# Matrix Analysis And Applied Linear Algebra Book And Solutions Manual 



## Synopsis

This book avoids the traditional definition-theorem-proof format; instead a fresh approach introduces a variety of problems and examples all in a clear and informal style. The in-depth focus on applications separates this book from others, and helps students to see how linear algebra can be applied to real-life situations. Some of the more contemporary topics of applied linear algebra are included here which are not normally found in undergraduate textbooks. Theoretical developments are always accompanied with detailed examples, and each section ends with a number of exercises from which students can gain further insight. Moreover, the inclusion of historical information provides personal insights into the mathematicians who developed this subject. The textbook contains numerous examples and exercises, historical notes, and comments on numerical performance and the possible pitfalls of algorithms. Solutions to all of the exercises are provided, as well as a CD-ROM containing a searchable copy of the textbook.

## Book Information

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## Customer Reviews

Although titled as Matrix Analysis and Applied Linear Algebra, this book is one of the clearest treatments of pure linear algebra in general. Most of the theorems are proved and the proofs are very well motivated. There are no hand-waving arguments yet it is very easy to follow all the material contained. I also noticed that this book provides a smooth transition to introductory functional analysis for those who already possess the adequate real analysis background. There is an immense collection of well chosen examples throughout the book, and all the solutions are
included in thesolution manual which comes as a seperate volume. The whole package(printed version of the book + CD-ROM + solution manual) is bundled, so once you order it, you will have all of them at once). The organization of the book is also excellent and it manages to maintain a perfect coherence between sections while each chapter can be read alone as well. This is a rare trait indeed. However, this is not a numerical linear algebra book like Demmel’s and Trefethen`s texts, which mostly dwell on algorithmic implementation side, although it is the perfect complement to those two works.Whole text(in color), including the solution manual, is available online for people who want to take a quick look at it.The CD-ROM, which comes with the hard copy of the text also contains the electronic version of the book for readers convenience.Obviously there is no panacea for learning or teaching matrix analysis while resorting to a single text, but this book comes closest to accomplishing this with a rather nice package.

This book is very interesting to read, it is very clear, well explained and presented. The subjects covered in this book are mostly for undergraduate to begining graduate and can serve as a bridge to numerical linear algebra. The author makes a great emphasis on explanation and he does a great job. For those who have ever read a book by SIAM know the style of writing and presentation. The book is applied as it mean it is not theoritical.The book contains a lot of exercise of different difficulty and it is accompanied with a solution manual to all of the exercises and a CD-ROM with a lot of stuff in it that make the book more interesting. The author maintain a web site where you can find many more information concernig the book. I recommend this book to anyone who want to introduce himself into linear algebra and matrix analysis.

This is a good book for bridging between an introductory, single semester course on linear algebra and graduate matrix analysis.Although it isn't in the traditional lemma-theorem-proof format of more traditional maths books, I found the explanations and proofs very clear. There is an electronic version of the book that you can read online but not save or print.

Professor Meyer has indeed produced an excellent book on Linear Algebra. The author manages to explain complex topics in a manner, understandable to an undergrad, without simplyfying or skipping parts. This is NOT the kind of textbook were you read one page over and over again without understanding. And it's NOT the kind of book where, trying to follow the authors steps, you stop and wonder HEY how did he do that.Professor Meyer is patient and thorough and explains even the simpler issues step by step without annoying comments like "inuitively we can see" or "it is
obvious". He takes his time to make sure that everything is chrystal clear. The book covers all you need to know in linear algebra, and more. A lot of computational issues and algorithms are also evaluated in this book. However, if you have no interests in such topics, those sections can be skipped and uses as a reference if you wish to explore computational issues.In conclusion: Great work Professor Meyer!

I wanted a truly intermediate linear algebra book, not too elementary and not too advanced. I chose this one, and have not been disappointed. Especially if you are already acquainted with the subject, this book has much to offer. Although I am wont to skip introductory chapters dealing with Gaussian elimination, I am glad that I did not skip the introductory material in this book, because it goes considerably beyond the usual presentation. The author is concerned throughout the book with the numerical and computational aspect of the subject, but sometimes can only summarize those results in a book only 700 pages long. I appreciate even those summaries, since they are entirely missing from other linear algebra textbooks. This is a practical, problem-oriented textbook, especially valuable for a computational perspective.According to the blurb on the back, this book "circumvents the traditional definition-theorem-proof format that has bored students in the past." I do not find that format boring. I appreciate the clarity that it ought to facilitate. My only criticism, so far, is that this format was not followed.P.S. After more acquaintance with this book, I must add that I wish that it were better organized. Throughout, the author refers to other sections earlier and much later. The result is that I need half a dozen book marks to read even a little. The author surely knows the subject extremely well, and I hope that he produces an edition so revised as to amount to quite a new book.

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