Applied Probabilistic Calculus for Financial Engineering
Engineering Money
Financial and Economic Analysis for Engineering and Technology Management
A Concise Introduction to Engineering Economics
Engineering Economics and Economic Design for Process Engineers
Engineering Economic Analysis
Engineering Economics and the Decision-making Process
Risk Analysis in Engineering and Economics
Economic and Financial Analysis for Engineering and Project Management
Engineering Economics
Fundamentals of Engineering Economics
Fundamentals of Economics for Applied Engineering
Calculations for Engineering Economic Analysis
Investment Decisions and the Logic of Valuation
Engineering Economics And Financial Accounting (Ascent Series)
Economics and Finance for Engineers and Planners
Engineering Economics and Finance for Transportation Infrastructure
Applying Engineering Economics
Solutions Manual to Accompany Engineering Economics for Capital Investment Analysis
Engineering Economics of Life Cycle Cost Analysis
Engineering Economics and Financial Accounting
Modeling and Simulation in Engineering, Economics and Management
Data Science for Economics and Finance
Engineering Economics and Finance for Transportation Infrastructure
Engineering Economics
Contemporary Engineering Economics, Global Edition
Economic and Financial Analysis for Engineering and Project Management
Financial Economics
Fundamentals of Engineering Economic Analysis
Advanced Engineering Economics
Understanding Bitcoin
Finance for Engineers
Engineering Economy
Engineering Economics and Finance
Engineering Economics for Aviation and Aerospace
Finance and Accounting for Energy Engineers

Neil Grigg presents the core issues of economics and finance that relate directly to the work of civil engineers, construction managers, and public works and utility officials. Whilst many undergraduate finance textbooks are largely descriptive in nature, the economic analysis in most graduate texts is too advanced for latter year undergraduates. This book bridges the gap between these two extremes, offering a textbook that studies economic activity in financial markets, focusing on how consumers determine future consumption and on the role of financial securities. Areas covered in include: an examination of the role of finance in the economy using basic economic principles, eventually progressing to introductory graduate analysis a microeconomic study of capital asset pricing when there is risk, inflation, taxes and asymmetric information an emphasis on economic intuition using geometry to explain formal analysis an extended treatment of corporate finance and the evaluation of public policy.

Fundamentals of Engineering Economic Analysis offers a powerful, visually-rich approach to the subject—delivering streamlined yet rigorous coverage of the use of economic analysis techniques in engineering design. This award-winning textbook provides an impressive array of pedagogical tools to maximize student engagement and comprehension, including learning objectives, key term definitions, comprehensive case studies, classroom discussion questions, and challenging practice problems. Clear, topically—organized chapters guide students from fundamental concepts of borrowing, lending, investing, and time value of money, to more complex topics such as capitalized and future worth, external rate of return, depreciation, and after-tax economic analysis. This fully-updated second edition features substantial new and revised content that has been thoroughly re-designed to support different learning and teaching styles. Numerous real-world vignettes demonstrate how students will use economics as practicing engineers, while plentiful illustrations, such as cash flow diagrams, reinforce student understanding of underlying concepts. Extensive digital resources now provide an immersive interactive learning environment, enabling students to use integrated tools such as Excel. The addition of the WileyPLUS platform provides tutorials, videos, animations, a complete library of Excel video lessons, and much more. An easy-to-follow contemporary engineering economics text that helps making sound economic decisions without advanced mathematics. This one-semester introduction to the fundamentals of engineering economics provides an overview of the basic theory and mathematics underlying operational business decisions that engineering technology, engineering, and industrial technology students will face in the workplace. A basic knowledge of economics empowers a manager to balance costs with production. This new edition of Fundamentals of Economics for Engineering Technologists and Engineers is written in plain language. Concepts have been simplified and kept straightforward with an emphasis on "how to
apply" economic principles. Practical examples as a tool for managing business data and giving detailed analysis of business operations. throughout the text make good use of Microsoft Excel templates, provided on the book’s companion website, for students. Chapter-end exercises provide discussion and multiple-choice questions along with numerical problems, and a solutions manual and instructor resources is given for adopting instructors. Engineering Economy deals with evaluating the financial viability of capital projects. This process involves creating a cash flow which represents the changes in the system due to the capital project and the costs of the capital project over time. These cash flow elements are then analyzed at selected points in time by adjusting them to a common point in time based on the minimum attractive rate of return of the organization and the decision metric chosen for the analysis. These techniques are covered in all engineering economy textbooks, but all current textbooks follow the traditional pedagogy of teaching formulae, applying these formulae (and the tabularized values for these equations), and only then using computerized spreadsheets to solve the same and similar problems; this method takes too long to master. This book bypasses the tables & uses the speed of computers to present the concepts in a basic (and less mathematically elegant) use-oriented form, which allows practitioners (and future practitioners, e.g. students) to master engineering economic principles quickly and efficiently. This simplified approach creates the same understanding of the concepts and their application without the no-value-added step on understanding the tables, which are never used outside the classroom (except while taking the FE exam, and the new online FE should soon end that use). The book is intended for practitioners, other than those in the finance department of an organization, who need to evaluate the financial viability of a capital project in order to make better decisions if the decision maker and/ or make better recommendations to decision makers if not. Understanding the process of determining financial viability allows those who propose, develop, and implement capital projects to develop capital projects of greater value to their organization, and better understand where to look for potential projects. Engineers, engineering technologists, and other technical professionals at the individual contributor level need these skills, and these skills are critical skills for these same individuals when they progress to leadership roles. This book will help these individuals develop and select more viable capital projects, without needing to wade through a much longer, expensive resource. There are many text books about engineering design and some include project evaluation techniques. There are text books on accounting methods and yet others on business management. This book does not aim to replace these specialized texts but brings together the elements of these subjects that young engineers working in industry – particularly the construction industry and its customers – need to understand. Most engineers learn about money the hard way: by experience in the workplace. The authors having done this themselves recognized the gap in engineers' education and set out to bridge it. This book is based on a 1996 course George Solt pioneered for final-year engineering undergraduates. The book is written in an approachable style and gives young engineers as well as mature engineers an insight into the way engineering businesses run, the importance of capital and the problems of cash flow. This book presents a new approach to the valuation of capital asset investments and investment decision-making. Starting from simple premises and working logically through three basic elements (capital, income, and cash flow), it guides readers on an interdisciplinary journey through the subtleties of accounting and finance, explaining how to correctly measure a project's economic profitability and efficiency, how to assess the impact of investment policy and financing policy on shareholder value creation, and how to design reliable, transparent, and logically consistent financial models. The book adopts an innovative pedagogical approach, based on a newly developed accounting-and-finance-engineering system, to help readers gain a deeper understanding of the accounting and financial magnitudes, learn about new analytical tools, and develop the necessary skills to practically implement them. This diverse approach to capital budgeting allows a sophisticated economic analysis in both absolute terms (values) and relative terms (rates of return), and is applicable to a wide range of economic entities, including real assets and financial assets, engineering designs and manufacturing schemes, corporate-financed and project-financed transactions, privately-owned projects and public investments, individual projects and firms. As such, this book is a valuable resource for a broad audience, including scholars and researchers, industry practitioners, executives, and managers, as well as students of corporate finance, managerial finance, engineering economics, financial management, management accounting, operations research, and financial mathematics. It features more than 180 guided examples, 50 charts and figures and over 160 explanatory tables that help readers grasp the new concepts and tools. Each chapter starts with an abstract and a list of the skills readers can expect to gain, and concludes with a list of key points summarizing the content. Presents engineering economy in the context of the entire decision-making framework. Features a four-part structure that starts with the basics of engineering economy and then walks through each
step in the decision-making process. Includes examples throughout the book that stem from real-life applications. Introduces and integrates the use of computers and spreadsheets in economic analysis. For engineering professionals looking for increased awareness of the issues involved with engineering economics. Illustrates how R may be used successfully to solve problems in quantitative finance. Applied Probabilistic Calculus for Financial Engineering: An Introduction Using R provides R recipes for asset allocation and portfolio optimization problems. It begins by introducing all the necessary probabilistic and statistical foundations, before moving on to topics related to asset allocation and portfolio optimization with R codes illustrated for various examples. This clear and concise book covers financial engineering, using R in data analysis, and univariate, bivariate, and multivariate data analysis. It examines probabilistic calculus for modeling financial engineering—walking the reader through building an effective financial model from the Geometric Brownian Motion (GBM) Model via probabilistic calculus, while also covering Ito Calculus. Classical mathematical models in financial engineering and modern portfolio theory are discussed—along with the Two Mutual Fund Theorem and The Sharpe Ratio. The book also looks at R as a calculator and using R in data analysis in financial engineering. Additionally, it covers asset allocation using R, financial risk modeling and portfolio optimization using R, global and local optimal values, locating functional maxima and minima, and portfolio optimization by performance analytics in CRAN. Covers optimization methodologies in probabilistic calculus for financial engineering. Answers the question: What does a "Random Walk" Financial Theory look like? Covers the GBM Model and the Random Walk Model Examines modern theories of portfolio optimization, including The Markowitz Model of Modern Portfolio Theory (MPT), The Black-Litterman Model, and The Black-Scholes Option Pricing Model Applied Probabilistic Calculus for Financial Engineering: An Introduction Using R & an ideal reference for professionals and students in economics, econometrics, and finance, as well as for financial investment quants and financial engineers. Expert guidance for fiscally responsible engineering and technology managers. This thoroughly updated Second Edition is an accessible self-study guide and text that helps engineers extract important meaning from financial statements and accounting records, ask insightful questions, engage in thoughtful debate about accounting and financial issues, and make informed decisions that benefit their companies. Advanced Engineering Economics, Second Edition, provides an integrated framework for understanding and applying project evaluation and selection concepts that are critical to making informed individual, corporate, and public investment decisions. Grounded in the foundational principles of economic analysis, this well-regarded reference describes a comprehensive range of central topics, from basic concepts such as accounting income and cash flow, to more advanced techniques including deterministic capital budgeting, risk simulation, and decision tree analysis. Fully updated throughout, the second edition retains the structure of its previous iteration, covering basic economic concepts and techniques, deterministic and stochastic analysis, and special topics in engineering economics analysis. New and expanded chapters examine the use of transform techniques in cash flow modeling, procedures for replacement analysis, the evaluation of public investments, corporate taxation, utility theory, and more. Now available as interactive eBook, this classic volume is essential reading for both students and practitioners in fields including engineering, business and economics, operations research, and systems analysis. Understanding finance and accounting principles is important in interfacing and conducting business with accountants, financial analysts, and members of upper management. In a relatively simple and easy-to-understand manner, this book familiarizes professionals with decision making skills founded on financial calculations and quantitative analysis. It covers finance and accounting ratios and other metrics; income statements, balance sheets, cash flow, and working capital concepts; inventory concepts; life cycle, period, direct, and indirect costs; and energy performance contracting. Each chapter concludes with a list of questions or problems for self-assessment and knowledge affirmation purposes. Answers to the questions are at the back of the book. Economic and Financial Analysis for Engineering and Project Management is for engineers and others who must analyze the financial and economic ramifications of producing and sustaining capital projects. Unlike other books in the field, it offers straightforward and lucid explanations of all main formulas needed to carry out financial analyses. The math is kept simple and is fully explained, making the book accessible to non-technical personnel. Numerous sample problems are provided, and can be worked on standard spreadsheet programs, as well as using interest rate tables. The book shows how to link quantitative data to management decisions and to standard reporting forms and has been designed for practicing engineers and students alike. Economic and Financial Analysis for Engineering and Project Management is a "must have" for graduate students in engineering management departments; graduate and undergraduates taking courses in project management, engineering economics, and engineering finance. Practicing engineers will
find this book THE handy reference for any project involving financial analyses. Featuring a handy "look-up" format, this easy-to-use guide helps engineers in every discipline to perform all types of economic analysis with confidence. Coverage includes economic analysis using compound interest, cost comparisons of alternative methods, decision making using statistics and probability, linear programming and sensitivity analysis, project scheduling with the critical path method (CPM) and PERT, and more. This student-friendly text on the current economic issues particular to engineering covers the topics needed to analyze engineering alternatives. Students use both hand-worked and spreadsheet solutions of examples, problems and case studies. In this edition the options have been increased with an expanded spreadsheet analysis component, twice the number of case studies, and virtually all new end-of-chapter problems. The chapters on factor derivation and usage, cost estimation, replacement studies, and after-tax evaluation have been heavily revised. New material is included on public sector projects and cost estimation. A reordering of chapters puts the fundamental topics up front in the text. Many chapters include a special set of problems that prepare the students for the Fundamentals of Engineering (FE) exam. This text provides students and practicing professionals with a solid preparation in the financial understanding of engineering problems and projects, as well as the techniques needed for evaluating and making sound economic decisions. Distinguishing characteristics include learning objectives for each chapter, an easy-to-read writing style, many solved examples, integrated spreadsheets, and case studies throughout the text. Graphical cross-referencing between topics and quick-solve spreadsheet solutions are indicated in the margin throughout the text. While the chapters are progressive, over three-quarters can stand alone, allowing instructors flexibility for meeting course needs. A complete online learning center (OLC) offers supplemental practice problems, spreadsheet exercises, and review questions for the the Fundamentals of Engineering (FE) exam. Designed as a textbook for undergraduate students in various engineering disciplines—Mechanical, Civil, Industrial Engineering, Electronics Engineering and Computer Science—and for postgraduate students in Industrial Engineering and Water Resource Management, this comprehensive and well-organized book, now in its Second Edition, shows how complex economic decisions can be made from a number of given alternatives. It provides the managers not only a sound basis but also a clear-cut approach to making decisions. These decisions will ultimately result in minimizing costs and/or maximizing benefits. What is more, the book adequately illustrates the concepts with numerical problems and Indian cases. While retaining all the chapters of the previous edition, the book adds a number of topics to make it more comprehensive and more student friendly. What's New to This Edition • Discusses different types of costs such as average cost, recurring cost, and life cycle cost. • Deals with different types of cost estimating models, index numbers and capital allowance. • Covers the basics of nondeterministic decision making. • Describes the meaning of cash flows with probability distributions and decision making, and selection of alternatives using simulation. • Discusses the basic concepts of Accounting. This book, which is profusely illustrated with worked-out examples and a number of diagrams and tables, should prove extremely useful not only as a text but also as a reference for those offering courses in such areas as Project Management, Production Management, and Financial Management. Discover Bitcoin, the cryptocurrency that has the finance world buzzing. Bitcoin is arguably one of the biggest developments in financer since the advent of fiat currency. With UnderstandingBitcoin, expert author Pedro Franco provides finance professionals with a complete technical guide and resource to the cryptography, engineering and economic development of Bitcoin and other cryptocurrencies. This comprehensive, yet accessible workfully explores the supporting economic realities and technological advances of Bitcoin, and presents positive and negative arguments from various economic schools regarding its continuend viability. This authoritative text provides a step-by-step description of how Bitcoin works, starting with public key cryptography and moving on to explain transaction processing, the blockchain and mining technologies. This vital resource reviews Bitcoin from the broader perspective of digital currencies and explores historical attempts at cryptographic currencies. Bitcoin is, after all, not just an digital currency; it’s a modern approach to the secure transfer of value using cryptography. This book is a detailed guide to what it is, how it works, and how it just may jumpstart a change in the way digital value changes hands. Understand how Bitcoin works, and the technology behind it Delve into the economics of Bitcoin, and its impact on the financial industry Discover alt-coins and other available cryptocurrencies Explore the ideas behind Bitcoin 2.0 technologies Learn transaction protocols, micropayment channels, atomiccross-chain trading, and more. Bitcoin challenges the basic assumption under which the current financial system rests: that currencies are issued by central governments, and their supply is managed by central banks. To fully understand this revolutionary technology, UnderstandingBitcoin is a uniquely complete, reader-friendly guide. This reference outlines the fundamental concepts and strategies for economic assessments...
for informed management decisions in industry. The book illustrates how to prepare capital cost and operating expense estimates, profitability analyses, and feasibility studies, and how to execute sensitivity and uncertainty assessments. From financial reports to opportunity costs and engineering trade-offs, Process Engineering Economics considers a wide range of alternatives for profitable investing and for projecting outcomes in various chemical and engineering fields. It also explains how to monitor costs, finances, and economic limitations at every stage of chemical project design, preparation, and evaluation. This open access book covers the use of data science, including advanced machine learning, big data analytics, Semantic Web technologies, natural language processing, social media analysis, time series analysis, among others, for applications in economics and finance. In addition, it shows some successful applications of advanced data science solutions used to extract new knowledge from data in order to improve economic forecasting models. The book starts with an introduction on the use of data science technologies in economics and finance and is followed by thirteen chapters showing success stories of the application of specific data science methodologies, touching on particular topics related to novel big data sources and technologies for economic analysis (e.g., social media and news); big data models leveraging on supervised/unsupervised (deep) machine learning; natural language processing to build economic and financial indicators; and forecasting and nowcasting of economic variables through time series analysis. This book is relevant to all stakeholders involved in digital and data-intensive research in economics and finance, helping them to understand the main opportunities and challenges, become familiar with the latest methodological findings, and learn how to use and evaluate the performances of novel tools and frameworks. It primarily targets data scientists and business analysts exploiting data science technologies, and it will also be a useful resource to research students in disciplines and courses related to these topics. Overall, readers will learn modern and effective data science solutions to create tangible innovations for economic and financial applications. This book provides a straightforward approach to explaining engineering economics that is appropriate for members of all of the major engineering disciplines. It includes real world engineering economic analysis examples, and provides the basic knowledge required for engineers to be able to perform engineering economic analyses for different potential alternative equipment, products, services, and projects in both the public and private sectors. It focuses on mastering the basic engineering economics formulas and their use on different types of engineering and construction projects, and includes numerous example problems and real world case studies. This work offers a concise, but in-depth coverage of all fundamental topics of engineering economics. With flair and an originality of approach, Crundwell brings his considerable experience to bear on this crucial topic. Uniquely, this book discusses the technical and financial aspects of decision-making in engineering and demonstrates these through case studies. It's a hugely important matter as, of course, engineering solutions and financial decisions are intimately tied together. The best engineers combine the technical and financial cases in determining new solutions to opportunities, challenges and problems. To get your project approved, no matter the size of it, the financial case must be clear and compelling. This book provides a framework for engineers and scientists to undertake financial evaluations and assessments of engineering or production projects. Engineering has changed dramatically in the last century. With modern computing systems, instantaneous communication, elimination of low/mid management, increased complexity, and extremely efficient supply chains, all have dramatically affected the responsibilities of engineers at all levels. The future will require cost effective systems that are more secure, interconnected, software centric, and complex. Employees at all levels need to be able to develop accurate cost estimates based upon defensible cost analysis. It is under this backdrop that this book is being written. By presenting the methods, processes, and tools needed to conduct cost analysis, estimation, and management of complex systems, this textbook is the next step beyond basic engineering economics. Features Focuses on systems life cycle costing. Includes materials beyond basic engineering economics, such as simulation-based costing. Presents cost estimating, analysis, and management from a total ownership cost perspective. Offers numerous real-life examples. Provides Excel-based textbook/problems. Offers PowerPoint slides, Solutions Manual, and author website with downloadable Excel solutions, etc. Engineers often find themselves tasked with the difficult challenge of developing a design that is both technically and economically feasible. A sharply focused, how-to book, Engineering Economics and Economic Design for Process Engineers provides the tools and methods to resolve design and economic issues. It helps you integrate technical and economic decision making, creating more profit and growth for your organization. The book puts methods that are simple, fast, and inexpensive within easy reach. Author Thane Brown sets the stage by explaining the engineer’s role in the creation of economically feasible projects. He discusses the basic economics of projects — how they are funded, what kinds of investments they require, how revenues, expenses, profits, and risks are interrelated, and how cash
flows into and out of a company. In the engineering economics section of the book, Brown covers topics such as present and future values, annuities, interest rates, inflation, and inflation indices. He details how to create order-of-magnitude and study grade estimates for the investments in a project and how to make study grade production cost estimates. Against this backdrop, Brown explores a unique scheme for producing an Economic Design. He demonstrates how using the Economic Design Model brings increased economic thinking and rigor into the early parts of design, the time in a project’s life when its cost structure is being set and when the engineer’s impact on profit is greatest. The model emphasizes three powerful new tools that help you create a comprehensive design option list. When the model is used early in a project, it can drastically lower both capital and production costs. The book’s uniquely industrial focus presents topics as they would happen in a real work situation. It shows you how to combine technical and economic decision making to create economically optimum designs and increase your impact on profit and growth, and, therefore, your importance to your organization. Using these time-tested techniques, you can design processes that cost less to build and operate, and improve your company’s profit. This comprehensive yet accessible text emphasizes problem solving, evaluation of projects, capital budgeting and resource allocation under risk and uncertainty. Current theory of economics and finance is also discussed and the text is complemented by a full set of problems, exercises and case studies. For all engineers and practitioners, it is essential to have a fundamental understanding of cost structure, estimating cash flows, and evaluating alternative projects and designs on an economic basis. Engineering Economics for Aviation and Aerospace provides the tools and techniques necessary for engineers to economically evaluate their projects and choices. The focus of this book is on a comprehensive understanding of the theory and practical applications of engineering economics. It explains and demonstrates the principles and techniques of engineering economics and financial analysis as applied to the aviation and aerospace industries. Time value of money, interest factors, and spreadsheet functions are used to evaluate the cash flows associated with a single project or multiple projects. The alternative engineering economics tools and techniques are utilized in separate chapters to evaluate the attractiveness of a single project or to select the best of multiple alternatives. Most of the engineering economics and financial mathematics books available in the market take either a pure theoretical approach or offer limited applications. This book incorporates both approaches, providing students of aviation and industrial economics, as well as practitioners, with the necessary mathematical knowledge to evaluate alternatives on an economic basis. For courses in engineering and economics Comprehensive blends engineering concepts with economic theory Contemporary Engineering Economics teaches engineers how to make smart financial decisions in an effort to create economical products. As design and manufacturing become an integral part of engineers’ work, they are required to make more and more decisions regarding money. The Sixth Edition helps students think like the 21st century engineer who is able to incorporate elements of science, engineering, design, and economics into his or her products. This text comprehensively integrates economic theory with principles of engineering, helping students build sound skills in financial project analysis. MyEngineeringLab™ not included. Students, if MyEngineeringLab is a recommended/mandatory component of the course, please ask your instructor for the correct ISBN and course ID. MyEngineeringLab should only be purchased when required by an instructor. Instructors, contact your Pearson representative for more information. MyEngineeringLab is an online homework, tutorial, and assessment program designed to work with this text to engage students and improve results. Within its structured environment, students practice what they learn, test their understanding, and pursue a personalized study plan that helps them better absorb course material and understand difficult concepts. Instructors can choose from a wide range of assignment options, including time limits, proctoring, and maximum number of attempts allowed. The bottom line: MyEngineeringLab means less time grading and more time teaching. Engineering Economics: Financial Decision Making for Engineers is designed for teaching a course on engineering economics to match engineering practice today. It recognizes the role of the engineer as a decision maker who has to make and defend sensible decisions. Such decisions must not only take into account a correct assessment of costs and benefits, they must also reflect an understanding of the environment in which the decisions are made. The 5th edition has new material on project management in order to adhere to the CEAB guidelines as well the new edition will have a new spreadsheet feature throughout the text. More than any other book available, Risk Analysis in Engineering and Economics introduces the fundamental concepts, techniques, and applications of the subject in a style tailored to meet the needs of students and practitioners of engineering, science, economics, and finance. Drawing on his extensive experience in uncertainty and risk modeling and analysis, the author leads readers from the fundamental concepts through the theory, applications, and data requirements, sources, and collection. He emphasizes the
practical use of the methods presented and carefully examines the limitations, advantages, and disadvantages of each. Case studies that incorporate the techniques discussed offer a practical perspective that helps readers clearly identify and solve problems encountered in practice. If you deal with decision-making under conditions of uncertainty, this book is required reading. The presentation includes more than 300 tables and figures, more than 100 examples, many case studies, and a wealth of end-of-chapter problems. Unlike the classical books on reliability and risk assessment, this book helps you relate underlying concepts to everyday applications and better prepares you to understand and use the methods of risk analysis. This book contains the refereed proceedings of the International Conference on Modeling and Simulation in Engineering, Economics and Management, MS 2016, held in Teruel, Spain, in July 2016. The event was co-organized by the AMSE Association and the University of Zaragoza through the GESES Research Group, with the support of the SoGReS-MF Research Group from University Jaume I. This edition of the conference paid special attention to modeling and simulation in diverse fields of business management. The 20 papers in this book were carefully reviewed and selected from 52 submissions. They are organized in topical sections on modeling and simulation in finance and accounting; modeling and simulation in business management and economy; and engineering and other general applications. Economic and Financial Analysis for Engineering and Project Management is for engineers and others who must analyze the financial and economic ramifications of producing and sustaining capital projects. Unlike other books in the field, it offers straightforward and lucid explanations of all main formulas needed to carry out financial analyses. The math is kept simple and is fully explained, making the book accessible to non-technical personnel. Numerous sample problems are provided, and can be worked on standard spreadsheet programs, as well as using interest rate tables. The book shows how to link quantitative data to management decisions and to standard reporting forms and has been designed for practicing engineers and students alike. Economic and Financial Analysis for Engineering and Project Management is a "must have" for graduate students in engineering management departments; graduate and undergraduates taking courses in project management, engineering economics, and engineering finance. Practicing engineers will find this book THE handy reference for any project involving financial analyses. This textbook provides a fundamental overview of the application of engineering economic principles to transportation infrastructure investments. Basic theory is presented and illustrated with examples specific to the transportation field. It also reviews the history of transportation finance, as well as current methods for funding transportation investments in the U.S. Future problems and potential solutions are also discussed and illustrated.

Copyright code: b77eaae40834ba4efdbecf395f7d6499