



## An Introduction to Multivariable Mathematics

By Leon Simon

Morgan & Claypool. Paperback. Book Condition: New. Paperback. 142 pages. Dimensions: 9.2in. x 7.3in. x 0.5in. The text is designed for use in a forty-lecture introductory course covering linear algebra, multivariable differential calculus, and an introduction to real analysis. The core material of the book is arranged to allow for the main introductory material on linear algebra, including basic vector space theory in Euclidean space and the initial theory of matrices and linear systems, to be covered in the first ten or eleven lectures, followed by a similar number of lectures on basic multivariable analysis, including first theorems on differentiable functions on domains in Euclidean space and a brief introduction to submanifolds. The book then concludes with further essential linear algebra, including the theory of determinants, eigenvalues, and the spectral theorem for real symmetric matrices, and further multivariable analysis, including the contraction mapping principle and the inverse and implicit function theorems. There is also an appendix which provides a nine-lecture introduction to real analysis. There are various ways in which the additional material in the appendix could be integrated into a course--for example in the Stanford Mathematics honors program, run as a four-lecture per week program in the Autumn Quarter each...



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