Quantitative Fundamentals of Molecular and Cellular Bioengineering: J. Dane Wittrup 2020-01-07 Quantitative Fundamentals of Molecular and Cellular Bioengineering is an essential introduction for anyone working in the field of bioengineering. The book covers the fundamental mathematical tools, principles, and techniques that are used in the study of molecular and cellular systems. These concepts are presented in a way that is accessible to students who have a background in biology, chemistry, or physics. The book is divided into two parts: Part I covers the fundamentals of molecular and cellular systems, while Part II explores the application of these systems in the design and development of bioengineering solutions. The book includes numerous examples and exercises that help students develop their skills in quantitative bioengineering. Additionally, the book provides an introduction to the use of computational tools and software for bioengineering research. This textbook is ideal for undergraduate and graduate students in bioengineering, as well as for researchers in the field who wish to refresh their knowledge of the fundamentals of molecular and cellular bioengineering.
Fundamentals of Applied Dynamics covers Newtonian mechanics, without Hamiltonian or Lagrangian formalism. No further knowledge other than one year of calculus is required. Dr. Roberto Tenenbaum has over 30 years of teaching experience. He is a professor of Mechanical Engineering at the University of Rio de Janeiro, Brazil. Some praise for the original edition: "Fundamentals of Applied Dynamics contains a large number of examples treated in great detail... The author takes great pains to carefully examine all the points touched upon... The material is presented in a very systematic way, almost always going from the general to the more particular. The text is extremely clear and consistent, and all the figures are of excellent quality... The careful, authoritative and comprehensive way in which the material is presented reflects the long experience of the author in teaching dynamics to generations of students." - Peter Hagedorn, Darmstadt University of Technology

Dynamics of Structure and Foundation - A Unified Approach - Indrajit Chowdhury 2008

Designed to provide engineers with quick access to current and practical information on the dynamics of structure and foundation, this unique work, consisting of two separately available volumes, serves as a complete reference, especially for those involved with earthquake or dynamic analysis, or the design of machine foundations in the oil, gas, and chemical industries.

Finite Element Procedures - Klaus-Jürgen Bathe 2006