

Preface

This is a set of lecture notes that I have written for a course taught at City University of Hong Kong in the last few years. It is a course for beginning graduate students majoring in Analysis or Applied Mathematics. The book consists of six chapters, and each chapter deals with a specific topic. They are quite independent of each other; and can be used in any order that the instructor wishes. The idea is to give students a broad view of the mathematics that is frequently used in applications. Each chapter has only four sections, and I did not go into depth in any one of the topics in these chapters. But, the mathematics presented in the book is not simple, and requires a good knowledge of advanced calculus, ordinary differential equations and functions of a complex variable at the undergraduate level. This book can be used either as a text book or as a reference book for self-reading. Readers, who wish to learn more about any one of these subjects touched upon in this book, can find plenty of references at the end of each chapter.