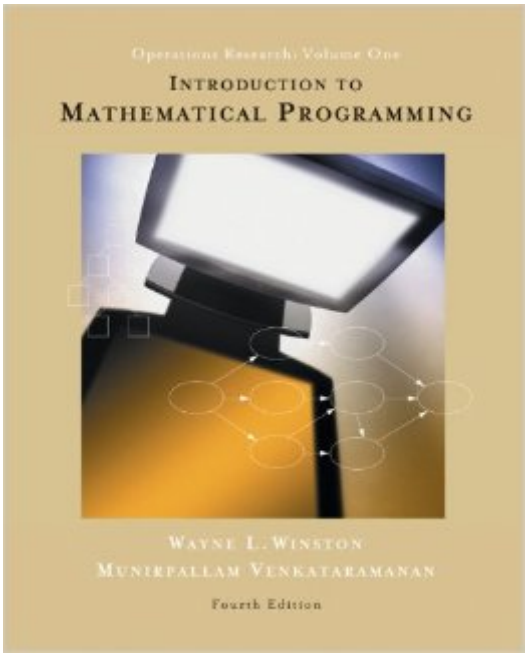
Introduction To Mathematical Programming: Operations Research, Vol. 1 (Book & CD-ROM)



Synopsis

Authors Wayne Winston and Munirpallam Venkataramanan emphasize model-formulation and model-building skills as well as interpretation of computer software output. Focusing on deterministic models, this book is designed for the first half of an operations research sequence. A subset of Winston's best-selling OPERATIONS RESEARCH, INTRODUCTION TO MATHEMATICAL PROGRAMMING offers self-contained chapters that make it flexible enough for one- or two-semester courses ranging from advanced beginning to intermediate in level. The book has a strong computer orientation and emphasizes model-formulation and model-building skills. Every topic includes a corresponding computer-based modeling and solution method and every chapter presents the software tools needed to solve realistic problems. LINDO, LINGO, and Premium Solver for Education software packages are available with the book.

Book Information

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Customer Reviews

As one of the previous reviewers noted this book offers no (very few to be accurate) proofs. While I would normally pounce on an author for neglecting proofs and rigor, Winston approach is rather refreshing and practical. It is like a tool shed filled with tools that one may use without completely understanding its composition. This book is very accessible to people who are not very mathematically apt and provides a gentle introduction for those advanced in mathematics. If you want a general introduction to LP and NLP before you dive into the meat and potatoes (rigor and

proofs) or if you want to just pick up some methods to optimize operations related tasks, I highly recommends this book.

This isn’t your regular review here, because I’m guessing we all "have" to buy this book when we take the course.This book is very helpful for students of all levels. I took it for an "operations research" class after more than 7 years of not studying any math. Still, the first few chapters offer a recap of algebra needed for the course. In the subsequent chapters, everything progresses slowly with lots of examples, (which is helpful if you miss a class or two).Good luck with the class using this book then.

I’m a PhD student in operations research, and this is a great operations research book. Its sometimes confusing that it has so many names: Mathematical programming, linear programming (and non-linear), industrial engineering, operations research, optimization etc.So this is an optimization book, not a computer programming book. Mathematical programming refers to both linear and non-linear optimization. I would recommend this as an introductory book in both the theory and the modeling aspect of operations research/ linear and non-linear optimization.For more advanced theory I would recommend the following (advanced undergrads and graduate students):Linear Programming (LP): Introduction to Linear Programming by Bertsimas and Tsitsiklis.Non-Linear Programming (NLP): Convex Optimization by Boyd and VandenbergheBoth LP and NLP: Linear and Nonlinear Programming by David G. Luenberger and Yinyu Yeenjoy!

This was a required text for my Operations Research class and I wish it wasn’t. The text itself is not completely awful, it does cover things in a logical order and provides good examples to work from. The major problem is that is a out of date, sadly so in fact. The software it is meant to come with does not run on newer versions of Windows, not to mention there are many other programs freely available that do the same things.If you are a student required to get this text, I recommend Chegg as they have lots of resources for this book which makes learning from it much easier. If you are a professor looking for a text for an Operations Research class, please look elsewhere, you students will thank you!

The book is very good, brings loads of examples and exercises. It has also a sample version of LINGO, which is quite useful for Operational Researchers.The only hint I give is the following: if you have already the blue book OPERATIONS RESEARCH by the same author, forget about this one.

The content is basically the same, except from two chapters.

There are textbooks where one can really see that effort not only went into minimizing mistakes but also in narrowing the barrier of learning as much as possible (i.e., simplifying without losing mathematical rigor). This text doesn't master either aspect.Otherwise the book is fairly mediocre. Unfortunately, some obsolete concepts (such as the M method as well as some other algorithms) are covered, but critical concepts (Simplex _fundamentals_) are either ignored or explained poorly (especially the section on direction of unboundedness was confusing, left out critical information, and didn't connect well to the later Simplex chapters).EDIT: After reading some of the well-written sections that deal with common student errors I thought I was too harsh on this one. Also, I should have not criticized the treatment of the M-method because it is still taught everywhere.Then I realized that numerous sections in this text introduce concepts with an unintuitive approach, emphasizing memorization over understanding. This is inexcusable and I will refrain from increasing my original rating for this reason.

Heavy book with plenty of interesting material. The CD is included but I have never used it. I barely opened the book for the class for which it was required but I used it as basic material for other classes I was struggling to understand.

Dr. Winston's two-volume series is well produced, to cover Mathematical Programing and Probability Models, all the key things required to understand Management Science, Operations and Optimization, and Systems Engineering. This is well-written as well, for both the novice and the more experienced person who needs a refresher or a reference. Though the computer programs on the disk are outdated, you can download the latest versions from the Internet, and from Dr. Winston's own site at the software maker's website, for students who require it.

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