

Engineering Your Future An Australasian Guide 2nd

Dowling's Engineering Your Future: An Australasian Guide, Fourth Edition is used for first year, core subjects across all Engineering disciplines. Building on the previous editions, this text has been updated with new references, while still maintaining a strong and practical emphasis on skills that are essential for problem solving and design. Numerous topical and locally focused examples of projects across engineering disciplines help demonstrate the role and responsibilities of a professional engineer. Themes of sustainability, ethical practice and effective communication are a constant throughout the text. This full-coloured print with interactive e-text resource has a variety of digital media embedded at the point of learning such as videos and knowledge-check questions to engage students and to help consolidate their learning.

City and state governments around the world are struggling to achieve environmentally sustainable transport. Economic, technological, city and transport planning and human behaviour solutions are often hampered by ineffective implementation. So attention is now turning to institutional, governmental and political barriers. Approaches to these implementation problems assume that transport ownership can only be public (owned by state entities) or private (corporate or personal). Another option – largely unexplored to date – is communal ownership of transport. Community-Owned Transport proposes and develops the notion that communal ownership has a historical basis and provides unique opportunities for providing personal mobility. It looks at the historical roots of modern urban transport's failings as those of technological change and the associated governing of transport systems, particularly the role of public sector institutions. Community ownership is explored through the new 'sharing economy' developments – car sharing, ridesharing and bicycle share schemes – and older social innovations in ecovillages and communal living. Models and practices of community ownership of transport are provided and this study also discusses how community ownership might contribute to sustainable transport. Drawing widely on different disciplines and fields of scholarship, this book explores the conceptual and practical aspects of communal ownership of transport. It will be a valuable resource for those seeking innovative approaches to addressing the pressing problems of transport, including graduate and postgraduate students, as well as policymakers, practitioners and community groups.

The development of complex cultural behaviour in our own species is perhaps the most significant research issue in modern archaeology. Until recently, it was believed that our capacity for language and art only developed after some of our ancestors reached Europe around 40,000 years ago. Archaeological discoveries in Africa now show that modern humans were practicing symbolic behaviours prior to their dispersal from that continent, and more recent discoveries in Indonesia and Australia are once again challenging ideas about human cultural development. Despite these significant discoveries and exciting potentials, there is a curious absence of published information about Asia-Pacific region, and consequently, global narratives of our most celebrated cognitive accomplishment — art — has consistently underrepresented the contribution of Southeast Asia, Australia, and the Pacific Islands. This volume provides the first outline of what this region has to offer to the world of art in archaeology. Readers undertaking tertiary archaeology courses interested in the art of the Asia-Pacific region or human behavioural evolution, along with anyone who is fascinated by the development of our modern ability to decorate ourselves and our world, should find this book a good addition to their library.

Every once in awhile, there is a book with a message so timeless, so universal, that it transcends generations. The Unwritten Laws of

Business is such a book. Originally published over 60 years ago as *The Unwritten Laws of Engineering*, it has sold over 100,000 copies, despite the fact that it has never been available before to general readers. Fully revised for business readers today, here are but a few of the gems you'll find in this little-known business classic: If you take care of your present job well, the future will take care of itself. The individual who says nothing is usually credited with having nothing to say. Whenever you are performing someone else's function, you are probably neglecting your own. Martyrdom only rarely makes heroes, and in the business world, such heroes and martyrs often find themselves unemployed.

This book gathers the proceedings of the fifteenth International Conference on Management Science and Engineering Management (ICMSEM 2021) held on August 1-4, 2021, at the University of Castilla-La Mancha (UCLM), Toledo, Spain. The proceedings contains theoretical and practical research of decision support systems, complex systems, empirical studies, sustainable development, project management, and operation optimization, showing advanced management concepts and demonstrates substantial interdisciplinary developments in MSEM methods and practical applications. It allows researchers and practitioners in management science and engineering management (MSEM) to share their latest insights and contribution. Meanwhile, it appeals to readers interested in these areas, especially those looking for new ideas and research directions.

A brief introduction to the field of engineering.

Unlike most books on this subject, *Productive Safety Management*, described in this book, integrates occupational health and safety, human resource management, environmental management, and engineering to provide a whole-business approach to effective safety management. The book helps companies to reduce and manage risk by providing, analysing and improving systems in place within the company. It also looks at how external factors can affect company decision making and provides a tool to make sure that a health and safety management system is strategically aligned, appropriately resourced, and that it maximises employee commitment. Chapters on human resource management explore cultural issues and explain how to gain commitment to company objectives. The book has been written for managers and supervisors working in hazardous industries, OHS practitioners, undergraduate and postgraduate students.

Major buildings, energy supply systems, chemical plants, food processing, and aircraft are all examples of engineering today. Despite such diversity, nearly all engineering fields rely on common principles and methods, and there is remarkable similarity in the daily work of engineers. Engineers spend most effort organising and coordinating collaborative work by all the diverse people involved, guided by their technical knowledge and experience. Unlike physics or biology, where immutable laws underpin the study, the essence of engineering is found in how theory is applied judgements. To quickly grasp the nature of engineering the fifty summaries in *30-Second Engineering* outlines types of engineering from mechanical to chemical; the universal stages of a collaborative engineering project; and the key ways engineering can solve the challenges of our future earth.

The latest research innovations and enhanced technologies have altered the discipline of materials science and engineering. As a direct result of these developments, new trends in Materials Science and Engineering (MSE) pedagogy have emerged that require attention. The *Handbook of Research on Recent Developments in Materials Science and Corrosion Engineering Education* brings together innovative and current advances in the curriculum design and course content of MSE education programs. Focusing on the application of instructional strategies, pedagogical frameworks, and career preparation techniques, this book is an essential reference source for academicians, engineering practitioners, researchers, and industry professionals interested in emerging and future trends in MSE training and education.

The book derives the mathematical basis for the most encountered waves in science and engineering. It gives the basis to undertake calculations required for important occupations such as maritime engineering, climate science, urban noise control, and medical diagnostics. The book initiates with fluid dynamics basis with subsequent chapters covering surface gravity waves, sound waves, internal gravity waves and waves in rotating fluids, and details basic phenomena such as refraction. Thereafter, specialized application chapters include description of specific contemporary problems. All concepts are supported by narrative examples, illustrations, and case studies. Features:- Explains the basis of wave mechanics in fluid systems. Provides tools for the analysis of water waves, sound waves, internal gravity, and rotating fluid waves through different examples. Includes comprehensible mathematical derivations at the expense of fewer theoretical topics. Reviews cases describable by linear theory and cases requiring nonlinear and wave-interaction theories. Supports concepts with narrative examples, illustrations, and case studies. This book aims at Senior Undergraduates/Graduate students and Researchers in Fluid Mechanics, Applied Mathematics, Mechanical Engineering, Civil Engineering, and Physical Oceanography.

Following the national engineering curriculum, this title contains competency-based training requirements and Australian standards.

Mobile Security and Privacy: Advances, Challenges and Future Research Directions provides the first truly holistic view of leading edge mobile security research from Dr. Man Ho Au and Dr. Raymond Choo—leading researchers in mobile security. Mobile devices and apps have become part of everyday life in both developed and developing countries. As with most evolving technologies, mobile devices and mobile apps can be used for criminal exploitation. Along with the increased use of mobile devices and apps to access and store sensitive, personally identifiable information (PII) has come an increasing need for the community to have a better understanding of the associated security and privacy risks. Drawing upon the expertise of world-renowned researchers and experts, this volume comprehensively discusses a range of mobile security and privacy topics from research, applied, and international perspectives, while aligning technical security implementations with the most recent developments in government, legal, and international environments. The book does not focus on vendor-specific solutions, instead providing a complete presentation of forward-looking research in all areas of mobile security. The book will enable practitioners to learn about upcoming trends, scientists to share new directions in research, and government and industry decision-makers to prepare for major strategic decisions regarding implementation of mobile technology security and privacy. In addition to the state-of-the-art research advances, this book also discusses prospective future research topics and open challenges. Presents the most current and leading edge research on mobile security and privacy, featuring a panel of top experts in the field Provides a strategic and international overview of the security issues surrounding mobile technologies Covers key technical topics and provides readers with a complete understanding of the most current research findings along with future research directions and challenges Enables practitioners to learn about upcoming trends, scientists to share new directions in research, and government and industry decision-makers to prepare for major strategic decisions regarding the implementation of mobile technology security and privacy initiatives

In recent years, Australian literature has experienced a revival of interest both domestically and internationally. The increasing prominence of work by writers like Christos Tsiolkas, heightened through television and film adaptation, as well as the award of major international prizes to writers like Richard Flanagan, and the development of new, high-profile prizes like the Stella Prize, have all reinvigorated interest in Australian literature both at home and abroad. This Companion emerges as a part of that reinvigoration, considering anew the history and development of Australian literature and its key themes, as well as tracing the transition of the field through those critical debates. It considers works of Australian literature on their own terms, as well as positioning them in their critical and historical context and their ethical and

interactive position in the public and private spheres. With an emphasis on literature's responsibilities, this book claims Australian literary studies as a field uniquely positioned to expose the ways in which literature engages with, produces and is produced by its context, provoking a critical re-evaluation of the concept of the relationship between national literatures, cultures, and histories, and the social function of literary texts.

This detailed exposition gives background and context to how modern biogeography has got to where it is now. For biogeographers and other researchers interested in biodiversity and the evolution of life on islands, *Biogeology: Evolution in a Changing Landscape* provides an overview of a large swathe of the globe encompassing Wallacea and the western Pacific. The book contains the full text of the original article explored in each chapter, presented as it appeared on publication. Key features: Holistic treatment, collecting together a series of important biogeographical papers into a single volume Authored by an expert who has spent nearly three decades actively involved in biogeography Describes and interprets a region of exceptional biodiversity and extreme endemism The only book to provide an integrated treatment of Wallacea, Melanesia, New Zealand, the New Zealand Subantarctic Islands and Antarctica Offers a critique of fashionable neo-dispersalist arguments, showing how these still suffer from the same weaknesses of the original Darwinian formulation. The chapters also include analysis of many major theoretical and philosophical issues of modern biogeographic theory, so that those interested in a more philosophical approach will find the book stimulating and thought-provoking.

The communication demands expected of today's engineers and information technology professionals immersed in multicultural global enterprises are unsurpassed. *New Media Communication Skills for Engineers and IT Professionals: Trans-National and Trans-Cultural Demands* provides new and experienced practitioners, academics, employers, researchers, and students with international examples of best practices in new, as well as traditional, communication skills in increasingly trans-cultural, digitalized, hypertext environments. This book will be a valuable addition to the existing literature and resources in communication skills in both organizational and higher educational settings, giving readers comprehensive insights into the proficient use of a broad range of communication critical for effective professional participation in the globalized and digitized communication environments that characterize current engineering and IT workplaces.

This edition of the Think Like a series displays the wonderful world of engineers. This bundle of insights shows why no one can hold you responsible for the impact of gravity, what Gerrit Rietveld can teach you about going against the flow, that Donald Trump says more than you think, and how Netflix goes beyond binge-watching. This book is for anyone who wants to widen their perspective and broaden their horizons. This is a collection of peer-reviewed papers originally presented at the 19th Australasian Conference on the Mechanics of Structures and Materials by academics, researchers and practitioners largely from Australasia and the Asia-Pacific region. The topics under discussion include: composite structures and materials; computational mechanics; dynamic analysis of structures; earthquake engineering; fire engineering; geomechanics and foundation engineering; mechanics of materials; reinforced and prestressed concrete structures; shock and impact loading; steel structures; structural health monitoring and damage identification; structural mechanics; and timber engineering. It is a valuable reference for academics, researchers, and civil and mechanical engineers working in structural and material engineering and mechanics.

This is the first book to introduce the new statistics - effect sizes, confidence intervals, and meta-analysis - in an accessible way. It is chock full of practical examples and tips on how to analyze and report research results using these techniques. The book is invaluable to readers interested in meeting the new APA Publication Manual guidelines by adopting the new statistics - which are more informative than null hypothesis significance testing, and becoming widely used in many disciplines. Accompanying the book is the Exploratory Software for Confidence Intervals (ESCI) package, free software that runs under Excel and is accessible at www.thenewstatistics.com. The book's exercises use ESCI's simulations, which are highly visual and interactive, to engage users and encourage exploration. Working with the simulations strengthens understanding of key statistical ideas. There are also many examples, and detailed guidance to show readers how to analyze their own data using the new statistics, and practical strategies for interpreting the results. A particular strength of the book is its explanation of meta-analysis, using simple diagrams and examples. Understanding meta-analysis is increasingly important, even at undergraduate levels, because medicine, psychology and many other disciplines now use meta-analysis to assemble the evidence needed for evidence-based practice. The book's pedagogical program, built on cognitive science principles, reinforces learning: Boxes provide "evidence-based" advice on the most effective statistical techniques. Numerous examples reinforce learning, and show that many disciplines are using the new statistics. Graphs are tied in with ESCI to make important concepts vividly clear and memorable. Opening overviews and end of chapter take-home messages summarize key points. Exercises encourage exploration, deep understanding, and practical applications. This highly accessible book is intended as the core text for any course that emphasizes the new statistics, or as a supplementary text for graduate and/or advanced undergraduate courses in statistics and research methods in departments of psychology, education, human development, nursing, and natural, social, and life sciences. Researchers and practitioners interested in understanding the new statistics, and future published research, will also appreciate this book. A basic familiarity with introductory statistics is assumed.

China, Arms Control, and Non-Proliferation is an empirically and conceptually path-breaking book that documents China's participation in international arms control and non-proliferation regimes from 1985 to 2001. The book focuses on the distinction between US expectations of Chinese compliance, which China has not always met, and international standards, against which Chinese performance is acceptable. This will be the standard staple work dealing with China and international arms control and will be invaluable to those dealing with Chinese security studies, foreign policy, international relations and arms control and disarmament.

Over the past decade, Cognitive Work Analysis (CWA) has been one of the popular human factors approaches for complex systems evaluation and design applications. This is reflected by a diverse range of applications across safety

critical domains. The book brings together a series of CWA applications and discussions from world-leading human factors researchers and practitioners. It begins with an overview of the CWA framework, including its theoretical underpinnings, the methodological approaches involved (including practical guidance on each phase), and previous applications of the framework. The core of the book is a series of CWA applications, undertaken in a wide range of safety critical domains for a range of purposes. These serve to demonstrate the contribution that CWA can make to real-world projects and provide readers with inspiration for how such analyses can be practically carried out. Following this, a series of applications in which new approaches or adaptations have been added to the framework are presented. These show how practical applications feedback into the theories/approaches underpinning CWA. The closing chapter then speculates on future applications of the framework and on a series of new research directions required in order to enhance its utility. In emphasising the practical realities of performing CWA, and the real-world impacts it can provide, the book tackles several common misconceptions in a constructive and persuasive way. It provides a welcome demonstration of how CWA can be a powerful ally in tackling complexity-related problems that afflict systems in all areas. Focusing on the era of "first encounters" in Polynesia, this book provides a fresh look at some of the early contacts between indigenous people and the captains and crew of European ships. The case studies chosen enable comparison of New Zealand Māori–European transactions with similar Pacific ones. The book examines the conflict situations that arose and the reasons for physical violence, highlighting the roles of honour, mana, and agency. Drawing on a range of archival materials, sailor and missionary journals, as well as indigenous narratives, Wilkes applies an analytical method typically used for examining much more recent conflict. She compares different ways of "seeing" and "knowing" the world and reflects on the reasons for poor decision-making amongst all the social actors involved. The evidence presented in the book strongly suggests that preventing violence – promoting and negotiating peace – happens most effectively when mana and honour are acknowledged between parties.

Advances in Science and Technology of $Mn+1AX_n$ Phases presents a comprehensive review of synthesis, microstructures, properties, ab-initio calculations and applications of $Mn+1AX_n$ phases and targets the continuing research of advanced materials and ceramics. An overview of the current status, future directions, challenges and opportunities of $Mn+1AX_n$ phases that exhibit some of the best attributes of metals and ceramics is included. Students of materials science and engineering at postgraduate level will value this book as a reference source at an international level for both teaching and research in materials science and engineering. In addition to students the principal audiences of this book are ceramic researchers, materials scientists and engineers, materials physicists and chemists. The book is also an invaluable reference for the professional materials and ceramics societies. The most up-to-date and

comprehensive research data on MAX phases is presented Written by highly knowledgeable and well-respected researchers in the field Discusses new and unusual properties

This overview of Australasian economic thought presents the first analysis of the Australian economic contribution for 25 years, and is the first to offer a panoramic sweeping account of New Zealand economic thought. Those two countries, both at the start of the twentieth century and at its end, excelled at innovative economic practices and harbouring unique economic institutions. A History of Australasian Economic Thought explains how Australian and New Zealand economists exerted influence on economic thought and contributed to the economic life of their respective countries in the twentieth century. Besides surveying theorists and innovators, this book also considers some of the key expositors and builders of the academic economics profession in both countries. The book covers key economic events including the Great Depression, the Second World War, the post-war boom and the great inflation that overtook it and, lastly, the economic reform programmes that both Australia and New Zealand undertook in the 1980s. Through the interplay of economic events and economic thought, this book shows how Australasian economists influenced, to differing degrees, economic policy in their respective countries. This book is of great importance to those who are interested in and study the history of economic thought, economic theory and philosophy, and philosophy of social science, as well as Australasian economics.

This collection identifies the key tensions and conflicts being debated within the field of critical disability studies and provides both an outline of the field in its current form and offers manifestos for its future direction. Traversing a number of disciplines from science and technology studies to maternal studies, the collection offers a transdisciplinary vision for the future of critical disability studies. Some common thematic concerns emerge across the book such as digital futures, the usefulness of anger, creativity, family as disability allies, intersectionality, ethics, eugenics, accessibility and interdisciplinarity. However, the contributors who write as either disabled people or allies do not proceed from a singular approach to disability, often reflecting different or even opposing positions on these issues. Containing contributions from established and new voices in disability studies outlining their own manifesto for the future of the field, this book will be of interest to all scholars and students working within the fields of disability studies, cultural studies, sociology, law, history and education. The concerns introduced here are further explored in its sister volume Interdisciplinary approaches to disability: looking towards the future.

"This is the ideal text for undergraduate students beginning their Engineering studies. It will engage the undergraduate engineering student directly with what it means to be a contemporary engineer in Australia and New Zealand. There is a strong and practical emphasis on developing the range of communication and decision-making skills that are essential for tackling engineering problems. Throughout the text

and its accompanying exercises and problems, students are encouraged to reflect on and thereby improve their learning practices."--provided by publisher.

In this illustrated ecological history, acclaimed scientist and historian Flannery follows the environment of the islands through the age of dinosaurs to the age of mammals and the arrival of humans, to the European colonizers and industrial society. Penetrating, gripping, and provocative, this book combines natural history, anthropology, and ecology on an epic scale. Illustrations.

Engineering Your Future: An Australasian Guide, Third edition, is the ideal resource for undergraduate students beginning their engineering studies. Building on the success of the popular first and second editions, this new edition continues the strong and practical emphasis on skills that are essential for engineering problem solving and design. Numerous topical and locally focused examples of projects across the broad range of engineering disciplines help to demonstrate vividly the role and responsibilities of a professional engineer. Themes of sustainability, ethical practice and effective communication are a constant throughout the text. This edition extensively covers the concepts of sustainability, design, engineering economics and professional responsibility. In addition, its many exercises and project activities will encourage students to put key engineering principles and skills into practice.

This unique and up-to-date work surveys the use of mechatronics in rail vehicles, notably traction, braking, communications, data sharing, and control. The results include improved safety, comfort, and fuel efficiency. Mechatronic systems are a key element in modern rail vehicle design and operation. Starting with an overview of mechatronic theory, the book goes on to cover topics including modeling of mechanical and electrical systems for rail vehicles, open and closed loop control systems, sensors, actuators and microprocessors. Modern simulation techniques and examples are included throughout, and numerical experiments and developed models for railway application are presented and explained. Case studies are used, alongside practical examples, to ensure that the reader can apply mechatronic theory to real world conditions. These case studies include modeling of a hybrid locomotive and simplified models of railway vehicle lateral dynamics for suspension control studies. Rail Vehicle Mechatronics provides current and in-depth content for design engineers, operations managers, systems engineers and technical consultants world-wide, working with freight, passenger, and urban transit railway systems.

Now in dynamic full color, SI ENGINEERING FUNDAMENTALS: AN INTRODUCTION TO ENGINEERING, 5e helps students develop the strong problem-solving skills and solid foundation in fundamental principles they will need to become analytical, detail-oriented, and creative engineers. The book opens with an overview of what engineers do, an inside glimpse of the various areas of specialization, and a straightforward look at what it takes to succeed. It then covers the basic physical concepts and laws that students will encounter on the job. Professional Profiles throughout the text highlight the work of practicing engineers from around the globe, tying in the fundamental principles and applying them to professional engineering. Using a flexible, modular format, the book demonstrates how engineers apply physical and chemical laws and principles, as well as mathematics, to design, test, and supervise the production of millions of parts, products, and services that people use every day. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

The design and study of materials is a pivotal component to new discoveries in the various fields of science and technology. By better understanding the components and structures of materials, researchers can increase its applications across different industries. Materials Science and Engineering: Concepts, Methodologies, Tools, and Applications is a compendium of the latest academic material on investigations, technologies, and techniques pertaining to analyzing the synthesis and design of new materials. Through its broad and

extensive coverage on a variety of crucial topics, such as nanomaterials, biomaterials, and relevant computational methods, this multi-volume work is an essential reference source for engineers, academics, researchers, students, professionals, and practitioners seeking innovative perspectives in the field of materials science and engineering.

Oakes/Leone is an introduction to engineering text. Although introduction to engineering is not offered at all schools, we are seeing the course grow (22% up in last two years TWM Research) as students enter engineering schools and drop out in their second year because they are overwhelmed by the math and physics and have not received any engineering instruction at all. As such, this course and text strive to introduce students to the topics in engineering including descriptions of the various sub-fields, math fundamentals, ethics, technical communications, engineering design and students success skills. The market is segmented between a soft approach to engineering-leaving out math and physics altogether, and a more comprehensive approach to engineering including math and physics. Oakes Brief is for the former segment and Oakes Comprehensive is for the latter segment. The book is successful because it covers the basic course needs well. In the almost sixty years since the publication of the first edition of HVAC Engineer's Handbook, it has become widely known as a highly useful and definitive reference for HVAC engineers and technicians alike, and those working on domestic hot and cold water services, gas supply and steam services. The 11th edition continues in the tradition of previous editions, being easily transportable and therefore an integral part of the HVAC engineer or technician's daily tools. Newly updated data on natural ventilation, ventilation rates, free cooling and night-time cooling, make the 11th edition of the HVAC Engineer's Handbook a vital source of information. Fred Porges has worked in both the manufacturing and process industries, and became a partner in a building services consultancy in 1962. He has held senior positions with design contractors, and his experience covers every building service and type of building from schools to housing, factories to laboratories. Advances in Calcium Phosphate Biomaterials presents a comprehensive, state-of-the-art review of the latest advances in developing calcium phosphate biomaterials and their applications in medicine. It covers the fundamental structures, synthesis methods, characterization methods, and the physical and chemical properties of calcium phosphate biomaterials, as well as the synthesis and properties of calcium phosphate-based biomaterials in regenerative medicine and their clinical applications. The book brings together these new concepts, mechanisms and methods in contributions by both young and "veteran" academics, clinicians, and researchers to forward the knowledge and expertise on calcium phosphate and related materials. Accordingly, the book not only covers the fundamentals but also open new avenues for meeting future challenges in research and clinical applications. Besim Ben-Nissan is a Professor of Chemistry and Forensic Science at the University of Technology, Sydney, Australia

Online genetic testing services are increasingly being offered to consumers who are becoming exposed to, and knowledgeable about, new kinds of genetic technologies, as the launch of a 23andme genetic testing product in the UK testifies. Genetic research breakthroughs, cheek swabbing forensic pathologists and celebrities discovering their ancestral roots are littered throughout the North American, European and Australasian media landscapes. Genetic testing is now capturing the attention, and imagination, of hundreds of thousands of people who can not only buy genetic tests online, but can also go online to find relatives, share their results with strangers, sign up for personal DNA-based musical scores, and take part in research. This book critically examines

this market of direct-to-consumer (DTC) genetic testing from a social science perspective, asking, what happens when genetics goes online? With a focus on genetic testing for disease, the book is about the new social arrangements which emerge when a traditionally clinical practice (genetic testing) is taken into new spaces (the internet). It examines the intersections of new genetics and new media by drawing from three different fields: internet studies; the sociology of health; and science and technology studies. While there has been a surge of research activity concerning DTC genetic testing, particularly in sociology, ethics and law, this is the first scholarly monograph on the topic, and the first book which brings together the social study of genetics and the social study of digital technologies. This book thus not only offers a new overview of this field, but also offers a unique contribution by attending to the digital, and by drawing upon empirical examples from our own research of DTC genetic testing websites (using online methods) and in-depth interviews in the United Kingdom with people using healthcare services.

This open access book examines how the social sciences can be integrated into the praxis of engineering and science, presenting unique perspectives on the interplay between engineering and social science. Motivated by the report by the Commission on Humanities and Social Sciences of the American Association of Arts and Sciences, which emphasizes the importance of social sciences and Humanities in technical fields, the essays and papers collected in this book were presented at the NSF-funded workshop 'Engineering a Better Future: Interplay between Engineering, Social Sciences and Innovation', which brought together a singular collection of people, topics and disciplines. The book is split into three parts: A. Meeting at the Middle: Challenges to educating at the boundaries covers experiments in combining engineering education and the social sciences; B. Engineers Shaping Human Affairs: Investigating the interaction between social sciences and engineering, including the cult of innovation, politics of engineering, engineering design and future of societies; and C. Engineering the Engineers: Investigates thinking about design with papers on the art and science of science and engineering practice.

Student Attainment in Higher Education: Issues, controversies and debates is a timely exploration of student attainment in a rapidly changing higher education context and a rapidly changing world. The effects of neoliberalism and the commercialization of everyday life on education have been well documented, but with a focus on pedagogy, whilst student success is measured through grades, statistics and metrics. By exploring attainment in a broader context, this book provides a unique contribution to the critical literature on contemporary higher education. Within the themes of understanding attainment and challenging practice, the book sets out to explore student attainment as complex and multifaceted. It achieves this by looking at different conceptualizations of what attainment means and to whom; how attainment is shaped by different and often competing agendas and vested interests. The book highlights these wider issues, controversies and debates that underpin student attainment, whilst at the same time engaging with strategic and local interventions, which set out to improve aspects of the higher education system and increase individual and social agency within it. Sharing a range of pedagogical approaches and interventions, some of the key topics include: addressing attainment gaps engaging mature learners nurturing the intellectual identity the impact of activity choices. Creating a dialogue amongst different audiences about national and international controversies and debates around the topic of

student attainment, this contribution will be beneficial to teaching professionals, policymakers and strategists. As an edited collection with contextualisation in the wider research arena, the book has both national and international applicability and transferability.

'The Right Thing to Read': A History of Australian Girl-Readers, 1910-1960 explores the reading habits, identity, and construction of femininity of Australian girls aged between ten and fourteen from 1910 to 1960. It investigates changing notions of Australian girlhood across the period, and explores the ways that parents, teachers, educators, journalists and politicians attempted to mitigate concerns about girls' development through the promotion of 'healthy' literature. The book also addresses the influence of British publishers to Australian girl-readers and the growing importance of Australian publishers throughout the period. It considers the rise of Australian literary nationalism in the global context, and the increasing prominence of Australian literature in the period after the Second World War. It also shows how access to reading material improved for girls over the first half of the last century.

Made in Australia and Aotearoa/New Zealand: Studies in Popular Music serves as a comprehensive and thorough introduction to the history, sociology, and musicology of twentieth-century popular music of Australia and Aotearoa/New Zealand. The volume consists of chapters by leading scholars of Australian and Aotearoan/New Zealand music, and covers the major figures, styles, and social contexts of pop music in Australia and Aotearoa/New Zealand. Each chapter provides adequate context so readers understand why the figure or genre under discussion is of lasting significance to Australian or Aotearoan/New Zealand popular music. The book first presents a general description of the history and background of popular music in these countries, followed by chapters that are organized into thematic sections: Place-Making and Music-Making; Rethinking the Musical Event; Musical Transformations: Decline and Renewal; and Global Sounds, Local Identity.

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