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	Descrizione fisica	1 online resource (XIII, 507 p. 182 illus., 59 illus. in color.)
	Collana	Undergraduate Texts in Mathematics, , 2197-5604
	Disciplina	519.535
	Soggetti	Mathematical analysis Analysis
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	Livello bibliografico	Monografia
	Note generali	Includes index.
	Nota di contenuto	Preface -- 1 Results from One-Variable Calculus -- Part I Multivariable Differential Calculus -- 2 Euclidean Space -- 3 Linear Mappings and Their Matrices -- 4 The Derivative -- 5 Inverse and Implicit Functions -- Part II Multivariable Integral Calculus -- 6 Integration -- 7 Approximation by Smooth Functions -- 8 Parameterized Curves -- 9 Integration of Differential Forms -- Index.
	Sommario/riassunto	The graceful role of analysis in underpinning calculus is often lost to their separation in the curriculum. This book entwines the two subjects, providing a conceptual approach to multivariable calculus closely supported by the structure and reasoning of analysis. The setting is Euclidean space, with the material on differentiation culminating in the inverse and implicit function theorems, and the material on integration culminating in the general fundamental theorem of integral calculus. More in-depth than most calculus books but less technical than a typical analysis introduction, Calculus and Analysis in Euclidean Space offers a rich blend of content to students outside the traditional mathematics major, while also providing transitional preparation for those who will continue on in the subject. The writing in this book aims to convey the intent of ideas early in discussion. The narrative proceeds through figures, formulas, and text, guiding the reader to do mathematics resourcefully by marshaling the skills of geometric intuition (the visual cortex being quickly instinctive) algebraic manipulation (symbol-patterns being precise and robust) incisive use

of natural language (slogans that encapsulate central ideas enabling a large-scale grasp of the subject). Thinking in these ways renders mathematics coherent, inevitable, and fluid. The prerequisite is single-variable calculus, including familiarity with the foundational theorems and some experience with proofs.