Engineering Money: Financial Fundamentals for Engineers

Richard Hill, George Solt
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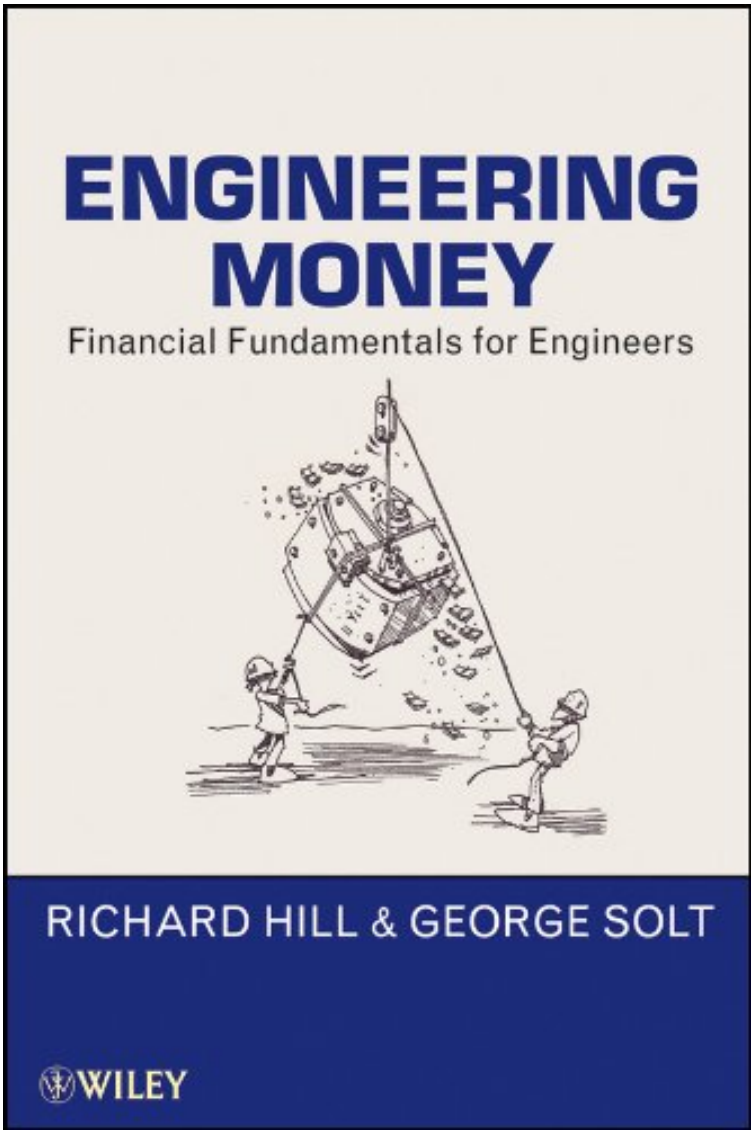

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Richard Hill, George Solt : Engineering Money: Financial Fundamentals for Engineers before purchasing it in order to gage whether or not it would be worth my time, and all praised Engineering Money: Financial Fundamentals for Engineers:

0 of 0 people found the following review helpful. Useful OverviewBy Bass CadetWhile more oriented to construction contractors and managers, this has useful information for engineers and other technical people. The authors provide many anecdotes about their previous experiences. Although generally helpful, they do tend to repeat stories and warnings.It is a relatively quick read and a painless introduction to the financial side of engineering. It is unlike engineering economics, which deals mainly with time value of money. This provides more of a business perspective.It

would be more helpful to include design and, especially, manufacturing financial concepts. These would be more useful for most engineers. Having started two companies, I found the information useful but a little too introductory. It is probably most useful for new graduates or senior year students.2 of 2 people found the following review helpful. A Radical (And Possibly Heretical) Departure From The Standard Engineering Economics TextbookBy Gregory McMahanI originally picked up this book thinking that I would get the typically dry discourse on the fundamentals of engineering economics. I also expected the usual presentation of the same old topics such as the concept of equivalence, the basic present value formula, determination and timing of (net) cash flows, the various formulae for different types of known and straight-forward cash flow series, determinations of economic feasibility and its flip-side, internal rates of return, as well as the incorporation of the effects of inflation and escalation on all of the above.To my surprise, none of the above appeared in the formal narrative of the book to any appreciable degree beyond a terse seven pages included in an appendix. Instead, the authors embark on their lively and witty narrative journey by assuming that the reader has had a course in engineering economics (and that all of the math and calculations are old hat to him or her), and instead take the reader on a guided tour of the life of a real-world, engineering project. Along the way, the authors show us the various components of an engineering project within the context of a business organization, and skillfully demonstrate through the use of numerous personal and professional anecdotes what can- and often does- go horribly wrong. In a way, this is the kind of book that I imagine Warren Buffett and Charles T. Munger would write in collaboration about business and investment in the real world.While the standard engineering economics texts, such as Contemporary Engineering Economics (5th Edition) and Principles of Engineering Economy, 8th Edition focus on dry rendition of theory and (somewhat) complicated formulae, this book goes in a different direction and focuses on the actual practice as it relates to getting things done in a business context. It skillfully tackles the 'why' questions behind engineering economics and project finance.Being pitched more along the lines of an introductory book on 'the business end' and the organization of engineering businesses (and those businesses that rely heavily upon the contribution of engineers), the book is most unusual, and often borderline heretical, in that there is a fair bit of levity mixed in with deadly seriousness in its pages. However, the overall good-natured humor and jaded but not too cynical view of real-life project management and business operation (this borne of both of the authors' hard-won experience) always shines through, and do much to liven up an otherwise dry and humorless subject.Among the merits of the text are its incorporation of heaps of wry anecdotes and the use of storytelling to emphasize what can go horribly wrong during the life of a contract. I especially liked the way that it introduces, defines and de-mystifies a lot of the 'MBA-speak' or business techno-babble, such as terms like 'cost-centers' and 'critical-path'. It also carefully introduces the life-cycle of the contract within the context of real-life, and again (and I can not emphasize this enough) provides a variety of examples of things that can go horribly wrong. In so doing, it covertly presented the real nature and meaning of risk in the real world.I personally found a lot of value in the authors' extended discussion of the critical importance of working capital in the business setting. The text also gave me a better understanding and deeper insight into investment (of all things).In my estimation, the book has a couple of very minor demerits. One has to do with its funny way of speaking; however, about fifty pages into the book I soon realized that the authors' collective voice used The Proper, Academic British English. As such, the presence and use of some words and phrases often sounds peculiar. The other has to do with its intended audience, which appears to be pitched moreso towards Crown country students (kids studying in one of the current or former British Commonwealth countries) and not specifically for an audience based in the United States. Yet, on balance, these things do not detract from the totality of the text, and I believe it lends the book a unique character.Overall, I enjoyed reading the book, and was surprised by the number of chuckles and head-shaking snickering it elicited from me as I read its pages. For those students that are curious about engineering as it is practiced in the business setting, I enthusiastically recommend this book.1 of 1 people found the following review helpful. To reflect its resourceful contents, he book title should have been: Projects engineering Contract financesBy Didaskalex****This is an attractive facilitator on financial fundamentals for engineers working on, or in relation to projects. To reflect its resourceful contents, he book title should have been: Projects engineering finances. the book is very friendly to the new generation of clueless engineers on the backbone of project engineering, and contracting industry.It's all about money, is the authors excuse for writing this book which is a vivid technology transfer and upgrade of economic engineering, about the contracting industry. a brief history of money follows on inflation, interest rates, and banking. If you don't know how or why to measure money, you are introduced to financial accounts, assets, and provisions. With a couple of warnings on company liability, management and shareholders.Capital, yearly business plan, working capital, and cash flow are concisely explored in chapters 6 to 9. Following chapters 10 - 16 deal with contracts, their conditions, cost centers, contact pricing, and tendering with two milestone warnings on 'How things can go wrong 2 3. Two case studies of a gas-fired power plant, and expert witness who relates contract specifications to performance guarantees.Going in depth on contract types, terms of payment, and warning 4 on not adhering to good contractual practices, Contract execution, Procurement and monitoring follow up, with a nice contract cash flow/ time curve. chapter 22 and beyond cover getting paid strategy, consultants, optimization, OSHA, Green engineering, RD, Engineering, money, and ethics. Three appendices on financial accounts, CPM analysis, and project cash flow analysis.Compared with Peters/ Timmerhaus' "Plant Design and

Economics for Chemical Engineers, 5th edition, the popular standard text's strong feature on economic analysis, and cost estimation, it is hard to preach having gain without pain. Another Chemical Engineering handbook by Towler and Sinnott covering the economics of plant and process design, including capital cost estimating, revenues and production costs, and profits is also very competitive.

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 ndash; particularly the construction industry and its customers ndash; 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 engineersrsquo; 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.

"Engineering Money is an excellent book for an undergraduate course dealing with return on investment issues for any contracted project, but particularly for engineering projects. The one-liner summary items would provide excellent starting points for a spirited class discussion. Highly recommended. Lower-and-upper division undergraduates." (Choice , 1 April 2011) nbsp;From the Back CoverGet the must-have knowledge every engineer needs regarding finance in this much-needed guide When starting out on their careers, most engineers are unaware that successful engineering projects depend as much on money as they do on technology and that the two are inextricably linked. They eventually learn on the job that money is the only common measure we have for labor, materials and energy and it is therefore essential to managing any project. Traditional engineering education generally ignores financial matters. This book fills the gap by by preparing young engineers on the role finance plays in their projects before they embark on their careers. Engineering Money: Fills the gap in most engineersrsquo; training and gives young engineers an insight into the way engineering businesses run, the importance of capital, how to raise it, and the problems of cash flow Explains the role of money in managing an engineering project and why an engineer is "a guy who can do for half a dollar what any fool can do for a dollar" Is written in an approachable and entertaining style and includes real-world topics that engineers will face in their profession no matter which part of the world theyrsquo;re working in Uniting the basic concepts of engineering design, project evaluation techniques, and accounting methods, Engineering Money delivers an approachable view of finance that gives engineers at all levels the resourcefulness to account for every dollarmdash;and make every cent count.About the AuthorRICHARD HILL worked for twenty years in design and proposals in the contracting industry and served as marketing director for a specialist process plant contractor. He now runs his own independent consultancy and lectures at Cranfield University, University College London, and UNESCO-IHE in Delft, Holland. GEORGE SOLT spent thirty years in industrial research and development serving as technical director in two-specialist process plant contracting companies before becoming a full-time academic at Cranfield University and University College London.