Contents

Chapter 1
Introduction

Chapter 2
Cartesian Tensors

Chapter 3
Kinematics

Chapter 4

Conservation Laws

Chapter 5

Vorticity Dynamics

Chapter 6
Irrotational Flow

Chapter 7
Gravity Waves

Chapter 8
Dynamic Similarity

Chapter 9
Laminar Flow

Chapter 10

Boundary Layers and Related Topics

Chapter 11
Instability

Chapter 12
Turbulence

Chapter 13
Geophysical Fluid Dynamics

Chapter 14
Aerodynamics

Chapter 15

Compressible Flow

Appendix A

Some Properties of Common Fluids

Appendix B

Curvilinear Coordinates

Appendix C

Founders of Modern Fluid Dynamics