Título:

Autor:

Precio: $936.88

Editorial:

Año: 2011

Tema:

Edición: 1ª

Sinopsis

ISBN: 9781441975911

This concise and up-to-date textbook is designed for the standard sophomore course in differential equations. It treats the basic ideas, models, and solution methods in a user friendly format that is accessible to engineers, scientists, economists, and mathematics majors. It emphasizes analytical, graphical, and numerical techniques, and it provides the tools needed by students to continue to the next level in applying the methods to more advanced problems. There is a strong connection to applications with motivations in mechanics and heat transfer, circuits, biology, economics, chemical reactors, and other areas. Exceeding the first edition by over one hundred pages, this new edition has a large increase in the number of worked examples and practice exercises, and it continues to provide templates for MATLAB and Maple commands and codes that are useful in differential equations. Sample examination questions are included for students and instructors. Solutions of many of the exercises are contained in an appendix. Moreover, the text contains a new, elementary chapter on systems of differential equations, both linear and nonlinear, that introduces key ideas without matrix analysis. Two subsequent chapters treat systems in a more formal way. Briefly, the topics include: * First-order equations: separable, linear, autonomous, and bifurcation phenomena; * Second-order linear homogeneous and non-homogeneous equations; * Laplace transforms; and * Linear and nonlinear systems, and phase plane properties.