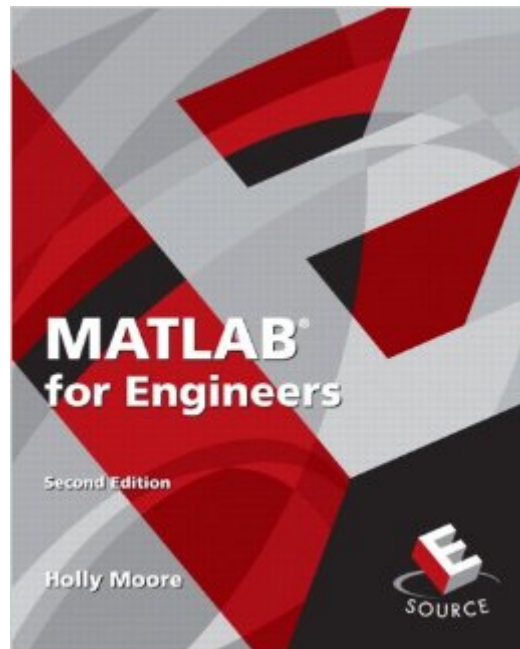# MATLAB For Engineers (2nd Edition)

Synopsis

MATLAB for Engineers, 2e is ideal for Freshman or Introductory courses in Engineering and Computer Science. Â With a hands-on approach and focus on problem solving, this introduction to the powerful MATLAB computing language is designed for students with only a basic college algebra background. Numerous examples are drawn from a range of engineering disciplines, demonstrating MATLABâ ™s applications to a broad variety of problems. Â Note: This book is included in Prentice Hallâ ™s ESource series. ESource allows professors to select the content appropriate for their freshman/first-year engineering course. Professors can adopt the published manuals as is or use ESourceâ ™s website www.prenhall.com/esource to view and select the chapters they need, in the sequence they want. Â The option to add their own material or copyrighted material from Â other publishers also exists. Â

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Customer Reviews

I reviewed a number of books before choosing a text for an introductory class on computational techniques for sophomore engineers. I chose this book because it struck a great compromise between the "Introduction to MATLAB" materials and the MATLAB functionality engineers really use (especially chapters 11 and 12).The examples are thorough and plentiful. Student engineers and anyone new to MATLAB would do well to get this book.

I have just started learning MATLAB and this is the best book I have found so far. The book is full of examples, well structured and can be used as a reference as well as a textbook. Numerous facets

of MATLAB are covered including but not limited to linear algebra, flow analysis, symbolic derivatives and integration, and solving systems of equations both numerically and symbolically. This book was written to be used in a classroom environment but I had no trouble getting through it on my own. I would venture to say that it goes way beyond an introduction into intermediate practical uses for MATLAB. If you only get one book on MATLAB, this is it!

This is an OK initial book. The examples concentrate more on the mathematics involved, rather than examples of MatLab coding. There is extremely little information on advanced topics, such as use of a GUI, or formation of structures.I'd target this book to a freshman engineering student who has almost no experience in engineering/scientific programming. At the elementary level, explanations are quite a bit better than what you find in the MathWorks MatLab documentation.

If you have just received MATLAB, have it on the office/school computer and never use it, or use it so infrequently that you do not recall some of the basic commands this is a near perfect book for you. While the book has many examples using physics, finance or other problems, they are there primarily as examples on how to set up MATLAB to solve the problem and go on to produce presentable outputs and plots.After just a day or two you will forever resist typing complex formulas into a tiny MS Excel cell to produce a screen full of data that you then must capture into a graph. In MATLAB the same problem is similar to typing it out in a few lines of plain English, hit the return key, and have the table or graph simply appear, save it as a jpg and insert it into a MS Office application.In summary, if you have a mathematical expression or need to construct a problem ranging from simple to somewhat complex, and want a guide on how to quickly lay it into MATLAB and get a result this is the book for you. If you use MATLAB daily and are comfortable with it, want to create GUIs, need to capture streaming data for real time analysis, etc this is the wrong book.

This book makes an ideal introduction to MATLAB for beginning engineers and programmers. The book uses many actual examples from basic physics, chemistry, and trigonometry to illustrate the use of MATLAB. There is ample explanation of the concepts and formulas used, although these explanations can be easily glossed over by more experienced engineers. The book includes practice exercises throughout each chapter with answers in the back of the book, as well as problem sets at the end of each chapter.I actually used the open source Octave package instead of MATLAB with the book, and did not encounter any problems. The book discusses the MATLAB graphical user interface, which Octave does not have, but I simply skipped those sections without it

interfering with my understanding of the rest of the material.I was bothered by some shortcomings for use with new engineers. In most of the problems, the units seem to be carefully chosen to prevent the need for dimensional analysis. The book demonstrates dimensional analysis in many examples, but doesn't explain the principles involved or require dimensional analysis in most problems. This could lead to sloppiness with units. The book also doesn't seem to mention the importance of significant figures. In some exercises, it wasn't clear whether the data in the first column should be included in the table itself or inferred from the row numbers. None of these are major problems, as any decent engineering curriculum will teach dimensional analysis and significant figures, and in practice it's a matter of taste whether to include data in the first column or not. The book excels at its primary purpose: teaching the use of MATLAB to beginning engineers.

I used this book to teach an introductory engineering programming course. I'd say the biggest strengths of this text are the "non-computer-science-y" way that the material is discussed, and the excellent homework problems. They provide a way for me to reintroduce topics that students are supposed to know "on the sly." The problems are realistic. The tone is sufficiently casual, and doesn't assume any prior knowledge of the material. The only thing it's missing is an Appendix to cover some of the math that students may have missed like polar coordinates, some details on matrices, and a quick review of complex numbers and graphing them. I'm really happy with this book, and the students haven't complained overmuch about it, which is unusual for any engineering textbook.

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