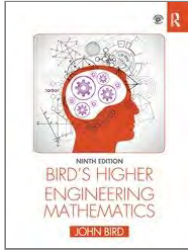
John Bird

This comprehensive textbook covers the key mathematical principles for real-life engineering problems. Along with its companion website it provides simple explanations, supported by 1600 worked problems and over 3200 further problems contained within 384 exercises throughout the text. With 34 Revision tests together with 9 Multiple-choice tests -- and detailed solutions to 3200 further problems.

Routledge
June 2018 : 1226pp
Pb: 978-0-815-37814-3 : **£59.99**
Hb: 978-0-815-37815-0 : **£170**
eBook: 978-1-351-23287-6

* For full contents and more information, visit: www.routledge.com/9780815378143

9TH EDITION

Bird's Higher Engineering Mathematics**John Bird** Defence College of Technical Training, UK

Higher Engineering Mathematics has helped thousands of students to succeed in their exams by developing problem-solving skills. It is supported by over 600 practical engineering examples and applications which relate theory to practice. The extensive and thorough topic coverage makes this a solid text for undergraduate and upper-level vocational courses. Its companion website provides resources for both students and lecturers, including lists of essential formulae, and full solutions to all 2,000 further questions contained in the 277 practice exercises; and illustrations and answers to revision tests for adopting course instructors.

Routledge

March 2021 : 934pp

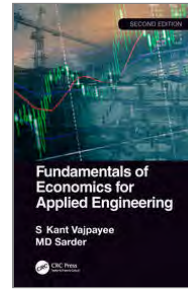
Pb: 978-0-367-64373-7 : £52.99

Hb: 978-0-367-64375-1 : £125

eBook: 978-1-003-12422-1

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2ND EDITION

Fundamentals of Economics for Applied Engineering**S. Kant Vajpayee** University of Southern Mississippi, USA,
MD Sarder Bowling Green State University, USA

This one-semester introduction to basic engineering economics provides an overview of the theory and mathematics underlying operational business decisions that engineering technology, engineering, and industrial technology students will face in the workplace. Plain language is used and concepts have been kept straightforward with an emphasis on applying economic principles. Practical examples as throughout the text make good use of Microsoft Excel templates, provided on the book's companion website, for students. Exercises provide discussion and multiple-choice questions along with numerical problems, and a solutions manual and instructor resources is given for adopting instructors.

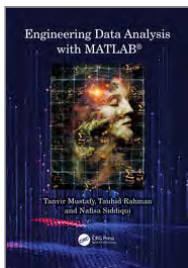
CRC Press

August 2019 : 470pp

Pb: 978-0-367-18947-1 : £66.99

Hb: 978-0-367-18946-4 : £155

eBook: 978-0-429-19945-5

* For full contents and more information, visit: www.routledge.com/9780367189471**Engineering Data Analysis with MATLAB®****Tanvir Mustafy** Military Inst. of Science and Tech, BD,
Tauhid Rahman Military Inst. of Science and Tech, BD,
Nafisa Siddiqui Military Inst. of Science and Tech, BD

This book provides a concise overview of a variety of techniques for analyzing statistical, scientific, and financial data, using MATLAB® to integrate several approaches to data analysis and statistics. Chapters offer a broad review of computational data analysis, illustrated with many examples and applications. Each chapter combines theoretical concepts with practical MATLAB® applications and includes practice exercises, ensuring a comprehensive understanding of the material. With coverage of both basic and more complex ideas in applied statistics, the book has broad appeal for undergraduate students up to practicing engineers.

CRC Press

December 2024 : 902pp

Pb: 978-1-032-50771-2 : £75.99

Hb: 978-1-032-50658-6 : £155

eBook: 978-1-003-39958-2

* For full contents and more information, visit: www.routledge.com/9781032507712**Spreadsheet Problem Solving and Programming for Engineers and Scientists****David E. Clough** University of Colorado, USA, **Steven C. Chapra** Tufts University, USA

Beginning with a thorough five chapters on the basics of spreadsheets and programming, the book is well set out, building on the authors' combined decades of experience teaching spreadsheets and programming. Following on from this, three chapters cover engineering economics, key numerical methods, and applied statistics. With each chapter including examples and a set of exercises, the book is an ideal companion for all engineering courses and also for self-study. Based on the latest version of Excel, it is also compatible with earlier versions dating back to 2013. Including case studies, the book will be of interest to students and professionals working in all areas of engineering.

CRC Press

October 2023 : 452pp

Hb: 978-1-032-42053-0 : £105

eBook: 978-1-003-36105-3

* For full contents and more information, visit: www.routledge.com/9781032420530**Experimental Statistics and Data Analysis for Mechanical and Aerospace Engineers****James A. Middleton***Series: Advances in Applied Mathematics*

This text will introduce students to key concepts in probability and statistics with applications in mechanical and aerospace engineering. Emphasis is placed on modelling variation in observations, characterizing its distribution, and making inferences with regards to quality assurance and control. Fitting multivariate models, experimental design and hypothesis testing are all critical skills developed in the course. All topics are developed utilizing data from engineering projects, simulations, and laboratory experiences. MatLab is used throughout.

Chapman & Hall

November 2021 : 586pp

Hb: 978-0-367-55596-2 : £125

eBook: 978-1-003-09422-7

* For full contents and more information, visit: www.routledge.com/9780367555962**Theory of Differential Equations in Engineering and Mechanics****Kam-tim Chau** Hong Kong Polytechnic University

This volume gives comprehensive coverage of the essential differential equations students are likely to encounter in solving engineering and mechanics problems-- with its advanced companion text on applications. This covers a very broad range of theories related to solving differential equations, mathematical preliminaries, ODE (n-th order and system of 1st order ODE in matrix form), PDE (1st order, 2nd, and higher order including wave, diffusion, potential, biharmonic equations and more)--plus rarer material such as Green's function, integrodifferential equations, asymptotic expansion and perturbation, calculus of variations, variational principles, finite difference method.

CRC Press

September 2017 : 1000pp

Pb: 978-1-138-74813-2 : £96.99

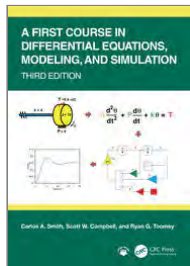
Hb: 978-1-498-76778-1 : £175

eBook: 978-1-315-16493-9

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3RD EDITION

A First Course in Differential Equations, Modeling, and Simulation



Carlos A. Smith University of South Florida, Tampa, USA,
Scott W. Campbell University of South Florida, Tampa, USA,
Ryan G. Toomey

This textbook shows how differential equations arise from applying basic physical principles and experimental observations to engineering systems. Avoiding overly theoretical explanations, the textbook also discusses classical and Laplace transform methods for obtaining the analytical solution of differential equations. In addition, the authors explain how to solve sets of differential equations where analytical solutions cannot easily be obtained. Incorporating valuable suggestions from mathematicians and mathematics professors, the Third Edition provides students with a practical understanding of how to apply differential equations in modern engineering and science.

CRC Press

September 2025 : 534pp

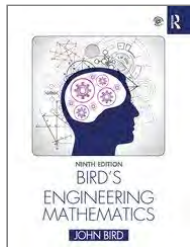
Hb: 978-1-041-02421-7 : **£94.99**

eBook: 978-1-003-61916-1

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John Bird Defence College of Technical Training, UK

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Routledge

March 2021 : 758pp

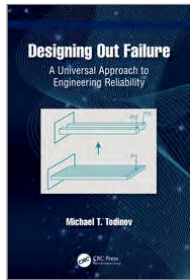
Pb: 978-0-367-64378-2 : **£51.99**Hb: 978-0-367-64379-9 : **£125**

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Designing Out Failure

A Universal Approach to Engineering Reliability

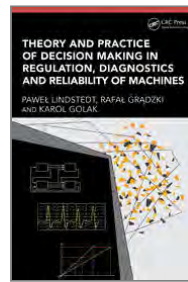


Michael T. Todinov Professor, Dept. of Mechanical Engineering and Mathematical Sciences, Oxford Brookes University, UK

Designing Out Failure is a comprehensive textbook that introduces a unique, domain-independent methodology for eliminating failure modes and improving reliability across all engineering disciplines.

CRC Press
April 2026 : 260pp
Hb: 978-1-041-13934-8 : **£96.99**
eBook: 978-1-003-67930-1
* For full contents and more information, visit: www.routledge.com/9781041139348

Theory and Practice of Decision Making in Regulation, Diagnostics and Reliability of Machines



Paweł Lindstedt Air force institute of technology, **Rafał Grądzki** Białystok University of Technology, Poland, **Karol Golak** Białystok University of Technology, Poland

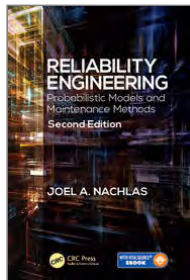
Without decision-making processes, it is difficult to achieve suitable safety and cost-efficiency. Tackling this head on, the textbook discusses theoretical foundations of decision making, and how this can impact diagnostics and the reliability of machines. Discussing cybernetics, artificial intelligence, engine control, machine diagnostics and reliability, the book uses practical examples such as turbine blades of aircraft engines and vehicles such as cars and buses. This book will be of interest to students and industry workers in the field of mechanical engineering, aerospace and automotive engineering, enabling readers to make informed decisions in their field of work.

CRC Press
December 2024 : 232pp
Hb: 978-1-032-63841-6 : **£120**
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2ND EDITION

Reliability Engineering

Probabilistic Models and Maintenance Methods, Second Edition



Joel A. Nachlas Virginia Polytechnic Institute and State University, Department of Industrial & Systems Engineering, Blacksburg, USA

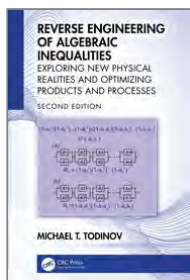
Without proper reliability and maintenance planning, even the most efficient and seemingly cost-effective designs can incur enormous expenses due to repeated or catastrophic failure and subsequent search for the cause. Today's engineering students face increasing pressure from employers, customers, and regulators to produce cost-efficient designs that are less prone to failure and that are safe and easy to use. An understanding of reliability principles and maintenance planning can help accomplish these goals. With a blend of mathematical rigor and readability, this book is the ideal introductory textbook for graduate students.

CRC Press
December 2016 : 394pp
Hb: 978-1-498-75247-3 : **£155**
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2ND EDITION

Reverse Engineering of Algebraic Inequalities

Exploring New Physical Realities and Optimizing Products and Processes

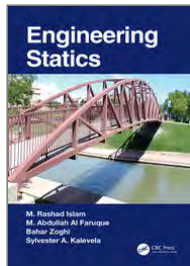


Michael T. Todinov Oxford Brookes University, UK

This book introduces a novel method that relies on reverse engineering of algebraic inequalities with the purpose to optimize systems and processes in relevant fields like mechanical eng, structural eng, physics, electrical eng, reliability eng, and risk management. This book provides the reader with methods to enhance the reliability of systems in total absence of knowledge about the reliabilities of the components building the systems; to develop light-weight structures; to develop structures with very big load-bearing capacity; to enhance process performance; to obtain new useful physical properties and to correct flaws in the current practice for predicting system reliability.

CRC Press
December 2024 : 214pp
Hb: 978-1-032-84856-3 : **£89.99**
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Engineering Statics presents the cutting-edge topics in engineering statics, focusing on practical applications knowledge, with numerous real-world examples, practice problems, and case studies throughout. It covers theory concisely and uses plain language and coverage that can be completed in a one-semester course. It also covers the related concepts required to take the Fundamentals of Engineering (FE) exam.

CRC Press

August 2024 : 308pp

Pb: 978-0-367-56521-3 : **£48.99**

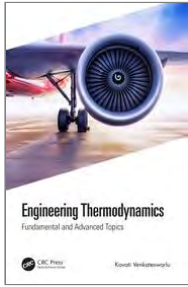
Hb: 978-0-367-56106-2 : **£125**

eBook: 978-1-003-09815-7

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Engineering Thermodynamics

Fundamental and Advanced Topics



Kavati Venkateswarlu RAK Research and Innovation Center, American University of Ras Al Khaimah", Ras Al Khaimah, United Arab Emirates.

The proposed textbook covers fundamental and advanced concepts of engineering thermodynamics with the help of pedagogical features including solved problems and unsolved exercises. It presents detailed discussion of vapor power cycles including reheat Rankine cycle, regenerative Rankine cycle and Carnot vapor cycle. It will be a valuable resource for senior undergraduate and graduate students in the field of mechanical engineering, civil engineering and aerospace engineering.

CRC Press

October 2024 : 487pp

Pb: 978-0-367-65210-4 : **£54.99**

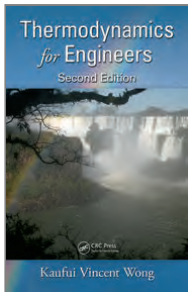
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2ND EDITION

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Kaufui Vincent Wong University of Miami, Coral Gables, Florida, USA

Series: Mechanical and Aerospace Engineering Series

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CRC Press

August 2011 : 450pp

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Introduction to Experimental Methods



Terry W. Armstrong New Mexico State University,
United States

Introduction to Experimental Methods explains fundamental engineering concepts in mechanics, dynamics, heat transfer, and fluid dynamics. From conceptualizing an engineering experiment to presenting the results with lab experiments, this book enables students to work through the design process and analyze experimental results. The book is intended for senior undergraduate engineering students taking courses in Experimental Methods. Offering a complete overview of instruction for engineering lab methodology, the book includes practical lab manuals for student use. It discusses how to write lab reports, various instruments and equipment, as well as failures in experimentation.

CRC Press

July 2023 : 488pp

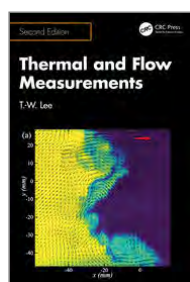
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CRC Press

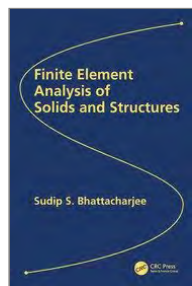
December 2025 : 386pp

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Finite Element Analysis of Solids and Structures



Sudip S. Bhattacharjee

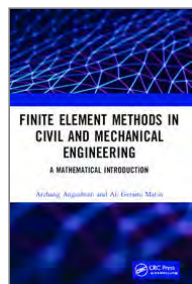
This textbook combines the theory of elasticity (advanced analytical treatment of stress analysis problems) and finite element methods (numerical details of finite element formulations) into one academic course derived from author's teaching, research, and applied work in automotive product development as well as in civil structural analysis. This work contains 12 discrete chapters that can be covered in a single semester university graduate course on linear elastic finite element analysis methods. The book also serves as a reference for practicing engineers working on design assessment and analysis of solids and structures.

CRC Press
October 2024 : 340pp
Pb: 978-1-032-04158-2 : £48.99
Hb: 978-0-367-43705-3 : £125
eBook: 978-1-003-02784-3

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Finite Element Methods in Civil and Mechanical Engineering

A Mathematical Introduction



Arzhang Angoshtari George Washington University, USA, **Ali Gerami Matin** George Washington University, USA

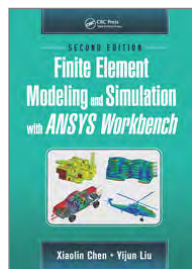
The finite element method is widely employed for numerical simulations in engineering and science due to its efficiency. This concise introduction to the mathematical theory of the finite element method presents a selection of applications in civil and mechanical engineering such as beams and frames, Poisson's equation, heat transfer, advection-diffusion, linear elasticity, and incompressible fluids. Simple MATLAB codes and/or FENICS scripts of these examples can be downloaded from the book's companion website.

CRC Press
December 2020 : 176pp
Pb: 978-1-138-33517-2 : £51.99
Hb: 978-1-138-33516-5 : £115
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2ND EDITION

Finite Element Modeling and Simulation with ANSYS Workbench, Second Edition



Xiaolin Chen Washington State University, Vancouver, USA, **Yijun Liu** University of Cincinnati, Ohio, USA

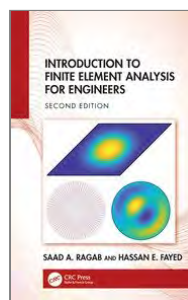
Finite Element Modeling and Simulation with ANSYS Workbench 18, Second Edition, combines finite element theory with real-world practice. Providing an introduction to finite element modeling and analysis for those with no prior experience, and written by authors with a combined experience of 30 years teaching the subject, this text presents FEM formulations integrated with relevant hands-on instructions for using ANSYS Workbench 18. Incorporating the basic theories of FEA, simulation case studies, and the use of ANSYS Workbench in the modeling of engineering problems, the book also establishes the finite element method as a powerful numerical tool in engineering design and analysis.

CRC Press
September 2018 : 472pp
Hb: 978-1-138-48629-4 : £155
eBook: 978-1-351-04587-2

* For full contents and more information, visit: www.routledge.com/9781138486294

2ND EDITION

Introduction to Finite Element Analysis for Engineers



Saad A. Ragab Virginia Tech, USA, **Hassan E. Fayed** Virginia Tech, USA

The book includes MATLAB codes and aims to build a comprehensive understanding of FEA and its applications in modern engineering. New chapters include topics such as a system of partial differential equations in two or more independent variables, while chapter ten presents the finite element method for a nonlinear Mindlin-Reissner plate. The book demonstrates the power and versatility of FEA as a tool, with many examples of practical engineering problems. These problems range from those which can be solved without a computer, to those requiring MATLAB or Python. With applications in Civil, Mechanical, Aerospace and Biomedical Engineering, the textbook is ideal for graduate students.

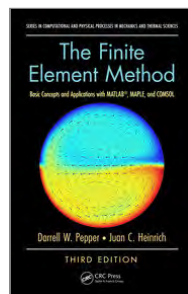
CRC Press
August 2024 : 772pp
Hb: 978-1-032-34629-8 : £175
eBook: 978-1-003-32315-0

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3RD EDITION

The Finite Element Method

Basic Concepts and Applications with MATLAB, MAPLE, and COMSOL, Third Edition



Darrell W. Pepper University of Nevada, Las Vegas, USA, **Juan C. Heinrich** University of New Mexico, Albuquerque, USA

Series: Computational and Physical Processes in Mechanics and Thermal Sciences

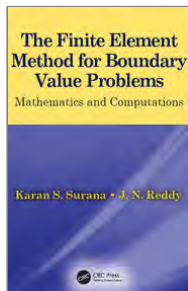
The third edition of the book introduces the fundamentals of the finite element method through simple examples and an applications-oriented approach using the latest computational tools. Using the transport equation for heat transfer as the foundation for the governing equations, text demonstrates the versatility of the method of weighted residuals for a wide range of applications including structural analysis and fluid flow. It introduces the boundary element method and meshless, or mesh-free, methods through two additional chapters. User-friendly computer codes written in MATLAB, MAPLE and FORTRAN are listed.

CRC Press
March 2017 : 628pp
Hb: 978-1-498-73860-6 : £155
eBook: 978-1-315-39510-4

* For full contents and more information, visit: www.routledge.com/9781498738606

The Finite Element Method for Boundary Value Problems

Mathematics and Computations



Karan S. Surana University of Kansas, USA, **J. N. Reddy**
Texas A&M University, College Station, USA

Series: Applied and Computational Mechanics

Written by two well-respected experts in the field, The Finite Element Method for Boundary Value Problems: Mathematics and Computations bridges the gap between applied mathematics and application-oriented studies of FEM. Mathematically rigorous, it uses examples, applications, and illustrations from various areas of engineering, applied mathematics, and the physical sciences. Readers are able to grasp the mathematical foundations of FEM, as well as its versatility; unlike many finite element texts this work is not limited to solid mechanics problems. Based around use of the finite element method for solving boundary values problems (BVPs), the text is organized around three categories of differential operators: self-adjoint, non-self adjoint, and non-linear. These operators are utilized with various methods of approximation, including the Galerkin, Petrov-Galerkin, and other methods.

CRC Press

November 2016 : 824pp

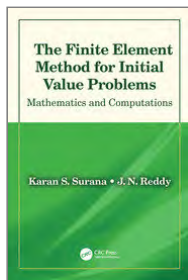
Hb: 978-1-498-78050-6 : £200

eBook: 978-1-315-36571-8

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The Finite Element Method for Initial Value Problems

Mathematics and Computations



Karan S. Surana University of Kansas, USA, **J. N. Reddy**
Texas A&M University, College Station, USA

Unlike most finite element books that cover time dependent processes (IVPs) in a cursory manner, The Finite Element Method for Initial Value Problems: Mathematics and Computations focuses on the mathematical details as well as applications of space-time coupled and space-time decoupled finite element methods for IVPs. Space-time operator classification, space-time methods of approximation, and space-time calculus of variations are used to establish unconditional stability of space-time methods during the evolution. Space-time decoupled methods are also presented with the same rigor.

CRC Press

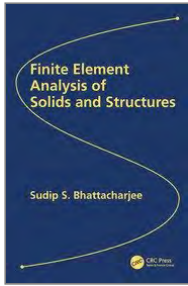
October 2017 : 630pp

Hb: 978-1-138-57637-7 : £205

eBook: 978-1-351-27000-7

* For full contents and more information, visit: www.routledge.com/9781138576377

Finite Element Analysis of Solids and Structures



Sudip S. Bhattacharjee

This textbook combines the theory of elasticity (advanced analytical treatment of stress analysis problems) and finite element methods (numerical details of finite element formulations) into one academic course derived from author's teaching, research, and applied work in automotive product development as well as in civil structural analysis. This work contains 12 discrete chapters that can be covered in a single semester university graduate course on linear elastic finite element analysis methods. The book also serves as a reference for practicing engineers working on design assessment and analysis of solids and structures.

CRC Press

October 2024 : 340pp

Pb: 978-1-032-04158-2 : **£48.99**

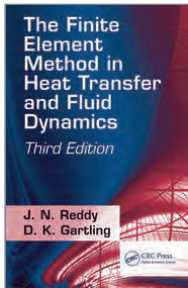
Hb: 978-0-367-43705-3 : **£125**

eBook: 978-1-003-02784-3

* For full contents and more information, visit: www.routledge.com/9781032041582

3RD EDITION

The Finite Element Method in Heat Transfer and Fluid Dynamics



J. N. Reddy Texas A&M University, College Station, USA,
D.K. Gartling Sandia National Laboratories, Albuquerque,
New Mexico, USA

Series: Applied and Computational Mechanics

Considered to be among the very best in the field, this masterwork from renowned experts J. N. Reddy and David Gartling is the latest version of a book that has long been relied upon by practicing engineers, researchers, and graduate students. Noted for its powerful methodology and clear explanations of the subject, this third edition contains considerably more workable exercises and examples associated with problems in heat conduction, incompressible viscous flow, and convection heat transfer. It also uses applied examples to show realistic examples of FEM in thermal and fluid design analysis.

CRC Press

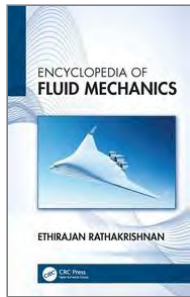
April 2010 : 524pp

Hb: 978-1-420-08598-3 : **£205**

eBook: 978-0-429-11142-6

* For full contents and more information, visit: www.routledge.com/9781420085983

Encyclopedia of Fluid Mechanics



Ethirajan Rathakrishnan Indian Institute of Technology Kanpur, India

This book, being developed using the course material used in teaching the courses on the fluid mechanics, high-speed flows, aerodynamics, high-enthalpy flows, experimental methods, aircraft design, heat transfer, introduction to engineering, wind engineering, precisely presents the theoretical and application aspects of the terms associated with those. It will serve as ideal study material for senior undergraduate and graduate students in the fields of mechanical engineering, aerospace engineering, flow physics, civil engineering, automotive engineering, and manufacturing engineering.

CRC Press

December 2022 : 570pp

Pb: 978-1-032-38238-8 : **£105**

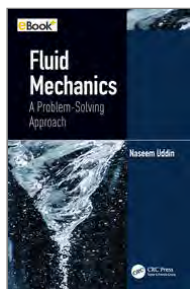
Hb: 978-1-032-39101-4 : **£265**

eBook: 978-1-003-34840-5

* For full contents and more information, visit: www.routledge.com/9781032382388

Fluid Mechanics

A Problem-Solving Approach



Naseem Uddin Universiti Teknologi Brunei

Fluid Mechanics: A Problem-Solving Approach presents problem-solving approaches that are used in fluid mechanics and provides a clear distinction between integral formulation and the different formulation of conservation law. The book is intended for senior undergraduate mechanical and civil engineering students taking courses in Fluid Mechanics. Including a detailed discussion on pipe flow correlations, entrance length correlations, and plotting of Moody diagram, the book works through the comprehensive coverage of fluid mechanics with a gradual introduction of theory in a straightforward, practical approach.

CRC Press

December 2022 : 537pp

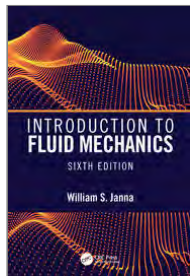
Hb: 978-1-032-32453-1 : **£125**

eBook: 978-1-032-32456-2 : **£105**

* For full contents and more information, visit: www.routledge.com/9781032324531

6TH EDITION

Introduction to Fluid Mechanics, Sixth Edition



William S. Janna University of Memphis, Tennessee, USA

Introduction to Fluid Mechanics, Sixth Edition, is intended for a first course in Fluid Mechanics, as taken by a range of engineering majors. Beginning with dimensions, units, and fluid properties, the text continues with explanation of key equations and coverage of the control-volume approach.

CRC Press

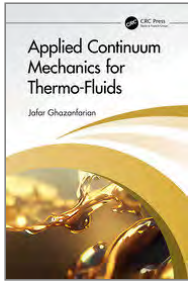
April 2020 : 754pp

Hb: 978-0-367-34127-5 : **£175**

eBook: 978-0-429-32453-6

* For full contents and more information, visit: www.routledge.com/9780367341275

Applied Continuum Mechanics for Thermo-Fluids



Jafar Ghazanfarian University of Zanjan, Iran

Applied Continuum Mechanics for Thermo-Fluids presents the tensor notation rules and integral theorems before defining the preliminary concepts and applications of continuum mechanics. It bridges the gap between physical concepts and mathematical expressions with a rigorous mathematical treatment. The book is intended for upper-level undergraduate mechanical engineering students taking Continuum Mechanics, Advanced Fluid Mechanics, and Convective Heat Transfer courses. Instructors will be able to utilize a Solutions Manual and Figure Slides for their course.

CRC Press

June 2024 : 245pp

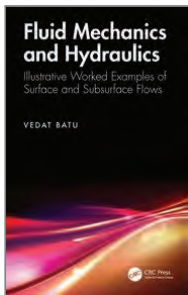
Hb: 978-1-032-71938-2 : **£105**

eBook: 978-1-032-72484-3 : **£91.99**

* For full contents and more information, visit: www.routledge.com/9781032719382

Fluid Mechanics and Hydraulics

Illustrative Worked Examples of Surface and Subsurface Flows



Vedat Batu

Fluid Mechanics and Hydraulics: Illustrative Worked Examples of Surface and Subsurface Flows presents the basic principles of fluid mechanics through the use of numerous worked examples. It serves as an effective learning source for college students and as a teaching tool for instructors (with an included solutions manual) as well as for practicing professionals in the areas of fluid mechanics and hydraulics.

CRC Press

May 2024 : 1268pp

Hb: 978-1-032-60078-9 : **£175**

eBook: 978-1-003-45744-2

* For full contents and more information, visit: www.routledge.com/9781032600789

2ND EDITION

Fluid Mechanics

An Intermediate Approach



Bijay K. Sultanian University of Central Florida, FL

Fluid Mechanics: An Intermediate Approach helps readers develop a physics-based understanding of complex flows and mathematically model them with accurate boundary conditions for numerical predictions. The book includes numerous worked examples and end-of-chapter problems for student practice. It also discusses how to numerically model compressible flow over all Mach numbers in a variable-area duct, accounting for friction, heat transfer, rotation, internal choking, and normal shock formation. The book is intended for graduate mechanical and aerospace engineering students taking courses in Fluid Mechanics and Gas Dynamics.

CRC Press

January 2025 : 390pp

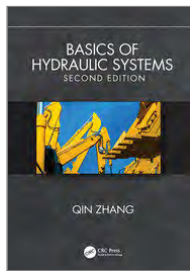
Hb: 978-1-032-35079-0 : **£120**

eBook: 978-1-032-88318-2 : **£99.99**

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2ND EDITION

Basics of Hydraulic Systems, Second Edition



Qin Zhang Washington State University, Prosser, USA

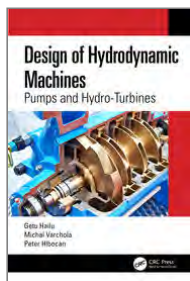
Basics of Hydraulic Systems, Second Edition provides students and professionals in both engineering and technology management fields a basic book to assist in their study of fluid power systems technology. This edition is expanded to include new chapters on system modeling and hydraulic systems controls. The text covers subjects essential to understanding operating principles, configuration features, functionalities, applications of composing elements, and controls of hydraulic systems. It presents them in a systematic, accessible way, following the course of energy transmission in hydraulic power generation, distribution, deployment, modeling, and control in fluid power systems.

CRC Press
March 2019 : 338pp
Hb: 978-1-138-48466-5 : £155
eBook: 978-0-429-19726-0

* For full contents and more information, visit: www.routledge.com/9781138484665

Design of Hydrodynamic Machines

Pumps and Hydro-Turbines



Getu Hailu University of Alaska Anchorage, USA, **Michal Varchola** Slovak Technical University, Slovakia, **Peter Hibocan**

Design of Hydrodynamic Machines provides a broad, yet concise, theoretical background on the relationship between fluid dynamics and geometry. It covers the most important types of turbomachinery used in power generation industrial processes, utilities, and the oil and gas industry. Intended for final year undergraduates and postgraduates in mechanical, civil, and aeronautical engineering, the book will also be useful for those involved in the hydraulic design, analysis, and testing of turbomachinery. The book offers guidance on the hydraulic design aspect of different parts of turbomachinery, such as impellers, diffusers, volute casing, inlet and outlets.

CRC Press
May 2025 : 268pp
Pb: 978-1-032-22929-4 : £52.99
Hb: 978-0-367-43961-3 : £140
eBook: 978-1-003-00714-2

* For full contents and more information, visit: www.routledge.com/9781032229294

2ND EDITION

Engineering Applications of Pneumatics and Hydraulics



Ian C. Turner Chartered Consulting Engineer, UK

Requiring only a very basic knowledge of the physics of fluids, this book provides a sound understanding of fluid power systems and their uses. It takes a strongly practical approach and covers maintenance and trouble-shooting, with a particular emphasis on safety systems and regulations. This second edition completely updates the guidance on safety legislation, codes of practice, technical standards and standardisation organisations, reflecting advances in technology. It is written for students from Levels 3 to 5, and for a wide range of practising engineers: especially plant, operations, and measurement and control engineers.

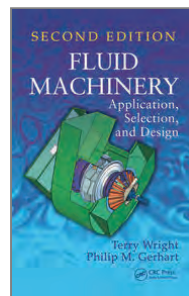
Routledge
August 2020 : 184pp
Pb: 978-0-367-46084-6 : £51.99
Hb: 978-0-367-46085-3 : £91.99
eBook: 978-1-003-02681-5

* For full contents and more information, visit: www.routledge.com/9780367460846

2ND EDITION

Fluid Machinery

Application, Selection, and Design, Second Edition



Terry Wright Consultant, Cornelia, Georgia, USA, **Philip Gerhart** University of Evansville, Indiana, USA

The second edition of a classic, this work provides a comprehensive introduction to the fluid mechanics of turbomachinery. By focusing on the preliminary design and selection of equipment to meet performance specifications, the authors promote a basic yet thorough understanding of the subject. Topics covered include gas and hydraulic turbines as well as industrial equipment, such as pumps and fans, making the text ideal for undergraduate mechanical engineering students. This book presents illustrations, examples, and exercises that emphasize real-world industrial applications of fluid machinery.

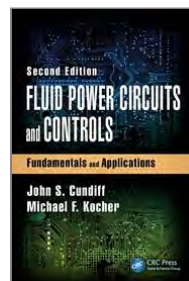
CRC Press
December 2009 : 454pp
Hb: 978-1-420-08294-4 : £150
eBook: 978-0-429-14121-8

* For full contents and more information, visit: www.routledge.com/9781420082944

2ND EDITION

Fluid Power Circuits and Controls

Fundamentals and Applications, Second Edition



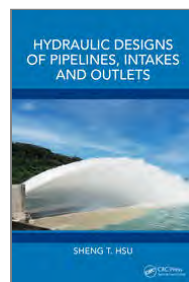
John S. Cundiff Virginia Tech University, Blacksburg, USA, **Michael F. Kocher** University of Nebraska, Lincoln, USA

Fluid Power Circuits and Controls: Fundamentals and Applications, Second Edition, is designed for a first course in fluid power for undergraduate engineering students. After an introduction to the design and function of components, students apply what they've learned, and consider how the component operating characteristics interact with the rest of the circuit. The Second Edition offers many new worked examples, and additional exercises and problems in each chapter. Half of these new problems involve basic analysis of specific elements, and the rest are design-oriented, emphasizing analysis of system performance. A complete Solutions Manual is available for qualified adopting instructors.

CRC Press
December 2019 : 554pp
Hb: 978-1-498-77001-9 : £130
eBook: 978-0-429-18370-6

* For full contents and more information, visit: www.routledge.com/9781498770019

Hydraulic Designs of Pipelines, Intakes and Outlets



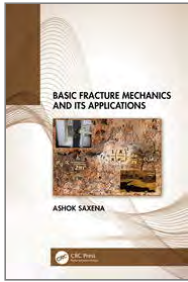
Sheng T. Hsu GT International, Taipei, Taiwan

This book addresses hydraulic design considerations of integrated pipeline systems, including intakes, conduits, and outlets. Based on the author's experience of over 50 years working with hydraulic designs of structures as well as designs, analyses and trouble-shootings of pipeline systems, the book discusses actual design practice and presents a range of real-world examples of projects conducted and participated in by the author. This applied approach gives the book a uniquely practical focus. The book serves as a reference for practitioners as well as a textbook for postgraduate students.

CRC Press
February 2025 : 364pp
Hb: 978-1-032-60651-4 : £150
eBook: 978-1-003-46267-5

* For full contents and more information, visit: www.routledge.com/9781032606514

Basic Fracture Mechanics and its Applications



Ashok Saxena WireTough Cylinders, USA

Beginning with four foundational chapters, discussing the theory in depth, the book also presents specific aspects of fracture mechanics and fatigue. Other topics include material testing and selection for damage tolerant design, alongside a discussion of ensuring the structural integrity of components. Alongside a strong focus on the practical applications of fracture mechanics and fatigue, the book will also provide a clear working of the theory and includes appendices with additional background to ensure a comprehensive understanding. Every chapter ends with both solved and unsolved example problems and end of chapter problems, and instructor support materials are also available.

CRC Press

December 2022 : 342pp

Hb: 978-1-032-26719-7 : £86.99

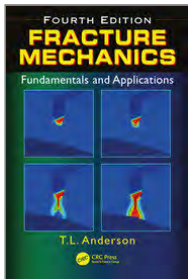
eBook: 978-1-003-29229-6

* For full contents and more information, visit: www.routledge.com/9781032267197

4TH EDITION

Fracture Mechanics

Fundamentals and Applications, Fourth Edition



Ted L. Anderson Quest Integrity Group, Boulder USA

Fracture Mechanics: Fundamentals and Applications, Fourth Edition is the most useful and comprehensive guide to fracture mechanics available. It has been adopted by more than 150 universities worldwide and used by thousands of engineers and researchers. This new edition reflects the latest research, industry practices, applications, and computational analysis and modeling. It encompasses theory and applications, linear and nonlinear fracture mechanics, solid mechanics, and materials science with a unified, balanced, and in-depth approach. Numerous chapter problems have been added or revised, and additional resources are available for those teaching college courses or training sessions.

CRC Press

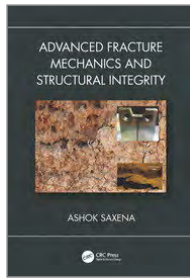
February 2017 : 684pp

Hb: 978-1-498-72813-3 : £155

eBook: 978-1-315-37029-3

* For full contents and more information, visit: www.routledge.com/9781498728133

Advanced Fracture Mechanics and Structural Integrity



Ashok Saxena University of Arkansas, Fayetteville, USA

Advanced Fracture Mechanics and Structural Integrity is organized to cover quantitative descriptions of crack growth and fracture phenomena. The mechanics of fracture are explained, emphasizing elastic-plastic and time-dependent fracture mechanics. Applications are presented, using examples from power generation, aerospace, marine, and chemical industries, with focus on predicting the remaining life of structural components and advanced testing methods for structural materials. Numerous examples and end-of-chapter problems are provided, along with references to encourage further study. The book is written for use in an advanced graduate course on fracture mechanics or structural integrity.

CRC Press

February 2019 : 323pp

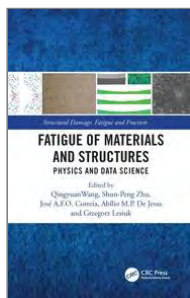
Hb: 978-1-138-54426-0 : £155

eBook: 978-1-351-00406-0

* For full contents and more information, visit: www.routledge.com/9781138544260

Fatigue of Materials and Structures

Physics and Data Science



Edited by **Qingyuan Wang** Sichuan University, China, **Shun-Peng Zhu** University of Electronic Science and Technology of China, China, **José Correia** University of Porto, Portugal, **Abílio De Jesus** University of Porto, Portugal, **Grzegorz Lesiuk** Wroclaw University of Science and Technology, Poland

Series: Structural Damage, Fatigue and Fracture

Failure mechanisms and modeling in engineering materials and structures are critical for managing aging structures, and directly affect their sustainability. Key theories and methods of fatigue failure are discussed in detail. Fatigue damage accumulation, crack initiation and crack growth analysis are presented with a focus on mechanical understanding and risk management for design, maintenance, and operation. Some recent advancements are included, such as fatigue of additive manufactured metals and advanced materials, with data analytics and AI, which could potentially transform fatigue analysis and reliability design.

CRC Press

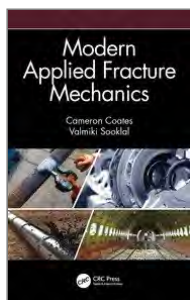
May 2025 : 494pp

Hb: 978-1-032-49755-6 : £175

eBook: 978-1-003-40512-2

* For full contents and more information, visit: www.routledge.com/9781032497556

Modern Applied Fracture Mechanics



Cameron Coates Kennesaw State University, USA, **Valmiki Sooklal** Kennesaw State University, USA

Modern Applied Fracture Mechanics presents a practical, accessible guide to understanding and applying basic linear elastic fracture mechanics (LEFM) techniques to problems commonly seen in industry, including fatigue analysis, failure analysis, and damage tolerance. The textbook is appropriate for undergraduate students, preparing them for the industry, and for advanced studies in fracture mechanics at the graduate level. Industry professionals and researchers will find this book a valuable resource for understanding basic fracture mechanics principles and methods.

CRC Press

July 2025 : 242pp

Pb: 978-0-367-50988-0 : £52.99

Hb: 978-0-367-50125-9 : £125

eBook: 978-1-003-05205-0

* For full contents and more information, visit: www.routledge.com/9780367509880

4TH EDITION

Heat Exchangers

Selection, Rating, and Thermal Design, Fourth Edition



Sadik Kakaç TOBB University of Economics and Technology, Ankara, Turkey, **Hongtan Liu** University of Miami, Coral Gables, Florida, USA, **Anchasa Pramuanjaroenkij** Kasetsart University, Chalermpkrakiat Sakon Nakhon Province Campus, Thailand

Heat exchangers are essential in a wide range of engineering applications, including power plants, automobiles, airplanes, process and chemical industries, and heating, air conditioning and refrigeration systems. Revised and updated with new problem sets, the fourth edition presents a fully updated and systematic treatment of heat exchangers, focusing on selection, thermal-hydraulic design, and rating. The fourth edition is designed for student readers taking courses/modules in process heat transfer, thermal systems design, and heat exchanger technology, this text includes full coverage of all widely-used heat exchanger types.

CRC Press

February 2020 : 546pp

Hb: 978-1-138-60186-4 : £130

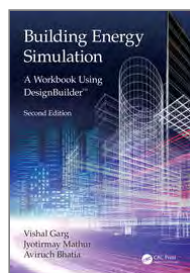
eBook: 978-0-429-46986-2

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2ND EDITION

Building Energy Simulation

A Workbook Using DesignBuilder™



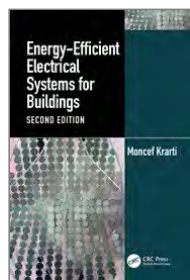
Vishal Garg IIIT, Hyderabad, Telangana, India, **Jyotirmay Mathur** MNIT, Jaipur, Rajasthan, India, **Aviruch Bhatia** IIIT, Hyderabad, Telangana, India

The 2nd edition of Building Energy Simulation includes study of various components and systems of a building and their effect on energy consumption, with the help of DesignBuilder™, a front-end for EnergyPlus simulation engine, supported by examples and exercises. Following a "learning by doing" methodology, it explains simulation input parameters and how to do analysis of the simulation output explaining building physics and energy simulation. Divided into three sections, it covers fundamentals of energy simulation followed by advanced topics in energy simulation and simulation for compliance of building codes and detailed case studies for whole building energy simulation.

CRC Press
September 2020 : 740pp
Pb: 978-0-367-37468-6 : £125
Hb: 978-0-367-37470-9 : £315
eBook: 978-0-429-35463-2

* For full contents and more information, visit: www.routledge.com/9780367374686

2ND EDITION

Energy-Efficient Electrical Systems for Buildings

Moncef Krarti University of Colorado, Boulder, USA

Series: Mechanical and Aerospace Engineering Series

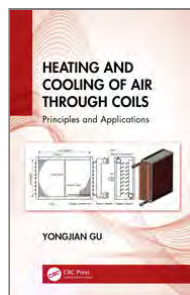
Energy-Efficient Electrical Systems for Buildings, Second Edition offers systematic and practical approaches to design and analyze electrical distribution and utilization systems in buildings. It considers safety and energy efficiency, focusing on sustainability and resiliency, to design electrical distribution systems for buildings. The book is intended for senior undergraduate mechanical, civil, and electrical engineering students taking courses in Electrical Systems for Buildings and Design of Building Electrical Systems. It features a new chapter on the optimal design energy efficient and resilient power systems and new chapter problems, examples, and case studies.

CRC Press
August 2023 : 580pp
Hb: 978-1-032-23383-3 : £135
eBook: 978-1-032-23403-8 : £115

* For full contents and more information, visit: www.routledge.com/9781032233833

Heating and Cooling of Air Through Coils

Principles and Applications



Yongjian Gu United States Merchant Marine Academy, New York

Heating and Cooling of Air Through Coils combines theory and practice to cover the fundamentals in the processes of heating and cooling of air through coils and the key aspects in coil fluid piping systems, coils, and energy sources for the fluid in the coils. The book will interest engineers and researchers involved in the design and operation of heat exchangers and HVAC systems. It can also serve as a textbook for undergraduate students taking courses in Advanced Heat Transfer, HVAC, and Energy Management. The book covers various coil types, coil tube constructions and arrangements, and fluid flow characteristics in the coils.

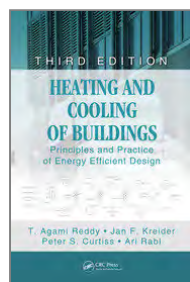
CRC Press
September 2025 : 288pp
Pb: 978-1-032-26664-0 : £52.99
Hb: 978-1-032-26663-3 : £125
eBook: 978-1-003-28932-6

* For full contents and more information, visit: www.routledge.com/9781032266640

3RD EDITION

Heating and Cooling of Buildings

Principles and Practice of Energy Efficient Design, Third Edition



T. Reddy Arizona State University, USA, **Jan F. Kreider**, **Peter S. Curtiss** Curtiss Engineering, Inc., Boulder, Colorado, USA, **Ari Rabi** École des Mines, Paris, France

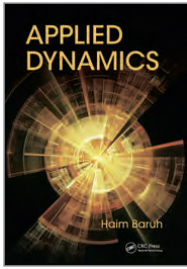
Series: Mechanical and Aerospace Engineering Series

Structured to provide a rigorous and comprehensive introduction to the design of mechanical systems in buildings, the new revision of this successful text provides up to date coverage based around the latest advances in energy efficiency and green design. Along with numerous new and revised examples, design case studies, and homework problems, the third edition offers an updated version of the HCB software and website, which contains a wealth of data to support design analysis and planning. Based around current codes and standards, this third edition explores the latest technologies that are central to design and operation of today's buildings.

CRC Press
July 2016 : 900pp
Hb: 978-1-439-89989-2 : £195
eBook: 978-1-315-37456-7

* For full contents and more information, visit: www.routledge.com/9781439899892

Applied Dynamics



Haim Baruh Rutgers University, Piscataway, New Jersey, USA

This modern study of engineering dynamics covers an array of topics, from basic principles to two- and three-dimensional motion, general kinematics and kinetics, analytical mechanics, vehicle motion, vibration response, and stability. By including examples from everyday life, the book makes concepts relatable and accessible. However, no effort is made to reduce rigor, as the text provides thorough coverage of the fundamental concepts of Newtonian and Lagrangian mechanics, three-dimensional motion, Kane's equations, as well as the stability and response of dynamical systems.

CRC Press

December 2014 : 876pp

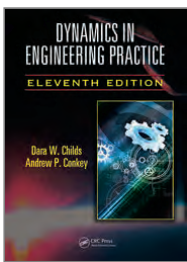
Hb: 978-1-482-25073-2 : £165

eBook: 978-0-429-09044-8

* For full contents and more information, visit: www.routledge.com/9781482250732

11TH EDITION

Dynamics in Engineering Practice



Dara W. Childs Texas A&M University, College Station, USA, **Andrew P. Conkey** Texas A&M University, Corpus Christi, USA

Series: Applied and Computational Mechanics

Written by a renowned teacher, researcher, and professional consultant in applied dynamics, this book represents a revolutionary approach to modern engineering dynamics analysis—one you can assimilate quickly and easily to get immediate results. The eleventh edition includes a new chapter on Lagrangian Dynamics, and many new and revised examples and chapter problems. The book begins by establishing the premise that most dynamics engineers are developing and analyzing models to predict motion, and that the subject of differential equations is the natural language for dynamics.

CRC Press

April 2015 : 474pp

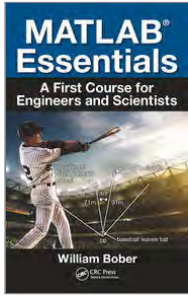
Hb: 978-1-482-25025-1 : £155

eBook: 978-0-429-16210-7

* For full contents and more information, visit: www.routledge.com/9781482250251

MATLAB® Essentials

A First Course for Engineers and Scientists



William Bober Florida Atlantic University, Boca Raton, USA

All disciplines of science and engineering use numerical methods for complex problem analysis, due to the highly mathematical nature of the field. Analytical methods alone are unable to solve many complex problems engineering students and professionals confront. Introduction to MATLAB® Programming for Engineers and Scientists examines the basic elements of code writing, and describes MATLAB® methods for solving common engineering problems and applications across the range of engineering disciplines. The text uses a class-tested learning approach and accessible two-color page design to guide students from basic programming to the skills needed for future coursework and engineering practice.

CRC Press

September 2017 : 275pp

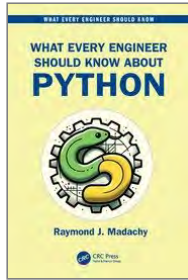
Pb: 978-1-138-03237-8 : £155

Hb: 978-1-138-56328-5 : £170

eBook: 978-1-315-16200-3

* For full contents and more information, visit: www.routledge.com/9781138032378

What Every Engineer Should Know About Python



Raymond J. Madachy Naval Postgraduate School,
Monterey, California, USA

Series: What Every Engineer Should Know

Engineers of all disciplines can benefit from knowledge of Python. This powerful programming language can help engineers better leverage their skill set and do more sophisticated work in a shorter time. What Every Engineer Should Know About Python provides engineering students and practitioners with a simple and practical introduction to Python for technical programming and other empowering uses for engineering and scientific work, without computer science jargon. This practical and concise book serves as a self-contained introduction to engineers and readers from scientific disciplines new to programming or new to Python.

CRC Press

May 2025 : 318pp

Pb: 978-1-032-35818-5 : **£52.99**

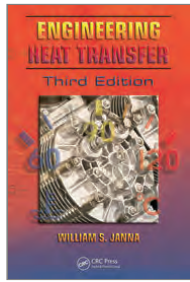
Hb: 978-1-032-35562-7 : **£130**

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3RD EDITION

Engineering Heat Transfer



William S. Janna The University of Memphis, Tennessee, USA

Series: Heat Transfer

Adhering to the pedagogy that made previous editions into perennial bestsellers, this updated classic offers a student-savvy presentation of an otherwise abstract topic. Drawings and graphs are provided in abundance, as are examples and problems. The examples amplify theory and show how derived equations are used to model physical problems. This text covers practical applications in a way that deemphasizes mathematical techniques, but preserves physical interpretation of heat transfer fundamentals and modeling of heat transfer phenomena. End-of-chapter problems proceed from short simple confidence builders to difficult ones that help students develop a rigorous approach to problem solving.

CRC Press

January 2009 : 692pp

Hb: 978-1-420-07202-0 : £185

eBook: 978-1-315-27538-3

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2ND EDITION

Introduction to Materials Science and Engineering



Yip-Wah Chung Northwestern University, Evanston, Illinois, USA, **Monica Kapoor**

Updated to reflect the many societal and technological changes in the field since publication of the first edition, Introduction to Materials Science and Engineering, Second Edition offers an interdisciplinary view, emphasizing the importance of materials to engineering applications, and builds the basis needed to select, modify, and create materials to meet specific criteria. Written for advanced undergraduate students and readers interested in introductory materials science and engineering concepts, this concise textbook provides a strong foundation in MSE and its applications. The textbook offers a solutions manual and PowerPoint lecture slides for adopting professors.

CRC Press

November 2025 : 386pp

Pb: 978-1-032-12175-8 : **£52.99**

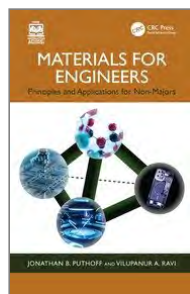
Hb: 978-1-032-10144-6 : **£94.99**

eBook: 978-1-003-22344-3 : **£84.99**

* For full contents and more information, visit: www.routledge.com/9781032121758

Materials for Engineers

Principles and Applications for Non-Majors



Jonathan B. Puthoff, **Vilupanur A. Ravi**

Designed with the needs of non-Materials Science and Engineering students in mind, this textbook covers the major categories of materials and their defining properties, but with an emphasis on applications related to materials properties measurement, materials selection, and design as opposed to an accent on fundamental physical and chemical topics. This textbook is aimed at undergraduate engineering students taking materials science courses. It can also be used by professional engineers interested in a ready reference.

CRC Press

August 2024 : 366pp

Hb: 978-1-032-10253-5 : **£96.99**

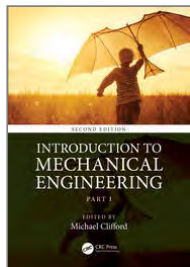
eBook: 978-1-003-21440-3

* For full contents and more information, visit: www.routledge.com/9781032102535

2ND EDITION

Introduction to Mechanical Engineering

Part 1

*Edited by* **Michael Clifford** University of Nottingham, UK

An Introduction to Mechanical Engineering: Part 1, Second Edition, provides a grounding in the core subjects of solid mechanics, materials, fluid mechanics, thermodynamics, electronics, and machine design. Printed in color, this updated bestseller has a full range of learning features, and online resources available for both students and instructors.

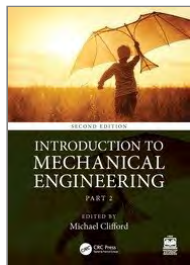
CRC Press
December 2022 : 732pp
Pb: 978-0-367-33316-4 : **£62.99**
Hb: 978-1-032-36232-8 : **£105**
eBook: 978-0-429-31916-7

* For full contents and more information, visit: www.routledge.com/9780367333164

2ND EDITION

Introduction to Mechanical Engineering

Part 2

*Edited by* **Michael Clifford** University of Nottingham, UK

An Introduction to Mechanical Engineering Part 2, Second Edition is an essential text for all second-year undergraduate students and those studying for foundation degrees and HNDs. Building upon the first-year level topics in Introduction to Mechanical Engineering Part 1, Part 2 provides the next level of coverage for those subject areas.

CRC Press
November 2024 : 631pp
Pb: 978-0-367-33377-5 : **£59.99**
Hb: 978-1-032-76021-6 : **£96.99**
eBook: 978-0-429-31949-5

* For full contents and more information, visit: www.routledge.com/9780367333775

4TH EDITION

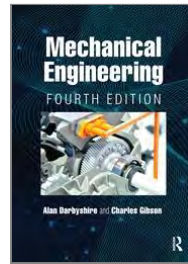
Mechanical Engineering Principles**John Bird, Carl Ross** Professor of Structural Dynamics, University of Portsmouth, UK

A student-friendly introduction to core mechanical engineering topics, focusing on examples and applications. The book contains 400 fully worked problems, 700 further problems with answers, and 300 multiple-choice questions. Two new chapters are included, covering the basic principles of matrix algebra and the matrix displacement method. The latter will also include guidance on software that can be used via Smartphones, iPads or laptops. The new edition is up to date with the latest BTEC National specifications and can also be used on undergraduate courses in mechanical, civil, structural, aeronautical and marine engineering, and naval architecture.

Routledge
September 2019 : 388pp
Pb: 978-0-367-25324-0 : **£49.99**
Hb: 978-0-367-25326-4 : **£195**
eBook: 978-0-429-28720-6

* For full contents and more information, visit: www.routledge.com/9780367253240

4TH EDITION

Mechanical Engineering**Alan Darbyshire** College Lecturer, UK, **Charles Gibson** Yeovil College, UK

This established textbook is revised in line with the technical qualifications of new engineering apprenticeship standards at Level 3. Four new chapters cover dynamic engineering systems, fluid systems and additive manufacturing. Mathematical theory is backed up with numerous worked examples and student activities, with quizzes throughout the text and end-of-unit questions for revision and course work. It covers eight units of the BTEC L3 Advanced Manufacturing Engineering Development Technical Knowledge qualification, as well as content in the BTEC National Engineering Syllabus and BTEC L3 Aerospace and Aviation Engineering specialist qualifications.

Routledge
July 2022 : 518pp
Pb: 978-1-032-18853-9 : **£51.99**
Hb: 978-1-032-18854-6 : **£94.99**
eBook: 978-1-003-25657-1

* For full contents and more information, visit: www.routledge.com/9781032188539**T Level Engineering**

Technology, Manufacture and Maintenance

**Andrew Livesey**

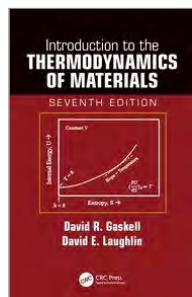
This text covers the core content for the new T Level qualifications, as well as most other Level 3 qualifications in engineering manufacturing and maintenance. It starts with the design process, progresses through the science and mathematics of engineering processes, and lastly examines the management of engineering organisations. It is ideal for students and instructors on T Level courses, as well as a handy reference book for the practising engineer.

Routledge
May 2023 : 260pp
Pb: 978-1-032-25750-1 : **£38.99**
Hb: 978-1-032-25751-8 : **£89.99**
eBook: 978-1-003-28483-3

* For full contents and more information, visit: www.routledge.com/9781032257501

7TH EDITION

Introduction to the Thermodynamics of Materials



David R. Gaskell, **David E. Laughlin** Carnegie Mellon University, Pittsburgh, Pennsylvania, USA

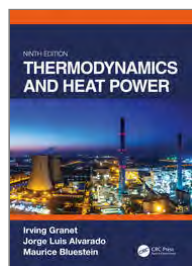
Maintaining the substance that has made Introduction to the Thermodynamic of Materials a perennial best seller for decades, this Seventh Edition is updated to reflect the broadening field of materials science and engineering. Chapters are updated and revised throughout to be more useful and logical for students. Written as the definitive introduction to thermodynamic behavior of materials systems, this text presents the underlying thermodynamic principles of materials and their applications and continues to be the best undergraduate textbook in thermodynamics for materials science students. An updated solutions manual is also available for qualifying adopting professors.

CRC Press
July 2024 : 696pp
Hb: 978-1-032-45099-5 : £130
eBook: 978-1-003-37538-8

* For full contents and more information, visit: www.routledge.com/9781032450995

9TH EDITION

Thermodynamics and Heat Power, Ninth Edition



Irving Granet Queensborough Community College, City University of New York, Bayside, USA, **Jorge Alvarado** Texas A&M University, USA, **Maurice Bluestein** Indiana University-Purdue University, Indianapolis, USA

The ninth edition of Thermodynamics and Heat Power offers a revised sequence of thermodynamics concepts, processes, and energy systems to enable learning outcomes for Engineering and Engineering Technology students taking an introductory course. Built around an easily understandable approach, this updated text focuses on thermodynamics fundamentals and explores renewable energy generation, IC engines, power plants, HVAC, and applied heat transfer. Energy, heat, and work are examined in relation to thermodynamics cycles, and the effects of fluid properties on system performance are explained. Numerous step-by-step examples and problems make this text ideal for student readers.

CRC Press
September 2023 : 864pp
Pb: 978-0-367-56184-0 : £62.99
Hb: 978-0-367-28091-8 : £165
eBook: 978-0-429-29962-9

* For full contents and more information, visit: www.routledge.com/9780367561840

Thermodynamics

Fundamentals and Applications



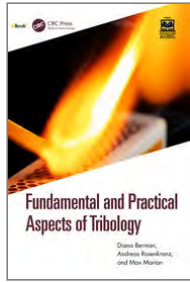
Naseem Uddin Universiti Teknologi Brunei

Thermodynamics: Fundamentals and Applications offers a blend of theory and practical applications for a complete understanding of thermodynamics for various engineering applications. Beginning with a basic introduction and principles of thermodynamics, the book advances to more specialized topics like Organic Rankine cycle, gas mixtures, equilibria, and chemical reactions. The book is intended for senior undergraduate mechanical, aerospace, and chemical engineering students taking courses in Thermodynamics.

CRC Press
July 2024 : 537pp
Hb: 978-1-032-72938-1 : £140
eBook: 978-1-032-72940-4 : £125

* For full contents and more information, visit: www.routledge.com/9781032729381

Fundamental and Practical Aspects of Tribology



Diana Berman , Andreas Rosenkranz , Max Marian

Fundamental and Practical Aspects of Tribology introduces the rudiments of engineering surfaces and teaches basic phenomena of interacting surfaces in relative motion, major modes of friction and wear, and theories of contact evolution and lubrication. The book also considers the relationship between nanotribology and macrotribology, rolling contacts, tribological problems in magnetic recording and electrical contacts, and monitoring and diagnosis of friction and wear. This textbook is written for students taking courses in tribology and lubrication, as well as surface engineering. It will also appeal to scientists and engineers who are new to tribology.

CRC Press

July 2024 : 314pp

Hb: 978-1-032-50225-0 : **£97.99**

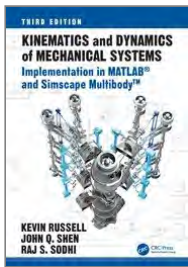
eBook: 978-1-032-80355-5 : **£86.99**

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3RD EDITION

Kinematics and Dynamics of Mechanical Systems

Implementation in MATLAB® and Simscape Multibody™



Kevin Russell New Jersey Institute of Technology, USA,
John Q. Shen Softalink LLC, USA, **Raj Sodhi** New Jersey
 Institute of Technology, USA

Updated throughout for the third edition, Kinematics and Dynamics of Mechanical Systems: Implementation in MATLAB™ and Simscape Multibody™ offers step-by-step instruction on the fundamentals of mechanism kinematics, synthesis, statics and dynamics, alongside demonstrating its real-world applications. Following updates made by MATLAB™, replacing Simmechanics with new system Simscape Multibody, this textbook provides updated instructions and example problems to fully enable the reader to use this new and improved system. New features includes enhanced rendering, 3D geometry in animations of user-generated solutions for planar linkages, spatial linkages and robotic systems.

CRC Press

December 2022 : 544pp

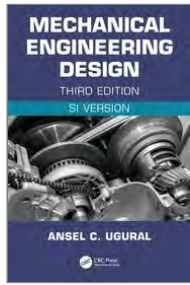
Hb: 978-1-032-32831-7 : £165

eBook: 978-1-003-31696-1

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3RD EDITION

Mechanical Engineering Design (SI Edition)



Ansel C. Ugural New Jersey Institute of Technology,
Newark, USA

Mechanical Engineering Design, Third Edition strikes a balance between theory and application, and prepares students for more advanced study or professional practice. Updated throughout, it outlines basic concepts and provides the necessary theory to gain insight into mechanics with numerical methods in design. Divided into three sections, the text presents background topics, addresses failure prevention across a variety of machine elements, and covers the design of machine components as well as entire machines.

CRC Press

May 2022 : 836pp

Hb: 978-1-032-17004-6 : £155

eBook: 978-1-003-25137-8

* For full contents and more information, visit: www.routledge.com/9781032170046

3RD EDITION

Mechanical Engineering Design



Ansel C. Ugural New Jersey Institute of Technology,
Newark, USA

Mechanical Engineering Design, Third Edition strikes a balance between theory and application, and prepares students for more advanced study or professional practice. Updated throughout, it outlines basic concepts and provides the necessary theory to gain insight into mechanics with numerical methods in design. Divided into three sections, the text presents background topics, addresses failure prevention across a variety of machine elements, and covers the design of machine components as well as entire machines. Optional sections treating special and advanced topics are also included.

CRC Press

December 2020 : 852pp

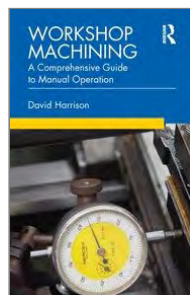
Hb: 978-0-367-51347-4 : £130

eBook: 978-1-003-09928-4

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Workshop Machining

A Comprehensive Guide to Manual Operation



David Harrison Newcastle College, UK

Workshop Machining is a comprehensive textbook that explains the fundamental principles of manually operating machinery to form shapes in a variety of materials. It bridges the gap between traditional toolmaking skills and programming and operation of CNC machines in a production environment. Everything is covered from the basic machine controls to advanced cutting operations using a wide range of tooling and work holding devices. Theory and practice are shown via a mixture of diagrams, text and illustrated worked examples, as well as through exercises.

Routledge

December 2021 : 474pp

Pb: 978-0-367-27839-7 : **£51.99**

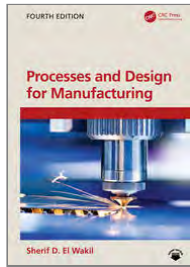
Hb: 978-0-367-27840-3 : **£140**

eBook: 978-0-429-29819-6

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4TH EDITION

Processes and Design for Manufacturing



Sherif D. El Wakil University of Massachusetts
Dartmouth

Processes and Design for Manufacturing, 4th edition, offers a comprehensive and detailed examination of modern manufacturing processes, while also delving into the concept of Design for Manufacturing (DFM) and its application across diverse manufacturing techniques. This book examines manufacturing processes from the viewpoint of the product designer, investigating the selection of manufacturing methods in the early phases of design and how this affects the constructional features of a product. This book is essential reading for senior undergraduate students studying manufacturing processes, product design, design for manufacture and computer-aided manufacturing.

CRC Press

August 2025 : 555pp

Hb: 978-1-032-86002-2 : **£165**

eBook: 978-1-003-53710-6

* For full contents and more information, visit: www.routledge.com/9781032860022

Engineering Dimensions, Units, and Conversions



Yongjian Gu United States Merchant Marine Academy,
New York

Engineering Dimensions, Units, and Conversions delves into the analysis and application of the dimensions, units, and unit conversions in engineering practical use. It demonstrates the importance of dimensional homogeneity and unit consistency. Offering a comprehensive exploration of both primary and secondary units, the book presents detailed portrayals of various unit systems in both the English system and the SI system. The book is a valuable reference for practicing engineers and researchers engaged in engineering research and development. It will also be of interest to undergraduate and graduate students in all major engineering disciplines.

CRC Press

February 2025 : 272pp

Pb: 978-1-032-83362-0 : **£52.99**

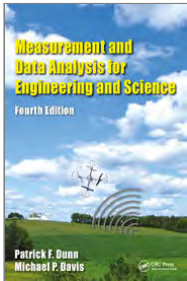
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eBook: 978-1-003-50897-7

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4TH EDITION

Measurement and Data Analysis for Engineering and Science



Patrick F. Dunn, Michael P. Davis

Measurement and Data Analysis for Engineering and Science, Fourth Edition, provides up-to-date coverage of experimentation methods in science and engineering. This edition adds five new "concept chapters" to introduce major areas of experimentation generally before the topics are treated in detail, to make the text more accessible for undergraduate students. These feature Measurement System Components, Assessing Measurement System Performance, Setting Signal Sampling Conditions, Analyzing Experimental Results, and Reporting Experimental Results. More practical examples, case studies, and a variety of homework problems have been added; and MATLAB and Simulink resources have been updated.

CRC Press

December 2017 : 588pp

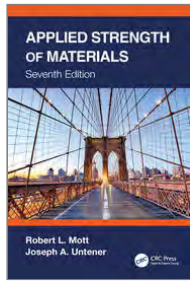
Hb: 978-1-138-05086-0 : **£175**

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7TH EDITION

Applied Strength of Materials



Robert L. Mott University of Dayton, USA, **Joseph A. Untener** University of Dayton, USA

Introducing the theoretical background of the subject, with a strong visual component, the book equips the reader with problem-solving techniques. The updated seventh edition incorporates new technologies, with a pedagogical approach. It emphasizes realistic engineering applications for the analysis and design of structural members. A "Big Picture" section starts each chapter to help students grasp the overall objectives and their application in industrial applications. Step-by-step problem-solving approaches are included throughout the book. While calculus is used sparingly, detailed developments of important design-related formulas are provided.

CRC Press

July 2021 : 1172pp

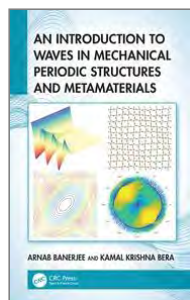
Pb: 978-1-032-00222-4 : **£69.99**

Hb: 978-0-367-82078-7 : **£175**

eBook: 978-1-003-17320-5

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An Introduction to Waves in Mechanical Periodic Structures and Metamaterials



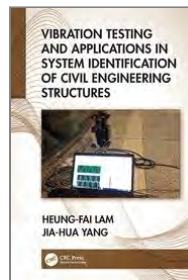
Arnab Banerjee, Kamal Krishna Bera

Metamaterials are artificial, engineered materials designed to manipulate wave propagation in ways not possible with conventional materials. This book presents a systematic and rigorous treatment of wave propagation in periodic structures, with a particular focus on mechanical and acoustic metamaterials. It bridges fundamental concepts and advanced topics, offering a unified framework to analyze discrete and continuous periodic systems. This book serves as an accessible resource for senior undergraduate and graduate students in structural engineering, mechanical engineering, applied physics, and materials science, as well as researchers interested in wave mechanics in metamaterials.

CRC Press
December 2025 : 292pp
Hb: 978-1-032-88995-5 : £115
eBook: 978-1-003-68746-7

* For full contents and more information, visit: www.routledge.com/9781032889955

Vibration Testing and Applications in System Identification of Civil Engineering Structures



Heung-Fai Lam City University of Hong Kong, **Jia-Hua Yang** Tongji University, China

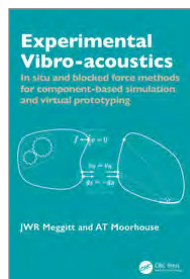
This book covers vibration testing and identification of dynamic structural systems: structural dynamics, methods of modal analysis and model identification, vibration testing with a detailed measurement system, software, practical applications, and case studies of full-scale structures. It gives Masters students the theories of system identification and empowers them to apply this in practice.

CRC Press
December 2024 : 424pp
Pb: 978-1-032-29839-9 : £55.99
Hb: 978-1-138-33288-1 : £155
eBook: 978-0-429-44586-6

* For full contents and more information, visit: www.routledge.com/9781032298399

Experimental Vibro-acoustics

In situ and blocked force methods for component-based simulation and virtual prototyping



Joshua Meggitt University of Salford, UK, **Andrew Moorhouse** University of Salford, UK

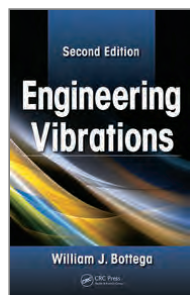
This first comprehensive practical engineering guide to using vibro-acoustic data in a component-based approach to the analysis, simulation, virtual prototyping and 'digital twinning' of machines and mechanical systems. It gives a full set of practical and theoretical tools to characterise, combine and recombine components into virtual assemblies and predict vibration and audible sound, including the in situ blocked force method. Principles of sources, components, assemblies and interfaces are followed by techniques of measurement, data processing and uncertainties, then case studies and a detailed example for design engineers across transport, industrial and building engineering.

CRC Press
August 2025 : 490pp
Hb: 978-1-032-47971-2 : £175
eBook: 978-1-003-39913-1

* For full contents and more information, visit: www.routledge.com/9781032479712

2ND EDITION

Engineering Vibrations



William J. Bottega Rutgers University, Piscataway, New Jersey, USA

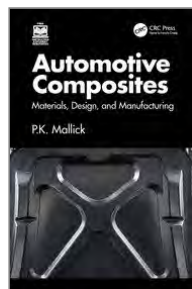
This text emphasizes fundamental principles along with practical problem solving with a mathematically rigorous yet accessible approach. It uses illustrative examples and case studies to reinforce the concepts, encourages effective interpretation of results, and assists in learning the techniques and procedures. It includes more than 500 illustrations, tabulated results of case studies, a table of operators of various one-dimensional continua, and an in depth discussion of two-dimensional continua. It also offers problem-solving flowcharts for solving forced vibration problems for discrete and continuous systems.

CRC Press
December 2014 : 928pp
Hb: 978-1-439-83035-2 : £185
eBook: 978-0-429-15202-3

* For full contents and more information, visit: www.routledge.com/9781439830352

Automotive Composites

Materials, Design, and Manufacturing



P.K. Mallick University of Michigan, Dearborn, USA

This textbook addresses the materials, design, and manufacturing of fiber-reinforced polymer composites for structural automotive applications. The use of composites in the automotive industry is critically important for design of lightweight structures to meet fuel economy standards, reduction of greenhouse gas emissions, and increased battery range in electric vehicles. This book discusses key issues around manufacturing and mass-scale application of these composites in the automotive industry. This textbook is aimed at mechanical and materials engineering students studying automotive composites as well as professional engineers developing these materials for industry application.

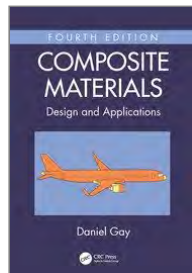
CRC Press
December 2025 : 495pp
Hb: 978-1-032-17213-2 : £115
eBook: 978-1-003-25365-5

* For full contents and more information, visit: www.routledge.com/9781032172132

4TH EDITION

Composite Materials

Design and Applications



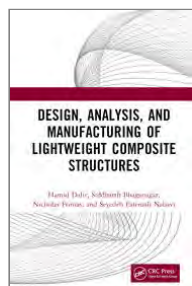
Daniel Gay Institut Clément Ader, University of Toulouse, France

For decades, Composite Materials: Design and Applications has guided readers on the efficient design of structural composite parts and has illustrated challenges encountered in modern engineering practice. The Fourth Edition of this best-seller retains its pedagogical structure, featuring a technical level that rises in difficulty as the text progresses, while allowing each part to be explored independently, but has been updated to mirror recent advances and developments in manufacturing processes and applications. This book serves as a textbook for advanced students studying composite materials design, as well as a handy reference for industry professionals working with composite materials.

CRC Press
September 2025 : 640pp
Pb: 978-1-032-05048-5 : £52.99
Hb: 978-1-032-04308-1 : £140
eBook: 978-1-003-19578-8

* For full contents and more information, visit: www.routledge.com/9781032050485

Design, Analysis, and Manufacturing of Lightweight Composite Structures



Hamid Dalir, Siddharth Bhaganagar, Nicholas Frimas, Seyedeh Fatemah Nabavi

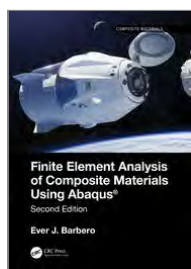
Discussing the mechanical properties of advanced composites & their materials, the book describes testing, evaluation & sustainability in mfg. Looking at how composite materials can form structural components, it focuses on how to design & analyse these materials as appropriate to different applications. It discusses micromechanics, stiffness matrices & numerical calculations using MATLAB, Excel and Python. It covers failure, strain and stress, alongside finite element analysis of composites. The book is suitable for students & researchers in the field of composites, mechanical design, micromechanics, mechanics of solids & material science.

CRC Press
February 2024 : 214pp
Hb: 978-1-032-55140-1 : £99.99
eBook: 978-1-003-42919-7

* For full contents and more information, visit: www.routledge.com/9781032551401

2ND EDITION

Finite Element Analysis of Composite Materials using Abaqus®



Ever J. Barbero, Ever J. Barbero West Virginia University, Morgantown, USA

Series: Composite Materials

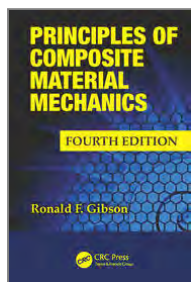
Developed from the author's course on advanced mechanics of composite materials, Finite Element Analysis of Composite Materials with Abaqus™ shows how powerful finite element tools address practical problems in the structural analysis of composites. This Second Edition updates all examples, sample code, and problems to Abaqus 2020. Aimed at advanced students and professional engineers, this text features 60+ fully developed examples, 80+ end-of-chapter exercises, and 50+ pieces of Abaqus pseudo-code that illustrate solutions to example problems. A companion website offers relevant model files for download, enabling readers to easily reproduce the examples and complete the exercises.

CRC Press
May 2023 : 571pp
Hb: 978-0-367-62145-2 : £105
eBook: 978-1-003-10815-3

* For full contents and more information, visit: www.routledge.com/9780367621452

4TH EDITION

Principles of Composite Material Mechanics



Ronald F. Gibson University of Nevada, Reno, USA

Series: Mechanical Engineering

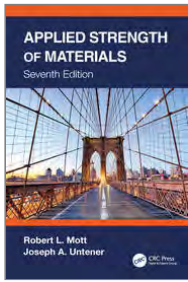
This book covers a unique blend of classical and modern mechanics of composites technologies. The fourth edition reflects the current state of the art, fresh insight gleaned from the author's ongoing composites research, and pedagogical improvements based on feedback from students, colleagues, and the author's own course notes. New worked-out examples and homework problems are added in most chapters, example problems and homework problems are now integrated within the chapters, and answers to selected homework problems are featured in the back of the book.

CRC Press
February 2016 : 698pp
Hb: 978-1-498-72069-4 : £140
eBook: 978-0-429-19058-2

* For full contents and more information, visit: www.routledge.com/9781498720694

7TH EDITION

Applied Strength of Materials



Robert L. Mott University of Dayton, USA, **Joseph A. Untener** University of Dayton, USA

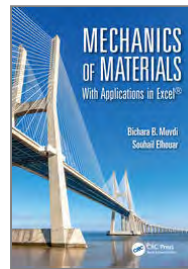
Introducing the theoretical background of the subject, with a strong visual component, the book equips the reader with problem-solving techniques. The updated seventh edition incorporates new technologies, with a pedagogical approach. It emphasizes realistic engineering applications for the analysis and design of structural members. A "Big Picture" section starts each chapter to help students grasp the overall objectives and their application in industrial applications. Step-by-step problem-solving approaches are included throughout the book. While calculus is used sparingly, detailed developments of important design-related formulas are provided.

CRC Press
July 2021 : 1172pp
Pb: 978-1-032-00222-4 : **£69.99**
Hb: 978-0-367-82078-7 : **£175**
eBook: 978-1-003-17320-5

* For full contents and more information, visit: www.routledge.com/9781032002224

Mechanics of Materials

With Applications in Excel



Bichara B. Muvdi Bradley University, Peoria, Illinois, USA, **Souhail Elhouar** Bradley University, Peoria, Illinois, USA

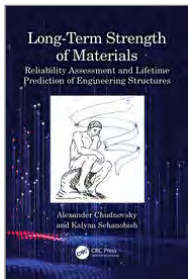
This text covers the fundamentals of the mechanics of materials—or strength of materials—in a clear and easily understandable way, incorporating numerous examples, homework problems, and review problems to ensure comprehension. It also instills practical skills for developing Microsoft® Excel® applications to solve mechanics of materials problems using numerical techniques. The book includes editable Excel spreadsheets representing all the examples featured in the text, PowerPoint® lecture slides, multimedia simulations, graphics files, and a solutions manual with qualifying course adoption.

CRC Press
June 2016 : 723pp
Hb: 978-1-466-57071-9 : **£135**
eBook: 978-1-315-37431-4

* For full contents and more information, visit: www.routledge.com/9781466570719

Long-Term Strength of Materials

Reliability Assessment and Lifetime Prediction of Engineering Structures



Alexander Chudnovsky University of Illinois at Chicago, USA, **Kalyan Sehanobish** The Dow Chemical Company, USA

This textbook introduces the thermodynamics of irreversible processes along with entropy to address the time dependency of fracture. Working from observations of structural failure, the book identifies the principal failure types such as brittle damage and ductile failure. It then addresses the life of a structure in a specific environment and load condition, using irreversible thermodynamics and the entropy criterion to address cooperative fracture, and novel statistical fracture mechanics to address solo fracture. The book is ideal for graduate students and design engineers in civil and materials engineering, as well as mechanical and chemical engineering.

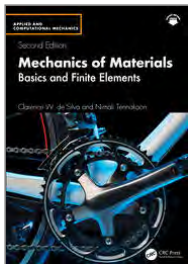
CRC Press
August 2023 : 224pp
Pb: 978-1-032-41813-1 : **£52.99**
Hb: 978-1-032-41814-8 : **£145**
eBook: 978-1-003-35984-5

* For full contents and more information, visit: www.routledge.com/9781032418131

2ND EDITION

Mechanics of Materials

Basics and Finite Elements



Clarence W. de Silva University of British Columbia, Canada, **Nimali Tennakoon**

Series: Applied and Computational Mechanics

This second edition is an introductory book on the subject of Mechanics of Materials with a focus on integrating the basics of Finite Element Analysis. Mechanics of Materials provides the basis for understanding structural mechanics in engineering systems such as buildings, bridges, vehicles, and machines.

CRC Press
March 2026 : 609pp
Hb: 978-1-032-82589-2 : **£105**
eBook: 978-1-003-51207-3

* For full contents and more information, visit: www.routledge.com/9781032825892

Introduction to Mechanism Design

with Computer Applications



Eric Constance, Karl B. Dyer

Introduction to Mechanism Design: with Computer Applications provides an updated approach to undergraduate Mechanism Design and Kinematics courses/modules for engineering students. The use of web-based simulations, solid modeling, and software such as MATLAB and Excel is employed to link the design process with the latest software tools for the design and analysis of mechanisms and machines. While a mechanical engineer might brainstorm with a pencil and sketch pad, the final result is developed and communicated through CAD and computational visualizations. This modern approach to mechanical design processes has not been fully integrated in most books, as it is in this new text.

CRC Press

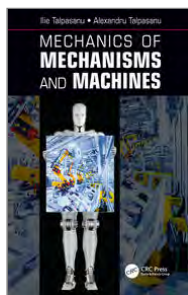
August 2018 : 760pp

Hb: 978-1-138-74065-5 : £150

eBook: 978-1-315-18326-8

* For full contents and more information, visit: www.routledge.com/9781138740655

Mechanics of Mechanisms and Machines



Ilie Talpasanu Wentworth Institute of Technology, Boston, Massachusetts, USA, **Alexandru Talpasanu**

Mechanics of Mechanisms and Machines provides a practical approach to machine dynamics and kinematics for undergraduate students and mechanical engineers. It starts by analyzing simple mechanisms, and progresses to more complex examples. It will be the only textbook to cover mechanism design through the use of graphs and generation of independent equations from a matroid form.

CRC Press

December 2018 : 610pp

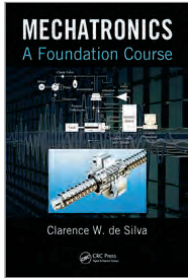
Hb: 978-1-498-73547-6 : £155

eBook: 978-0-429-39830-8

* For full contents and more information, visit: www.routledge.com/9781498735476

Mechatronics

A Foundation Course



Clarence W. de Silva University of British Columbia, Vancouver, Canada

Designed for students across all of engineering, this text offers the multidisciplinary approach needed to develop a foundation in mechatronics. It covers electrical and mechanical components, sensors and instrumentation, drives and actuators, controls, signal processing, component interfacing, modeling, and design. Practical applications and tools introduced up front are uniformly integrated throughout the book. Cases studies and worked examples that make use of MATLAB®, Simulink®, and LabView® application and case studies are included, as are numerous exercises, most based on real engineering practice.

CRC Press
June 2010 : 898pp
Hb: 978-1-420-08211-1 : £170
eBook: 978-0-429-13947-5

* For full contents and more information, visit: www.routledge.com/9781420082111

Mechatronics

An Integrated Approach



Clarence W. de Silva University of British Columbia, Vancouver, Canada

Intended as an engineering textbook that is versatile enough to span several courses in mechatronics, this book offers a strong foundation in such core subjects as dynamic system modeling, electrical components and analysis, mechanical components and analysis, robotics, drives and actuators, control systems, digital processing and hardware, communication and interfacing, software tools, design, and prototyping. The appendices cover Laplace and Fourier transform techniques and software tools including MATLAB, SIMULINK, and LabVIEW. It also emphasizes practical situations and applications with numerous worked examples, problems, and exercises and offers an entire chapter devoted to case studies.

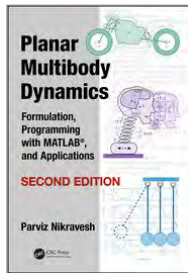
CRC Press
November 2004 : 1348pp
Hb: 978-0-849-31274-8 : £185
eBook: 978-0-429-21068-6

* For full contents and more information, visit: www.routledge.com/9780849312748

2ND EDITION

Planar Multibody Dynamics

Formulation, Programming with MATLAB®, and Applications, Second Edition

**Parviz Nikravesh**

Planar Multibody Dynamics: Formulation, Programming, and Applications, Second Edition enhances the quality and ease of design education with extensive use of the latest computerized design tools combined with coverage of classical design and dynamics of machinery principles. Using clear, concise language, the text introduces fundamental theories, computational methods, and program development for analyzing simple to complex mechanical systems. MATLAB® is used throughout, with examples begin with basic commands before introducing students to more advanced programming techniques. The routines developed in each chapter come together to form complete programs for different types of analysis.

CRC Press

October 2018 : 430pp

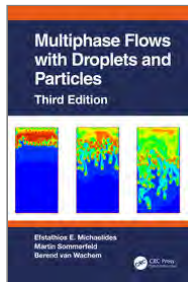
Hb: 978-1-138-09612-7 : £170

eBook: 978-1-315-10543-7

* For full contents and more information, visit: www.routledge.com/9781138096127

3RD EDITION

Multiphase Flows with Droplets and Particles, Third Edition



Efstathios E. Michaelides Texas Christian University, USA
, Martin Sommerfeld Martin Luther University, Germany,
Berend van Wachem University of Magdeburg, Germany

Multiphase Flows with Droplets and Particles, Third Edition provides an organized, pedagogical study of multiphase flows with particles and droplets. The revision presents new information on particle interactions; particle collisions; thermophoresis and Brownian movement; computational techniques and codes; the treatment of irregularly-shaped particles. An entire chapter is devoted to the flow of nanoparticles and applications of nanofluids. Designed to complement a graduate course in multiphase flows, the book can also serve as a supplement in short courses for engineers or as a stand-alone reference for engineers and scientists who work in this area.

CRC Press

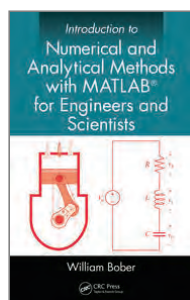
October 2024 : 478pp

Pb: 978-0-367-54434-8 : **£65.99**Hb: 978-0-367-54431-7 : **£175**

eBook: 978-1-003-08927-8

* For full contents and more information, visit: www.routledge.com/9780367544348

Introduction to Numerical and Analytical Methods with MATLAB® for Engineers and Scientists



William Bober Florida Atlantic University, Boca Raton, USA

This textbook teaches students how to write computer programs on the MATLAB® platform and to use many of MATLAB's built-in functions to solve engineering-type problems. To students, MATLAB's built-in functions are black boxes. By combining a textbook on MATLAB with basic numerical and analytical analysis, the mystery of what the black boxes contain is somewhat alleviated. Within each chapter there are exercises related to the topics just covered. The text contains many examples from mechanical, civil, aeronautical, and electrical engineering.

CRC Press

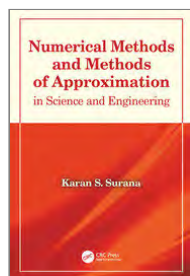
November 2013 : 556pp

Hb: 978-1-466-57602-5 : £155

eBook: 978-0-429-10161-8

* For full contents and more information, visit: www.routledge.com/9781466576025

Numerical Methods and Methods of Approximation in Science and Engineering



Karan S. Surana University of Kansas, USA

Numerical Methods and Methods of Approximation in Science and Engineering prepares students and other readers for advanced studies involving applied numerical and computational analysis. Focused on building a sound theoretical foundation, it uses a clear and simple approach backed by numerous worked examples to facilitate understanding of numerical methods and their application. Readers will learn to structure a sequence of operations into a program, using the programming language of their choice; this approach leads to a deeper understanding of the methods and their limitations. The text features highlighted examples, numerous problems, and a complete Solutions Manual for instructors.

CRC Press

November 2018 : 498pp

Hb: 978-0-367-13672-7 : £165

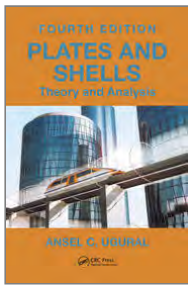
eBook: 978-0-429-02828-1

* For full contents and more information, visit: www.routledge.com/9780367136727

4TH EDITION

Plates and Shells

Theory and Analysis, Fourth Edition



Ansel C. Ugural New Jersey Institute of Technology,
Newark, USA

Series: Applied and Computational Mechanics

Noted for its practical, accessible approach to senior and graduate-level engineering mechanics, *Plates and Shells: Theory and Analysis* is a long-time bestselling text on the subjects of elasticity and stress analysis. Many new examples and applications are included to review and support key foundational concepts. Advanced methods are discussed and analyzed, accompanied by illustrations. Problems are carefully arranged from the basic to the more challenging level. Computer/numerical approaches (Finite Difference, Finite Element, MATLAB) are introduced, and MATLAB code for selected illustrative problems and a case study is included.

CRC Press

October 2017 : 618pp

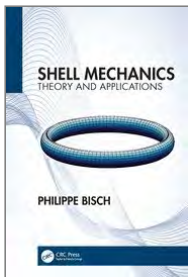
Hb: 978-1-138-03245-3 : £200

eBook: 978-1-315-10462-1

* For full contents and more information, visit: www.routledge.com/9781138032453

Shell Mechanics

Theory and Applications



Philippe Bisch Ecole des Ponts ParisTech, France

This book is devoted to shells, a natural or human construction, whose modelling as a structure was particularly developed during the 20th century, leading to current numerical models. It highlights the very strong link between the deformation of geometric surfaces and the mechanics of shells. The book is based on the knowledge acquired by the reader in structural mechanics and provides the necessary information on the geometry of surfaces. It is particularly aimed at students in the fields of engineering using mechanics, as well as professionals wishing to deepen their knowledge of shells.

CRC Press

September 2025 : 562pp

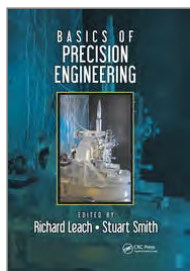
Pb: 978-1-032-45171-8 : £62.99

Hb: 978-1-138-31059-9 : £150

eBook: 978-0-429-44040-3

* For full contents and more information, visit: www.routledge.com/9781032451718

Basics of Precision Engineering



Edited by **Richard Leach , Stuart T. Smith**

BASICS OF PRECISION MACHINERY provides students and professionals a comprehensive and up-to-date survey of the field. The text reviews basic dynamics of machinery and kinematics concepts, and the design of mechanisms. Engineering materials selection and behavior is examined, along with environmental isolation. Metrology principles and applications, and dimensional metrology, are presented in detail, since these topics are essential to precision engineering; uncertainty analysis and probability are covered as well. Numerous figures, tables, examples and problems are included throughout the text, and a Solutions Manual and Figure Slides are available for professors who adopt the textbook.

CRC Press

March 2021 : 676pp

Pb: 978-0-367-78139-2 : **£51.99**

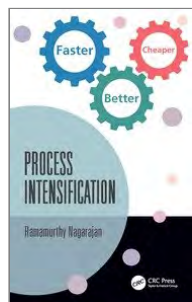
Hb: 978-1-498-76085-0 : **£170**

eBook: 978-1-351-20411-8

* For full contents and more information, visit: www.routledge.com/9780367781392

Process Intensification

Faster, Better, Cheaper



Ramamurthy Nagarajan Dept of Chemical Engineering,
IIT Madras

Process Intensification: Faster, Better, Cheaper presents basic concepts and applications of Process Intensification (PI) and links their common effects across processes. It defines two fundamental parameters, PI factor, and Cost Impact (CI) factor, and uses these to analyze various applications where PI has been carried out. The book is intended for senior undergraduate chemical and mechanical engineering students taking courses in Process Design, Process Optimization, Process Synthesis, and Process Intensification. Each chapter investigates a specific application, discusses the key PI principles, and includes problem sets and examples.

CRC Press

May 2025 : 270pp

Pb: 978-1-032-25481-4 : **£52.99**

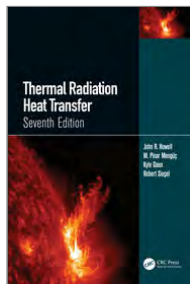
Hb: 978-1-032-25477-7 : **£105**

eBook: 978-1-032-25486-9 : **£91.99**

* For full contents and more information, visit: www.routledge.com/9781032254814

7TH EDITION

Thermal Radiation Heat Transfer



John R. Howell University of Texas, Austin, USA, **M. Pinar Mengüç** Ozyegin Universities, Istanbul, Turkey, **Kyle Daun** University of Waterloo, Waterloo, Canada, **Robert Siegel** Heat Transfer Consultant, Shaker Heights, Ohio, USA

The Seventh Edition of this classic text outlines the fundamental physical principles of thermal radiation, as well as analytical and numerical techniques for quantifying radiative transfer between surfaces and within participating media. The textbook includes newly expanded sections on surface properties, electromagnetic theory, scattering and absorption of particles, near-field radiative transfer, and emphasizes the broader connections to thermodynamic principles. Sections on inverse analysis and Monte Carlo methods have been updated, along with new material on manufacturing, renewable energy, climate change, building energy efficiency, and biomedical applications.

CRC Press

December 2020 : 1040pp

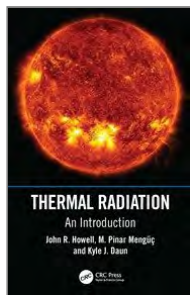
Hb: 978-0-367-34707-9 : £150

eBook: 978-0-429-32730-8

* For full contents and more information, visit: www.routledge.com/9780367347079

Thermal Radiation

An Introduction



John R. Howell University of Texas, Austin, USA, **M. Pinar Mengüç** Ozyegin Universities, Istanbul, Turkey, **Kyle Daun** University of Waterloo, Waterloo, Canada

This book is a complete text for a one-semester introductory graduate course on radiative energy transfer. It bridges the gap between a basic introduction and comprehensive coverage of thermal radiation, focusing on insight into radiative transfer as practiced by engineers. The textbook is intended for instructors and graduate students in a first-year course on radiative heat transfer or advanced heat transfer. Covering radiative transfer among surfaces, with an introduction to the effects of participating media between surfaces, the book includes surface and medium property characteristics and solution of the radiative transfer equation in simple geometries.

CRC Press

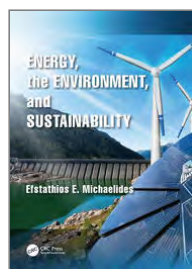
March 2023 : 476pp

Hb: 978-1-032-01531-6 : £94.99

eBook: 978-1-032-42254-1 : £86.99

* For full contents and more information, visit: www.routledge.com/9781032015316

Energy, the Environment, and Sustainability



Efstathios E. Michaelides Texas Christian University, USA

Series: Mechanical and Aerospace Engineering Series

Energy and the Environment explains in simple terms what the energy demand is at the present, what the environmental effects of energy use are, and what can be accomplished to alleviate the environmental effects of energy use and ensure adequate energy supply. Though technical in approach, the text uses simple explanations of engineering processes and systems and algebra-based math to be comprehensible to students in a range of disciplines. Schematic diagrams, quantitative examples, and numerous problems will help students make quantitative calculations. This will assist them in comprehending the complexity of the energy-environment balance, and to analyze and evaluate proposed solutions.

CRC Press

April 2018 : 483pp

Pb: 978-1-138-03844-8 : **£155**

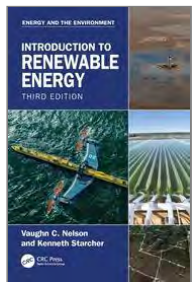
Hb: 978-1-138-48917-2 : **£170**

eBook: 978-1-315-17735-9

* For full contents and more information, visit: www.routledge.com/9781138038448

3RD EDITION

Introduction to Renewable Energy



Vaughn Nelson West Texas A&M University, Canyon, USA, **Kenneth Starcher** West Texas A&M University, Canyon, USA

Series: Energy and the Environment

Introduction to Renewable Energy, Third Edition covers the fundamentals of renewable energy and serves as a resource to undergraduates in renewable energy courses, non-specialists within the energy industries, or anyone working to support the successful implementation of renewable energy. This revised edition discusses developments that have occurred since the publication of the previous edition and considers the growing environmental impact of human activity on planet Earth.

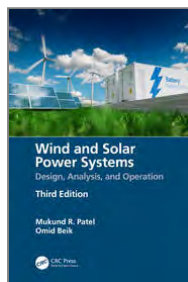
CRC Press
March 2025 : 450pp
Hb: 978-1-032-88841-5 : £125
eBook: 978-1-003-53991-9

* For full contents and more information, visit: www.routledge.com/9781032888415

3RD EDITION

Wind and Solar Power Systems

Design, Analysis, and Operation



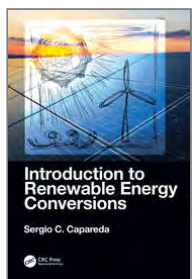
Mukund R. Patel U.S. Merchant Marine Academy, USA, **Omid Beik** Enercis Inc., Canada

This book provides technological and socio-economic coverage of renewable energy. It discusses wind power technologies, solar photovoltaic technologies, large-scale energy storage technologies, and ancillary power systems. In this new edition, the book addresses advancements that have been made in renewable energy: solar systems have seen great transformation, the power electronics converters, their control and operation, have been improved, and multi-stage, multi-phase systems have been proposed and put into installation. The text has been revised to include up-to-date material, statistics, and current technology trends.

CRC Press
March 2025 : 408pp
Pb: 978-0-367-71620-2 : £55.99
Hb: 978-0-367-47693-9 : £140
eBook: 978-1-003-04295-2

* For full contents and more information, visit: www.routledge.com/9780367716202

Introduction to Renewable Energy Conversions



Sergio Capareda Texas A&M University, College Station, USA

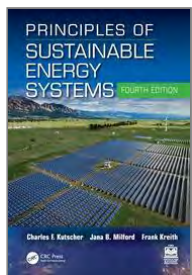
Introduction to Renewable Energy Conversions examines all the major renewable energy conversion technologies, with the goal of enabling readers to formulate realistic resource assessments. The text provides step-by-step procedures for assessing renewable energy options, and then moves to the design of appropriate renewable energy strategies. The goal is for future engineers to learn the process of making resource estimates, through the introduction of more than 140 solved problems (and equal number of solved problems for teachers), over 165 engineering related equations, more than 120 figures and numerous tables to explain each renewable energy conversion type.

CRC Press
August 2019 : 456pp
Hb: 978-0-367-18850-4 : £125
eBook: 978-0-429-19910-3

* For full contents and more information, visit: www.routledge.com/9780367188504

4TH EDITION

Principles of Sustainable Energy Systems



Charles F. Kutscher National Renewable Energy Laboratory, Golden, Colorado, USA, **Jana B. Milford** University of Colorado Boulder, USA, **Frank Kreith**

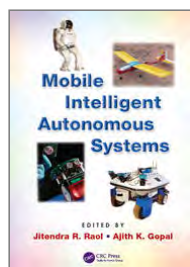
Series: Mechanical and Aerospace Engineering Series

This book provides students with a fundamental and practical understanding of the energy transition. It discusses the design, production, and economics of energy conversion and storage technologies as well as requirements and technologies for the end-use sectors of transportation, buildings, and industry. This new edition features recent advances in batteries and other storage technologies, electricity transmission, electric vehicles, and beneficial electrification and demand response in buildings. The book is intended for upper-level undergraduate and graduate engineering students taking courses in Renewable Energy, Energy Systems, and Energy Conversion.

CRC Press
August 2025 : 664pp
Hb: 978-1-032-95795-1 : £170
eBook: 978-1-003-58661-6

* For full contents and more information, visit: www.routledge.com/9781032957951

Mobile Intelligent Autonomous Systems



Edited by **Jitendra R. Raol** Ramaiah Instof Tech, India,
Ajith K. Gopal

Going beyond the traditional field of robotics to include other mobile vehicles, this reference and "recipe book" describes important theoretical concepts, techniques, and applications that can be used to build truly mobile intelligent autonomous systems (MIAS). With the infusion of neural networks, fuzzy logic, and genetic algorithm paradigms for MIAS, it blends modeling, sensors, control, estimation, optimization, signal processing, and heuristic methods in MIAS and robotics, and includes examples and applications throughout. Offering a comprehensive view of important topics, it helps readers understand the subject from a system-theoretic and practical point of view.

CRC Press

March 2017 : 832pp

Pb: 978-1-138-07245-9 : **£86.99**

Hb: 978-1-439-86300-8 : **£220**

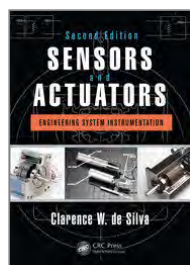
eBook: 978-0-429-10481-7

* For full contents and more information, visit: www.routledge.com/9781138072459

2ND EDITION

Sensors and Actuators

Engineering System Instrumentation, Second Edition



Clarence W. de Silva University of British Columbia,
Vancouver, Canada

This introductory textbook on engineering system instrumentation emphasizes sensors, transducers, actuators, and devices for component interconnection. The book deals with "instrumenting" an engineering system through the incorporation of suitable sensors, actuators, and associated interface hardware including filters, amplifiers and other signal modifiers. In view of the practical considerations, design issues, and industrial techniques that are presented throughout the book, and in view of the simplified and snap-shot style presentation of more advanced theory and concepts, it also serves as a useful reference for engineers, technicians, project managers, and other practicing professionals in industry and in research laboratories.

CRC Press

July 2015 : 848pp

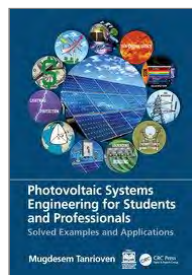
Hb: 978-1-466-50681-7 : **£185**

eBook: 978-0-429-09643-3

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Photovoltaic Systems Engineering for Students and Professionals

Solved Examples and Applications



Mugdesem Tanrioven Yildiz Technical University, Turkey

Photovoltaic Systems Engineering for Students and Professionals: Solved Examples and Applications examines photovoltaic (PV) power plants in a holistic way. PV installations of all types and sizes- from the smallest plant element to the largest system components- are approached from an electrical engineering perspective, and further explained through worked examples. It presents the different forms of energy and the energy conversions between them in a clear and understandable way. The book is both an essential resource for students as well as practicing engineers working in the solar photovoltaic areas and critical work for all electrical engineers.

CRC Press

October 2023 : 620pp

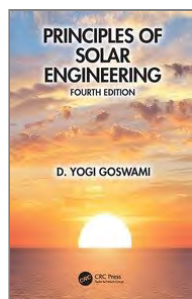
Hb: 978-1-032-54185-3 : £140

eBook: 978-1-003-41557-2

* For full contents and more information, visit: www.routledge.com/9781032541853

4TH EDITION

Principles of Solar Engineering



D. Yogi Goswami University of South Florida, USA

Principles of Solar Engineering, Fourth Edition addresses the need for solar resource assessment and highlights improvements and advancements involving photovoltaics and solar thermal technologies, grid power, and energy storage. With updates made to every chapter, the book discusses new technologies in photovoltaics, such as organic, dye-sensitized and perovskite solar cells, and the design of solar systems and power plants. It features battery energy storage for distributed and bulk storage and electrical integration with the main solar systems. The book is intended for senior undergraduate and graduate engineering students in Energy Engineering and Solar Energy courses.

CRC Press

September 2022 : 656pp

Hb: 978-1-032-15500-5 : £155

eBook: 978-1-003-24438-7

* For full contents and more information, visit: www.routledge.com/9781032155005

Collision Actions on Structures



Arnold C.Y. Yong Research Fellow, Malaysia, **Nelson T.K. Lam** University of Melbourne, Australia, **Scott J. Menegon** Swinburne University of Technology, Australia

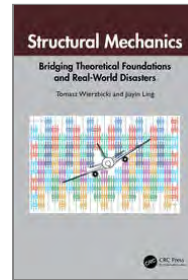
This book is concerned with collision of a moving, fallen or flying object on a rigid barrier or a structural element, and the transmission of the transient action to the rest of a structural system. Engineers typically have little to draw on for analysis and design. Modelling software, such as FEM, is challenging to use effectively, physical experimentation is costly, and there is little or no regulatory documentation. This textbook for graduate students and guide for practitioners sets out solid principles and much of the methodology conveyed in the book has been validated experimentally.

CRC Press
November 2024 : 378pp
Pb: 978-0-367-67830-2 : £48.99
Hb: 978-0-367-67817-3 : £115
eBook: 978-1-003-13303-2

* For full contents and more information, visit: www.routledge.com/9780367678302

Structural Mechanics

Bridging Theoretical Foundations and Real-World Disasters



Tomasz Wierzbicki, **Jiayin Ling**

This book originated from the lecture notes of Professor Tomasz Wierzbicki who taught at MIT and Stanford University. The notes were amended and improved over the years to provide a link between rigorous theoretical foundations with solutions to important engineering problems. The book discusses complex man-made structures under accidental impact or explosive loads resulting in the loss of life and/or extensive property, infrastructural, and environmental damage. The book is not restricted to the accident reconstruction only. The additional 17 lectures provide theoretical foundations for the elastic structures, plastic plates and shells, and ductile fracture.

CRC Press
December 2024 : 588pp
Hb: 978-1-032-84281-3 : £165
eBook: 978-1-003-51714-6

* For full contents and more information, visit: www.routledge.com/9781032842813

Fundamentals of Structural Engineering

A Problem-Based Approach



Tanvir Mustafy Military Inst. of Science and Tech, BD

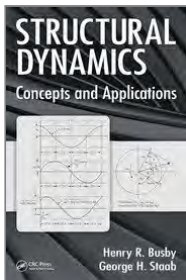
This book provides an introduction to the principles of structural engineering using a problem-based approach. It covers the basic concepts of structural analysis and design, including statics, strength of materials, and mechanics of materials. The text emphasizes the application of these principles to real-world structural engineering problems and includes numerous example problems and case studies to illustrate key concepts. The problem-based approach helps students develop their problem-solving skills, critical thinking abilities, and intuition for structural engineering.

CRC Press
December 2024 : 570pp
Hb: 978-1-032-63805-8 : £105
eBook: 978-1-032-63807-2

* For full contents and more information, visit: www.routledge.com/9781032638058

Structural Dynamics

Concepts and Applications



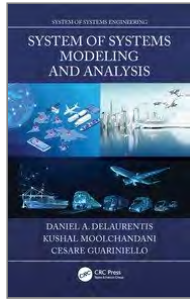
Henry R. Busby Ohio State University, Columbus, USA, **George H. Staab** Ohio State University, Columbus, USA

Structural Dynamics: Concepts and Applications focuses on dynamic problems in mechanical, civil and aerospace engineering through the equations of motion. The text explains structural response from dynamic loads and the modeling and calculation of dynamic responses in structural systems. A range of applications is included, from various engineering disciplines. Coverage progresses consistently from basic to advanced, with emphasis placed on analytical methods and numerical solution techniques. Stress analysis is discussed, and MATLAB applications are integrated throughout. A solutions manual and figure slides for classroom projection are available for instructors.

CRC Press
August 2017 : 598pp
Hb: 978-1-498-76594-7 : £195
eBook: 978-1-315-12002-7

* For full contents and more information, visit: www.routledge.com/9781498765947

System of Systems Modeling and Analysis



Daniel A. DeLaurentis Purdue University, USA, **Kushal Moolchandani** Purdue University, USA, **Cesare Guariniello** Purdue University, USA

Series: System of Systems Engineering

System-of-Systems Modeling and Analysis provides the reader with motivation, theory, methodology, and examples of modeling and analysis for system of system problems. The book is intended for senior undergraduate students in engineering programs studying System-of-Systems Modeling, System-of-Systems Analysis, and System-of-Systems Engineering courses. Professional engineers will also benefit from Methods, Tools, and Processes (MTP) and examples as a baseline for specific user applications. Providing a bridge between theory and practice for modeling and analysis of SoS, this book includes generalized concepts and Methods, Tools, and Processes (MTP) applicable to SoS.

CRC Press

December 2022 : 287pp

Hb: 978-1-032-13830-5 : £125

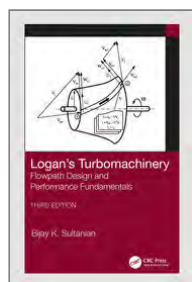
eBook: 978-1-003-23101-1

* For full contents and more information, visit: www.routledge.com/9781032138305

3RD EDITION

Logan's Turbomachinery

Flowpath Design and Performance Fundamentals, Third Edition



Bijay K Sultanian University of Central Florida, FL

Series: Mechanical Engineering

Logan's Turbomachinery: Flowpath Design and Performance Fundamentals, Third Edition is the long-awaited revision of this classic textbook, thoroughly updated by Dr. Bijay Sultanian. While the basic concepts remain constant, turbomachinery design has advanced since the Second Edition was published in 1993. Airfoils in modern turbomachines feature three-dimensional geometries, Computational Fluid Mechanics (CFD) has become a standard design tool, and major advances have been made in the materials and manufacturing technologies that affect turbomachinery design. The new edition addresses these trends to best serve today's students, and design engineers working in turbomachinery industries.

CRC Press

January 2019 : 341 pp

Hb: 978-1-138-19820-3 : £130

eBook: 978-1-315-22648-4

* For full contents and more information, visit: www.routledge.com/9781138198203

Turbomachinery

Concepts, Applications, and Design



V. Dakshina Murty

Turbomachinery: Concepts, Applications, and Design is an introductory turbomachinery textbook aimed at seniors and first year graduate students, giving balanced treatment of both the concepts and design aspects of turbomachinery, based on sound analysis and a strong theoretical foundation. The text has three sections, Basic Concepts, Incompressible Fluid Machines; and Compressible Fluid Machines. Emphasis is on straightforward presentation of key concepts and applications, with numerous examples and problems that clearly link theory and practice over a wide range of engineering areas. Problem solutions and figure slides are available for instructors adopting the text for their classes.

CRC Press

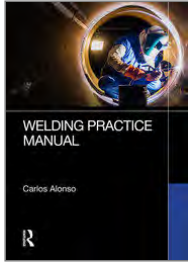
January 2018 : 326 pp

Hb: 978-1-138-64069-6 : £185

eBook: 978-1-315-20512-0

* For full contents and more information, visit: www.routledge.com/9781138640696

Welding Practice Manual



Carlos Alonso

These simple and very practical exercises for welders are categorized by the key processes (coated electrode, TIG, MIG MAG, and oxygas), the types of joint (screeds, angled, butt), the base material (carbon steel, stainless steel and aluminum), and the position in which the welding is performed (horizontal, cornice, ascending or descending vertical, under ceiling). It supports the certification tests for welders under the International Institute of Welding, and in line with the UNE standards for Europe, AWS standards for North America, and ISO standards. It suits trainees and apprentices in UK to Levels 1 to 3, and provides a reference for fully qualified welders.

Routledge

December 2025 : 290pp

Pb: 978-1-032-69226-5 : **£37.99**

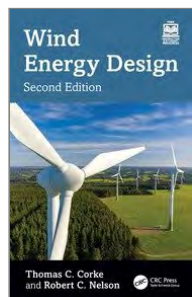
Hb: 978-1-032-72768-4 : **£89.99**

eBook: 978-1-003-42248-8

* For full contents and more information, visit: www.routledge.com/9781032692265

2ND EDITION

Wind Energy Design



Thomas C. Corke University of Notre Dame, USA, **Robert C. Nelson** University of Notre Dame, USA

Wind Energy Design provides an understanding of how wind farm design impacts wind turbine performance and offers rigorous design optimization coverage. It explores the blade design features, including aerodynamics, structures, and environmental impact, that yield an efficient rotor. The new edition features new sections on minimizing the costs of electricity and wind farm design for maximum energy capture. It includes a new case study on deployable wind turbines for defense and disaster response missions. This book is intended for upper-level undergraduate engineering students taking courses in Renewable Energy, Wind Power, Energy Systems, and Energy Conversion.

CRC Press

September 2025 : 362pp

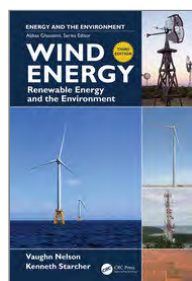
Hb: 978-1-041-00752-4 : £125

eBook: 978-1-003-61148-6

* For full contents and more information, visit: www.routledge.com/9781041007524

3RD EDITION

Wind Energy: Renewable Energy and the Environment



Vaughn Nelson West Texas A&M University, Canyon, USA, **Kenneth Starcher** West Texas A&M University, Canyon, USA

Series: Energy and the Environment

This book explores the wind industry from its inception in the 1970s to today; presents the design, aerodynamics, operation, control, applications, and different types of wind turbines; and provides ample reasons to shift from fossil fuels to renewable energy. It also discusses the political and economic factors regarding the adoption of wind as an energy source. It covers the characteristics of wind, such as shear, power potential, and turbulence, and discusses the measurement and siting of individual wind turbines and wind farms. This new edition is fully updated throughout, and adds new material on wind forecasting, offshore wind, decommissioning and repowering wind farms, and more.

CRC Press

November 2018 : 326pp

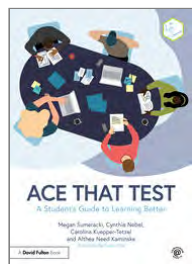
Hb: 978-1-138-61534-2 : £140

eBook: 978-0-429-46315-0

* For full contents and more information, visit: www.routledge.com/9781138615342

Ace That Test

A Student's Guide to Learning Better



Megan Sumeracki, Cynthia Nebel, Carolina Kuepper-Tetzl, Althea Need Kaminske

This exciting new text reveals the effective study strategies that will help you to use your time more efficiently, ace your tests, and retain information over time. In full colour and accompanied by beautifully illustrated graphics, Ace That Test offers evidence-based learning strategies that students can use during their study sessions, including dual coding and the power of retrieving what they know. With QR codes linking to answers to embedded questions and supplemental material, this is essential reading for college, university, and school students as well as educators teaching study skills or learning to learn courses.

Routledge

July 2023 : 146pp

Pb: 978-1-032-35585-6 : **£18.99**

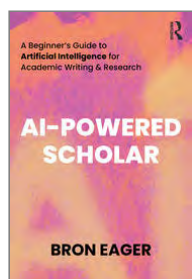
Hb: 978-1-032-35586-3 : **£145**

eBook: 978-1-003-32753-0

* For full contents and more information, visit: www.routledge.com/9781032355856

AI-Powered Scholar

A Beginner's Guide to Artificial Intelligence for Academic Writing & Research



Bron Eager University of Tasmania, Australia

This book is a practical and comprehensive guide on using AI tools to streamline and optimise the academic writing and research process. Through a series of step-by-step instructions and practical tips, this book provides readers with the knowledge and tools they need to leverage the power of AI to produce high-quality academic publications. Whether you're a university student or a tenured professor, this book is your indispensable companion to beginning your path towards becoming an AI-powered scholar.

Routledge

December 2024 : 168pp

Pb: 978-1-032-66526-9 : **£19.99**

Hb: 978-1-032-66525-2 : **£145**

eBook: 978-1-032-66527-6

* For full contents and more information, visit: www.routledge.com/9781032665269

How to Become a Successful College Student

The Tools, Habits, and Skills Needed to Foster College Readiness



Scotty Dunlap Eastern Kentucky University, USA, **Brian Dudak** Middle Tennessee State University, USA

This book is your one-stop shop for the academic tools and habits needed to make your transition from high school to college a resounding success! The shift from high school to college can be a challenge, with many students finding the skills that had previously worked so well no longer seem to be enough. How to Become a Successful College Student outlines the strategies you need to 'level up' your current processes in order to foster learning and retention of information in a new and rigorous environment. This guide is a must-have resource for anyone who wants to maximize their higher education experience.

Prufrock Press

November 2023 : 202pp

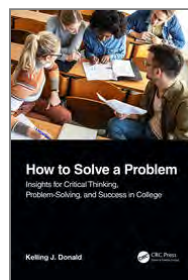
Pb: 978-1-032-52409-2 : **£14.99**

eBook: 978-1-003-41268-7

* For full contents and more information, visit: www.routledge.com/9781032524092

How to Solve A Problem

Insights for Critical Thinking, Problem-Solving, and Success in College



Kelling J. Donald University of Richmond, USA

This concise and accessible resource offers new college students, especially those in science degree programs, guidance on engaging successfully with the classroom experience and skillfully tackling technical or scientific questions. The author provides insights on identifying, from the outset, individual markers for what success in college will look like for students, how to think about the engagement with professors as a partnership, and how to function effectively in that partnership toward achieving their pre-defined goals or markers of success. It is an ideal companion for science degree prospects and first-generation students seeking insight into the college experience.

CRC Press

April 2023 : 152pp

Pb: 978-1-032-20361-4 : **£26.99**

Hb: 978-1-032-20368-3 : **£66.99**

eBook: 978-1-003-26334-0

* For full contents and more information, visit: www.routledge.com/9781032203614

Making Your Doctoral Research Project Ambitious

Developing Large-Scale Studies with Real-World Impact



Edited by Nadia Siddiqui Durham University, UK, **Stephen Gorard** Durham University, UK

This edited collection provides real and outstanding examples of multiple research design methodologies which will allow doctoral researchers to develop a wide set of research skills, leading to the development of a high-quality academic thesis from which peer reviewed research papers and books can emerge. Ideal reading for doctoral students and supervisors, this book is a source of encouragement and motivation for new researchers seeking to challenge general perceptions in the social sciences that PhD or other doctoral research projects must be small-scale rather than trivial studies, but can instead produce robust findings that have real-world implications.

Routledge

April 2022 : 278pp

Pb: 978-1-032-06245-7 : **£30.99**

Hb: 978-1-032-05975-4 : **£155**

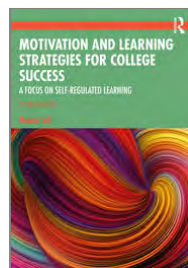
eBook: 978-1-003-20136-6

* For full contents and more information, visit: www.routledge.com/9781032062457

7TH EDITION

Motivation and Learning Strategies for College Success

A Focus on Self-Regulated Learning



Helena Seli

Now in its 7th edition, Motivation and Learning Strategies for College Success: A Focus on Self-Regulated Learning provides a framework organized around motivation, methods of learning, time management, control of the physical and social environment, and monitoring performance that makes it easy for students to recognize what they need to do to become successful learners. Full of rich pedagogical features and exercises, students will find Follow-Up Activities, Opportunities for Reflection, Chapter-End Reviews, Key Points, and a Glossary.

Routledge

August 2023 : 304pp

Pb: 978-1-032-47020-7 : **£54.99**

Hb: 978-1-032-47255-3 : **£155**

eBook: 978-1-003-38527-1

* For full contents and more information, visit: www.routledge.com/9781032470207

2ND EDITION

Stress, Cognition and Health

Real World Examples and Practical Applications

**Tony Cassidy**

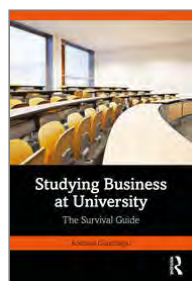
The new edition of this bestselling textbook provides a comprehensive overview of the latest research on stress and health, moving beyond the former deficit model to a resource growth model. It examines all aspects of the topic, from how the external world and the impact of technology makes demands upon individuals, through biological and psychological processes, to outcomes in terms health and wellbeing. The process is set within a dynamic, multilevel systems and developmental lifespan perspective. The book includes a history of the evolution of stress research and the biological systems and immune responses that translate external pressures into health outcomes.

Routledge
October 2022 : 148pp
Pb: 978-0-367-56418-6 : **£39.99**
Hb: 978-0-367-56634-0 : **£140**
eBook: 978-1-003-09873-7

* For full contents and more information, visit: www.routledge.com/9780367564186

Studying Business at University

The Survival Guide

**Andreas Giazitzoglu**

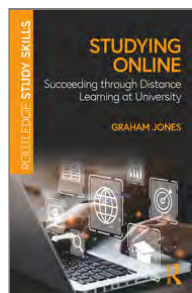
Studying Business at University provides new and prospective undergraduates with a concise and easy-to-read insight into what life is like as a business student today. Written in the style of an email dialogue between two students, it informs and reassures the new business student who is seeking advice on how to get the most out of their degree experience, and covers the whole degree from application to graduation – and beyond. This book will also be a helpful reference for lecturers who want to give their students as much support as possible as they learn to balance the demands of academia with the pressures of the real world.

Routledge
March 2025 : 134pp
Pb: 978-1-032-74042-3 : **£20.99**
Hb: 978-1-032-74034-8 : **£155**
eBook: 978-1-003-46739-7

* For full contents and more information, visit: www.routledge.com/9781032740423

Studying Online

Succeeding through Distance Learning at University

**Graham Jones** University of Buckingham, UK*Series: Routledge Study Skills*

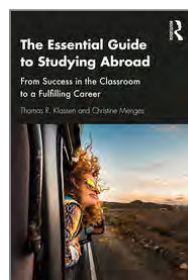
Helping you get to grips with online learning, this book contains a wealth of practical tips and strategies that will make studying online easier. Covering the advantages of online learning as well as the problems you might face, this book provides tried and tested advice to help you overcome those difficulties so that you can work to the best of your abilities. Identifying techniques designed specifically for studying online, with step-by-step instructions, as well as guidance on using online study software to the best effect, this must-have student companion provides tips and tricks to make university distance studying both effective and enjoyable.

Routledge
July 2022 : 244pp
Pb: 978-1-032-19539-1 : **£18.99**
Hb: 978-1-032-19538-4 : **£140**
eBook: 978-1-003-25969-5

* For full contents and more information, visit: www.routledge.com/9781032195391

The Essential Guide to Studying Abroad

From Success in the Classroom to a Fulfilling Career



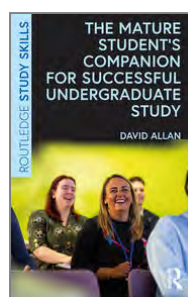
Thomas R. Klassen York University, Canada, **Christine Menges** WHU – Otto Beisheim School of Management, Germany

This book is an indispensable how-to-guide on flourishing when studying abroad, and how to use an international education to begin a fulfilling career after graduation. Written in an engaging and accessible style, using many examples, case studies and links to resources, the book reduces the stress of studying abroad. Covering all aspects of the international student experience – inside and outside the classroom – the book encourages young people to perform their very best and succeed in their new environment. International students preparing for cross cultural learning and recent graduates looking for employment will find this book both practical and inspiring.

Routledge
August 2019 : 238pp
Pb: 978-0-367-23516-1 : **£35.99**
Hb: 978-0-367-23515-4 : **£155**
eBook: 978-0-429-28011-5

* For full contents and more information, visit: www.routledge.com/9780367235161

The Mature Student's Companion for Successful Undergraduate Study

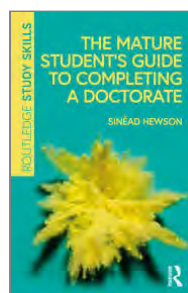
**David Allan** Edge Hill University, UK*Series: Routledge Study Skills*

A guiding resource and supportive companion, this book is designed for mature individuals intending to undertake an undergraduate degree. With a wealth of practical strategies for developing study skills, whilst, at the same time, addressing the changes that university study can bring, this key text highlights the significance of individual strengths obtained from life experiences, and demonstrates their importance in learning as a mature student. Packed full of activities to support development and case studies to exemplify a range of situations, this is a must-read for anyone looking to undertake an undergraduate degree as a mature student.

Routledge
June 2025 : 170pp
Pb: 978-1-032-61924-8 : **£17.99**
Hb: 978-1-032-61923-1 : **£155**
eBook: 978-1-032-61925-5

* For full contents and more information, visit: www.routledge.com/9781032619248

The Mature Student's Guide to Completing a Doctorate

**Sinéad Hewson***Series: Routledge Study Skills*

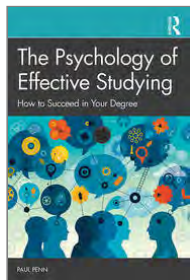
Carefully structured to make it accessible and easy to follow, this thought-provoking book encourages the reader to facilitate a dialogue across disciplines so that unconventional students are acknowledged and can discover a successful path towards admission and PhD completion. It is a must-read for advanced academic researchers, advanced post-graduate students and experienced professionals with vocational backgrounds who are seeking recognition for their knowledge and alternative pathways to contribute to the sector.

Routledge
April 2024 : 282pp
Pb: 978-1-032-53800-6 : **£17.99**
Hb: 978-1-032-53801-3 : **£145**
eBook: 978-1-003-41369-1

* For full contents and more information, visit: www.routledge.com/9781032538006

The Psychology of Effective Studying

How to Succeed in Your Degree



Paul Penn Independent Scholar, UK

This book provides a vital guide for students to key study skills that are instrumental in success at university. It uses a combination of research from cognitive psychology, humour and practical examples to convey where students often go fundamentally wrong in their studying practices and provides clear and concise advice on how they can improve. The book covers time management, academic integrity, writing essays, team work, and other key required skills for academic study. Written in a humorous and irreverent tone, and including illustrations and examples from popular culture, this is the ideal alternative and accessible study skills resource for any student at undergraduate level.

Routledge

August 2019 : 244pp

Pb: 978-1-138-57092-4 : **£23.99**

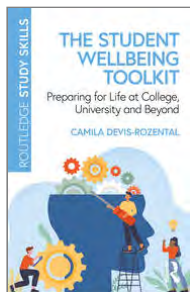
Hb: 978-1-138-57090-0 : **£140**

eBook: 978-0-203-70311-3

* For full contents and more information, visit: www.routledge.com/9781138570924

The Student Wellbeing Toolkit

Preparing for Life at College, University and Beyond



Camila Devis-Rozental Bournemouth University, UK

Series: Routledge Study Skills

The Student Wellbeing Toolkit puts wellbeing at the centre of your journey into university and beyond. By encouraging self-efficacy and a focus on the things you can control, it provides clear guidance to enhance wellbeing and opportunities for self-reflection that help develop self-awareness and prosocial skills for life. Drawing on research evidenced theories around positive psychology, theories of learning, motivation, and self-development, the book explores what, how, and why these areas are key to our wellbeing and the rationale for taking them into account to enable you to flourish and thrive at university.

Routledge

June 2023 : 286pp

Pb: 978-1-032-32966-6 : **£18.99**

Hb: 978-1-032-32965-9 : **£155**

eBook: 978-1-003-31754-8

* For full contents and more information, visit: www.routledge.com/9781032329666

3RD EDITION

Academic Writing for International Students of Business and Economics



Stephen Bailey Taught English internationally and at the Univ of Nottingham & Derby Univ & has previously published with Routledge

Now in its third edition, this key text helps international students succeed in writing essays and reports for their business and economics course. Thoroughly revised and updated, it is designed to be used by teachers in the classroom and students for self-study. New topics in this edition include writing in groups, written British and American English, and reflective writing. In addition, the new interactive website has a full set of teaching notes as well as more challenging exercises, revision material and links to other sources. Written to deal with the specific language issues faced by international students, this practical, user-friendly book is an invaluable guide.

Routledge
January 2020 : 346pp
Pb: 978-0-367-28031-4 : **£30.99**
Hb: 978-0-367-28030-7 : **£155**
eBook: 978-0-429-29927-8

* For full contents and more information, visit: www.routledge.com/9780367280314

Academic Writing for University Students



Stephen Bailey Taught English internationally and at the Univ of Nottingham & Derby Univ & has previously published with Routledge

Designed to help students succeed in writing university-level essays and reports, this book has been carefully designed for use both in the classroom and for self-study. Covering three key areas: the writing process, elements of writing and writing models, it encourages critical writing and developing a voice. Academic Writing in the University provides all of the tools necessary to produce excellent written work. With progress checks, practical examples and self-testing units, this practical, user-friendly book covers all stages of the writing process and is an invaluable guide to academic writing in the university.

Routledge
December 2021 : 324pp
Pb: 978-0-367-44539-3 : **£24.99**
Hb: 978-0-367-44538-6 : **£155**
eBook: 978-1-003-01021-0

* For full contents and more information, visit: www.routledge.com/9780367445393

6TH EDITION

Academic Writing

A Handbook for International Students



Stephen Bailey Taught English internationally and at the Univ of Nottingham & Derby Univ & has previously published with Routledge

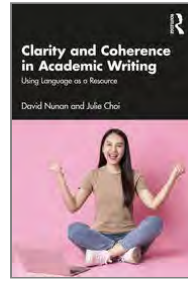
The sixth edition of this popular book has been written to help international students succeed in writing essays and reports for their English-language academic courses. Thoroughly revised and updated in a streamlined format making it even easier to use, it is designed to let readers find the support they need easily, both in the classroom and for self-study. The book consists of three parts, comprising a total of 28 units, all of which are fully cross-referenced and can be taught in conjunction with each other or used for reference. A progress check at the end of each part allows students to self-assess their learning.

Routledge
March 2025 : 320pp
Pb: 978-1-032-83417-7 : **£28.99**
Hb: 978-1-032-83418-4 : **£155**
eBook: 978-1-003-50926-4

* For full contents and more information, visit: www.routledge.com/9781032834177

Clarity and Coherence in Academic Writing

Using Language as a Resource



David Nunan, Julie Choi University of Melbourne, Australia

This book presents a lively, rich, and concise introduction to the key concepts and tools for developing clarity and coherence in academic writing. Well-known authors and linguists David Nunan and Julie Choi provide examples of the linguistic procedures that writers can draw on to enhance clarity and coherence for the reader. This resource makes complex concepts accessible to the emergent writer and illustrates how these concepts can be applied to their own writing. In-text projects and tasks invite you, the reader, to experiment with principles and ideas in developing your identity and voice as a writer.

Routledge
March 2023 : 224pp
Pb: 978-1-032-01382-4 : **£29.99**
Hb: 978-1-032-01559-0 : **£140**
eBook: 978-1-003-17909-2

* For full contents and more information, visit: www.routledge.com/9781032013824

Demystifying Academic Writing

Genres, Moves, Skills, and Strategies



Zhihui Fang

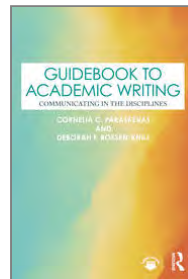
Accessible and informative, this book is designed to enhance the capacity of graduate and undergraduate students, as well as early career scholars, to write for academic purposes. Fang describes the key genres and types of academic writing, explains common rhetorical moves, offers linguistic strategies and insights to give students the skills they need for effective academic writing across genres and disciplines. Assuming no technical knowledge, this text is ideal for both non-native and native English speakers alike, and for courses in academic writing, composition, and L2 writing instruction.

Routledge
April 2021 : 286pp
Pb: 978-0-367-65354-5 : **£41.99**
Hb: 978-0-367-67508-0 : **£155**
eBook: 978-1-003-13161-8

* For full contents and more information, visit: www.routledge.com/9780367653545

Guidebook to Academic Writing

Communicating in the Disciplines



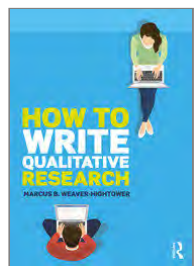
Cornelia C. Paraskevas, Deborah F. Rossen-Knill

This innovative guidebook is a concise introduction to discipline-specific academic language. Using authentic texts written by both novice and expert writers and 'translating' current, corpus-based research of academic language into a practical guide, the book gives students the tools to navigate the linguistic features of various disciplines. With exercises and additional online resources, this guidebook provides students with a range of tools they can choose from in order to create effective texts that meet discipline and reader expectations. Accessibly written, it is an essential guide for all students in humanities and sciences writing academic texts in English.

Routledge
July 2024 : 240pp
Pb: 978-1-032-48470-9 : **£39.99**
Hb: 978-1-032-48472-3 : **£155**
eBook: 978-1-003-38924-8

* For full contents and more information, visit: www.routledge.com/9781032484709

How to Write Qualitative Research



Marcus B. Weaver-Hightower University of North Dakota, USA

Qualitative research has exploded in popularity in nearly every discipline from the social sciences to health fields to business. While many qualitative textbooks explain how to conduct an interview or analyze fieldnotes, rarely do they give more than a few scant pages to the skill many find most difficult: writing. That's where *How to Write Qualitative Research* comes in. Using clear prose, helpful examples and lists, it breaks down and explains the most common writing tasks in qualitative research, and each chapter suggests step-by-step how-to approaches writers can use to tackle those tasks.

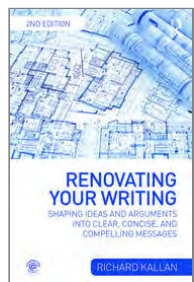
Routledge
October 2018 : 282pp
Pb: 978-1-138-06631-1 : **£45.99**
Hb: 978-1-138-06630-4 : **£155**
eBook: 978-1-315-15926-3

* For full contents and more information, visit: www.routledge.com/9781138066311

2ND EDITION

Renovating Your Writing

Shaping Ideas and Arguments into Clear, Concise, and Compelling Messages



Richard Kallan

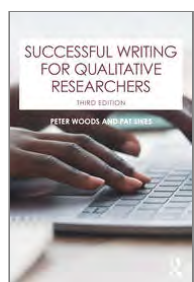
Renovating Your Writing outlines the principles of effective composition by focusing on the essential skill set and mindset every successful writer must possess. Now in its second edition, this novel text provides readers with unique strategies for crafting and revising their writing, whether for school, work, or play. The new edition emphasizes, in particular, the importance of the writer embracing a rhetorical perspective, distinguishing between formal and social media compositional styles, and appreciating the effort needed to produce clear, concise, and compelling messages.

Routledge
July 2017 : 190pp
Pb: 978-1-138-72677-2 : **£31.99**
Hb: 978-1-138-72676-5 : **£155**
eBook: 978-1-315-18660-3

* For full contents and more information, visit: www.routledge.com/9781138726772

3RD EDITION

Successful Writing for Qualitative Researchers



Peter Woods, Pat Sikes

The third edition of this text has been brought fully up to date to cover developments in funding and institutional requirements. With new material on the responsibilities of the writer, technological developments, the ability to reach wider audiences and arts-based research, this book is designed to give practical advice to aspiring and established academic writers on mind-sets, strategies, techniques and opportunities. A must-read guide for all those looking to translate their qualitative research into writing.

Routledge
March 2022 : 190pp
Pb: 978-0-367-69823-2 : **£30.99**
Hb: 978-0-367-69822-5 : **£155**
eBook: 978-1-003-14340-6

* For full contents and more information, visit: www.routledge.com/9780367698232

2ND EDITION

The Essentials of Academic Writing for International Students



Stephen Bailey Taught English internationally and at the Univ of Nottingham & Derby Univ & has previously published with Routledge

Written to help international students write essays and reports for their English-language university courses, this key title covers the essentials needed to achieve academic writing success. An easy-to-follow course that builds writing confidence and can be used both in the classroom and for self-study, this second edition has been thoroughly revised and updated to contain relevant examples, explanations and exercises. All international students wanting to maximise their academic potential will find this practical, concise and easy-to-use book an invaluable guide to writing in English for their degree courses.

Routledge
March 2024 : 252pp
Pb: 978-1-032-72170-5 : **£23.99**
Hb: 978-1-032-72173-6 : **£155**
eBook: 978-1-032-72172-9

* For full contents and more information, visit: www.routledge.com/9781032721705

5TH EDITION

Using Sources Effectively

Strengthening Your Writing and Avoiding Plagiarism



Robert A. Harris

Now in its fifth, expanded edition, *Using Sources Effectively*, Fifth Edition targets the two most prominent problems in current research-paper writing: the increase in unintentional plagiarism and the ineffective use of research source material. Designed as a supplementary textbook for both undergraduate and graduate courses, this book will help every student who uses research in writing. Included in this edition is coverage of research strategies and source selection (Chapter 2), a chapter on quoting sources effectively (Chapter 4), and a chapter on sentence patterns (Chapter 10). APA and MLA citation styles have been updated throughout the text.

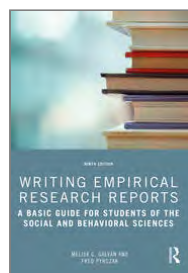
Routledge
January 2017 : 210pp
Pb: 978-1-138-28968-0 : **£60.99**
Hb: 978-1-138-28966-6 : **£185**
eBook: 978-1-315-26706-7

* For full contents and more information, visit: www.routledge.com/9781138289680

9TH EDITION

Writing Empirical Research Reports

A Basic Guide for Students of the Social and Behavioral Sciences



Melisa C. Galvan California State University, Northridge, USA

Writing Empirical Research Reports: A Basic Guide for Students of the Social and Behavioral Sciences, Ninth Edition, offers clear and practical guidance on how to write research proposals, reports, theses, and dissertations. Accompanied by online resources for students and instructors, this book is ideal for use in research methods courses, thesis/dissertation preparation courses, research seminars where writing a research report is a culminating activity, and any graduate-level seminar in which the instructor covers the vital components necessary to prepare a research manuscript for submission for publication.

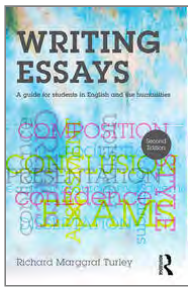
Routledge
October 2023 : 196pp
Pb: 978-1-032-13680-6 : **£59.99**
Hb: 978-1-032-13678-3 : **£145**
eBook: 978-1-003-23041-0

* For full contents and more information, visit: www.routledge.com/9781032136806

2ND EDITION

Writing Essays

A guide for students in English and the humanities



Richard Marggraf Turley Aberystwyth University, Wales.

Essays are a major form of assessment in higher education today and this is a fact that causes some writers a great deal of anxiety. Fortunately, essay writing is a skill that can be learned, like any other. Writing Essays demystifies the entire process of essay writing and reveals the tricks of the trade, making your student life easier. You'll learn how to impress tutors by discovering exactly what markers look for when they read your work. Using practical examples selected from real student assignments and tutor feedback, this book covers every aspect of composition, from introductions and conclusions, down to presentation and submission.

Routledge
November 2015 : 158pp
Pb: 978-1-138-91669-2 : **£23.99**
Hb: 978-1-138-91668-5 : **£155**
eBook: 978-1-315-68944-9

* For full contents and more information, visit: www.routledge.com/9781138916692

8TH EDITION

Writing Literature Reviews

A Guide for Students of the Social and Behavioral Sciences



Melisa C. Galvan California State University, Northridge, USA, **Jose L. Galvan** Professor Emeritus, California State University, Los Angeles.

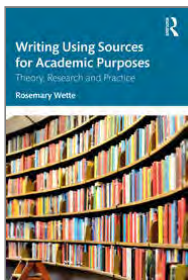
Writing Literature Reviews provides students with practical guidelines for the complex process of writing literature reviews for course projects, theses or dissertations, and research manuscripts for publication. It is ideal for use in research methods courses, thesis/dissertation preparation courses, research seminars where a literature review is expected as a culminating activity, or any course in which the instructor needs to cover the vital components necessary to prepare a literature review for a variety of audiences. The book is supported by online materials including self-test quizzes for students, and lecture slides for instructors.

Routledge
November 2024 : 288pp
Pb: 978-1-032-32868-3 : **£66.99**
Hb: 978-1-032-32862-1 : **£190**
eBook: 978-1-003-31709-8

* For full contents and more information, visit: www.routledge.com/9781032328683

Writing Using Sources for Academic Purposes

Theory, Research and Practice



Rosemary Wette

Writing Using Sources for Academic Purposes: Theory, Research and Practice provides research-based information about key components of source-based writing, and the challenges it presents for novices.

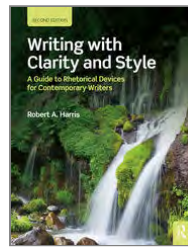
Routledge
December 2020 : 164pp
Pb: 978-0-367-17592-4 : **£41.99**
Hb: 978-0-367-17590-0 : **£155**
eBook: 978-0-429-05751-9

* For full contents and more information, visit: www.routledge.com/9780367175924

2ND EDITION

Writing with Clarity and Style

A Guide to Rhetorical Devices for Contemporary Writers



Robert A. Harris

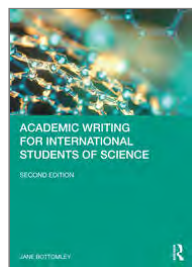
Writing with Clarity and Style, 2nd Edition, will help you to improve your writing dramatically. The book shows you how to use dozens of classical rhetorical devices to bring power, clarity, and effectiveness to your writing. You will also learn about writing styles, authorial personas, and sentence syntax as tools to make your writing interesting and persuasive. If you want to improve the appeal and persuasion of your speeches, this is also the book for you.

Routledge
December 2017 : 232pp
Pb: 978-1-138-56009-3 : **£40.99**
Hb: 978-1-138-56010-9 : **£155**
eBook: 978-0-203-71204-7

* For full contents and more information, visit: www.routledge.com/9781138560093

2ND EDITION

Academic Writing for International Students of Science



Jane Bottomley University of Manchester

This second edition is an accessible companion designed to help science and technology students develop the knowledge, skills and strategies needed to produce clear and coherent academic writing in their university assignments. Using authentic texts to explore the nature of scientific writing, the book covers key areas such as scientific style, effective sentence and paragraph structure, and coherence in texts and arguments. Throughout the book, a range of tasks offers the opportunity to put theory into practice. This is an invaluable tool for the busy science or technology student looking to improve their writing and reach their full academic potential.

Routledge

October 2021 : 220pp

Pb: 978-0-367-63272-4 : **£30.99**

Hb: 978-0-367-63271-7 : **£155**

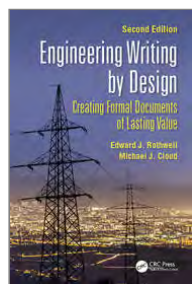
eBook: 978-1-003-11857-2

* For full contents and more information, visit: www.routledge.com/9780367632724

2ND EDITION

Engineering Writing by Design

Creating Formal Documents of Lasting Value, Second Edition



Edward J. Rothwell , Michael J. Cloud

This book shows how effective writing can be achieved by thinking like an engineer. Based on the authors' combined experience as engineering educators, the book presents a novel approach to technical writing, positioning formal writing tasks as engineering design problems with requirements, constraints, protocols, standards, and customers (readers) to satisfy. Featuring illustrative examples, chapter summaries and exercises, quick-reference tables, and recommendations for further reading, this book is packed with valuable tips and information practicing and aspiring engineers need to become effective writers.

CRC Press

January 2020 : 257pp

Pb: 978-0-367-34754-3 : **£55.99**

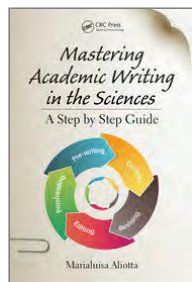
Hb: 978-0-367-89682-9 : **£125**

eBook: 978-0-429-32769-8

* For full contents and more information, visit: www.routledge.com/9780367347543

Mastering Academic Writing in the Sciences

A Step-by-Step Guide



Marialuisa Aliotta

This book provides a comprehensive and coherent step-by-step guide to writing in scientific academic disciplines. It is an invaluable resource for those working on a PhD thesis, research paper, dissertation, or report. Writing these documents can be a long and arduous experience for students and their supervisors, and even for experienced researchers. However, this book can hold the key to success. Mapping the steps involved in the writing process - from acquiring and organizing sources of information, to revising early drafts, to proofreading the final product - it provides clear guidance on what to write and how best to write it.

CRC Press

April 2018 : 200pp

Pb: 978-1-498-70147-1 : **£52.99**

Hb: 978-1-138-74288-8 : **£140**

eBook: 978-1-351-00214-1

* For full contents and more information, visit: www.routledge.com/9781498701471

3RD EDITION

Technical Writing

A Practical Guide for Engineers, Scientists, and Nontechnical Professionals



Philip A. Laplante The Pennsylvania State University, Malvern, USA, **Chris Laplante**

Series: *What Every Engineer Should Know*

This practical text enables readers to write, edit, and publish materials of a technical nature, including books, articles, reports, and electronic media. Written by experienced practicing engineers, this guide complements traditional technical writing manuals through presentation of first-hand examples that help readers understand practical considerations in writing and producing technical content. The new edition includes new and updated exercises, examples, and case studies and includes new content on software/systems documentation, popular writing tools, and technologies such as generative AI. It is aimed at students and professionals in the science and engineering domains.

CRC Press

November 2025 : 271pp

Pb: 978-1-032-84374-2 : **£47.99**

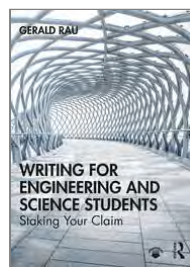
Hb: 978-1-032-84375-9 : **£160**

eBook: 978-1-003-51243-1

* For full contents and more information, visit: www.routledge.com/9781032843742

Writing for Engineering and Science Students

Staking Your Claim



Gerald Rau

Drawing on his extensive experience of teaching international students, Gerald A. Rau provides a clear "argument structure" for students to follow when undertaking both academic and technical writing. This is the first book to make clear the different structures required for engineering versus scientific articles. Tasks and exercises are provided throughout. Using the research article as a model and covering lab reports, research proposals, dissertations, poster presentations, industry reports, emails and job applications, this book is essential reading for all students of science and engineering who are taking a course in writing, or seeking a resource to aid in their writing assignments.

Routledge

August 2019 : 324pp

Pb: 978-1-138-38825-3 : **£40.99**

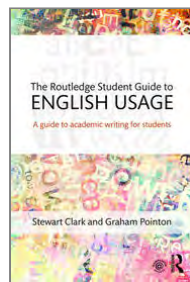
Hb: 978-1-138-38824-6 : **£155**

eBook: 978-0-429-42568-4

* For full contents and more information, visit: www.routledge.com/9781138388253

The Routledge Student Guide to English Usage

A guide to academic writing for students



Stewart Clark Norwegian University of Science and Technology, **Graham Pointon**

The Routledge Student Guide to English Usage is an authoritative A-Z guide to key aspects of English usage. Covering approximately 4000 carefully selected words, the authors focus on groups of confusable words that sound alike, look alike or are frequently mixed up. Examples of good usage are drawn from corpora such as the British National Corpus and the Corpus of Contemporary American English. A substantial reference section is also provided with stylistic guidance on academic writing skills, email standards, punctuation and grammar tips. This is the essential reference text for all students working on improving their academic writing skills.

Routledge

May 2016 : 402pp

Pb: 978-1-138-93359-0 : **£41.99**

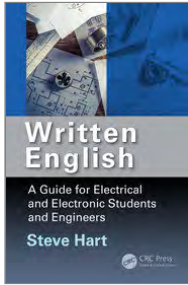
Hb: 978-1-138-93358-3 : **£155**

eBook: 978-1-315-67843-6

* For full contents and more information, visit: www.routledge.com/9781138933590

Written English

A Guide for Electrical and Electronic Students and Engineers



Steve Hart English Language Editor and Resource Writer, Cambridge, UK

This book covers all aspects of English grammar relevant to electrical and electronic engineers. It discusses working with numbers and algebra, including correct formatting procedures (both body citations and references). The book addresses vocabulary and stylistic issues, describes the level of writing expected in the field, reveals often-made mistakes, and indicates areas where engineers should focus their efforts. The text also offers unique insight into problems students and academics face on a day-to-day basis when writing in a language that is not their mother tongue.

CRC Press

December 2015 : 216pp

Pb: 978-1-498-73962-7 : **£41.99**

Hb: 978-1-138-42241-4 : **£200**

eBook: 978-1-315-21412-2

* For full contents and more information, visit: www.routledge.com/9781498739627

50 Things to Think About When Writing a Thesis

Paving Your Own Path to Submission



Donna Starks University of Auckland, New Zealand,
Margaret J. Robertson La Trobe University, Australia

This book shows thesis writers how to embrace the individual nature of writing, bringing their own unique identities and skillsets to their thesis. Each idea is presented as one that has multiple solutions depending on who the readers are and what they want to achieve. The book guides the reader on identifying their own ways of working, their own particular strengths, as well as their unique voice and how to use these as tools to navigate the process of writing and surviving the thesis. It also provides practical guidance on elements such as the literature review and methodology, considerations around language and how to deal with life after submission.

Routledge
August 2023 : 136pp
Pb: 978-1-032-34699-1 : **£28.99**
Hb: 978-1-032-34700-4 : **£145**
eBook: 978-1-003-32340-2

* For full contents and more information, visit: www.routledge.com/9781032346991

2ND EDITION

A Concise Guide to Writing a Thesis or Dissertation

Educational Research and Beyond



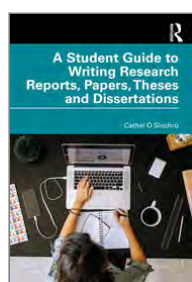
Halyna M. Kornuta, **Ron W. Germaine**

A Concise Guide to Writing a Thesis or Dissertation provides clear, concise, and intentional practice guidelines about organizing and writing a thesis or dissertation. Part I provides an overview for writing a thesis or dissertation. It describes the big picture of planning and formatting a research study, from identifying a topic through to writing quality. Part II describes the framework and substance of a research study. It models the pattern generally found in a formal, five-chapter research study.

Routledge
May 2019 : 134pp
Pb: 978-0-367-17458-3 : **£19.99**
Hb: 978-0-367-17457-6 : **£140**
eBook: 978-0-429-05688-8

* For full contents and more information, visit: www.routledge.com/9780367174583

A Student Guide to Writing Research Reports, Papers, Theses and Dissertations



Cathal Ó Siochrú

This useful guide for students combines all the guidance, advice, and key tips needed to write successful research reports, theses, or dissertations, exploring, in detail, each of the elements involved in writing an academic paper. The book will guide you through all the key sections of a report including the Introduction, Literature Review, Method, Results, Discussion and more.

Routledge
November 2022 : 234pp
Pb: 978-0-367-62104-9 : **£23.99**
Hb: 978-0-367-62103-2 : **£140**
eBook: 978-1-003-10796-5

* For full contents and more information, visit: www.routledge.com/9780367621049

Dissertation Practice

A Journal for Learning



Diane Bennett Durkin

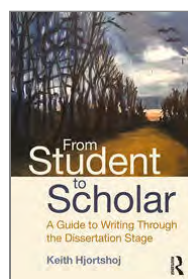
Dissertation Practice: A Journal for Learning is an interactive resource that promotes journaling to engender key dissertation practices, through activities and exercises. It is rooted in the view that students can use journaling to promote thought, and that the privacy of journal entries ensures comfort and familiarity. This personal context, along with the book's open prompts, allows students to engage in extended and alternative thinking. This is an essential resource for students in Ph.D and Ed.D programs in the social sciences and education who are using qualitative, quantitative, and mixed methods.

Routledge
October 2024 : 198pp
Pb: 978-1-032-85800-5 : **£26.99**
Hb: 978-1-032-85804-3 : **£145**
eBook: 978-1-003-51990-4

* For full contents and more information, visit: www.routledge.com/9781032858005

From Student to Scholar

A Guide to Writing Through the Dissertation Stage



Keith Hjortshoj John S. Knight Writing Program, Cornell University

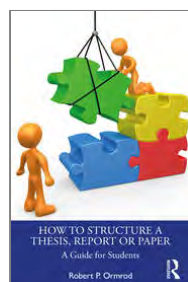
From Student to Scholar guides graduate students through the "hidden" developmental transition required in writing a dissertation and moving beyond, to become a successful scholar. Identifying common rhetorical challenges across disciplines, author Hjortshoj explains how to accommodate evolving audiences, motivations, standards, writing processes, and timelines. One full chapter is devoted to "writing blocks," and another offers advice to international students who are non-native speakers of English. The text also offers advice for managing relations with advisors and preparing for the diverse careers that PhDs, trained primarily as research specialists, actually enter.

Routledge
August 2018 : 204pp
Pb: 978-1-138-56944-7 : **£51.99**
Hb: 978-1-138-56942-3 : **£155**
eBook: 978-0-203-70426-4

* For full contents and more information, visit: www.routledge.com/9781138569447

How to Structure a Thesis, Report or Paper

A Guide for Students



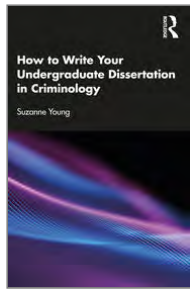
Robert P. Ormrod

This book provides concise practical guidance for students to help make their student's writing process more structured for their group work or thesis at any level. It therefore shows how to demonstrate meaningfully what they have learned in the relevant course or degree programme in a way that is accessible to the supervisor and the examiner. Suitable for students completing theses at Bachelors and Masters level, as well as other types of report-based work, and for supervisors looking for a clear and practical guide to help students with their writing process. The book will also provide a bridge to writing papers for journals in an academic career.

Routledge
November 2022 : 130pp
Pb: 978-1-032-36946-4 : **£19.99**
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How to Write Your Undergraduate Dissertation in Criminology



Suzanne Young

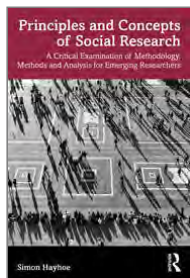
This book provides a guide for undergraduate criminology and criminal justice students undertaking their final year dissertation. Drawing on empirical case studies and including a range of resources and templates, this book takes students through each stage of the dissertation and offers useful guidance on structure and content.

Routledge
April 2022 : 146pp
Pb: 978-0-367-85999-2 : **£25.99**
Hb: 978-0-367-85998-5 : **£155**
eBook: 978-1-003-01633-5

* For full contents and more information, visit: www.routledge.com/9780367859992

Principles and Concepts of Social Research

A Critical Examination of Methodology, Methods and Analysis for Emerging Researchers



Simon Hayhoe

This text covers the foundations of social science research, outlining the history and core elements of Western social research, along with a variety of topics, ranging from the history of scientific beliefs from Ancient Greece to the contemporary world. This book will be of use to core research units and training programs that universities provide at postgraduate level, at doctoral level and for early career post-doctoral researchers, to develop greater understanding of issues surrounding research. In addition to its theory, the contents of the book will include questions for discussion in seminars and small group work.

Routledge
December 2022 : 200pp
Pb: 978-1-032-14967-7 : **£37.99**
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eBook: 978-1-003-24199-7

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2ND EDITION

Thesis and Dissertation Writing in a Second Language

A Handbook for Students and their Supervisors



Brian Paltridge, Sue Starfield

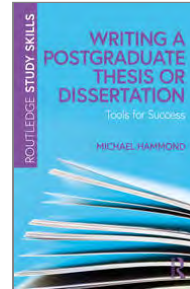
This fully updated edition is the guide for non-native speakers writing a thesis or dissertation in English. It explicitly unpacks academic writing, using accessible language and practical examples and discusses the issues that are crucial to success. These include: understanding the setting and purpose, understanding writer/reader relationships, issues of writer identity and what examiners really value. Suitable for students from all disciplines writing in a second language this book is equally valuable for supervisors of non-native speakers as it provides tasks that can be used with students to guide them in their writing.

Routledge
August 2019 : 248pp
Pb: 978-1-138-04870-6 : **£31.99**
Hb: 978-1-138-04869-0 : **£140**
eBook: 978-1-315-17002-2

* For full contents and more information, visit: www.routledge.com/9781138048706

Writing a Postgraduate Thesis or Dissertation

Tools for Success



Michael Hammond

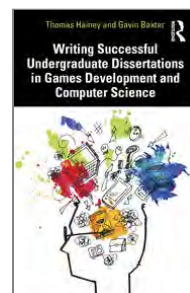
Series: *Routledge Study Skills*

Writing a Postgraduate Dissertation or Thesis discusses the challenges that students encounter in their writing and provides thoughtful advice on how to address those challenges. It provides key advice on how to write about a field of research, the tradition of methodology and methods undertaken, and the contribution to knowledge that is being made.

Routledge
July 2022 : 172pp
Pb: 978-0-367-75282-8 : **£20.99**
Hb: 978-0-367-75281-1 : **£155**
eBook: 978-1-003-16182-0

* For full contents and more information, visit: www.routledge.com/9780367752828

Writing Successful Undergraduate Dissertations in Games Development and Computer Science



Thomas Hainey School of Computing, Engineering and Physical Sciences, University of the West of Scotland,
Gavin Baxter

Writing a dissertation in the final year at university can be a daunting task, but particularly if the degree is practically oriented and implementation-based. This book provides a concise guide to producing a dissertation in Computer Science, Software Engineering or Games Development degrees with research projects typically involving design, implementation, testing and evaluation. Drawing on the authors' knowledge and experience of supervising dissertation students, the book offers a step-by-step guide to the key areas of writing a dissertation alongside real-life examples.

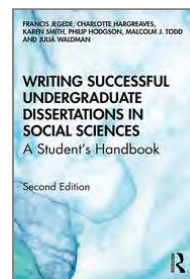
Routledge
November 2022 : 304pp
Pb: 978-0-367-51708-3 : **£23.99**
Hb: 978-0-367-51707-6 : **£140**
eBook: 978-1-003-05488-7

* For full contents and more information, visit: www.routledge.com/9780367517083

2ND EDITION

Writing Successful Undergraduate Dissertations in Social Sciences

A Student's Handbook



Francis Jegede, Charlotte Hargreaves, Karen Smith, Philip Hodgson, Malcolm Todd, Julia Waldman

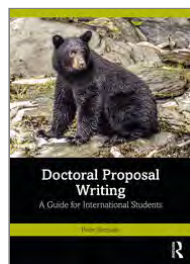
A practical guide for students undertaking their dissertation, this book uses real examples of dissertations across the Social Sciences. Providing an accessible overview of the essential steps in conducting research and writing dissertations, each chapter has clear learning outcomes and research objectives with relevant themes. Using a mixture of useful information, exercises, practical strategies, case study material and further reading, it gives hints and tips on beginning and managing a research project and working with supervisors. Packed with proven practical advice it is a dependable starting point and guide throughout the dissertation journey.

Routledge
February 2020 : 240pp
Pb: 978-0-367-25525-1 : **£25.99**
Hb: 978-0-367-25523-7 : **£155**
eBook: 978-0-429-28825-8

* For full contents and more information, visit: www.routledge.com/9780367255251

Doctoral Proposal Writing

A Guide for International Students



Peter Samuels Uni of Wolverhampton Busnss Schl

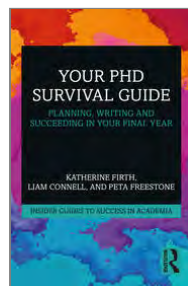
This book is an essential guide for current and prospective international doctoral students wishing to apply and study for a PhD in the UK, and other countries where courses are conducted in English. The book supports students in choosing a suitable research topic and writing an effective proposal for investigating this topic across a range of forms of doctoral research, across several disciplines, with an emphasis on international students and students with English as an additional language.

Routledge
October 2024 : 138pp
Pb: 978-1-032-56193-6 : **£28.99**
Hb: 978-1-032-56192-9 : **£155**
eBook: 978-1-003-43434-4

* For full contents and more information, visit: www.routledge.com/9781032561936

Your PhD Survival Guide

Planning, Writing, and Succeeding in Your Final Year



Katherine Firth University of Melbourne, Australia, **Liam Connell**, **Peta Freestone**

Series: Insider Guides to Success in Academia

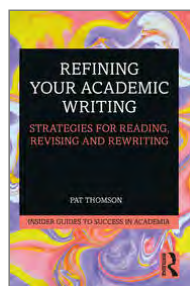
Accessible, insightful and a must-have toolkit for all doctoral students, the founders of the 'Thesis Boot Camp' intensive writing programme show how to survive and thrive through the challenging final year of writing and submitting a thesis. Drawing on an understanding of the intellectual, professional, practical and personal elements of the doctorate to help readers gain insight into what it means to finish a PhD and how to get there, this book covers common challenges and ways to resolve them. Written for students in all disciplines, and relevant to university systems around the world, this unique book expertly guides students through the final 6–12 months of the thesis.

Routledge
December 2020 : 222pp
Pb: 978-0-367-36184-6 : **£23.99**
Hb: 978-0-367-36183-9 : **£155**
eBook: 978-0-429-34439-8

* For full contents and more information, visit: www.routledge.com/9780367361846

Refining Your Academic Writing

Strategies for Reading, Revising and Rewriting



Pat Thomson

Series: Insider Guides to Success in Academia

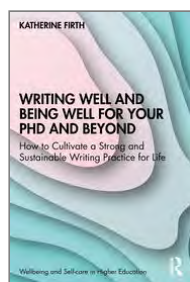
This book will help you complete your writing project and provides a reading, revising, and rewriting repertoire that you can adapt and add to. It offers ways to think about revision and a basic tool kit which will help you to identify what needs your attention and why. This accessible book draws on and extends some of the most heavily used posts on Thomson's popular academic writing blog Patter, as well as tried and tested writing workshops. Written with a light touch, this is ideal reading for doctoral and early career researchers, this book provides strategies needed to support the writing revision process.

Routledge
December 2022 : 236pp
Pb: 978-0-367-46876-7 : **£20.99**
Hb: 978-0-367-46875-0 : **£140**
eBook: 978-1-003-03168-0

* For full contents and more information, visit: www.routledge.com/9780367468767

Writing Well and Being Well for Your PhD and Beyond

How to Cultivate a Strong and Sustainable Writing Practice for Life



Katherine Firth University of Melbourne, Australia

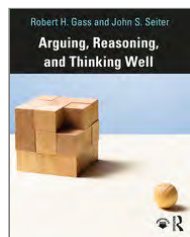
Series: Wellbeing and Self-care in Higher Education

Prioritising wellbeing alongside academic development, this book provides practical advice to help students write well, and be well, during their PhD and throughout their career. Relevant at any stage of the writing process, this book will help doctoral students and early career researchers to produce great words that people want to read, examiners want to pass and editors want to publish.

Routledge
September 2023 : 200pp
Pb: 978-1-032-31081-7 : **£23.99**
Hb: 978-1-032-31082-4 : **£145**
eBook: 978-1-003-30794-5

* For full contents and more information, visit: www.routledge.com/9781032310817

Arguing, Reasoning, and Thinking Well



Robert Gass, John Seiter

Arguing, Reasoning, and Thinking Well offers an engaging and accessible introduction to argumentation and critical thinking. Authors Gass and Seiter, renowned for their friendly writing style, include real-world examples, hypothetical dialogues, and editorial cartoons to invite readers in. The text includes a full chapter devoted to the ethics of argument, as well as content on refutation and formal logic. It is designed for students in argumentation and critical thinking courses in communication, philosophy, and psychology departments, and is suitable for students and general education courses across the curriculum.

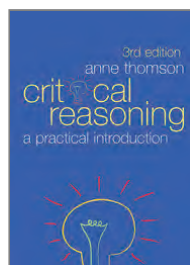
Routledge
June 2019 : 280pp
Pb: 978-0-815-37433-6 : **£86.99**
Hb: 978-0-815-37432-9 : **£175**
eBook: 978-1-351-24249-3

* For full contents and more information, visit: www.routledge.com/9780815374336

3RD EDITION

Critical Reasoning

A Practical Introduction



Anne Thomson

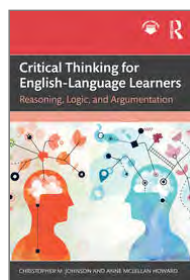
We all engage in the process of reasoning, but we don't always pay attention to whether we are doing it well. This book offers the opportunity to practise reasoning in a clear-headed and critical way, with the aims of developing an awareness of the importance of reasoning well and of improving the reader's skill in analyzing and evaluating arguments. Anne Thomson has updated and revised the book to include fresh and topical examples, and new chapters on evaluating the credibility of evidence and decision making and dilemmas. By the end of the book students should be able to identify flaws in arguments, analyze the reasoning in newspaper articles, books and speeches, assess the credibility of evidence and authorities and approach any topic with the ability to reason and think critically.

Routledge
September 2008 : 256pp
Pb: 978-0-415-44587-0 : **£40.99**
Hb: 978-0-415-44586-3 : **£155**
eBook: 978-0-203-87099-0

* For full contents and more information, visit: www.routledge.com/9780415445870

Critical Thinking for English-Language Learners

Reasoning, Logic, and Argumentation



Christopher M. Johnson, Anne McLellan Howard

Critical Thinking for English-Language Learners is an accessible introduction to critical thinking and the use of informal logic for learners of English. Critical thinking skills are key to helping students learn how to reason in English. By developing informal logic skills, students can develop their critical thinking abilities to better assess why different types of arguments are successful or unsuccessful. Providing students with key skills to make and critique arguments in English, this book is a key resource for beginning and intermediate learners of English studying Critical Thinking, English for Academic Purposes, and Introduction to Philosophy.

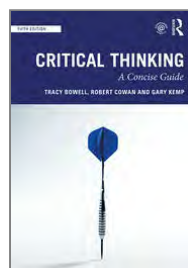
Routledge
February 2025 : 248pp
Pb: 978-1-032-75247-1 : **£41.99**
Hb: 978-1-032-75248-8 : **£155**
eBook: 978-1-003-47307-7

* For full contents and more information, visit: www.routledge.com/9781032752471

5TH EDITION

Critical Thinking

A Concise Guide



Tracy Bowell, Robert Cowan, Gary Kemp University of Glasgow, UK

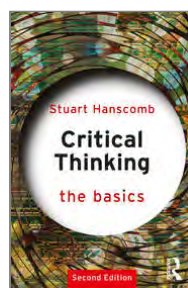
We are frequently confronted with arguments. Critical Thinking equips students with the concepts and techniques used in the analysis and assessment of arguments whatever the context. Through precise and accessible discussion, this book provides the tools to become a successful critical thinker, who can act and believe in accordance with good reasons, and who can articulate and make explicit those reasons. This fifth edition has been revised and updated throughout, including an expanded range of 'complete examples', the introduction of Venn diagrams, and the discussion of fake news and related phenomena arising in the contemporary scene.

Routledge
August 2019 : 348pp
Pb: 978-0-815-37143-4 : **£39.99**
Hb: 978-0-815-37142-7 : **£155**
eBook: 978-1-351-24373-5

* For full contents and more information, visit: www.routledge.com/9780815371434

2ND EDITION

Critical Thinking: The Basics



Stuart Hanscomb University of Glasgow, UK

Series: *The Basics*

An accessible and engaging introduction to the field of critical thinking, drawing on philosophy, communication and psychology. This 2nd edition has been revised and updated throughout and includes a new chapter on emotion and argument and how to build persuasive arguments. There are also many fresh examples, including conspiracy theories, trust, leadership and cultural cognition. With updated discussion questions/exercises and suggestions for further reading, this book is an essential read for students approaching the field of critical thinking for the first time, and for the general reader wanting to improving their thinking skills.

Routledge
June 2023 : 286pp
Pb: 978-1-032-16299-7 : **£20.99**
Hb: 978-1-032-16301-7 : **£145**
eBook: 978-1-003-24794-4

* For full contents and more information, visit: www.routledge.com/9781032162997

2ND EDITION

Recipes for Science

An Introduction to Scientific Methods and Reasoning



Angela Potochnik, Matteo Colombo, Cory Wright Tilburg University, The Netherlands

Today, scientific literacy is an essential aspect of any undergraduate education. Recipes for Science responds to this need by providing an accessible introduction to the nature of science and scientific methods, reasoning, and concepts

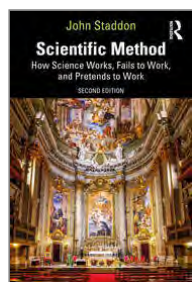
Routledge
April 2024 : 378pp
Pb: 978-1-032-29096-6 : **£45.99**
Hb: 978-1-032-29097-3 : **£185**
eBook: 978-1-003-30000-7

* For full contents and more information, visit: www.routledge.com/9781032290966

2ND EDITION

Scientific Method

How Science Works, Fails to Work, and Pretends to Work



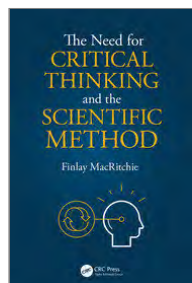
John Staddon Duke University, USA

This expanded second edition of *Scientific Method* shows how science works, fails to work, or pretends to work, by looking at examples from physics, biomedicine, psychology, sociology, and economics. *Scientific Method* is essential reading for students and professionals trying to make sense of the role of science in society, and of the meaning, value, and limitations of scientific methodology.

Routledge
June 2024 : 226pp
Pb: 978-1-032-65771-4 : **£33.99**
Hb: 978-1-032-68389-8 : **£155**
eBook: 978-1-032-68387-4

* For full contents and more information, visit: www.routledge.com/9781032657714

The Need for Critical Thinking and the Scientific Method



Finlay MacRitchie Kansas State University, Manhattan, USA

The book exposes many of the misunderstandings about the scientific method and its application to critical thinking. It argues for a better understanding of the scientific method and for nurturing critical thinking in the community. This knowledge helps the reader to analyze issues more objectively, and warns about the dangers of bias and propaganda. The principles are illustrated by considering several issues that are currently being debated. These include anthropogenic global warming (often loosely referred to as climate change), dangers to preservation of the Great Barrier Reef, and the expansion of the gluten-free food market and genetic engineering.

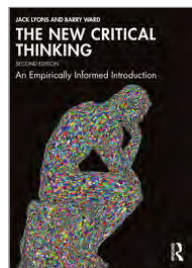
CRC Press
May 2018 : 152pp
Pb: 978-0-815-36775-8 : **£48.99**
Hb: 978-0-815-36815-1 : **£160**
eBook: 978-1-351-25587-5

* For full contents and more information, visit: www.routledge.com/9780815367758

2ND EDITION

The New Critical Thinking

An Empirically Informed Introduction



Jack Lyons, Barry Ward

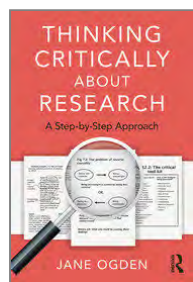
This highly innovative text aims to improve real-world critical thinking, incorporating insights from epistemology and philosophy of science to formulate best practices for assessing information sources and circumnavigate our natural intellectual blind spots. The book covers introductory logic in a way that emphasizes practical application, rather than formal completeness. This new edition provides ample resources and exercises for students and instructors alike both in-text and online.

Routledge
May 2024 : 412pp
Pb: 978-1-032-31728-1 : **£73.99**
Hb: 978-1-032-31730-4 : **£155**
eBook: 978-1-003-31102-7

* For full contents and more information, visit: www.routledge.com/9781032317281

Thinking Critically about Research

A Step by Step Approach



Jane Ogden

This book is designed to help readers develop a critical understanding of evidence and the ways in which evidence is presented, and to challenge the information they receive in both academic and non-academic sources. The author presents a step by step approach with a focus on knowing methods, culminating in a bespoke 'critical tool kit' which offers a practical checklist designed to be used when carrying out research. There are also learning features including tasks and worked examples, drawing on real research studies. This is an essential resource for students and researchers, and those putting research into practice, who want to have better critical thinking skills.

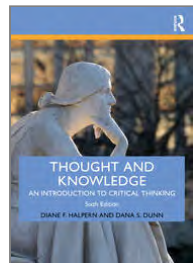
Routledge
December 2018 : 176pp
Pb: 978-0-367-00020-2 : **£40.99**
Hb: 978-0-367-00019-6 : **£155**
eBook: 978-0-429-44496-8

* For full contents and more information, visit: www.routledge.com/9780367000202

6TH EDITION

Thought and Knowledge

An Introduction to Critical Thinking



Diane F. Halpern Claremont McKenna College, USA,
Dana S. Dunn Moravian College, USA

Thought and Knowledge applies theory and research from the learning sciences to teach students the critical thinking skills that they need to succeed in today's world. The text is grounded in psychological science and brought to life through humorous and engaging language and numerous practical and real-world examples and anecdotes. Critical thinking skills are presented in every chapter, empowering students to learn more efficiently, research more productively, and present logical, critical, and informed arguments. The skills are reviewed at the end of the chapter, and a complete list of skills with definitions and examples are included in the appendix.

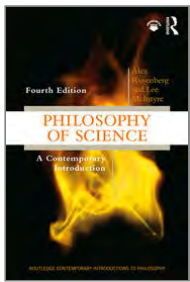
Routledge
October 2022 : 428pp
Pb: 978-1-138-65517-1 : **£69.99**
Hb: 978-1-138-65516-4 : **£220**
eBook: 978-1-032-32316-9 : **£61.99**

* For full contents and more information, visit: www.routledge.com/9781138655171

4TH EDITION

Philosophy of Science

A Contemporary Introduction

**Alex Rosenberg, Lee McIntyre***Series: Routledge Contemporary Introductions to Philosophy*

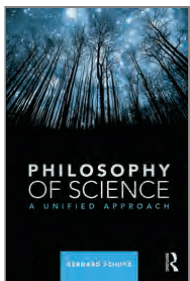
Any serious student attempting to better understand the nature, methods, and justification of science will value this book. Weaving lucid explanations with clear analyses, the volume is as a much-used, thematically-oriented introduction to the field. The new edition has been thoroughly rewritten based on instructor and student feedback, to improve readability and accessibility, without sacrificing depth. It retains all of the logically structured, extensive coverage of earlier editions, which the journal Teaching Philosophy called, "the industry standard" and "essential reading" in a 2010 review.

Routledge
November 2019 : 308pp
Pb: 978-1-138-33151-8 : **£49.99**
Hb: 978-1-138-33148-8 : **£155**
eBook: 978-0-429-44726-6

* For full contents and more information, visit: www.routledge.com/9781138331518

Philosophy of Science

A Unified Approach

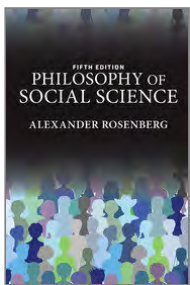
**Gerhard Schurz** Dusseldorf University, Germany,
Gerhard Schurz

Philosophy of Science: A Unified Approach combines an elementary introduction to philosophy of science with an integrated survey of all of its important subfields. Focusing on the methodological unity of the sciences, the book provides chapters with introductory sections, followed by complementary, advanced topics. By restricting the teaching materials to the introductory sections, one obtains the basis for a semester-long course. Covering all of the material contained in the book fills a year-long course.

Routledge
November 2013 : 480pp
Pb: 978-0-415-82936-6 : **£52.99**
Hb: 978-0-415-82934-2 : **£155**
eBook: 978-0-203-36627-1

* For full contents and more information, visit: www.routledge.com/9780415829366

5TH EDITION

Philosophy of Social Science**Alexander Rosenberg**

Philosophy of Social Science provides a tightly argued yet accessible introduction to the philosophical foundations of the human sciences, including economics, anthropology, sociology, political science, psychology, history, and the disciplines emerging at the intersections of these subjects with biology. Philosophy is unavoidable for social scientists because the choices they make in answering questions in their disciplines force them to take sides on philosophical matters. Conversely, the philosophy of social science is equally necessary for philosophers since the social and behavior sciences must inform their understanding of human action, norms, and social institutions.

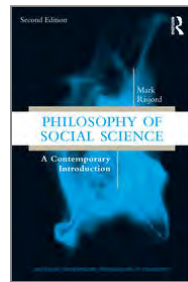
Routledge
July 2015 : 360pp
Pb: 978-0-813-34973-2 : **£49.99**
Hb: 978-0-367-09807-0 : **£155**
eBook: 978-0-429-49484-0

* For full contents and more information, visit: www.routledge.com/9780813349732

2ND EDITION

Philosophy of Social Science

A Contemporary Introduction

**Mark Risjord** Emory University, USA*Series: Routledge Contemporary Introductions to Philosophy*

This accessible text offers a comprehensive overview of debates in the field, with special attention to new research programs. Topics include the relationship of social policy to social science, interpretive research, cognitive and evolutionary explanations, intentional action explanation, rational choice theory, conventions and social norms, joint intentionality, causal inference, and experimentation. The Second Edition provides updates with the most recent literature and adds two new chapters: one on modeling and one on the role of race and gender in the social sciences.

Routledge
July 2022 : 336pp
Pb: 978-1-032-07586-0 : **£45.99**
Hb: 978-1-032-07587-7 : **£200**
eBook: 978-1-003-20779-5

* For full contents and more information, visit: www.routledge.com/9781032075860

A Dictionary of Social Research Methodology



Martyn Hammersley The Open University, UK

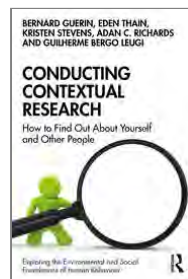
This accessible book offers a detailed guide to a wide range of methodological concepts, both those of a more philosophical kind and those that are more technical in character: from constructionism to critical realism, regression analysis to grounded theory, odds ratios to triangulation. Providing clear definitions for a wide range of methodological concepts from across the social sciences, this is an essential resource for all who have an interest in social research methodology.

Routledge
September 2024 : 180pp
Pb: 978-1-032-82213-6 : **£39.99**
Hb: 978-1-032-82215-0 : **£155**
eBook: 978-1-003-50350-7

* For full contents and more information, visit: www.routledge.com/9781032822136

Conducting Contextual Research

How to Find Out About Yourself and Other People



Bernard Guerin University of South Australia, Australia,
Eden Thain, **Kristen Stevens**, **Adan C. Richards**,
Guilherme Bergo Leugi

Series: Exploring the Environmental and Social Foundations of Human Behaviour

This innovative book proposes an entirely new approach to social research, presenting practical ways to discover people's life contexts in order to understand why they do what they do, which is essential for any forms of research that need to understand people. Conducting Contextual Research is essential reading for postgraduate students and professionals in the fields of counselling, psychology and social work, and will be useful to anyone conducting research or inquiries to understand human behaviour, including academic researchers, detectives, intelligence operators, social workers, government service researchers, social policy analysts, and biographers.

Routledge
June 2024 : 190pp
Pb: 978-1-032-60818-1 : **£46.99**
Hb: 978-1-032-60825-9 : **£145**
eBook: 978-1-003-46063-3

* For full contents and more information, visit: www.routledge.com/9781032608181

Are You Making a Meal Out of Research?

A Recipe for Research Success



Steve Reay, **Cassie Khoo**, **Gareth Terry**, **Guy Collier**,
Trent Dallas, **Valance Smith**

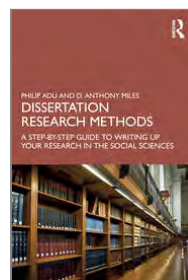
Research methods in a comic! This visual guide to common research methods paradigms will get you started on thinking about your research journey - what research is and understanding different types of methods, how you choose them, and how you get started. The book includes several worksheets to start making your own research menu and further reading to learn more. Suitable for upper level undergraduate and first level postgraduate students in the social and behavioural sciences, healthcare, and those interested in indigenous and Māori research methods.

Routledge
May 2023 : 72pp
Pb: 978-1-032-39232-5 : **£16.99**
Hb: 978-1-032-39230-1 : **£145**
eBook: 978-1-003-34892-4

* For full contents and more information, visit: www.routledge.com/9781032392325

Dissertation Research Methods

A Step-by-Step Guide to Writing Up Your Research in the Social Sciences



Philip Adu The National Centre for Academic and Dissertation Excellence, The Chicago School of Professional Psychology, USA, **D. Anthony Miles**

Dissertation Research Methods: A Step-by-Step Guide to Writing Up Your Research in the Social Sciences focuses specifically on methodology when planning, writing and submitting your dissertation thesis. Written by two methodology experts in the social sciences, the book provides a step-by-step guide through each stage of the dissertation process. This compact book will be of use to all graduate students and their supervisors in the Social Sciences, Education and Behavioural Sciences, looking for a guide for working with robust and defensible methodological principles in their dissertation research and theses.

Routledge
September 2023 : 470pp
Pb: 978-1-032-21385-9 : **£45.99**
Hb: 978-1-032-21383-5 : **£155**
eBook: 978-1-003-26815-4

* For full contents and more information, visit: www.routledge.com/9781032213859

A-Z of Digital Research Methods



Catherine Dawson

This book provides a quick and easy, alphabetical reference guide for any student or researcher looking for an introduction to digital research methods. It provides a pathway through the often confusing digital research landscape, giving a concise introduction to each method.

Routledge
July 2019 : 424pp
Pb: 978-1-138-48680-5 : **£29.99**
Hb: 978-1-138-48679-9 : **£140**
eBook: 978-1-351-04467-7

* For full contents and more information, visit: www.routledge.com/9781138486805

Doing Academic Research

A Practical Guide to Research Methods and Analysis



Ted Gournelos

Doing Academic Research is a concise, accessible, and tightly organized overview of the research process in the humanities, social sciences, and business. Rather than a book about research, this is a practical guide to doing research, and guides budding researchers along the process of developing an effective workflow, where to go for help, and how to actually complete the project. It addresses diversity in abilities, interest, discipline, and ways of knowing by focusing not just on the process of conducting any one method in detail, but also the ways in which someone might choose a research method and conduct it successfully.

Routledge
May 2019 : 208pp
Pb: 978-0-367-20793-9 : **£19.99**
Hb: 978-0-367-20791-5 : **£140**
eBook: 978-0-429-26355-2

* For full contents and more information, visit: www.routledge.com/9780367207939

Literature Review and Research Design

A Guide to Effective Research Practice



Dave Harris

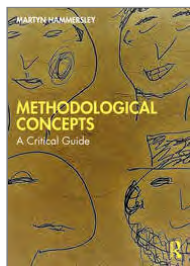
Graduate students executing their first independent research project often struggle to use academic literature effectively in the process of designing, developing, executing, and presenting their work. This book gives an overview of how to develop an effective research practice supported by the academic literature. Particularly suitable for those pursuing professional doctorates in subjects such as education and psychology.

Routledge
December 2019 : 176pp
Pb: 978-0-367-25037-9 : **£29.99**
Hb: 978-0-367-25036-2 : **£140**
eBook: 978-0-429-28566-0

* For full contents and more information, visit: www.routledge.com/9780367250379

Methodological Concepts

A Critical Guide



Martyn Hammersley The Open University, UK

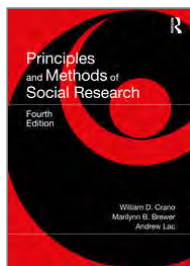
Methodological Concepts: A Critical Guide clarifies many key terms and issues in social research methodology. It outlines the conventional meanings of these terms, but also addresses their contentious character. The aim is to offer interpretations of them that provide a coherent conception of the nature of social science.

Routledge
February 2023 : 186pp
Pb: 978-1-032-39574-6 : **£36.99**
Hb: 978-1-032-39573-9 : **£140**
eBook: 978-1-003-35035-4

* For full contents and more information, visit: www.routledge.com/9781032395746

4TH EDITION

Principles and Methods of Social Research



William D. Crano Claremont Graduate University, USA,
Marilynn B. Brewer Ohio State University, USA, **Andrew Lac** Claremont Graduate University, USA

Through a multi-methodology approach, Principles and Methods of Social Research, Fourth Edition covers the latest research techniques and designs and guides readers toward the design and conduct of social research from the ground up. Applauded for its comprehensive coverage, the breadth and depth of content of this new edition is unparalleled. It is intended for graduate or advanced undergraduate courses in research methods in psychology, communication, sociology, education, public health, and marketing, and further appeals to researchers in various fields of social research, such as social psychology and communication.

Routledge
July 2023 : 486pp
Pb: 978-1-032-22240-0 : **£94.99**
Hb: 978-1-032-22241-7 : **£155**
eBook: 978-1-003-27173-4

* For full contents and more information, visit: www.routledge.com/9781032222400

5TH EDITION

Principles of Research in Behavioral Science



Mary E. Kite, **Bernard E. Whitley, Jr** Ball State University, USA

Now in its fifth edition, this invaluable textbook provides a comprehensive overview of research methods in the behavioral sciences, emphasizing the conceptual challenges inherent in scientific inquiry. Organized to mirror each stage of the research process, this text guides readers through the process, from formulating questions, to collecting data, to interpreting results. Ideal for advanced undergraduate, graduate, and post-graduate students seeking a strong foundation in research methods, it also serves as a valuable reference for seasoned researchers looking to refresh their knowledge.

Routledge
July 2025 : 806pp
Hb: 978-1-032-72058-6 : **£130**
IEPB: 978-1-032-72059-3 : **£45.99**
eBook: 978-1-032-72060-9

* For full contents and more information, visit: www.routledge.com/9781032720586

2ND EDITION

Research Design, Second Edition

Quantitative, Qualitative, Mixed Methods, Arts-Based, and Community-Based Participatory Research Approaches



Patricia Leavy

With a new chapter on the literature review, this accessible step-by-step guide to using the five major approaches to research design is now in a thoroughly revised second edition. The prior edition's user-friendly features are augmented by a new companion website with worksheets keyed to each chapter. For each approach, the text presents a template for a research proposal and explains how to conceptualize and fill in every section. Interdisciplinary research examples draw on current events and social justice issues. PowerPoints and chapter tests with answer keys are available to instructors using the book in a course.

Guilford Press
January 2023 : 323pp
Pb: 978-1-462-54897-2 : **£45.99**
Hb: 978-1-462-55088-3 : **£69.99**

* For full contents and more information, visit: www.routledge.com/9781462548972

2ND EDITION

Research Methods

The Key Concepts



Michael Hammond University of Warwick, UK, **Jerry Wellington**

Series: *Routledge Key Guides*

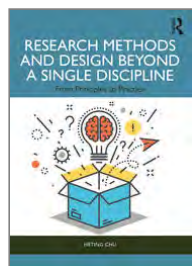
This invaluable resource provides a comprehensive overview of the many methods and methodologies of social research. Each entry provides a critical definition and examines the value and difficulties of a particular method or methodology of concept across different fields of social research. With thematic further reading stretching across the social sciences, this second edition will help readers develop a firm understanding of the rationale and principles behind key research methods, and is a must-have for new researchers at all levels, from undergraduate to postgraduate and beyond.

Routledge
September 2020 : 232pp
Pb: 978-0-367-17874-1 : **£23.99**
Hb: 978-0-367-17873-4 : **£115**
eBook: 978-0-429-05816-5

* For full contents and more information, visit: www.routledge.com/9780367178741

Research Methods and Design Beyond a Single Discipline

From Principles to Practice



Heting Chu

This book presents and discusses 15 research methods after an overview of each, an illustration of the research process and an examination of related topics. The focus of this book is on data collection techniques and research design. This book is essential for masters and doctoral students, and researchers who wish to learn about research methods and design comprehensively and systematically, as well as instructors delivering research methods courses across the social and behavioral sciences.

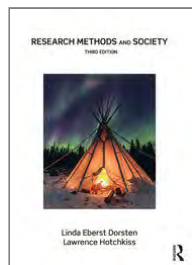
Routledge
April 2024 : 360pp
Pb: 978-0-367-89885-4 : **£61.99**
Hb: 978-0-367-89883-0 : **£155**
eBook: 978-1-003-02171-1

* For full contents and more information, visit: www.routledge.com/9780367898854

3RD EDITION

Research Methods and Society

Foundations of Social Inquiry



Linda Eberst Dorsten , Lawrence Hotchkiss

Research Methods and Society, Third Edition is designed to help undergraduate students acquire basic skills in methods of social science research. These skills provide a foundation for understanding research findings in the social sciences and for conducting social research. Just as important, such skills sets and principles can be applied to everyday situations to make sense of endless stream of claims and counterclaims confronted daily in print and electronic forms, including social media.

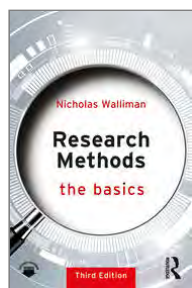
Routledge
December 2018 : 410pp
Pb: 978-0-815-36615-7 : **£96.99**
Hb: 978-0-815-36616-4 : **£245**
eBook: 978-1-351-25981-1

* For full contents and more information, visit: www.routledge.com/9780815366157

3RD EDITION

Research Methods

The Basics



Nicholas Walliman Oxford Brookes University, UK

Series: The Basics

Research Methods: The Basics is an accessible, user-friendly introduction to the different aspects of research theory, methods and practice. This third edition provides an expanded and fully updated resource suitable for students and practitioners in a wide range of disciplines including the natural sciences, social sciences and humanities. It is structured in two parts - the first covers the nature of knowledge and the reasons for doing research, the second explains the specific methods used to conduct an effective research project and how to propose, plan, carry out and write up a research project.

Routledge
December 2021 : 280pp
Pb: 978-0-367-69408-1 : **£20.99**
Hb: 978-0-367-69407-4 : **£150**
eBook: 978-1-003-14169-3

* For full contents and more information, visit: www.routledge.com/9780367694081

2ND EDITION

Social Research Methods by Example

Applications in the Modern World



Yasemin Besen-Cassino , Dan Cassino Fairleigh Dickson University

This book sharpens students' understanding of the research process and the essential methods that researchers use to perform their work on the cutting edge of the social sciences. The new edition features updated examples across the chapters, reflecting new directions within the social sciences and both a diversity of voices and research output in recent years. The authors also expand their chapter overviews in key areas and weave discussion of validity and ethics carefully into the fabric of each chapter's focus. Written not only to introduce students to the basic principles of social science research, this book provides readers with a toolkit to carry out the process on their own.

Routledge
May 2023 : 342pp
Pb: 978-1-032-20920-3 : **£40.99**
Hb: 978-1-032-21005-6 : **£145**
eBook: 978-1-003-26632-7

* For full contents and more information, visit: www.routledge.com/9781032209203

The Illustrated Guide to Social Science Research



Divya Sharma

This accessible and engaging textbook helps students to get to grips with key concepts, issues, and practices in social science research through the use of fun and informative illustrations and examples.

Routledge
July 2024 : 248pp
Pb: 978-1-032-32377-0 : **£39.99**
Hb: 978-1-032-32379-4 : **£155**
eBook: 978-1-003-31473-8

* For full contents and more information, visit: www.routledge.com/9781032323770

2ND EDITION

The Research Companion

A practical guide for those in the social sciences, health and development



Petra M. Boynton University College London, UK

Books on social and behavioral research too often focus on theory and methods and overlook the practical skills needed to undertake a research project. The Research Companion brings hard-earned lessons from the real world to offer clear and honest advice to all students and practitioners within the social and health sciences. The structure of the book makes it useful for researchers at all levels of experience: the numerous examples and case histories make it ideal for students just beginning their first research project, while the breadth of coverage and wealth of practical tips will also help more experienced researchers.

Routledge
September 2016 : 300pp
Pb: 978-1-138-91761-3 : **£52.99**
Hb: 978-1-138-91760-6 : **£155**
eBook: 978-1-315-68890-9

* For full contents and more information, visit: www.routledge.com/9781138917613

2ND EDITION

The Researcher's Toolkit

The Complete Guide to Practitioner Research



David Wilkinson Research Fellow within the Work-Based Learning Unit at the University of Leeds, **Dennis Dokter**

Designed for those undertaking research for the first time, the second edition of *The Researcher's Toolkit* is a practical and accessible guide for all those partaking in small-scale research. Jargon-free and assuming no prior knowledge, it covers the entire research process, from defining a research topic or question through to its completion. This book is a must-read guide for students and budding researchers as well as educators seeking to explain academic research and writing to their pupils. It will benefit anyone looking to complete a research project whether inside academia or beyond.

Routledge

May 2023 : 178pp

Pb: 978-1-032-01810-2 : **£28.99**

Hb: 978-1-032-01809-6 : **£145**

eBook: 978-1-003-18015-9

* For full contents and more information, visit: www.routledge.com/9781032018102

11TH EDITION

Understanding Research Methods

An Overview of the Essentials



Michelle Newhart, **Mildred L. Patten**

A perennial bestseller since 1997, this updated eleventh edition of *Understanding Research Methods* provides a detailed overview of all the important concepts traditionally covered in a research methods class. It covers the principles of both qualitative and quantitative research, and how to interpret statistics without computations, so is suitable for all students regardless of their math background. The book is organized so that each concept is treated independently and can be used in any order without resulting in gaps in knowledge—allowing it to be easily and precisely adapted to any course.

Routledge

June 2023 : 528pp

Pb: 978-0-367-55118-6 : **£96.99**

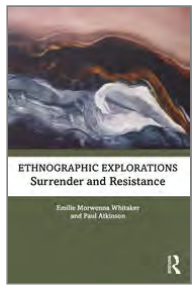
Hb: 978-0-367-55117-9 : **£255**

eBook: 978-1-003-09204-9

* For full contents and more information, visit: www.routledge.com/9780367551186

Ethnographic Explorations

Surrender and Resistance



Emilie Morwenna Whitaker Salford University, UK, **Paul Atkinson**

In *Ethnographic Explorations: Surrender and Resistance*, Whitaker and Atkinson, two experienced ethnographers, explore the complexities of fieldwork, analysis and writing from new perspectives. It takes the opportunity to reflect on Ethnography not just as a methodological perspective, but at a fundamental level. The book is intended for researchers at postgraduate and postdoctoral levels and at experienced researchers who want to read a different, sometimes challenging, take on ethnographic research and its outcomes.

Routledge
March 2023 : 184pp
Pb: 978-0-367-17441-5 : **£38.99**
Hb: 978-0-367-17440-8 : **£140**
eBook: 978-0-429-05680-2

* For full contents and more information, visit: www.routledge.com/9780367174415

Ethnographic Research in the Social Sciences



Edited by **Madhulika Sahoo**, **S. Jeyavelu**, **Anjali Kurane**

This book is an essential guide to scientifically conducting contemporary ethnographic research at undergraduate, postgraduate and doctoral levels in the social sciences, the humanities, and business studies. It addresses the methodological challenges of ethnographic research across the social sciences and highlights present time research areas, including digital ethnography, artificial intelligence, classroom pedagogy, hybrid organization and many more. A step-by-step, student friendly text, this book will be essential supplementary reading across the social sciences and the humanities, especially for those conducting fieldwork in the Global South.

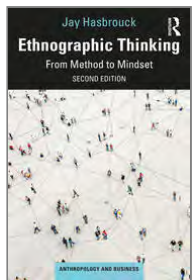
Routledge India
June 2023 : 282pp
Pb: 978-1-032-49233-9 : **£40.99**
Hb: 978-1-032-48008-4 : **£155**
eBook: 978-1-003-39277-4

* For full contents and more information, visit: www.routledge.com/9781032492339

2ND EDITION

Ethnographic Thinking

From Method to Mindset



Jay Hasbrouck

Series: Anthropology and Business

This second edition of *Ethnographic Thinking: From Method to Mindset* serves as a primer for practitioners who want to apply ethnography to real-world challenges and commercial ventures. This new edition now includes a section in each chapter focusing on practical advice to help readers activate key insights in their work. This work is essential reading for managers and strategists who want to tap into the full potential that an ethnographic perspective offers. It will also be of value to students and practitioners of applied ethnography, as well as professionals who would like to optimize the value of ethnographic thinking in their organizations.

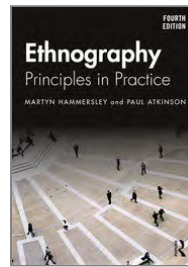
Routledge
April 2024 : 156pp
Pb: 978-1-032-46309-4 : **£40.99**
Hb: 978-1-032-46308-7 : **£155**
eBook: 978-1-003-38107-5

* For full contents and more information, visit: www.routledge.com/9781032463094

4TH EDITION

Ethnography

Principles in Practice



Martyn Hammersley The Open University, UK, **Paul Atkinson** Cardiff University, UK

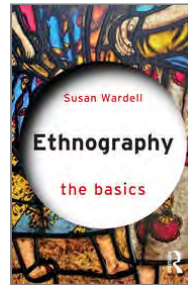
This edition has been expertly updated to reflect the important developments in digital and mobile technologies and social media. The ease with which recordings, audio or video, as well as photographs, can be produced via the use of mobile devices has opened up new tools and foci for ethnographers.

Routledge
April 2019 : 292pp
Pb: 978-1-138-50446-2 : **£45.99**
Hb: 978-1-138-50445-5 : **£170**
eBook: 978-1-315-14602-7

* For full contents and more information, visit: www.routledge.com/9781138504462

Ethnography

The Basics



Susan Wardell

Series: The Basics

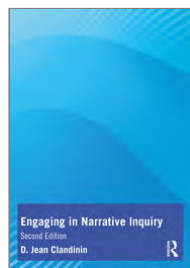
Ethnography: The Basics introduces a broad and beginner audience to ethnography, as a research methodology with diverse applications. By using everyday language, and developing a warm and inclusive tone, the book provides an accessible entry point to the topic.

Routledge
May 2025 : 278pp
Pb: 978-1-032-52012-4 : **£19.99**
Hb: 978-1-032-51311-9 : **£155**
eBook: 978-1-003-40488-0

* For full contents and more information, visit: www.routledge.com/9781032520124

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Engaging in Narrative Inquiry



D. Jean Clandinin

In *Engaging in Narrative Inquiry*, Second Edition, D. Jean Clandinin, a pioneer in narrative research, updates her classic formulation on narrative inquiry, clarifying, extending, and refining methods. The increasing interest in narrative inquiry as research methodology across disciplines makes this an essential guide and an excellent text for graduate courses in qualitative inquiry, education and nursing research, sociology, and all courses in autobiographical and narrative research and inquiry.

Routledge
September 2022 : 176pp
Pb: 978-1-032-14610-2 : **£45.99**
Hb: 978-1-032-14609-6 : **£155**
eBook: 978-1-003-24014-3

* For full contents and more information, visit: www.routledge.com/9781032146102

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Maria J. Mayan

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Routledge
May 2023 : 328pp
Pb: 978-1-629-58327-3 : **£31.99**
Hb: 978-1-629-58326-6 : **£135**
eBook: 978-1-003-38575-2

* For full contents and more information, visit: www.routledge.com/9781629583273

2ND EDITION

Qualitative Research

The Essential Guide to Theory and Practice



Maggi Savin-Baden Prof of Higher Education Research at Coventry University, UK, **Claire Howell Major** Prof of Higher Education at the University of Alabama, USA

The second edition of *Qualitative Research* is a one-stop resource for all those approaching qualitative research for the first time as well as those revisiting core concepts and issues. It presents a comprehensive overview of this rapidly developing field of inquiry, cleverly combined with practical, hands-on advice on how to conduct a successful qualitative study. This book is enhanced with the addition of online Instructor and Student Resources including videos, diagrams, an instructor manual, PowerPoint slides and links to further resources. This new edition is an indispensable companion and makes for ideal reading for all those involved in qualitative research worldwide.

Routledge
October 2025 : 664pp
Pb: 978-1-032-77458-9 : **£45.99**
Hb: 978-1-032-77460-2 : **£155**
eBook: 978-1-003-48319-9

* For full contents and more information, visit: www.routledge.com/9781032774589

Qualitative Research Using Social Media



Gwen Bouvier, Joel Rasmussen

This book shows how to conduct qualitative research projects using social media data. It takes the reader through the stages of choosing data, formulating a research question, and choosing and applying method(s).

Routledge
March 2022 : 214pp
Pb: 978-0-367-33347-8 : **£45.99**
Hb: 978-0-367-33350-8 : **£155**
eBook: 978-0-429-31933-4

* For full contents and more information, visit: www.routledge.com/9780367333478

2ND EDITION

Thinking with Theory in Qualitative Research



Alecia Y. Jackson Appalachian State University, USA,
Lisa A. Mazzei University of Oregon, USA

Thinking with Theory in Qualitative Research, Second Edition demonstrates how to enact various philosophical concepts in practices of inquiry, effectively opening up the process of thought in qualitative studies. In the ten years since the first edition was published, *Thinking with Theory* has become a vanguard text in the field of postfoundational inquiry for its accessible but thorough introductions to philosophically informed inquiry. This book is for experienced and novice researchers, and students in introductory, general, and advanced qualitative inquiry courses, who may also be first-time readers of philosophy.

Routledge
July 2022 : 170pp
Pb: 978-1-138-95214-0 : **£45.99**
Hb: 978-1-138-95213-3 : **£155**
eBook: 978-1-315-66776-8

* For full contents and more information, visit: www.routledge.com/9781138952140

Transformative Moments in Qualitative Research

Method, Theory, and Reflection



Anna Cohen-Miller

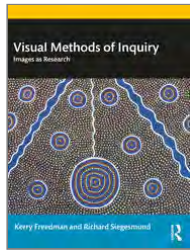
This groundbreaking book, eloquently fuses powerful stories of research with methodological insight and theory. Each chapter offers a clear, practical, and engaging exploration of qualitative inquiry, emphasizing the power of research to foster equity, inclusion, and justice-centered practice (e.g., social justice, economic justice, environmental/ecological justice). This book is an invaluable resource for graduate students, practitioners, and researchers to enhance their research and praxis. It will appeal to audiences across disciplinary backgrounds including social sciences, educational sciences, humanities, and STEM and health fields.

Routledge
December 2023 : 314pp
Pb: 978-1-032-38170-1 : **£41.99**
Hb: 978-1-032-38168-8 : **£145**
eBook: 978-1-003-34381-3

* For full contents and more information, visit: www.routledge.com/9781032381701

Visual Methods of Inquiry

Images as Research



Kerry Freedman , Richard Siegesmund

Visual Methods of Inquiry: Images as Research presents qualitative researchers in the social sciences with the benefits, applications, and forms of visual research methods. It includes a wide variety of images to illustrate the many uses of visual methods for social research. Students of social science and the visual arts will find this book useful in expanding and improving their methods of inquiry. Artists and researchers already familiar with visual methods will find that this book clarifies the ways the visual works in various research contexts and provides helpful language to describe and explain those methods.

Routledge

October 2023 : 238pp

Pb: 978-0-367-25048-5 : **£37.99**

Hb: 978-0-367-25049-2 : **£145**

eBook: 978-0-429-28572-1

* For full contents and more information, visit: www.routledge.com/9780367250485

2ND EDITION

Design Methods and Practices for Research of Project Management



Edited by **Beverly Pasian, Rodney Turner**

Design Methods and Practices for Research of Project Management is the most comprehensive guide on how to do research of and in project management. This second edition of the authoritative reference book offers a substantial update on the first edition with over 60% new content and so provides both practitioner and student researchers with a fully up-to-date and complete guide to research practice on project management.

Routledge
May 2024 : 368pp
Pb: 978-1-032-12387-5 : **£38.99**
Hb: 978-1-032-74496-4 : **£145**
eBook: 978-1-003-46951-3

* For full contents and more information, visit: www.routledge.com/9781032123875

2ND EDITION

Management Research

Applying the Principles of Business Research Methods



Susan Rose, Nigel Spinks, Ana Isabel Canhoto

Management Research supports new researchers on every step of the research journey, from defining a project to communicating its findings, as well as balancing the technical aspects of research with the management of the project itself. Management Research provides essential reading for undergraduate and postgraduate students undertaking a dissertation, thesis or research project, as well as professionals currently practicing in the field.

Routledge
December 2023 : 482pp
Pb: 978-1-032-46295-0 : **£57.99**
Hb: 978-1-032-46296-7 : **£190**
eBook: 978-1-003-38100-6

* For full contents and more information, visit: www.routledge.com/9781032462950

3RD EDITION

Planning Research in Hospitality and Tourism



Levent Altinay Oxford Brookes University, UK,
Alexandros Paraskevas, Faizan Ali

Planning Research in Hospitality and Tourism, 3rd Edition is an accessible, concise and practical guide to planning, conducting and analysing research in tourism and hospitality. Enriched with insightful case studies throughout, this volume is essential reading for all tourism and hospitality researchers.

Routledge
June 2024 : 372pp
Pb: 978-1-032-52258-6 : **£51.99**
Hb: 978-1-032-52257-9 : **£155**
eBook: 978-1-003-40579-5

* For full contents and more information, visit: www.routledge.com/9781032522586

Research Methodologies for Business Management



Vanessa Ratten La Trobe University, Australia

Most existing research methodologies texts take a more general approach or are edited books of previously published articles or chapters written by different authors. This book, written by a business management scholar, covers the fundamentals of business management research and its methodologies in a seamless, unified manner. It builds upon the knowledge by examining both qualitative and quantitative research methodologies in the context of business management. It will help business management students and junior researchers quickly build an essential base of knowledge and gain a strategic advantage in publishing and reviewing business related research.

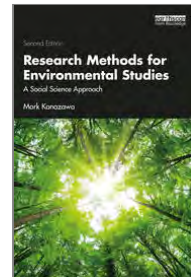
Routledge
February 2023 : 158pp
Pb: 978-1-032-32337-4 : **£46.99**
Hb: 978-1-032-32338-1 : **£140**
eBook: 978-1-003-31451-6

* For full contents and more information, visit: www.routledge.com/9781032323374

2ND EDITION

Research Methods for Environmental Studies

A Social Science Approach



Mark Kanazawa Carleton College, USA

The methodological needs of environmental studies are unique in the breadth of research questions that can be posed, calling for a textbook that covers a broad swath of approaches to conducting research with potentially many different kinds of evidence. Drawing on a variety of extended and updated examples to encourage problem-based learning and fully addressing the challenges associated with interdisciplinary investigation, this book will be an essential resource for students embarking on courses exploring research methods in environmental studies.

Routledge
July 2023 : 498pp
Pb: 978-1-032-19840-8 : **£40.99**
Hb: 978-1-032-19841-5 : **£155**
eBook: 978-1-003-26111-7

* For full contents and more information, visit: www.routledge.com/9781032198408

Researching and Analysing Business

Research Methods in Practice



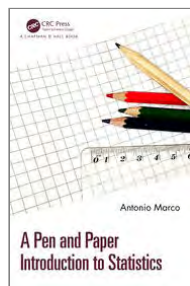
Edited by **Pantea Foroudi, Charles Dennis** Middlesex Business School, UK

Researching and Analysing Business provides an accessible and practical guide to various data collection and data analysis techniques within management. Unique in its practical approach, this book is required and recommended reading for advanced undergraduate and postgraduate students studying research methods.

Routledge
December 2023 : 456pp
Pb: 978-0-367-62065-3 : **£44.99**
Hb: 978-0-367-62064-6 : **£160**
eBook: 978-1-003-10777-4

* For full contents and more information, visit: www.routledge.com/9780367620653

A Pen and Paper Introduction to Statistics



Antonio Marco University of Essex, U.K.

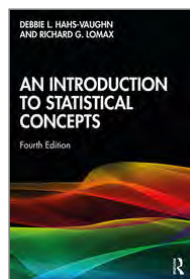
This book proposes to reverse the way statistics is taught, by starting with the introduction of linear models. The reader will have the opportunity to work through the examples and compute sums of squares by just drawing and counting, and finally evaluating whether observed differences are statistically significant by using the tables provided. Intended for students, professional life scientists, and those with little prior knowledge of statistics, this book is for all with simple and clear examples, computations and drawings helping the reader to, not only do, but also to understand statistics.

Chapman & Hall
December 2023 : 160pp
Pb: 978-1-032-50510-7 : **£35.99**
Hb: 978-1-032-50511-4 : **£105**
eBook: 978-1-003-39882-0

* For full contents and more information, visit: www.routledge.com/9781032505107

4TH EDITION

An Introduction to Statistical Concepts



Debbie L. Hahs-Vaughn University of Central Florida, USA, **Richard Lomax** The Ohio State University, USA

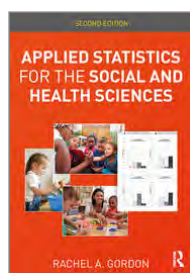
This comprehensive, flexible text is used in both one- and two-semester courses to review introductory through intermediate statistics. Instructors select the topics that are most appropriate for their course. Its conceptual approach helps students more easily understand the concepts and interpret SPSS and research results. Noted for its crystal clear explanations, key concepts are simply stated and occasionally reintroduced and related to one another for reinforcement. Numerous examples demonstrate their relevance. This edition features even more explanation to increase understanding of the concepts and has annotated script for using R.

Routledge
February 2020 : 1186pp
Hb: 978-1-138-65055-8 : **£130**
eBook: 978-1-315-62435-8

* For full contents and more information, visit: www.routledge.com/9781138650558

2ND EDITION

Applied Statistics for the Social and Health Sciences



Rachel A. Gordon Northern Illinois University, USA

Covering basic univariate and bivariate statistics and regression models for nominal, ordinal, and interval outcomes, this textbook provides graduate students in the social and health sciences with fundamental skills to estimate, interpret, and publish quantitative research using contemporary standards. Reflecting the growing importance of 'Big Data', this thoroughly revised and streamlined new edition, outlines changes in best practice in use of statistics in social and health sciences, draws upon new literatures and empirical examples, and highlights the importance of statistical programming, including coding, reproducibility, transparency, and open science.

Routledge
July 2023 : 800pp
Pb: 978-1-032-32344-2 : **£46.99**
Hb: 978-1-032-32343-5 : **£155**
eBook: 978-1-003-31453-0

* For full contents and more information, visit: www.routledge.com/9781032323442

9TH EDITION

Interpreting Basic Statistics

A Workbook Based on Excerpts from Journal Articles



Zealure C. Holcomb, **Keith S. Cox** University of North Carolina, USA

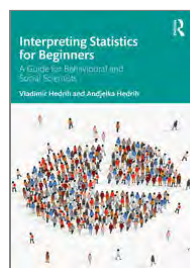
Interpreting Basic Statistics gives students valuable practice in interpreting statistical reporting as it actually appears in peer-reviewed journals. The questions in each exercise are divided into two parts: (1) Factual Questions and (2) Questions for Discussion. The factual questions require careful reading for details, while the discussion questions show that interpreting statistics is more than a mathematical exercise. Each exercise covers a limited number of topics, making it easy to coordinate the exercises with lectures or a traditional statistics textbook.

Routledge
September 2021 : 258pp
Pb: 978-0-367-56197-0 : **£66.99**
Hb: 978-0-367-56051-5 : **£200**
eBook: 978-1-003-09676-4

* For full contents and more information, visit: www.routledge.com/9780367561970

Interpreting Statistics for Beginners

A Guide for Behavioural and Social Scientists



Vladimir Hedrih, **Andjelka Hedrih**

Interpreting Statistics for Beginners teaches readers to correctly read and interpret results of basic statistical procedures as they are presented in scientific literature, and to understand what they can and cannot infer from such results. Written in an easy-to-read style and focusing on explaining concepts behind statistical calculations, the book is most helpful for readers with no previous training in statistics, and also those wishing to bridge the conceptual gap between doing the statistical calculations and interpreting the results.

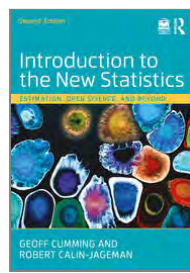
Routledge
February 2022 : 204pp
Pb: 978-0-367-61852-0 : **£39.99**
Hb: 978-0-367-62051-6 : **£155**
eBook: 978-1-003-10771-2

* For full contents and more information, visit: www.routledge.com/9780367618520

2ND EDITION

Introduction to the New Statistics

Estimation, Open Science, and Beyond



Geoff Cumming, **Robert Calin-Jageman**

This fully revised and updated second edition is an essential introduction to inferential statistics. It is the first introductory statistics text to use an estimation approach with meta-analysis ("the new statistics") from the start and also to explain the new and exciting Open Science practices, which encourage replication and enhance the trustworthiness of research. Designed for introduction to statistics, data analysis or quantitative methods courses in psychology, education and other social and health sciences, researchers interested in understanding Open Science and the new statistics will also appreciate this book.

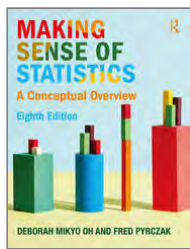
Routledge
March 2024 : 610pp
Pb: 978-0-367-53150-8 : **£72.99**
Hb: 978-0-367-53149-2 : **£225**
eBook: 978-1-032-68947-0

* For full contents and more information, visit: www.routledge.com/9780367531508

8TH EDITION

Making Sense of Statistics

A Conceptual Overview

**Deborah M. Oh , Fred Pyrczak**

Making Sense of Statistics, Eighth Edition, is the ideal introduction to the concepts of descriptive and inferential statistics for students undertaking their first research project. It presents each statistical concept in a series of short steps, then uses worked examples and exercises to enable students to apply their own learning. This conceptual book is useful for all study levels, from undergraduate to doctoral level across disciplines. Once students understand and feel comfortable with the statistics presented in this book, they should find it easy to master additional statistical concepts.

Routledge

June 2023 : 284pp

Pb: 978-1-032-28964-9 : **£52.99**Hb: 978-1-032-28962-5 : **£145**

eBook: 978-1-003-29935-6

* For full contents and more information, visit: www.routledge.com/9781032289649

4TH EDITION

Research Design and Statistical Analysis**Caren M. Rotello , Jerome L. Myers , Arnold D. Well , Robert F. Lorch, Jr.** University of Kentucky, Lexington, USA

This fully updated fourth edition of Research Design and Statistical Analysis provides comprehensive coverage of the design principles and statistical concepts necessary to make sense of real data. Incorporating the analyses of both experimental and observational data, and with coverage that is broad and deep enough to serve a two-semester sequence, this textbook is suitable for researchers, graduate students and advanced undergraduates in psychology, education, and other behavioral, social, and health sciences. The book is supported by a robust set of digital resources, including data files and exercises from the book in an Excel format, R scripts, and a solutions manual.

Routledge

January 2025 : 834pp

Pb: 978-1-032-89728-8 : **£80.99**Hb: 978-1-032-59210-7 : **£155**

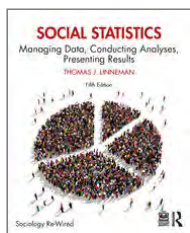
eBook: 978-1-003-45355-0

* For full contents and more information, visit: www.routledge.com/9781032897288

5TH EDITION

Social Statistics

Managing Data, Conducting Analyses, Presenting Results

**Thomas J. Linneman** The College of William and Mary, USA*Series: Sociology Re-Wired*

With a clear, engaging writing style and fascinating examples using a variety of real data, this text covers the contemporary statistical techniques that students will encounter in the world of social research. It covers these techniques at an introductory level and carefully guides students through increasingly complex examples without intimidating them.

Routledge

August 2025 : 668pp

Pb: 978-1-032-49035-9 : **£105**Hb: 978-1-032-49037-3 : **£155**

eBook: 978-1-003-39196-8

* For full contents and more information, visit: www.routledge.com/9781032490359

2ND EDITION

Statistical Methods

An Introduction to Basic Statistical Concepts and Analysis

**Cheryl Ann Willard**

Statistical Methods explains core statistical concepts and basic analysis techniques for the beginning undergraduate student in statistics or quantitative research methods. Each chapter covers a core concept before guiding students through a series of exercises designed to apply and demonstrate their knowledge. Expanded coverage of the second edition includes two new chapters on essential topics such as factorial analysis of variance, additional chapter exercises, and a full suite of instructor resources – powerpoint slides, instructor manual and test bank questions.

Routledge

March 2020 : 364pp

Pb: 978-0-367-20352-8 : **£60.99**Hb: 978-0-367-20351-1 : **£195**

eBook: 978-0-429-26103-9

* For full contents and more information, visit: www.routledge.com/9780367203528

4TH EDITION

Statistics Explained**Perry R. Hinton** Warwick University, UK

Statistics Explained is an accessible introduction to statistical concepts and ideas for undergraduate and postgraduate students new to the field. It makes few assumptions about the reader's statistical knowledge, carefully explaining each step of the analysis and the logic behind it. This new edition will include instructions and tips on how to present data and findings from SPSS output files, updated and more extensive case studies, and a section on alternative statistical software like R.

Routledge

October 2024 : 356pp

Pb: 978-0-367-36635-3 : **£39.99**Hb: 978-0-367-36638-4 : **£145**

eBook: 978-0-429-35326-0

* For full contents and more information, visit: www.routledge.com/9780367366353

2ND EDITION

Statistics for the Behavioural Sciences

An Introduction to Frequentist and Bayesian Approaches

**Riccardo Russo**

This accessible textbook is for those without a mathematical background (just some notions of basic algebra are sufficient) and provides a comprehensive introduction to all topics covered in introductory behavioural science statistics courses. This timely and highly readable text will be invaluable to undergraduate students of psychology and research methods courses in related disciplines, as well as anyone with an interest in understanding and applying the basic concepts and inferential techniques associated with statistics in the behavioural sciences.

Routledge

November 2020 : 330pp

Pb: 978-1-138-71150-1 : **£39.99**Hb: 978-1-138-71148-8 : **£155**

eBook: 978-1-315-20041-5

* For full contents and more information, visit: www.routledge.com/9781138711501

5TH EDITION

Statistics in Plain English



Timothy C. Urdan Santa Clara University, USA

Statistics in Plain English is a straightforward, conversational introduction to statistics that delivers exactly what its title promises. Each chapter begins with a brief overview of a statistic that describes what the statistic does and when to use it, followed by a detailed step-by-step explanation of how the statistic works and exactly what information it provides. Chapters also include an example of the statistic (or statistics) in use in real-world research, "Worked Examples," "Writing It Up" sections that demonstrate how to write about each statistic, "Wrapping Up and Looking Forward" sections, and practice work problems.

Routledge

March 2022 : 322pp

Pb: 978-0-367-34283-8 : **£37.99**

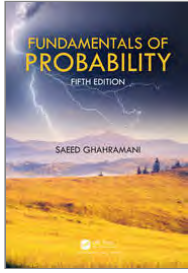
Hb: 978-0-367-34282-1 : **£195**

eBook: 978-1-032-22944-7 : **£33.99**

* For full contents and more information, visit: www.routledge.com/9780367342838

5TH EDITION

Fundamentals of Probability



Saeed Ghahramani Western New England University,
Springfield, Massachusetts, USA

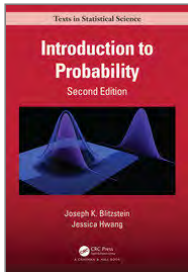
This one- or two-term calculus-based basic probability text is written for majors in mathematics, physical sciences, engineering, statistics, actuarial science, business and finance, operations research, and computer science. It presents probability in a natural way: through interesting and instructive examples and exercises that motivate the theory, definitions, theorems, and methodology. This book is mathematically rigorous and, at the same time, closely matches the historical development of probability. Whenever appropriate, historical remarks are included, and the 2096 examples and exercises have been designed to arouse curiosity and encourage students to delve into the theory.

Chapman & Hall
May 2024 : 700pp
Hb: 978-1-032-36608-1 : **£130**
IEPB: 978-1-032-80353-1 : **£49.99**
eBook: 978-1-003-33289-3

* For full contents and more information, visit: www.routledge.com/9781032366081

2ND EDITION

Introduction to Probability, Second Edition



Joseph K. Blitzstein Harvard University, Cambridge,
Massachusetts, USA, **Jessica Hwang** Stanford University,
California, USA

Series: Chapman & Hall/CRC Texts in Statistical Science

Undergraduate probability book that assumes one-semester of calculus. One key is the emphasis on "stories" for the probability distributions (which I mean in both an intuitive and technical sense): there are a dozen or so key distributions (Normal, Binomial, Poisson, etc.) that are incredibly widely-used in statistics, but a lot of books just write down formulas for them without explaining clearly why these particular distributions are so important, or how they are all connected. Each of these distributions has a "story" (a natural application where it arises), and thinking about stories makes the distributions easier to remember, understand, and work with.

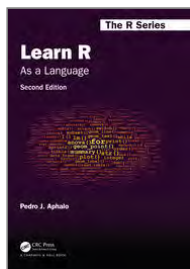
Chapman & Hall
February 2019 : 634pp
Hb: 978-1-138-36991-7 : **£76.99**
eBook: 978-0-429-42835-7

* For full contents and more information, visit: www.routledge.com/9781138369917

2ND EDITION

Learn R

As a Language



Pedro J. Aphalo University of Helsinki, Faculty of Biological and Environmental Sciences

Series: Chapman & Hall/CRC The R Series

Learning a computer language like R can be either frustrating, fun, or boring. Having fun requires challenges that wake up the learner's curiosity but also provide an emotional reward on overcoming them. This is the second edition of a book designed so that it includes smaller and bigger challenges, in what I call playgrounds, in the hope that all readers will enjoy their path to R fluency.

Chapman & Hall
April 2024 : 466pp
Pb: 978-1-032-51699-8 : **£67.99**
Hb: 978-1-032-51843-5 : **£175**
eBook: 978-1-003-40418-7

* For full contents and more information, visit: www.routledge.com/9781032516998

2ND EDITION

R Data Analysis without Programming

Explanation and Interpretation



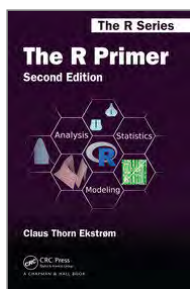
David W. Gerbing Portland State University, USA

The new edition of this innovative book, prepares the readers to quickly analyse data and interpret statistical results using R. Professor Gerbing has developed lessR, which is a ground-breaking method in alleviating the challenges of R programming. The lessR extends R, removing the need for programming. This edition expands upon the first edition's introduction to R through lessR which enables the readers to learn how to organize data for analysis, read the data into R, and generate output without performing numerous functions and programming exercises first.

Routledge
January 2023 : 378pp
Pb: 978-1-032-24403-7 : **£55.99**
Hb: 978-1-032-24402-0 : **£140**
eBook: 978-1-003-27841-2

* For full contents and more information, visit: www.routledge.com/9781032244037

2ND EDITION

R Primer

Claus Thorn Ekström University of Copenhagen, Denmark

Series: Chapman & Hall/CRC The R Series

Newcomers to R are often intimidated by the command-line interface, the vast number of functions and packages, or the processes of importing data and performing a simple statistical analysis. The R Primer provides a collection of concise examples and solutions to R problems frequently encountered by new users of this statistical software. This new edition adds coverage of R Studio and reproducible research.

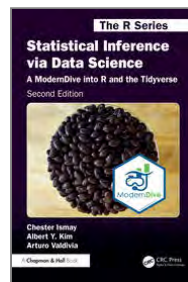
Chapman & Hall
March 2017 : 426pp
Pb: 978-1-138-63197-7 : **£59.99**
Hb: 978-1-498-77255-6 : **£125**
eBook: 978-1-315-15441-1

* For full contents and more information, visit: www.routledge.com/9781138631977

2ND EDITION

Statistical Inference via Data Science

A ModernDive into R and the Tidyverse



Chester Ismay DataCamp, **Albert Y. Kim**, **Arturo Valdivia**

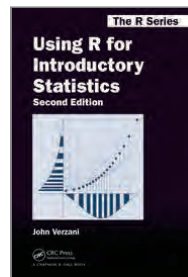
Series: Chapman & Hall/CRC The R Series

Offers a comprehensive guide to learning statistical inference with data science tools widely used in industry, academia, and government. Ideal for those new to statistics or looking to deepen their knowledge, this edition provides a clear entry point into data science and modern statistical methods.

Chapman & Hall
May 2025 : 490pp
Pb: 978-1-032-70837-9 : **£68.99**
Hb: 978-1-032-72451-5 : **£170**
eBook: 978-1-032-72454-6

* For full contents and more information, visit: www.routledge.com/9781032708379

2ND EDITION

Using R for Introductory Statistics

John Verzani CUNY/College of Staten Island, New York, USA

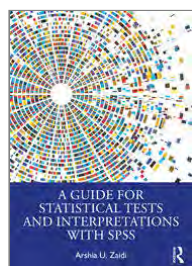
Series: Chapman & Hall/CRC The R Series

The second edition of a bestselling textbook, Using R for Introductory Statistics guides students through the basics of R, helping them overcome the sometimes steep learning curve. The author does this by breaking the material down into small, task-oriented steps. The second edition maintains the features that made the first edition so popular, while updating data, examples, and changes to R in line with the current version.

Chapman & Hall
June 2014 : 518pp
Hb: 978-1-466-59073-1 : **£67.99**
eBook: 978-1-315-37308-9

* For full contents and more information, visit: www.routledge.com/9781466590731

A Guide for Statistical Tests and Interpretations with SPSS



Arshia U. Zaidi

A Guide for Statistical Tests and Interpretations with SPSS is designed for students taking basic and advanced courses in statistics, taking an integrative and practical approach to learning statistics. It guides students through navigating SPSS outputs and writing quantitatively, dealing with technical and substantive interpretations without resorting to complex mathematical formulae. With SPSS screenshots and step-by-step advice, this book will be useful for all undergraduate and graduate students in the social sciences and humanities, as a supplemental textbook to provide practical guidance on moving through all steps of statistical testing and analysis.

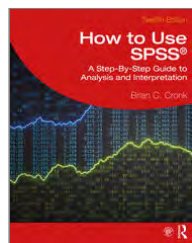
Routledge
October 2024 : 244pp
Pb: 978-1-032-10210-8 : **£48.99**
Hb: 978-1-032-10520-8 : **£140**
eBook: 978-1-003-21569-1

* For full contents and more information, visit: www.routledge.com/9781032102108

12TH EDITION

How to Use SPSS®

A Step-By-Step Guide to Analysis and Interpretation



Brian C. Cronk

This book is designed with the novice computer user in mind and for people who have no previous experience using SPSS. Each chapter is divided into short sections that describe the statistic being used, important underlying assumptions, and how to interpret the results and express them in a research report. The book begins with the basics, such as starting SPSS, defining variables, and entering and saving data. It covers all major statistical techniques typically taught in beginning statistics classes, such as descriptive statistics, graphing data, prediction and association, parametric inferential statistics, nonparametric inferential statistics and statistics for test construction.

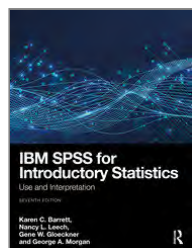
Routledge
January 2024 : 252pp
Pb: 978-1-032-58235-1 : **£65.99**
Hb: 978-1-032-58519-2 : **£155**
eBook: 978-1-003-45046-7

* For full contents and more information, visit: www.routledge.com/9781032582351

7TH EDITION

IBM SPSS for Introductory Statistics

Use and Interpretation



Karen C. Barrett Colorado State University, USA, **Nancy L. Leech** University of Colorado at Denver, USA, **Gene W. Gloeckner** Colorado State University, USA, **George A. Morgan** Colorado State University, USA

IBM SPSS for Introductory Statistics is designed to help students learn how to analyze and interpret research. In easy-to-understand language, the authors show readers how to choose the appropriate statistic based on the design, and to interpret outputs appropriately. This volume is an invaluable supplemental (or lab text) book for students. In addition, this book and its companion, IBM SPSS for Intermediate Statistics, are useful as guides/reminders to faculty and professionals regarding the specific steps to take to use SPSS and/or how to use and interpret parts of SPSS with which they are unfamiliar.

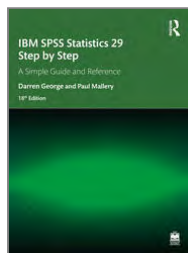
Routledge
September 2025 : 258pp
Pb: 978-1-032-41030-2 : **£47.99**
Hb: 978-1-032-41031-9 : **£155**
eBook: 978-1-003-35590-8

* For full contents and more information, visit: www.routledge.com/9781032410302

18TH EDITION

IBM SPSS Statistics 29 Step by Step

A Simple Guide and Reference



Darren George, Paul Mallery

IBM SPSS Statistics 29 Step by Step: A Simple Guide and Reference, eighteenth edition, takes a straightforward, step-by-step approach that makes SPSS software clear to beginners and experienced researchers alike. Accompanied by updated online instructor's materials and website data files, this is an essential resource for instructors and students needing a guide to using SPSS in their work, across the social sciences, behavioural sciences, education, and beyond.

Routledge
March 2024 : 440pp
Pb: 978-1-032-62193-7 : **£75.99**
Hb: 978-1-032-62212-5 : **£235**
eBook: 978-1-032-62215-6

* For full contents and more information, visit: www.routledge.com/9781032621937

3RD EDITION

SPSS Explained



Perry R. Hinton Warwick University, UK, **Isabella McMurray** University of Bedfordshire, UK, **Charlotte Brownlow**, **Peter C. Terry**

SPSS Explained provides the student with all that they need to undertake statistical analysis using SPSS. It combines a step-by-step approach to each procedure with easy-to-follow screenshots at each stage of the process. The authors have many years of experience in teaching SPSS to students from a wide range of disciplines. Their understanding of SPSS users' concerns, as well as a knowledge of the type of questions students ask, form the foundation of this book.

Routledge
September 2023 : 386pp
Pb: 978-0-367-36699-5 : **£52.99**
Hb: 978-0-367-36698-8 : **£145**
eBook: 978-0-429-35086-3

* For full contents and more information, visit: www.routledge.com/9780367366995

Geocomputation with Python



Michael Dorman , Anita Graser , Jakub Nowosad , Robin Lovelace University of Leeds, UK

Series: Chapman & Hall/CRC The Python Series

Geocomputation with Python is a comprehensive resource for working with geographic data with the most popular programming language in the world. The book gives an overview of Python's capabilities for spatial data analysis, as well as dozens of worked-through examples covering the entire range of standard GIS operations. Another unique feature is that this book is part of a wider community.

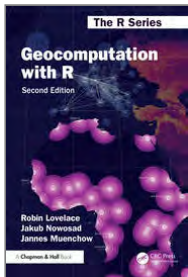
Geocomputation with Python is a sister project of Geocomputation with R (Lovelace, Nowosad, and Muenchow 2019), a book on geographic data analysis, visualization, and modeling using the R programming language that has numerous contributors and an active community.

Chapman & Hall
February 2025 : 344pp
Pb: 978-1-032-46065-9 : **£58.99**
Hb: 978-1-032-45891-5 : **£160**
eBook: 978-1-003-37991-1

* For **full contents** and more information, visit: www.routledge.com/9781032460659

2ND EDITION

Geocomputation with R



Robin Lovelace University of Leeds, UK, **Jakub Nowosad , Jannes Muenchow** Friedrich Schiller University, Jena, Germany

Series: Chapman & Hall/CRC The R Series

Geocomputation with R is for people who want to analyze, visualize, and model geographic data with open source software. The book provides a foundation for learning how to solve a wide range of geographic data analysis problems in a reproducible, and therefore scientifically sound and scalable way. The second edition features numerous updates, including the adoption of the high-performance terra package for all raster data processing, detailed coverage of the spherical geometry engine s2, updated information on coordinate reference systems and new content on openEO, STAC, COG, and gdalcubes. The book equips you with the knowledge and skills to tackle a wide range of issues.

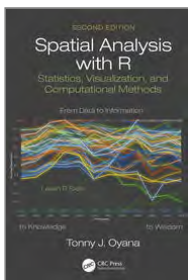
Chapman & Hall
May 2025 : 420pp
Pb: 978-1-032-24888-2 : **£58.99**
Hb: 978-1-032-22979-9 : **£160**
eBook: 978-1-003-28056-9

* For **full contents** and more information, visit: www.routledge.com/9781032248882

2ND EDITION

Spatial Analysis with R

Statistics, Visualization, and Computational Methods



Tonny J. Oyana

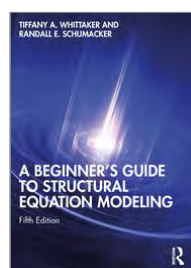
The implementation of new tools and methods for spatial analysis using R, the use and growth of artificial intelligence, machine learning and deep learning algorithms with a spatial perspective, and the interdisciplinary use of spatial analysis are all new topics in this second edition. The book provides a balance between concepts and practicum of spatial statistics with a comprehensive coverage of the most important approaches to understand spatial data, analyze spatial relationships and spatial patterns, and predict spatial processes. It offers new datasets, insights, and excellent illustrations to senior undergraduate and first year graduate students in geography and geosciences.

CRC Press
September 2023 : 354pp
Pb: 978-0-367-53238-3 : **£48.99**
Hb: 978-0-367-86085-1 : **£125**
eBook: 978-1-003-02164-3

* For **full contents** and more information, visit: www.routledge.com/9780367532383

5TH EDITION

A Beginner's Guide to Structural Equation Modeling



Randall E. Schumacker , Tiffany A. Whittaker

A Beginner's Guide to Structural Equation Modeling, fifth edition, has been redesigned with consideration of a true beginner in structural equation modeling (SEM) in mind. The book covers introductory through intermediate topics in SEM in more detail than in any previous edition. This book is intended for true beginners in structural equation modeling and is designed for introductory graduate courses in structural equation modeling taught in psychology, education, business, and the social and healthcare sciences. This book also appeals to researchers and faculty in various disciplines. Prerequisites include correlation and regression methods.

Routledge

May 2022 : 418pp

Pb: 978-0-367-47796-7 : **£76.99**

Hb: 978-0-367-49015-7 : **£155**

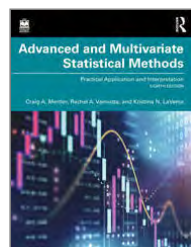
eBook: 978-1-003-04401-7

* For full contents and more information, visit: www.routledge.com/9780367477967

8TH EDITION

Advanced and Multivariate Statistical Methods

Practical Application and Interpretation



Craig A. Mertler Arizona State University, USA, **Rachel A. Vannatta** , **Kristina N. LaVenía** Bowling Green State University

Advanced and Multivariate Statistical Methods, Eighth Edition offers conceptual and practical insights into multivariate statistical techniques, designed for students without requiring deep technical or mathematical expertise. This updated text facilitates conceptual understanding of multivariate statistical methods by limiting the technical nature of the discussion of those concepts and focusing on their practical applications. This book is tailored for students taking a multivariate statistics course in graduate programs across a range of fields, including psychology, education, sociology, criminal justice, social work, mass communication, and nursing.

Routledge

September 2025 : 352pp

Pb: 978-1-032-89050-0 : **£145**

Hb: 978-1-032-91296-7 : **£155**

eBook: 978-1-003-56243-6

* For full contents and more information, visit: www.routledge.com/9781032890500

Data Analytics for the Social Sciences

Applications in R



G. David Garson

This book presents a complete exploration of statistical data analysis in R for a wide variety of social science disciplines and quantitative methods courses. Covering all the bases including multilevel modeling and ANOVA / ANCOVA, the book also goes further by looking at topics such as: neural networks to implement deep learning, thus solving complex problems other algorithms cannot; how to deal with missing values in real world data; and the use of text analytics. R code input and output is included. Suitable for all advanced level undergraduate and postgraduate students learning statistical data analysis.

Routledge

November 2021 : 704pp

Pb: 978-0-367-62427-9 : **£94.99**

Hb: 978-0-367-62429-3 : **£265**

eBook: 978-1-003-10939-6

* For full contents and more information, visit: www.routledge.com/9780367624279

Doing Statistical Analysis

A Student's Guide to Quantitative Research



Christer Thrane

Doing Statistical Analysis looks at three kinds of statistical research questions – descriptive, associational and inferential – and shows students how to conduct statistical analyses and interpret the results. Keeping equations to a minimum, it uses a conversational style and relatable examples such as football, covid-19 and tourism, to aid understanding. Each chapter contains practice exercises, and a section showing students how to reproduce the statistical results in the book using Stata and SPSS. Its accessible approach means this is the ideal textbook for undergraduate students across the social and behavioural sciences needing to build their confidence with statistical analysis.

Routledge

July 2022 : 266pp

Pb: 978-1-032-17132-6 : **£55.99**

Hb: 978-1-032-18030-4 : **£155**

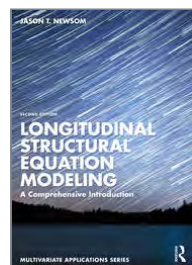
eBook: 978-1-003-25255-9

* For full contents and more information, visit: www.routledge.com/9781032171326

2ND EDITION

Longitudinal Structural Equation Modeling

A Comprehensive Introduction



Jason T. Newsom Portland State University, USA

Series: Multivariate Applications Series

Longitudinal Structural Equation Modeling, Second Edition provides an in-depth, comprehensive overview of structural equation modeling (SEM) strategies for longitudinal data to help readers see which modeling options are available for which hypotheses. Ideal for graduate courses on longitudinal (data) analysis, advanced SEM, longitudinal SEM, and/or advanced data (quantitative) analysis taught in the behavioral, social, and health sciences, Longitudinal Structural Equation Modeling, Second Edition, also appeals to researchers in these fields, and the first edition has been popular as a standard reference for this type of analysis.

Routledge

October 2023 : 522pp

Pb: 978-1-032-20286-0 : **£78.99**

Hb: 978-1-032-20283-9 : **£155**

eBook: 978-1-003-26303-6

* For full contents and more information, visit: www.routledge.com/9781032202860

3RD EDITION

Multilevel and Longitudinal Modeling with IBM SPSS



Ronald H. Heck University of Hawaii, Manoa, **Scott L. Thomas** University of Vermont, USA, **Lynn N. Tabata** University of Hawaii, Manoa

Series: Quantitative Methodology Series

This text demonstrates how to use the multilevel- and longitudinal-modeling techniques available in IBM SPSS (Version 26). Adopting a workbook format, the text walks readers through setting up, running, and interpreting a variety of different types of multilevel and longitudinal models using the linear mixed-effects model (MIXED and GENLINMIXED) platforms in SPSS. This text is an essential resource for graduate students taking courses on multilevel, longitudinal, and latent variable modeling, multivariate statistics, or advanced quantitative techniques.

Routledge

April 2022 : 494pp

Pb: 978-0-367-42461-9 : **£52.99**

Hb: 978-0-367-42460-2 : **£185**

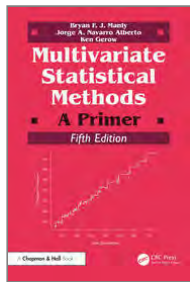
eBook: 978-0-367-82427-3

* For full contents and more information, visit: www.routledge.com/9780367424619

5TH EDITION

Multivariate Statistical Methods

A Primer



Bryan F. J. Manly University of Otago, Dunedin, New Zealand, **Jorge A. Navarro Alberto**, **Ken Gerow**

Great starting point for readers looking to become proficient in multivariate statistical methods, but who might not be deeply versed in the language of mathematics. In this edition, we provide readers with conceptual introductions to methods, practical suggestions, new references, and a more extensive collection of R functions and code that will help them to deepen their toolkit of multivariate statistical methods.

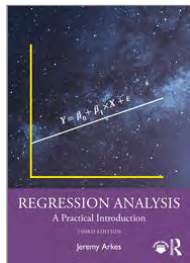
Chapman & Hall
October 2024 : 294pp
Pb: 978-1-032-59197-1 : **£55.99**
Hb: 978-1-032-59200-8 : **£160**
eBook: 978-1-003-45348-2

* For full contents and more information, visit: www.routledge.com/9781032591971

3RD EDITION

Regression Analysis

A Practical Introduction



Jeremy Arkes

This thoroughly practical and engaging textbook conveys the skills needed to responsibly develop, conduct, scrutinize, and interpret statistical analyses without requiring high-level math. This third edition features coverage of the Generalized AutoRegressive Conditional Heteroskedasticity (GARCH) model, Time Series Cross Section models and Multi-level (Hierarchical) models, and has been updated throughout to include more examples. It is ideal for undergraduate and postgraduate students learning quantitative methods in the social sciences, business, medicine, and data analytics. It will also appeal to researchers and academics looking to better understand regressions.

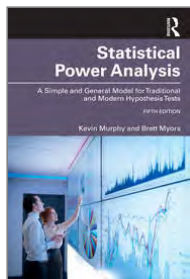
Routledge
September 2025 : 524pp
Pb: 978-1-041-00259-8 : **£41.99**
Hb: 978-1-041-00260-4 : **£130**
eBook: 978-1-003-60894-3

* For full contents and more information, visit: www.routledge.com/9781041002598

5TH EDITION

Statistical Power Analysis

A Simple and General Model for Traditional and Modern Hypothesis Tests, Fifth Edition



Brett Myors Griffith University, Australia, **Kevin R. Murphy** University of Limerick, Ireland

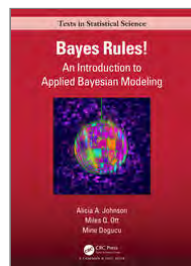
Statistical Power Analysis explains the key concepts in statistical power analysis and illustrates their application in both tests of traditional null hypotheses. It provides readers with the tools to understand and perform power analyses for virtually all the statistical methods used in the social and behavioral sciences. This edition includes new material and new power software. The programs used for power analysis in this book have been re-written in R, a language that is widely used and freely available. Statistical Power Analysis helps readers design studies, diagnose existing studies, and understand why hypothesis tests come out the way they do.

Routledge
March 2023 : 224pp
Pb: 978-1-032-28300-5 : **£57.99**
Hb: 978-1-032-28301-2 : **£140**
eBook: 978-1-003-29622-5

* For full contents and more information, visit: www.routledge.com/9781032283005

Bayes Rules!

An Introduction to Applied Bayesian Modeling



Alicia A. Johnson, **Miles Q. Ott** Smith College, Northampton, MA 01063, **Mine Dogucu** Denison university, OH, USA

Series: Chapman & Hall/CRC Texts in Statistical Science

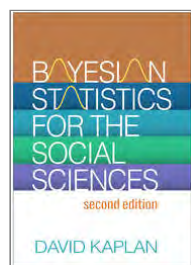
An engaging, sophisticated, and fun introduction to the field of Bayesian Statistics, *Bayes Rules! An Introduction to Bayesian Modeling with R* brings the power of modern Bayesian thinking, modeling, and computing to a broad audience. In particular, it is an ideal resource for advanced undergraduate Statistics students and practitioners with comparable experience. *Bayes Rules!* empowers readers to weave Bayesian approaches into their everyday practice.

Chapman & Hall
March 2022 : 544pp
Pb: 978-0-367-25539-8 : **£69.99**
Hb: 978-1-032-19159-1 : **£195**
eBook: 978-0-429-28834-0

* For full contents and more information, visit: www.routledge.com/9780367255398

2ND EDITION

Bayesian Statistics for the Social Sciences, Second Edition



David Kaplan University of Wisconsin–Madison, United States

This book equips social science researchers to apply the latest Bayesian methodologies to their data analysis problems. The second edition includes new chapters on model uncertainty, Bayesian variable selection and sparsity, and Bayesian workflow for statistical modeling, and emphasizes use of the RStan software package. Topics include frequentist and epistemic probability, prior distributions, Hamiltonian Monte Carlo, Bayesian linear regression and generalized linear models, model evaluation and comparison, multilevel modeling, missing data, and more. The book includes worked-through examples with annotated RStan code, and features a helpful companion website.

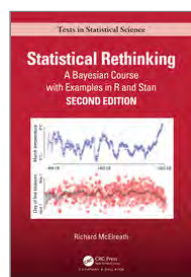
Guilford Press
December 2023 : 250pp
Hb: 978-1-462-55354-9 : **£62.99**

* For full contents and more information, visit: www.routledge.com/9781462553549

2ND EDITION

Statistical Rethinking

A Bayesian Course with Examples in R and STAN



Richard McElreath Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany

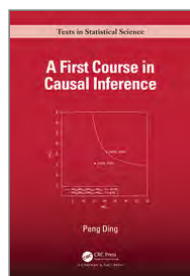
Series: Chapman & Hall/CRC Texts in Statistical Science

The very popular *Statistical Rethinking: A Bayesian Course with Examples in R and Stan*, Second Edition builds readers' knowledge of and confidence in statistical modeling. Reflecting the need for even minor programming in today's model-based statistics, the book pushes readers to perform step-by-step calculations that are usually automated. This unique computational approach ensures that readers understand enough of the details to make reasonable choices and interpretations in their own modeling work.

Chapman & Hall
March 2020 : 612pp
Hb: 978-0-367-13991-9 : **£86.99**
eBook: 978-0-429-02960-8

* For full contents and more information, visit: www.routledge.com/9780367139919

A First Course in Causal Inference



Peng Ding University of California Berkeley, U.S.A

Series: Chapman & Hall/CRC Texts in Statistical Science

This textbook, based on the author's course on causal inference at UC Berkeley taught over the past seven years, only requires basic knowledge of probability theory, statistical inference, and linear and logistic regressions. It assumes minimal knowledge of causal inference, and reviews basic probability and statistics in the appendix. It covers causal inference from a statistical perspective and includes examples and applications from biostatistics and econometrics. This book is suitable for an advanced undergraduate or graduate-level course on causal inference, or postgraduate and PhD-level course in statistics and biostatistics departments.

Chapman & Hall
July 2024 : 448pp
Hb: 978-1-032-75862-6 : **£68.99**
eBook: 978-1-003-48408-0

* For full contents and more information, visit: www.routledge.com/9781032758626

2ND EDITION

The Effect

An Introduction to Research Design and Causality



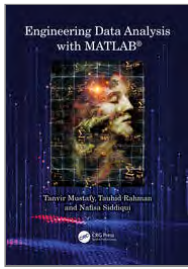
Nick Huntington-Klein

This book is about research design, specifically concerning research that uses non-experimental data to figure out whether one thing causes another. It introduces the concept of identification thoroughly and clearly and discusses it as a process of trying to isolate variation that has a causal interpretation. Concepts are demonstrated with a heavy emphasis on graphical intuition and the question of what we do to data. When we "add a control variable" what does that actually do? The second edition features a new chapter on partial identification, updated materials, methods, and writing throughout, and additional materials for help navigating the book or in using the book in teaching.

Chapman & Hall
July 2025 : 686pp
Pb: 978-1-032-58022-7 : **£41.99**
Hb: 978-1-032-58194-1 : **£130**
eBook: 978-1-003-44896-9

* For full contents and more information, visit: www.routledge.com/9781032580227

Engineering Data Analysis with MATLAB®



Tanvir Mustafy Military Inst. of Science and Tech, BD,
Tauhid Rahman Military Inst. of Science and Tech, BD,
Nafisa Siddiqui Military Inst. of Science and Tech, BD

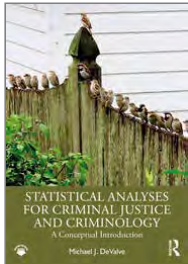
This book provides a concise overview of a variety of techniques for analyzing statistical, scientific, and financial data, using MATLAB® to integrate several approaches to data analysis and statistics. Chapters offer a broad review of computational data analysis, illustrated with many examples and applications. Each chapter combines theoretical concepts with practical MATLAB® applications and includes practice exercises, ensuring a comprehensive understanding of the material. With coverage of both basic and more complex ideas in applied statistics, the book has broad appeal for undergraduate students up to practicing engineers.

CRC Press
 December 2024 : 902pp
 Pb: 978-1-032-50771-2 : **£75.99**
 Hb: 978-1-032-50658-6 : **£155**
 eBook: 978-1-003-39958-2

* For full contents and more information, visit: www.routledge.com/9781032507712

Statistical Analyses for Criminal Justice and Criminology

A Conceptual Introduction



Michael J. DeValen

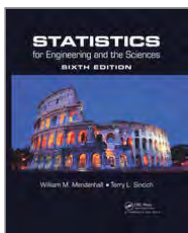
This book is a how-to guide for statistical analyses designed for undergraduates and others new to the subject. Written in an easy-going and clear style, the book uses policing data to illustrate concepts and includes a short narrative at the beginning of each chapter to engage readers. Easily identified Main Take-Aways and Key Terms features aid student understanding. Designed to combat the fear of mathematics and statistics often held by students in the social sciences, plain verbiage, multiple examples, and clear demonstrations combine to achieve the actualization and proper contextualized use of univariate and bivariate statistics.

Routledge
 June 2024 : 194pp
 Pb: 978-1-032-63854-6 : **£39.99**
 Hb: 978-1-032-63858-4 : **£155**
 eBook: 978-1-032-63859-1

* For full contents and more information, visit: www.routledge.com/9781032638546

6TH EDITION

Statistics for Engineering and the Sciences



William M. Mendenhall, **Terry L. Sincich**

Designed for a two-semester introductory course, this popular text continues to teach students the basic concepts of data description and statistical inference as well as the statistical methods necessary for real-world applications. Along with updated and reorganized material, this sixth edition includes many new and updated exercises based on contemporary engineering and scientific-related studies and real data. It also offers more statistical software printouts and corresponding instructions for use that reflect the latest versions of the SAS, SPSS, and MINITAB software.

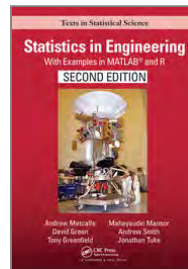
Chapman & Hall
 December 2015 : 1182pp
 Hb: 978-1-498-72885-0 : **£94.99**
 eBook: 978-0-429-07627-5

* For full contents and more information, visit: www.routledge.com/9781498728850

2ND EDITION

Statistics in Engineering

With Examples in MATLAB® and R, Second Edition



Andrew Metcalfe, **David Green**, **Tony Greenfield**,
Mayhayaudin Mansor, **Andrew Smith**, **Jonathan Tuke**

This is a textbook for an undergraduate course in statistics for engineers with a minimal calculus prerequisite. The second edition differs from existing books in three main aspects: it is the only introductory statistics textbook written for engineers that uses R throughout the text, there is an emphasis on statistical methods most relevant to engineers that are illustrated with practical applications, and there is an emphasis on random number generation and simulation, all very useful features in engineering.

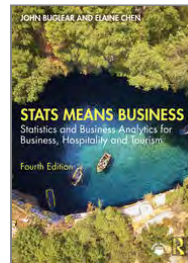
Chapman & Hall
 June 2020 : 810pp
 Pb: 978-0-367-57062-0 : **£51.99**
 Hb: 978-1-439-89547-4 : **£96.99**
 eBook: 978-1-315-11723-2

* For full contents and more information, visit: www.routledge.com/9780367570620

4TH EDITION

Stats Means Business

Statistics and Business Analytics for Business, Hospitality and Tourism



John Buglear, **Elaine Chen**

Stats Means Business is an introductory and comprehensive textbook written especially for Hospitality, Business and Tourism students who take statistics or quantitative methods modules. By minimising technical language, providing clear definitions of key terms and giving emphasis to interpretation rather than technique, this book caters to beginners in the subject. Stats Means Business is an ideal, accessible and practical introduction to statistics and quantitative research methods for Hospitality, Business and Tourism students.

Routledge
 April 2025 : 456pp
 Pb: 978-1-032-75021-7 : **£60.99**
 Hb: 978-1-032-75018-7 : **£155**
 eBook: 978-1-003-47202-5

* For full contents and more information, visit: www.routledge.com/9781032750217

A Tour of Data Science

Learn R and Python in Parallel



Nailong Zhang

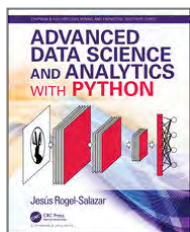
Series: Chapman & Hall/CRC Data Science Series

This book covers the fundamentals of data science, including programming, statistics, optimization, and machine learning in a single and short book. It does not cover everything, but instead, teaches the key concepts and topics. It also covers two of the most popular programming languages used in Data Science, R and Python, in one source.

Chapman & Hall
November 2020 : 216pp
Pb: 978-0-367-89586-0 : **£52.99**
Hb: 978-0-367-89706-2 : **£145**
eBook: 978-1-003-02064-6

* For full contents and more information, visit: www.routledge.com/9780367895860

Advanced Data Science and Analytics with Python



Jesús Rogel-Salazar Imperial College London, UK

Series: Chapman & Hall/CRC Data Mining and Knowledge Discovery Series

The book is intended for practitioners in data science and data analytics in both academic and business environments. It aims to present the reader with concepts in data science and analytics that were deemed to be more advanced or simply out of scope in the author's first book, and are used in data analytics using tools developed in Python such as SciKit Learn, Pandas, Numpy, etc. The use of Python is of particular benefit given its recent popularity in the data science community. The book is therefore a reference to be used by seasoned programmers and newcomers alike and the key benefit is the practical approach presented throughout the book.

Chapman & Hall
May 2020 : 424pp
Pb: 978-1-138-31506-8 : **£51.99**
Hb: 978-0-429-44661-0 : **£115**
eBook: 978-0-429-44664-1

* For full contents and more information, visit: www.routledge.com/9781138315068

2ND EDITION

Big Data and Social Science

Data Science Methods and Tools for Research and Practice



Edited by **Ian Foster** University of Chicago, Illinois, USA, **Rayid Ghani** University of Chicago, Illinois, USA, **Ron S. Jarmin**, **Frauke Kreuter** University of Mannheim, Germany; and Institute for Employment Research, Germany, **Julia Lane** New York University; American Institutes for Research, USA

Series: Chapman & Hall/CRC Statistics in the Social and Behavioral Sciences

This classroom-tested book fills a major gap in graduate- and professional-level data science and social science education. It can be used to train a new generation of social data scientists to tackle real-world problems and improve the skills and competencies of applied social scientists and public policy practitioners. It empowers you to use the massive and rapidly growing amounts of available data to interpret economic and social activities in a scientific and rigorous manner.

Chapman & Hall
November 2020 : 412pp
Pb: 978-0-367-56859-7 : **£60.99**
Hb: 978-0-367-34187-9 : **£155**
eBook: 978-0-429-32438-3

* For full contents and more information, visit: www.routledge.com/9780367568597

2ND EDITION

Data Science and Analytics with Python



Jesús Rogel-Salazar Imperial College London, UK

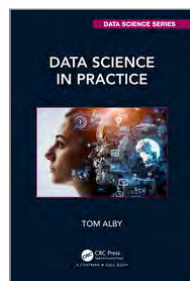
Series: Chapman & Hall/CRC Data Mining and Knowledge Discovery Series

Since the first edition, we have witnessed an unprecedented explosion in the interest and development within the fields of Artificial Intelligence and Machine Learning. This surge has led to the widespread adoption of the book, not just among business practitioners, but also by universities as a key textbook. Designed as a practical companion for data analysts and budding data scientists, this book assumes a working knowledge of programming and statistical modelling but aims to guide readers deeper into the wonders of data analytics and machine learning. Whether revisiting fundamental concepts or diving into new, advanced topics, this book offers something valuable for every reader.

Chapman & Hall
June 2025 : 514pp
Pb: 978-1-032-77249-3 : **£51.99**
Hb: 978-1-032-77252-3 : **£140**
eBook: 978-1-003-48206-2

* For full contents and more information, visit: www.routledge.com/9781032772493

Data Science in Practice



Tom Alby

Series: Chapman & Hall/CRC Data Science Series

Data Science in Practice is the ideal introduction to data science. With or without math skills: Here you get the all-round view that you need for your projects. This book describes how to properly question data, to unearth the treasure that data can be. As technology alone is not enough, this book also deals with problems in project implementation, illuminates various fields of application and addresses ethical aspects. Data Science in Practice includes many examples, notes on errors, decision-making aids and other practical tips, and is ideal as a complementary text for university students, or as a useful learning tool for those starting more data-related roles.

Chapman & Hall
September 2023 : 318pp
Pb: 978-1-032-50526-8 : **£61.99**
Hb: 978-1-032-50524-4 : **£160**
eBook: 978-1-003-42636-3

* For full contents and more information, visit: www.routledge.com/9781032505268

Data Science

A First Introduction



Tiffany Timbers University of British Columbia, **Trevor Campbell**, **Melissa Lee**

Series: Chapman & Hall/CRC Data Science Series

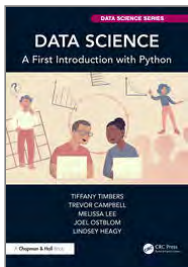
Data Science: A First Introduction focuses on using the R programming language in Jupyter notebooks to perform data manipulation and cleaning, create effective visualizations, and extract insights from data using classification, regression, clustering, and inference. The text emphasizes workflows that are clear, reproducible, and shareable, and includes coverage of the basics of version control. All source code is available online, demonstrating the use of good reproducible project workflows.

Chapman & Hall
July 2022 : 456pp
Pb: 978-0-367-52468-5 : **£55.99**
Hb: 978-0-367-53217-8 : **£140**
eBook: 978-1-003-08097-8

* For full contents and more information, visit: www.routledge.com/9780367524685

Data Science

A First Introduction with Python



Tiffany Timbers University of British Columbia, **Trevor Campbell**, **Melissa Lee** Assistant Professor, Uni of British Columbia, Canada, **Joel Ostblom**, **Lindsey Heagy** Professor, Uni of British Columbia, Canada

Series: *Chapman & Hall/CRC Data Science Series*

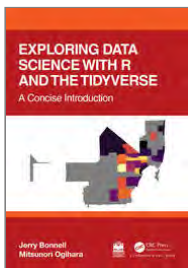
This book focuses on using the Python programming language in Jupyter notebooks to perform data manipulation and cleaning, create effective visualizations, and extract insights from data using classification, regression, clustering, and inference. The text emphasizes workflows that are clear, reproducible, and shareable, and includes coverage of the basics of version control. All source code is available online, demonstrating the use of good reproducible project workflows. The book is designed for learners from all disciplines with minimal prior knowledge of mathematics and programming. The authors have honed the material through years of experience teaching.

Chapman & Hall
August 2024 : 452pp
Pb: 978-1-032-57223-9 : **£61.99**
Hb: 978-1-032-57219-2 : **£160**
eBook: 978-1-003-43839-7

* For full contents and more information, visit: www.routledge.com/9781032572239

Exploring Data Science with R and the Tidyverse

A Concise Introduction



Jerry Bonnell, **Mitsunori Ogihara** University of Miami, Coral Gables, Florida, USA

This book introduces the reader to data science using R and the tidyverse. No prerequisite knowledge is needed in college-level programming or mathematics (e.g., calculus or statistics). The book is self-contained so readers can immediately begin building data science workflows without needing to reference extensive amounts of external resources for onboarding. The contents are targeted for undergraduate students but are equally applicable to students at the graduate level and beyond. The book develops concepts using many real-world examples to motivate the reader. An exercise set is made available and designed for compatibility with automated grading tools for instructor use.

Chapman & Hall
August 2023 : 492pp
Pb: 978-1-032-34170-5 : **£80.99**
Hb: 978-1-032-32950-5 : **£205**
eBook: 978-1-003-32084-5

* For full contents and more information, visit: www.routledge.com/9781032341705

Foundations of Data Science with Python



John M. Shea

Series: *Chapman & Hall/CRC The Python Series*

Foundations of Data Science with Python introduces readers to the fundamentals of data science, including data manipulation and visualization, probability, statistics, and dimensionality reduction. This book is targeted toward engineers and scientists, but it should be readily understandable to anyone who knows basic calculus and the essentials of computer programming. This book can be used as an undergraduate textbook for an Introduction to Data Science course or to provide a more contemporary approach in courses like Engineering Statistics. It is also intended to be accessible to practicing engineers and scientists.

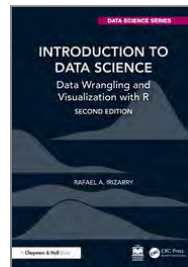
Chapman & Hall
February 2024 : 496pp
Pb: 978-1-032-35042-4 : **£77.99**
Hb: 978-1-032-34674-8 : **£200**
eBook: 978-1-003-32499-7

* For full contents and more information, visit: www.routledge.com/9781032350424

2ND EDITION

Introduction to Data Science

Data Wrangling and Visualization with R



Rafael A. Irizarry

Series: *Chapman & Hall/CRC Data Science Series*

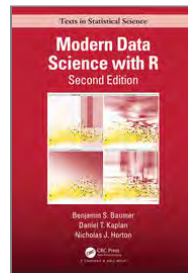
Thoroughly revised and updated, this is the first book of the second edition of Introduction to Data Science: Data Wrangling and Visualization with R. It introduces skills that can help you tackle real-world data analysis challenges. No previous knowledge of R is necessary, although some experience with programming may be helpful. If you read and understand all the chapters and complete all the exercises in this book, and understand statistical concepts, you will be well-positioned to perform basic data analysis tasks and you will be prepared to learn the more advanced concepts and skills needed to become an expert.

Chapman & Hall
August 2024 : 346pp
Hb: 978-1-032-11655-6 : **£62.99**
eBook: 978-1-003-22092-3

* For full contents and more information, visit: www.routledge.com/9781032116556

2ND EDITION

Modern Data Science with R



Benjamin S. Baumer Smith College, Northampton, MA, **Daniel T. Kaplan** Smith College, Northampton, MA, **Nicholas J. Horton** Amherst College, Amherst, MA

Series: *Chapman & Hall/CRC Texts in Statistical Science*

New data technologies and database systems facilitate scraping data and merging information from different sources and formats and restructuring data into a form suitable for analysis. State-of-the-art workflow and tools foster well-documented and reproducible analysis. Modern statistical methods allow the analyst to fit and assess models as well as to undertake supervised or unsupervised learning to extract information. Contemporary data science requires tight integration of these statistics, computing, data skills, mathematics, and communication. The text is intended for readers with some background in statistics and modest prior experience in scripting and programming.

Chapman & Hall
April 2021 : 650pp
Hb: 978-0-367-19149-8 : **£94.99**
eBook: 978-0-429-20071-7

* For full contents and more information, visit: www.routledge.com/9780367191498

Practitioner's Guide to Data Science



Hui Lin, **Ming Li**

Series: *Chapman & Hall/CRC Data Science Series*

This book aims to increase the visibility of data science in real-world, which differs from what you learn from a typical textbook. Many aspects of day-to-day data science work are almost absent from conventional statistics, machine learning, and data science curriculum. This book is for readers who want to explore possible career paths and eventually become data scientists. This book comprehensively introduces various data science fields, and programming skills in data science projects. Traditional data-related practitioners such as statisticians, business analysts, and data analysts will find this book helpful in expanding their skills for future data science careers.

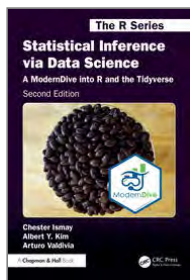
Chapman & Hall
May 2023 : 402pp
Pb: 978-0-815-35439-0 : **£57.99**
Hb: 978-0-815-35447-5 : **£155**
eBook: 978-1-351-13291-6

* For full contents and more information, visit: www.routledge.com/9780815354390

2ND EDITION

Statistical Inference via Data Science

A ModernDive into R and the Tidyverse



Chester Ismay DataCamp, **Albert Y. Kim**, **Arturo Valdivia**

Series: Chapman & Hall/CRC The R Series

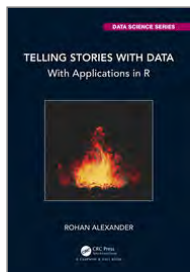
Offers a comprehensive guide to learning statistical inference with data science tools widely used in industry, academia, and government. Ideal for those new to statistics or looking to deepen their knowledge, this edition provides a clear entry point into data science and modern statistical methods.

Chapman & Hall
May 2025 : 490pp
Pb: 978-1-032-70837-9 : **£68.99**
Hb: 978-1-032-72451-5 : **£170**
eBook: 978-1-032-72454-6

* For full contents and more information, visit: www.routledge.com/9781032708379

Telling Stories with Data

With Applications in R



Rohan Alexander

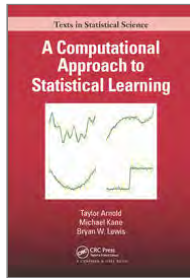
Series: Chapman & Hall/CRC Data Science Series

The book equips students with the end-to-end skills needed to do data science. That means gathering, cleaning, preparing, and sharing data, then using statistical models to analyse data, writing about the results of those models, drawing conclusions from them, and finally, using the cloud to put a model into production, all done in a reproducible way. This book will achieve the goals by working through extensive case studies in terms of gathering and preparing data, and integrating ethics throughout. It is specifically designed around teaching how to write about the data and models, so aspects such as writing are explicitly covered.

Chapman & Hall
July 2023 : 622pp
Hb: 978-1-032-13477-2 : **£83.99**
eBook: 978-1-003-22940-7

* For full contents and more information, visit: www.routledge.com/9781032134772

A Computational Approach to Statistical Learning



Taylor Arnold , Michael Kane , Bryan W. Lewis

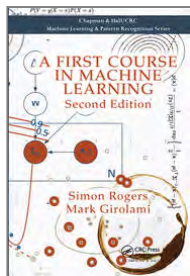
This book synthesizes those techniques from numerical analysis, algorithms, data structures, and optimization theory most commonly employed in statistics and machine learning. We provide concrete applications of these methods by giving complete reference implementations for a large set of the most commonly used statistical estimators. The goal is to provide a self-contained textbook explaining the inner algorithmic workings of statistical estimators.

Chapman & Hall
June 2020 : 374pp
Pb: 978-0-367-57061-3 : **£51.99**
Hb: 978-1-138-04637-5 : **£86.99**
eBook: 978-1-315-17140-1

* For full contents and more information, visit: www.routledge.com/9780367570613

2ND EDITION

A First Course in Machine Learning



Simon Rogers , Mark Girolami

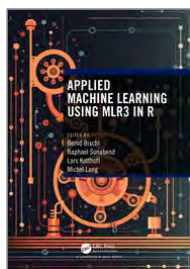
Series: Chapman & Hall/CRC Machine Learning & Pattern Recognition

The new edition of this popular, undergraduate textbook has been revised and updated to reflect current growth areas in Machine Learning. The new edition includes three new chapters with more detailed discussion of Markov Chain Monte Carlo techniques, Classification and Regression with Gaussian Processes, and Dirichlet Process models. Previous chapters have also been updated to reflect new developments in Machine Learning, and correct any previous errors in the text.

Chapman & Hall
June 2020 : 428pp
Pb: 978-0-367-57464-2 : **£45.99**
Hb: 978-1-498-73848-4 : **£72.99**
eBook: 978-1-315-38215-9

* For full contents and more information, visit: www.routledge.com/9780367574642

Applied Machine Learning Using mlr3 in R



Edited by **Bernd Bischl , Raphael Sonabend , Lars Kotthoff , Michel Lang**

mlr3 is an award-winning ecosystem of R packages that have been developed to enable state-of-the-art machine learning capabilities in R. This book gives an overview of flexible and robust machine learning methods, with an emphasis on how to implement them using mlr3 in R. It covers many key topics, including basic machine learning tasks, such as building and evaluating a predictive model; hyperparameter tuning of machine learning approaches to obtain peak performance; building machine learning pipelines that perform complex operations

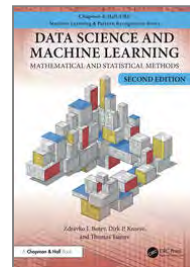
Chapman & Hall
January 2024 : 356pp
Pb: 978-1-032-50754-5 : **£67.99**
Hb: 978-1-032-51567-0 : **£175**
eBook: 978-1-003-40284-8

* For full contents and more information, visit: www.routledge.com/9781032507545

2ND EDITION

Data Science and Machine Learning

Mathematical and Statistical Methods, Second Edition



Zdravko Botev University of New South Wales, **Dirk P. Kroese** , **Thomas Taimre**

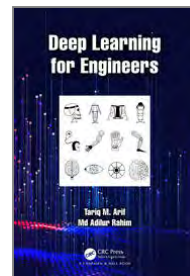
Series: Chapman & Hall/CRC Machine Learning & Pattern Recognition

The purpose of Data Science and Machine Learning: Mathematical and Statistical Methods is to provide an accessible, yet comprehensive textbook intended for students interested in gaining a better understanding of the mathematics and statistics that underpin the rich variety of ideas and machine learning algorithms in data science. This expanded second edition provides updates across key areas of statistical learning.

Chapman & Hall
November 2025 : 758pp
Hb: 978-1-032-48868-4 : **£78.99**
eBook: 978-1-003-39117-3

* For full contents and more information, visit: www.routledge.com/9781032488684

Deep Learning for Engineers



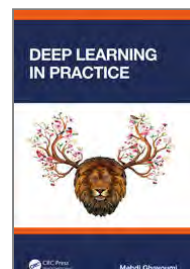
Tariq M. Arif Weber State University Ogden, UT, **Md Adilur Rahim** Louisiana State University Baton Rouge, LA

As a comprehensive guideline for applying deep learning models in practical settings, this book features an easy-to-understand coding structure using Python and PyTorch with an in-depth explanation of four typical deep learning case studies on image classification, object detection, semantic segmentation, and image captioning. Science and engineering students, academic researchers, and industry professionals will find the contents useful.

Chapman & Hall
February 2024 : 170pp
Pb: 978-1-032-51581-6 : **£52.99**
Hb: 978-1-032-50473-5 : **£94.99**
eBook: 978-1-003-40292-3

* For full contents and more information, visit: www.routledge.com/9781032515816

Deep Learning in Practice



Mehdi Ghayoumi University of San Diego

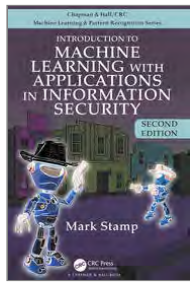
Deep Learning in Practice helps you learn how to develop and optimize a model for your projects using Deep Learning (DL) methods and architectures. This book is useful for undergraduate and graduate students, as well as practitioners in industry and academia. It will serve as a useful reference for learning deep learning fundamentals and implementing a deep learning model for any project, step by step.

Chapman & Hall
June 2025 : 218pp
Pb: 978-0-367-45658-0 : **£44.99**
Hb: 978-0-367-45862-1 : **£82.99**
eBook: 978-1-003-02581-8

* For full contents and more information, visit: www.routledge.com/9780367456580

2ND EDITION

Introduction to Machine Learning with Applications in Information Security



Mark Stamp Department of Computer Science, San Jose State University

Series: Chapman & Hall/CRC Machine Learning & Pattern Recognition

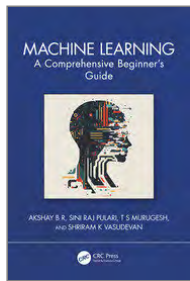
Introduction to Machine Learning with Applications in Information Security, Second Edition provides a classroom-tested introduction to a wide variety of machine learning and deep learning algorithms and techniques, reinforced via realistic applications. The book is accessible and doesn't prove theorems, or dwell on mathematical theory. The goal is to present topics at an intuitive level, with just enough detail to clarify the underlying concepts. The applications presented serve to demystify the topics by illustrating the use of various learning techniques in straightforward scenarios.

Chapman & Hall
December 2024 : 548pp
Pb: 978-1-032-20717-9 : **£47.99**
Hb: 978-1-032-20492-5 : **£70.99**
eBook: 978-1-003-26487-3

* For full contents and more information, visit: www.routledge.com/9781032207179

Machine Learning

A Comprehensive Beginner's Guide



Akshay B R, **Sini Raj Pulari**, **T.S. Murugesh Govt. College of Engineering Srirangam, Tamil Nadu**, **Shriram K. Vasudevan Intel India Pvt Ltd., Tamil Nadu**

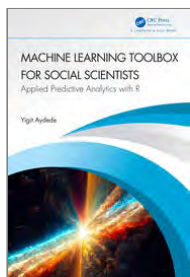
Machine learning is a dynamic and rapidly expanding field focused on creating algorithms that empower computers to recognize patterns, make predictions, and continually enhance performance. Dive into this fascinating field to master machine learning concepts with the step-by-step approach outlined in this book and contribute to its exciting future.

CRC Press
July 2024 : 258pp
Pb: 978-1-032-67666-1 : **£50.99**
Hb: 978-1-032-67665-4 : **£135**
eBook: 978-1-032-67668-5

* For full contents and more information, visit: www.routledge.com/9781032676661

Machine Learning Toolbox for Social Scientists

Applied Predictive Analytics with R



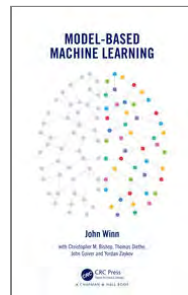
Yigit Aydede Professor, Saint Mary's University

Machine Learning Toolbox for Social Scientists covers predictive methods with complementary statistical "tools" that make it mostly self-contained. The inferential statistics is the traditional framework for most data analytics courses in social science and business fields, especially in Economics and Finance. The new organization that this book offers goes beyond standard machine learning code applications, providing intuitive backgrounds for new predictive methods that social science and business students can follow. The modern statistical methods the book provides allows it to be effectively used in teaching in the social science and business fields.

Chapman & Hall
September 2023 : 600pp
Hb: 978-1-032-46395-7 : **£86.99**
eBook: 978-1-003-38150-1

* For full contents and more information, visit: www.routledge.com/9781032463957

Model-Based Machine Learning



John Winn Microsoft Research Ltd., Cambridge, United Kingdom

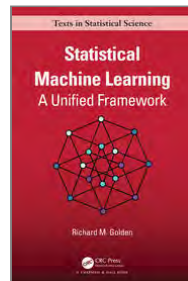
Machine learning is being applied to a growing variety of problems in a variety of domains. A fundamental challenge when using machine learning is connecting the abstract mathematics of a machine learning technique to real world problems. This book tackles this through model-based machine learning, focusing on understanding the assumptions encoded in a machine learning system and their impact on the behaviour of the system. The key ideas of model-based machine learning are introduced through case studies involving real-world applications. It aims not just to explain machine learning methods, but also how to create, debug, and evolve them to solve a problem.

Chapman & Hall
October 2023 : 468pp
Hb: 978-1-498-75681-5 : **£75.99**
eBook: 978-0-429-19268-5

* For full contents and more information, visit: www.routledge.com/9781498756815

Statistical Machine Learning

A Unified Framework



Richard Golden

Series: Chapman & Hall/CRC Texts in Statistical Science

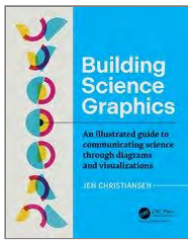
For advanced undergraduate students, graduate students, and professional. Presents a wide range of popular, disparate, and diverse machine learning algorithms within a unified theoretical framework, characterized by a collection of carefully chosen theorems from the fields of nonlinear optimization theory and mathematical statistics which respectively characterize both asymptotic behavior and generalization performance. The purpose is to teach students how to confidently apply these theorems in practice. The only required mathematical prerequisites are lower-division linear algebra, lower-division calculus, and an upper-division calculus-based course in probability theory.

Chapman & Hall
July 2020 : 524pp
Hb: 978-1-138-48469-6 : **£125**
eBook: 978-1-351-05150-7

* For full contents and more information, visit: www.routledge.com/9781138484696

Building Science Graphics

An Illustrated Guide to Communicating Science through Diagrams and Visualizations



Jen Christiansen

Series: AK Peters Visualization Series

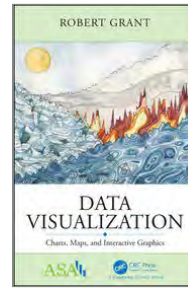
Building Science Graphics is a practical guide for anyone interested in creating science-centric illustrated explanatory diagrams. Starting with a clear introduction to the concept of information graphics and their role in contemporary science communication, it then outlines a process for creating graphics using evidence-based design strategies. The heart of the book is composed of two step-by-step graphical worksheets, designed to help jump-start any new project.

A K Peters/CRC Press
August 2022 : 357pp
Pb: 978-1-032-10674-8 : **£44.99**
Hb: 978-1-032-10940-4 : **£105**
eBook: 978-1-003-21781-7

* For full contents and more information, visit: www.routledge.com/9781032106748

Data Visualization

Charts, Maps, and Interactive Graphics



Robert Grant Kingston University & St George's, University of London

Series: ASA-CRC Series on Statistical Reasoning in Science and Society

This is the age of data. There are more innovations and more opportunities for interesting work with data than ever before, but there is also an overwhelming amount of quantitative information being published every day. Data visualisation has become big business, because communication is the difference between success and failure, no matter how clever the analysis may have been. The ability to visualize data is now a skill in demand across business, government, NGOs and academia. Data Visualization: Charts, Maps, and Interactive Graphics gives an overview of a wide range of techniques and challenges, while staying accessible to anyone interested in working with and understanding data.

Chapman & Hall
December 2018 : 248pp
Pb: 978-1-138-70760-3 : **£24.99**
Hb: 978-1-138-55359-0 : **£89.99**
eBook: 978-1-315-20135-1

* For full contents and more information, visit: www.routledge.com/9781138707603

CHART

Designing Creative Data Visualizations from Charts to Art



Nadieh Bremer

Series: AK Peters Visualization Series

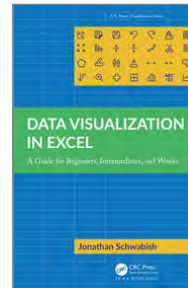
CHART is a guide to unleashing creativity in data visualization. It takes you on a journey along the spectrum from an ordinary chart to data art, packed with ways to bring more creativity into any visualization. It will help to make your visuals more compelling and memorable, long after the numbers have been crunched. The author shares thirteen hands-on, tool-agnostic lessons, each filled with actionable insights and unique perspectives. Between these core lessons, you'll find tips, mini-chapters, and dozens of real-world examples from both client and personal projects. Designed for journalists, data analysts, business professionals, and newcomers alike.

A K Peters/CRC Press
June 2025 : 284pp
Hb: 978-1-032-79775-5 : **£37.99**
eBook: 978-1-003-49780-6

* For full contents and more information, visit: www.routledge.com/9781032797755

Data Visualization in Excel

A Guide for Beginners, Intermediates, and Wonks



Jonathan Schwabish

Series: AK Peters Visualization Series

Data Visualization in Excel closes the gap between what people think Excel can do and what they can achieve in the tool. Over the past few years, recognition of the importance of effectively visualizing data has led to an explosion data analysis and visualization software tools. But for many people, Microsoft Excel continues to be the workhorse for their data visualization needs, not to mention the only tool that many data workers have access to. This book is the perfect guide for anyone who wants to create better, more effective, and more engaging data visualizations.

A K Peters/CRC Press
May 2023 : 400pp
Pb: 978-1-032-34326-6 : **£26.99**
Hb: 978-1-032-34328-0 : **£81.99**
eBook: 978-1-032-48782-3 : **£22.99**

* For full contents and more information, visit: www.routledge.com/9781032343266

Data Sketches

A journey of imagination, exploration, and beautiful data visualizations



Nadieh Bremer, Shirley Wu

Series: AK Peters Visualization Series

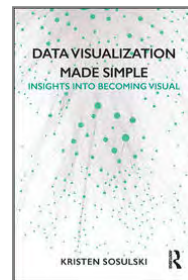
In Data Sketches, Nadieh Bremer and Shirley Wu document the creative and collaborative process behind 24 unique data visualization projects, spanning different topics, technologies, and forms. Features: Technical write-ups with beginner-friendly explanations of core concepts; Practical lessons on data and design challenges; Full-color; Interview with Tamara Munzner; Foreword by Alberto Cairo. This book is perfect for anyone interested or working in data visualization and information design, especially those who want to take their work to the next level and are inspired by unique and compelling data-driven storytelling.

A K Peters/CRC Press
February 2021 : 428pp
Pb: 978-0-367-00008-0 : **£41.99**
Hb: 978-0-367-00012-7 : **£115**
eBook: 978-0-429-44501-9

* For full contents and more information, visit: www.routledge.com/9780367000080

Data Visualization Made Simple

Insights into Becoming Visual



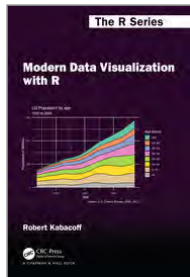
Kristen Sosulski New York University, USA

Data Visualization Made Simple is a practical guide to the fundamentals, strategies, and real-world cases for data visualization, an essential skill required in today's information-rich world. With foundations rooted in statistics, psychology, and computer science, data visualization offers practitioners in almost every field a coherent way to share findings from original research, big data, learning analytics, and more. Both novices and seasoned designers in education, business, and other areas can use this book's effective, linear process to develop data visualization literacy and promote exploratory, inquiry-based approaches to visualization problems.

Routledge
October 2018 : 284pp
Pb: 978-1-138-50391-5 : **£39.99**
Hb: 978-1-138-50387-8 : **£160**
eBook: 978-1-315-14609-6

* For full contents and more information, visit: www.routledge.com/9781138503915

Modern Data Visualization with R



Robert Kabacoff

Series: Chapman & Hall/CRC The R Series

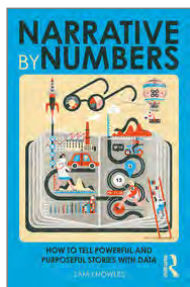
Describes ways that raw and summary data can be turned into visualizations that convey meaningful insights: basic graphs, bar charts, scatter plots, and line charts, and progresses to tree maps, alluvial plots, radar charts, mosaic plots, grouped dot plots, effects plots, multivariate presentations such as corrgrams, biplots, network diagrams.

Chapman & Hall
March 2024 : 271pp
Pb: 978-1-032-28760-7 : **£67.99**
Hb: 978-1-032-28949-6 : **£175**
eBook: 978-1-003-29927-1

* For full contents and more information, visit: www.routledge.com/9781032287607

Narrative by Numbers

How to Tell Powerful and Purposeful Stories with Data



Sam Knowles

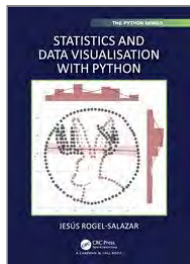
Series: Using Data Better

As jobs in the knowledge economy become increasingly similar, there are two core skills that everyone needs if they are going to thrive and succeed and to make a difference. These are the ability to interrogate and make sense of data, and the ability to use the insights extracted from the data to persuade others to take action. Analytics + storytelling = influence. Humans are hardwired to respond to stories and story structure. There are some simple and effective rules of data-driven storytelling that will help everyone tell more compelling, evidence-based stories, whoever they need to convince to create positive change. Narrative by Numbers shows you how.

Routledge
March 2018 : 176pp
Pb: 978-0-815-35314-0 : **£39.99**
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eBook: 978-1-351-13722-5

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Statistics and Data Visualisation with Python



Jesús Rogel-Salazar Imperial College London, UK

Series: Chapman & Hall/CRC The Python Series

Statistics and Data Visualisation with Python aims to build statistical knowledge from the ground up by enabling the reader to understand the ideas behind inferential statistics, and begin to formulate hypotheses that form the foundations for the applications and algorithms in statistical analysis, business analytics, machine learning and applied machine learning. This book is intended to serve as a bridge in statistics for graduates and business practitioners interested in using their skills in the area of statistical science, and data science and analytics, acting as a refresher for readers that have taken some courses in statistics, but no not necessarily use it in their daily work.

Chapman & Hall
January 2023 : 554pp
Pb: 978-0-367-74451-9 : **£49.99**
Hb: 978-0-367-74936-1 : **£135**
eBook: 978-1-003-16035-9

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The Data Storytelling Workbook



Anna Feigenbaum , Aria Alamalhodaie

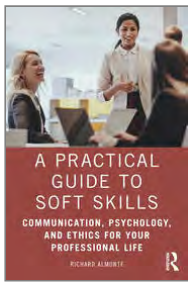
From tracking down information to symbolising human experiences, this book is your guide for telling more effective, empathetic and evidence-based data stories. Wide-ranging and in-depth, this interdisciplinary book is essential for students and researchers in journalism, communication, media, visual arts and cultural studies, as well as any who use data analysis and visualisation within their field.

Routledge
March 2020 : 256pp
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Hb: 978-1-138-05210-9 : **£155**
eBook: 978-1-315-16801-2

* For full contents and more information, visit: www.routledge.com/9781138052116

A Practical Guide to Soft Skills

Communication, Psychology, and Ethics for Your Professional Life



Richard Almonte

This accessible text overviews the range of soft skills sought after by employers and provides a practical guide to developing and effectively demonstrating these skills. The book can be used as a supplement for communication, business, and career-oriented courses, and will be of interest to individual students and junior professionals as well as career counsellors, postsecondary instructors across the curriculum, and professionals in human resources and learning and development.

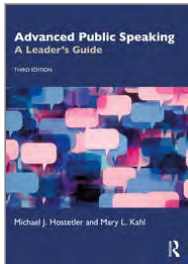
Routledge
December 2021 : 188pp
Pb: 978-1-032-07105-3 : **£47.99**
Hb: 978-1-032-08101-4 : **£160**
eBook: 978-1-003-21294-2

* For full contents and more information, visit: www.routledge.com/9781032071053

3RD EDITION

Advanced Public Speaking

A Leader's Guide



Michael J. Hostetler St. John's University, USA, **Mary L. Kahl**

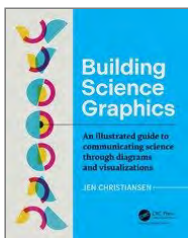
Providing users with the opportunity to increase their speaking abilities across a wide variety of complex and specific contexts, this student-engagement focused and flexible text serves as a core textbook for upper-level undergraduate public speaking courses.

Routledge
March 2024 : 212pp
Pb: 978-1-032-53186-1 : **£66.99**
Hb: 978-1-032-53187-8 : **£150**
eBook: 978-1-003-41078-2

* For full contents and more information, visit: www.routledge.com/9781032531861

Building Science Graphics

An Illustrated Guide to Communicating Science through Diagrams and Visualizations



Jen Christiansen

Series: *AK Peters Visualization Series*

Building Science Graphics is a practical guide for anyone interested in creating science-centric illustrated explanatory diagrams. Starting with a clear introduction to the concept of information graphics and their role in contemporary science communication, it then outlines a process for creating graphics using evidence-based design strategies. The heart of the book is composed of two step-by-step graphical worksheets, designed to help jump-start any new project.

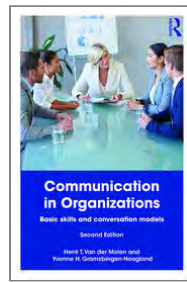
A K Peters/CRC Press
August 2022 : 357pp
Pb: 978-1-032-10674-8 : **£44.99**
Hb: 978-1-032-10940-4 : **£105**
eBook: 978-1-003-21781-7

* For full contents and more information, visit: www.routledge.com/9781032106748

2ND EDITION

Communication in Organizations

Basic Skills and Conversation Models



Henk T. Van der Molen, **Yvonne Gramsbergen-Hoogland**

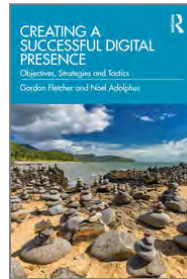
This new edition continues to give clear advice and guidance on communicating in a range of different contexts in the workplace. From handling complaints and breaking bad news to negotiating deals and giving presentations, the book explores the building blocks to effective communication skills, nurturing the leadership qualities required in any organization. Illustrated with concrete examples throughout, the new edition includes a new chapter on career coaching, as well as exercises and ideas for role-play to enable the ideas to come alive. This will be an invaluable book for students of management and business psychology, as well as those taking courses who are already in the workplace.

Routledge
October 2018 : 214pp
Pb: 978-1-138-55212-8 : **£35.99**
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eBook: 978-1-315-14796-3

* For full contents and more information, visit: www.routledge.com/9781138552128

Creating a Successful Digital Presence

Objectives, Strategies and Tactics



Gordon Fletcher, **Noel Adolphus**

Increasingly graduates, and anyone entering employment, need an individual digital presence to showcase themselves to secure their first professional role. It takes an employability approach to encourage readers to recognise and deliver an effective digital presence. By using a strategic and systematic process, this book draws together academic thinking with practical outcomes. It is essential reading for advanced undergraduate and postgraduate students studying any discipline related to the digital world, particularly digital marketing and digital business, entrepreneurship and strategy, as well as those taking employability and personal professional development programmes.

Routledge
July 2021 : 212pp
Pb: 978-0-367-46037-2 : **£41.99**
Hb: 978-0-367-46034-1 : **£155**
eBook: 978-1-003-02658-7

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English for Business Communication



Mable Chan

Series: *Routledge Applied English Language Introductions*

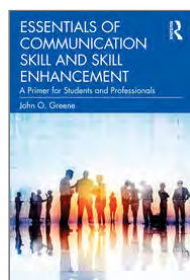
This textbook provides a comprehensive introduction for students and professionals who are studying English for business or workplace communication and covers both spoken and written English. Based on up-to-date research in business communication and incorporating an international range of real-world authentic texts, this book deals with the realities of communication in business today. This book goes beyond the traditional coverage of business English to provide a broad and practical textbook for those studying English in a workplace setting.

Routledge
January 2020 : 246pp
Pb: 978-1-138-48168-8 : **£39.99**
Hb: 978-1-138-48167-1 : **£155**
eBook: 978-1-351-06003-5

* For full contents and more information, visit: www.routledge.com/9781138481688

Essentials of Communication Skill and Skill Enhancement

A Primer for Students and Professionals



John O. Greene

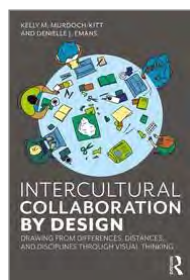
For those who wish to learn or teach the tools of skillful communication, this book provides concrete insight into what makes a person a successful communicator. Predicated on four simple notions—that communication can be done well or poorly, that communication skills matter, that people differ in those skills, and that those skills can be improved—the book helps readers identify and enhance their own communication strengths and address weaknesses, assess the communication skills of others, and coach others to improvement. This book is written for students and professionals in fields such as human resources, sales, training, counseling, customer relations, education, and healthcare.

Routledge
March 2021 : 174pp
Pb: 978-0-367-53428-8 : **£40.99**
Hb: 978-0-367-53838-5 : **£155**
eBook: 978-1-003-08345-0

* For full contents and more information, visit: www.routledge.com/9780367534288

Intercultural Collaboration by Design

Drawing from Differences, Distances, and Disciplines Through Visual Thinking



Kelly Murdoch-Kitt, Denielle Emans

Intercultural Collaboration by Design introduces a framework for collaborating across cultures and learning to use multicultural perspectives to address pressing global issues. With over 30 hands-on activities, this book will be of great interest to diverse teams from a variety of disciplines who want to enhance intercultural learning and co-working. Whether in the classroom or workplace, the activities are appropriate for a variety of collaboration contexts, without a need for background in art or design.

Routledge
January 2020 : 308pp
Pb: 978-0-367-21931-4 : **£35.99**
Hb: 978-0-367-21932-1 : **£140**
eBook: 978-0-429-26882-3

* For full contents and more information, visit: www.routledge.com/9780367219314

Interpersonal Skills for Group Collaboration

Creating High-Performance Teams in the Classroom and the Workplace



Tammy Rice-Bailey Milwaukee School of Engineering, USA, **Felicia Chong**

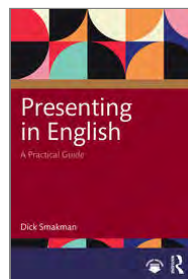
This lively and engaging text introduces readers to the core interpersonal and organizational skills needed to effectively collaborate on group projects in the classroom and the workplace. This guide can be used as a supplementary text for any courses involving group projects, and will also be of interest to professionals in communication, business, and many other fields.

Routledge
February 2023 : 142pp
Pb: 978-1-032-25906-2 : **£38.99**
Hb: 978-1-032-25907-9 : **£140**
eBook: 978-1-003-28557-1

* For full contents and more information, visit: www.routledge.com/9781032259062

Presenting in English

A Practical Guide



Dick Smakman

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Routledge
June 2024 : 230pp
Pb: 978-1-032-62532-4 : **£40.99**
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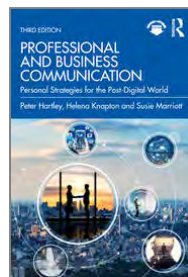
Routledge
April 2024 : 246pp
Pb: 978-1-032-53763-4 : **£105**
Hb: 978-1-032-54052-8 : **£235**
eBook: 978-1-032-72308-2 : **£96.99**

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Professional and Business Communication

Personal Strategies for the Post-Digital World



Peter Hartley Edge Hill University, UK, **Susie Marriott**, **Helena Knapton**

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Hb: 978-1-032-28586-3 : **£155**
eBook: 978-1-003-29755-0

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Research, Theory and Practice

**Owen Hargie**

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Routledge

November 2021 : 678pp

Pb: 978-1-032-00878-3 : **£55.99**Hb: 978-1-032-02185-0 : **£155**

eBook: 978-1-003-18226-9

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A Guide to Formats, Production and Authentic Delivery

**Jamie Cohen , Michael Sorrentino**

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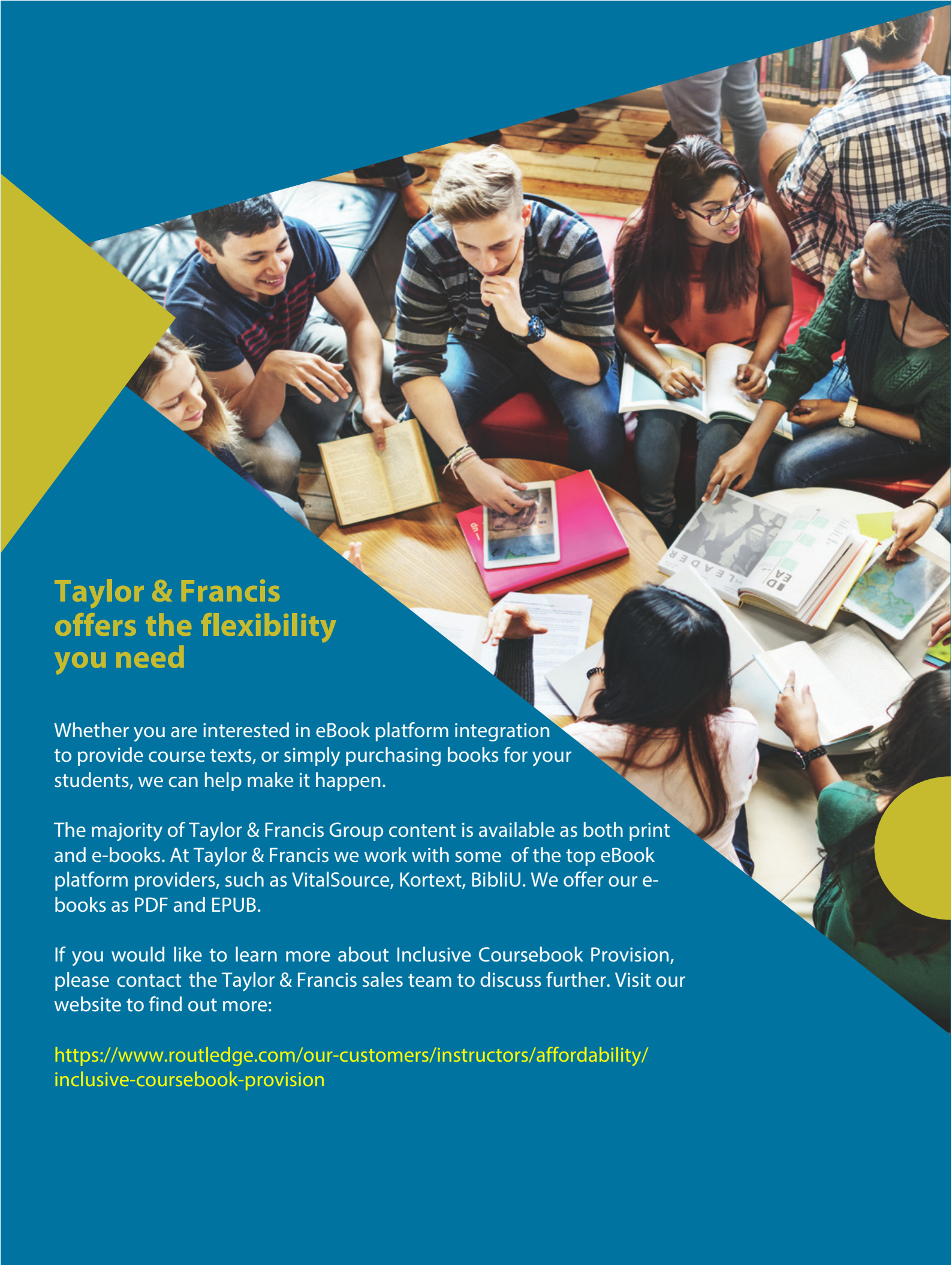
Routledge

March 2023 : 232pp

Pb: 978-1-032-25777-8 : **£38.99**Hb: 978-1-032-27185-9 : **£140**

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