

[Books] Advanced Calculus An Introduction To Classical Analysis

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Advanced Calculus - Harold M. Edwards - 2013-11-12

In a book written for mathematicians, teachers of mathematics, and highly motivated students, Harold Edwards has taken a bold and unusual approach to the presentation of advanced calculus. He begins with a lucid discussion of differential forms and quickly moves to the fundamental theorems of calculus and Stokes' theorem. The result is genuine mathematics, both in spirit and content, and an exciting choice for an honors or graduate course or indeed for any mathematician in need of a refreshingly informal and flexible reintroduction to the subject. For all these potential readers, the author has made the approach work in the best tradition of creative mathematics. This affordable softcover reprint of the 1994 edition presents

in beautiful unifying generalization. The author emphasizes the use of differential forms in linear algebra, implicit differentiation in higher dimensions using the calculus of differential forms, and the method of Lagrange multipliers in a general but easy-to-use formulation. There are copious exercises to help guide the reader in testing understanding. The chapters can be read in almost any order, including beginning with the final chapter that contains some of the more traditional topics of advanced calculus courses. In addition, it is ideal for a course on vector analysis from the differential forms point of view. The professional mathematician will find here a delightful example of mathematical literature; the student fortunate enough to have gone through this book will have a firm grasp of the nature of modern mathematics and a solid framework to continue to more advanced studies. The most important feature is that it is fun—it is fun to read the exercises, it is fun to read the comments printed in the margins, it is fun simply to pick a random spot in the book and begin reading. This is the way mathematics should be presented, with an excitement and liveliness that show why we are interested in the subject. —The American Mathematical Monthly (First Review) An inviting, unusual, high-level introduction to vector calculus, based solidly on differential forms. Superb exposition: informal but sophisticated, down-to-earth but general, geometrically rigorous, entertaining but serious. Remarkable diverse applications, physical and mathematical. —The American Mathematical Monthly (1994) Based on the Second Edition

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Advanced Calculus - Voxman - 2019-12-02

Advanced Calculus: An Introduction to Modern Analysis, an advanced undergraduate textbook, provides mathematics majors, as well as students who need mathematics in their field of study, with an introduction to the theory and applications of elementary analysis. The text presents, in an accessible form, a carefully maintained balance between abstract concepts and applied results of significance that serves to bridge the gap between the two- or three-semester calculus sequence and senior/graduate level courses in the theory and applications of ordinary and partial differential equations, complex variables, numerical methods, and measure and integration theory. The book focuses on topological concepts, such as compactness, connectedness, and metric spaces, and topics from analysis including Fourier series, numerical analysis, complex integration, generalized functions, and Fourier and Laplace transforms. Applications from genetics, spring systems, enzyme transfer, and a thorough introduction to the classical vibrating string, heat transfer, and brachistochrone problems illustrate this book's usefulness to the non-mathematics major. Extensive problem sets found throughout the book test the student's understanding of the topics and help develop the student's ability to handle more abstract mathematical ideas. Advanced Calculus: An

level undergraduate students in mathematics, biology, engineering, physics, and other related disciplines. An excellent textbook for a one-year course in advanced calculus, the methods employed in this text will increase students' mathematical maturity and prepare them solidly for senior/graduate level topics. The wealth of materials in the text allows the instructor to select topics that are of special interest to the student. A two- or three-semester calculus sequence is required for successful use of this book.

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Advanced Calculus - Joseph B. Dence - 2010-07-15
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Advanced Calculus and Vector Field Theory - Kathleen M. Urwin - 1966

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Advanced Calculus - Hans Sagan - 1974

Advanced Calculus - Hans Sagan - 1974

Introduction to Advanced Calculus - William Fogg Osgood - 1922

Introduction to Advanced Calculus - William Fogg Osgood - 1922

Calculus Using Mathematica - K.D. Stroyan - 2014-05-10

Calculus Using Mathematica is intended for college students taking a course in calculus. It teaches the basic skills of differentiation and integration and how to use Mathematica, a scientific software language, to perform very elaborate symbolic and numerical computations. This is a set composed of the core text, science and math projects, and computing software for symbolic manipulation and graphics generation. Topics covered in the core text include an introduction on how to get started with the program, the ideas of independent and dependent variables and parameters in the context of some down-to-earth applications, formulation of the main approximation of differential calculus, and discrete dynamical systems. The fundamental theory of integration, analytical vector geometry, and two dimensional linear dynamical systems are elaborated as well. This publication is intended for beginning college students.

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Answers, Hints, and Solutions to Advanced Calculus - Watson Fulks -

Answers, Hints, and Solutions to Advanced Calculus - Watson Fulks -

Advanced Calculus Explored - - 2019-11-29

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