Library Reading Guidance

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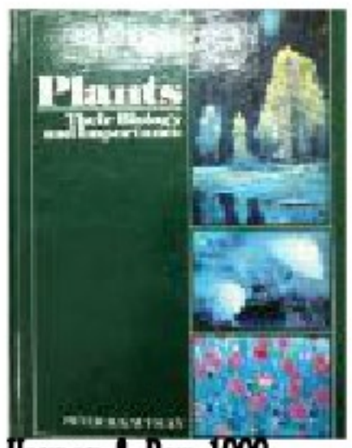
Plants: Their Biology and Importance

Peter B. Kaufman and the Others



Harper & Row, 1999
ISBN:060435755 (hbk.)
Call Number:Q94/P713

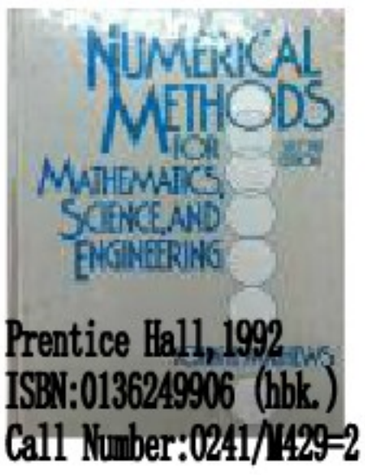
Plant biology is truly one of the most exciting and dynamic of all the natural sciences. As you read this text, you will begin to see how readily plant biology lends itself to the type of scientific research involved in each of these areas. In order to help you in your study of botany, we have organized the text into several convenient sections: plant structure; the major groups of plants and their diversity and evolution; genes and their action, plant genetics, and plant breeding; ecology of plants and plant communities; major aspects of how plants function physiologically; plant growth and development; and economics uses of plants by people. This material will give you a basic understanding of plant structure. It will also enable you to recognize that advances in biotechnology are opening up enormous possibilities of scientists studying plant structure and use.

We hope that by reading this text you gain a better appreciation of plants and their diversity, how they function, and the central role they play in our ecosystem in natural and wilderness areas as well as in rural areas and cities. Perhaps most of all, we hope this book inspires you to learn more about plants and the effect they have on your life and on the world around you. To put subject of this book in its proper perspective: plants are as important to the survival of the human race as the very air we breathe. We could not get along without them.

Numerical Methodsfor Mathematics, Science, and Engineering

Second Edition

John H. Mathews



Prentice Hall, 1992
ISBN:0136249906 (hbk.)
Call Number:0241/M429-2

Numerical Methods for Mathematics, Science, and Engineering, Second Edition, provides a rudimentary introduction to numerical analysis for either a single course or a year-long sequence and is suitable for undergraduate students in mathematics, science, and engineering. Ample material is presented so that instructors, will be able to select topics appropriate to their needs. It is assumed that the reader is familiar with calculus and has taken a structured programming language such as BASIC, C, FORTRAN, or Pascal.

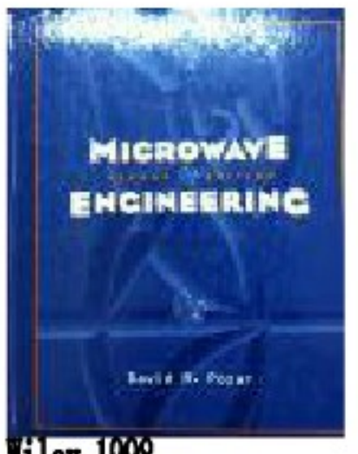
Students of all backgrounds enjoy numerical methods and this is kept in mind throughout the book. A variety of examples and problems sharpen one's skill in both the theory and practice of

numerical analysis. Computer calculations are presented in the from of tables and graphs whenever possible so that the resulting numerical approximations are easier to interpret. Many figures for this second edition were obtained by using the software Mathematica™. The algorithms for the various numerical processes are given in pseudo-code and are easy for students to translate into BASIC, C, FORTRAN, or Pascal. The structure of the algorithms makes them easy to adapt to a programming environment such as MAPLE, Mathematica ™, or MATLAB ™.

Microwave Engineering

Second Edition

David M. Pozar



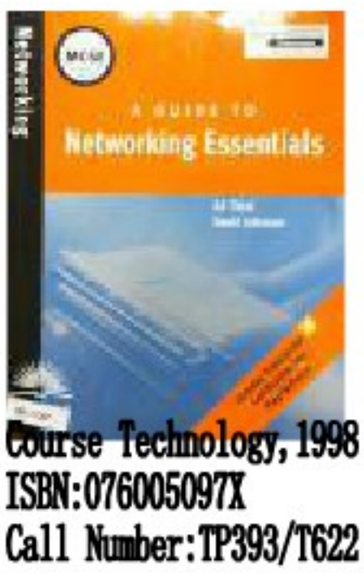
Wiley, 1998
ISBN:0471170968 (hbk.)
Call Number:TN015/P893=2

Because education should be the accumulation of understanding, not just an accumulation of facts, I have tried to write a textbook that emphasizes the fundamental concepts of Maxwell's equations, wave propagation, network analysis, and design principles as applied to modern microwave engineering. Although I have avoided the handbook approach, in which a large number of results are presented with little or no explanation or context, a considerable amount of material in this book is related to the design of specific microwave circuits and components, for both practical and motivational value. Modern microwave engineering involves predominantly circuit analysis and design, in contrast to the field theory orientation of a generation ago. I have tried to present the analysis and logic behind these designs so that the reader can see and understand the process of applying fundamental concepts and principles of microwave engineering, and has seen how these can be applied toward a specific design objective.

This text was written for use in a two-semester course in microwave engineering, for senior or first-year graduate students.

A Guide to Networking Essentials

Ed Tittel, David Johnson



Course Technology, 1998
ISBN:076005097X
Call Number:TP393/T622

In 1/4 clear, concise chapters, ***A Guide to Network Essentials*** provides a comprehensive, up-to-date roadmap for understanding networking today. With its thorough coverage of network designs, architectures, standards, and protocols, this text enables you to harness the power of rapidly changing networking technologies. But unlike other texts, ***A Guide to Network Essentials*** provides you with opportunity to put your skills to the test in end-of-chapter assessments, featuring Review Questions, Hands-on Projects, and more in-depth Case Projects. This integrated program of instruction and assessment will equip you with the networking expertise demanded by so many of today's top firms.

This text is a Microsoft Certified Professional Approved Study Guide, mapped directly to Microsoft's objectives for the exam. ***A Guide to Networking Essentials*** also comes with

Transcender Corporation's Certification Exam Simulation Software, featuring an assessment exam that simulates the real Microsoft exam. Together, these tools offer you an unparalleled opportunity to prepare for and pass the Microsoft Networking Essentials exam!

Fundamentals of Fluid Film Lubrication

Bernard J. Hamrock

McGraw-Hill, 1994
ISBN:0070259569
Call Number:TH117/H198

The title of this book was specifically chosen as ***Fundamentals of Fluid Film Lubrication***, rather than the more general title of Tribology, since fluid film lubrication will be the book's primary emphasis. Fluid film lubrication occurs when opposing bearing surfaces are completely separated by a lubricant film. Hydrodynamic and elastohydrodynamic lubrication are modes of fluid film lubrication and are emphasized in this text, whereas boundary lubrication is given only a cursory treatment. The reason for this slant of the book is that fluid film lubrication has been the focal point of my research throughout my professional career.

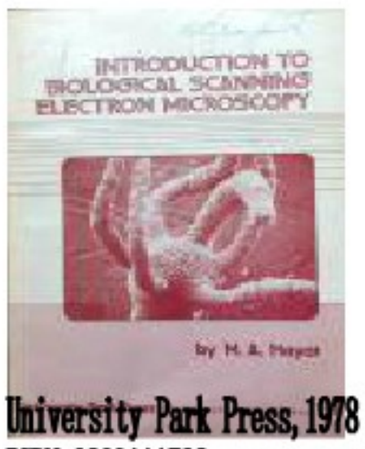
The organization of the text is such that is divided into three parts. The first part covers the fundamentals required in understanding fluid film lubrication. That is, an understanding of surface characterization (Chapter 3), lubricant properties (Chapter 4) , bearing materials(Chapter 5) , viscous flow(Chapter 6) , and the Reynolds equation (Chapter 7) is important in understanding lubrication (Chapters 8 to 18) , and the third part covers elastohydrodynamic lubrication(Chapters 19 to 27).

Throughout the book emphasis is given to deriving formulas from basic theory and providing physical understanding of these formulas. Although at times this proves to be lengthy, I feel it is important that the reader develop a firm understanding of how information provided in design charts has been obtained. Also the importance and influence of the assumptions made in all derivations based on the theory are discussed. The assumptions emphasize the limits to which the results of the derivations are valid and applicable.

The book was written for senior undergraduate and graduate engineering students. Engineers who encounter machine elements that use fluid film lubrication should also find this book useful.

Introduction to Biological Scanning Electron Microscopy

M. A. Hayat



University Park Press, 1978
ISBN:0839111738
Call Number:TN16/H412

Written by a distinguished scientist and teacher, widely known nationally and internationally for his many journal and book publications, this is the first and only introductory text dealing exclusively with biological scanning electron microscopy. It is unquestionably the premier text on this subject for undergraduate and graduate students and their teachers, but the thoroughness and precision of Professor Hayat's presentation make it particularly valuable also for technicians and research workers who need firm grounding in the use of the scanning electron microscope and preparatory procedures.

Because methodology is considered a major constraint in obtaining accurate information about the topography of internal and external surfaces of cells and tissues, the book covers methodology in detail, while presenting instrumentation in a concise and simplified manner. Professor Hayat provides a comprehensive compilation of almost all routine methods for canning electron microscopy, their advantages and disadvantages, new viewpoints on current problems, and areas of disagreement and potential research problems, so that the reader learns both the certainties and the gaps in current knowledge.

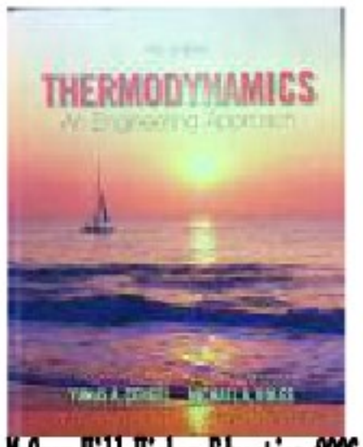
The book also covers preparatory procedures in detail, because a clear understanding of these procedures is essential to the correct interpretation of information derived from scanning electron micrographs. Included are discussions of the effects of various necessary treatments on the surface topography, the dimensions of specimens, and the production of artifacts.

New methods and new versions of old methods are presented in self-explanatory form so the reader can practice them without outside help. The text provides practical instructions for processing specimens, concentrating on methods known to be the best and most reliable, including some that are still in the experimental stage.

Thermodynamics: An Engineering Approach

Fifth Edition

Yunus A. ?engel, Michael A. Boles



McGraw-Hill Higher Education, 2006
ISBN:0072884959(bbk.)
Call Number:TK123/E57-5

The fifth edition ***Thermodynamics: An Engineering Approach*** moves students toward a clear understanding and firm grasp of the basic principles of thermodynamics. This textbook communicates directly with tomorrow's engineers in a simple yet precise manner that encourages creative thinking and is read by students with interest and enthusiasm.

Features:

• **An early introduction of the first law of thermodynamics**, which is now covered in Chapter 2. This new chapter establishers a general understanding of energy, mechanisms of energy transfer, the concept of energy balance, thermo-economics, and conversion efficiency.

• **Separate coverage of closed system energy analysis,** now discussed in Chapter4. The energy analysis of closed systems is presented together with boundary work and a discussion of specific heats for both ideal gases and incompressible substances.

• **Combined coverage of control volume mass and energy analysis**, which now appears in Chapter5.

• **Revised coverage of compressible flow,** which is discussed in chapter17. The completely revised chapter includes coverage of oblique shocks and flow with heat transfer, and is filled with exciting photographs.

• **Over 300 new comprehensive problems**, which further enhance the extensive and diverse text homework problem sets.

• **Physical intuition** to help students develop a sense of the underlying physical mechanisms and a mastery of solving practical problems that an engineer is likely to face in the real world.