

1. Record Nr.	UNINA9910753399403321
Autore	Axler Sheldon
Titolo	Linear Algebra Done Right // by Sheldon Axler
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2024
ISBN	3-031-41026-2
Edizione	[4th ed. 2024.]
Descrizione fisica	1 online resource (408 pages)
Collana	Undergraduate Texts in Mathematics, , 2197-5604
Disciplina	512.5
Soggetti	Algebras, Linear Linear Algebra
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Preface for the Instructor-Preface for the Student-Acknowledgments-1. Vector Spaces -- 2. Finite-Dimensional Vector Spaces -- 3. Linear Maps -- 4. Polynomials -- 5. Eigenvalues, Eigenvectors, and Invariant Subspaces -- 6. Inner Product Spaces -- 7. Operators on Inner Product Spaces -- 8. Operators on Complex Vector Spaces -- 9. Operators on Real Vector Spaces -- 10. Trace and Determinant-Photo Credits-Symbol Index-Index.
Sommario/riassunto	Now available in Open Access, this best-selling textbook for a second course in linear algebra is aimed at undergraduate math majors and graduate students. The fourth edition gives an expanded treatment of the singular value decomposition and its consequences. It includes a new chapter on multilinear algebra, treating bilinear forms, quadratic forms, tensor products, and an approach to determinants via alternating multilinear forms. This new edition also increases the use of the minimal polynomial to provide cleaner proofs of multiple results. Also, over 250 new exercises have been added. The novel approach taken here banishes determinants to the end of the book. The text focuses on the central goal of linear algebra: understanding the structure of linear operators on finite-dimensional vector spaces. The author has taken unusual care to motivate concepts and simplify proofs. A variety of interesting exercises in each chapter helps students understand and manipulate the objects of linear algebra. Beautiful formatting creates pages with an unusually student-friendly

appearance in both print and electronic versions. No prerequisites are assumed other than the usual demand for suitable mathematical maturity. The text starts by discussing vector spaces, linear independence, span, basis, and dimension. The book then deals with linear maps, eigenvalues, and eigenvectors. Inner-product spaces are introduced, leading to the finite-dimensional spectral theorem and its consequences. Generalized eigenvectors are then used to provide insight into the structure of a linear operator. From reviews of previous editions: Altogether, the text is a didactic masterpiece. — zbMATH The determinant-free proofs are elegant and intuitive. — American Mathematical Monthly The most original linear algebra book to appear in years, it certainly belongs in every undergraduate library — CHOICE.
