

Advanced Engineering Mathematics

Second Edition

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This book is aimed at second year undergraduate science and engineering students in universities, polytechnics and colleges throughout the world, as well as those studying for the Engineering Council Part II examinations. Highly successful in its first edition, it follows an integrated approach whereby analytical, numerical and computer-based techniques are discussed side by side, indicating to the student how problems arising in industrial situations are solved mathematically.

Proofs are provided only where it is necessary to illustrate basic principles. For the numerical techniques the approach has been to form a heuristically derived algorithm and to illustrate how this is used. Throughout the text there is a generous supply of worked examples with supplementary problems supplied at the end of each chapter.

Changes have been made to the content of the first edition reflecting the advent of the pocket calculator and microcomputer and shifts in emphasis of parts of the syllabus. The removal of some mathematical 'dead wood' has made room for new ideas. These include an extension of the chapter on integral transforms to meet the needs of Electrical Engineering applications and the introduction of Discrete Fourier Transforms.

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