ESSENTIALS OF APPLIED MATHEMATICS

FOR THE MANAGERIAL, LIFE AND SOCIAL SCIENCES

SOO T. TAN

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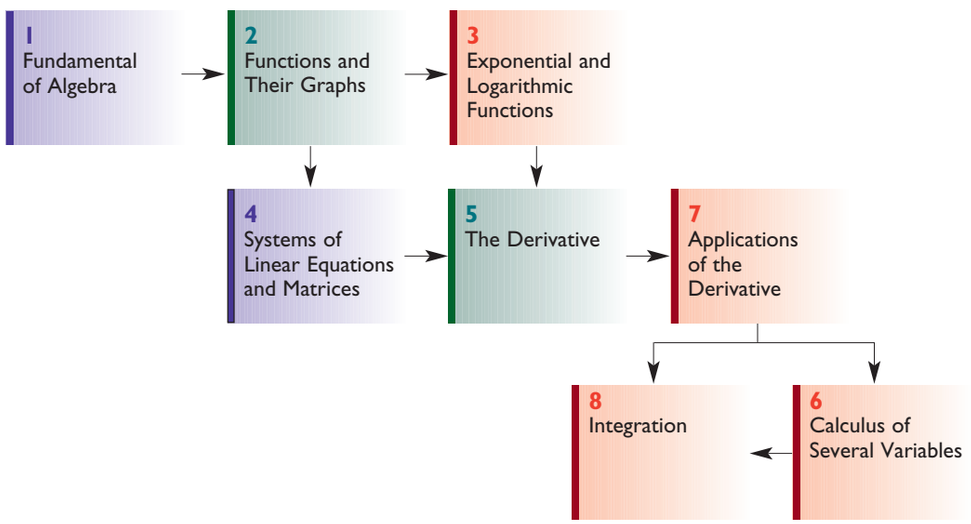
PREFACE

Essentials of Applied Mathematics for the Managerial, Life, and Social Sciences is customized to meet three main objectives, (1) to provide a text that is motivating while providing the background in the quantitative technique necessary to better understand and appreciate the course normally taken in undergraduate training, (2) to lay the foundation for more advanced courses, such as statistics and operations research, and (3) to make the text a useful tool for instructors.

The text contains more than enough materials for the usual two-semester or three semester course. It is arranged in such a way that the instructor may either follow the suggested chapter dependency flow below or be flexible in choosing the topics most suitable for her or his course for the intended audience.



About the Author

SOO T. TAN received his S.B. degree from Massachusetts Institute of Technology, his M.S. degree from the University of Wisconsin–Madison, and his Ph.D. from the University of California at Los Angeles. He has published numerous papers in Optimal Control Theory, Numerical Analysis, and Mathematics of Finance. He is currently Professor Emeritus of Mathematics at Stonehill College.

By the time I started writing the first of what turned out to be a series of textbooks in mathematics for students in the managerial, life, and social sciences, I had quite a few years of experience teaching mathematics to non-mathematics majors. One of the most important lessons I learned from my early experience teaching these courses is that many of the students come into these courses with some degree of apprehension. This awareness led to the intuitive approach I have adopted in all of my texts. As you will see, I try to introduce each abstract mathematical concept through an example drawn from a common, real-life experience. Once the idea has been conveyed, I then proceed to make it precise, thereby assuring that no mathematical rigor is lost in this intuitive treatment of the subject. Another lesson I learned from my students is that they have a much greater appreciation of the material if the applications are drawn from their fields of interest and from situations that occur in the real world. This is one reason you will see so many exercises in my texts that are modeled on data gathered from newspapers, magazines, journals, and other media. Whether it be the market for cholesterol-reducing drugs, financing a home, bidding for cable rights, broadband Internet households, or Starbucks' annual sales, I weave topics of current interest into my examples and exercises to keep the book relevant to all of my readers.

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