



Graduate Engineering Mathematics

V.B.K. Vatti

2020	7 x 9.5	1248 pp	Paperback	ISBN: 9789386768391	Price: 875.00
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About the Book

Graduate Engineering Mathematics is designed primarily as a textbook for the students of engineering and physical sciences. This book introduces concepts of mathematics such as Linear Algebra and Calculus, Numerical Methods, Series, Differential Equations, Transforms, Complex Analysis, Statistics, Probability and Linear Programming. This book will also be useful as a reference text to engineers and scientists. The book has seven parts comprising a total of 25 chapters. It contains as many as 644 worked examples and more than 1250 exercise problems with answers.

Salient Features

- Simple and systematic presentation of concepts.
- Large number of worked examples to reinforce the concepts.
- Clear exposition of the mathematical concepts.
- Exercises at the end of each chapter with answers.

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1. Matrices, Vectors and Eigenvalue Problems
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4. Multiple Integrals and bG Functions
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6. Solid Geometry

Part II: Numerical Methods

7. Numerical Solution of Non-linear Equations
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11. Numerical Solution of Partial Differential Equations

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Part VII: Statistics, Probability and Linear Programming

23. Curve Fitting, Correlation and Regression

24. Probability, Sampling and Inference

25. Linear Programming

Appendices

About the Author

V.B.K. Vatti :- Professor of Engineering Mathematics, Andhra University, obtained his doctorate from Indian Institute of Technology, Bombay after pursuing graduation and post-graduation from Andhra University. He has nearly about 35 years of teaching experience apart from research imparting various mathematical and computational skills to the UG and PG students of engineering. He has nearly 75 publications to his credit in various national and international journals and guided Indian and foreign students amounting to a decent number to obtain their PhD and MPhil degrees.

He has also served the university in various capacities such as coordinator of University Grants Commission, Chief of Employment and Guidance Bureau, HoD of Engineering Mathematics and Chairman of Common Board of Studies in Mathematics, Physics, Chemistry and HSS of engineering. He has authored 2 Text Books namely *Numerical Analysis: Iterative Methods and Graduate Engineering Mathematics* and also co-authored a few books on mathematics for the benefit of distance education students of Andhra University.