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**Mathematical techniques. An introduction for the engineering, physical, and mathematical sciences.**

Oxford University Press, Oxford (ISBN 0-19-924972-5). 880 p. (2002).

From the publisher's description: This textbook offers an accessible and comprehensive grounding in many of the mathematical techniques required in the early stages of an engineering or science degree, and also for the routine methods needed by first and second year mathematics students. Mathematical Techniques starts by revising work from pre-university level before developing the more advanced material which students will encounter during their undergraduate studies. The contents of the book has been fully revised for this, the third edition. The first chapter on standard techniques, has been rewritten and expanded to serve the increasingly diverse needs of students. The Fourier transform now has its own chapter; a simplified approach is adopted, and diffraction theory, together with supporting material on wave motion, is included. Many changes enhancing clarity have been made in other chapters. The chapter on projects using Mathematica has been extended to cover these changes: the associated programs are freely available on Keele University, Mathematics Department web site: [www.keele.ac.uk/depts/ma/](http://www.keele.ac.uk/depts/ma/). Chapters and sections are designed to be largely self-contained, allowing students to concentrate on the specific methods they need to master and use. The book contains nearly 500 worked examples, more than 2000 problems (with selected answers), and over 120 computing projects. The text is accessible, widely illustrated, and stands as an ideal introduction on mathematical methods at university level.

*Classification:* U25 I15 K45 K65 E65

*Keywords:* textbooks; universities; matrix algebra; integration; linear differential equations; Laplace transforms; Fourier transforms; multivariate calculus; discrete mathematics; Boolean algebra; probability; statistics; symbolic computing; Mathematica