Applications in hydraulics and offshoring engineering are considered, and ample references for further reading provided.

Computational Fluid Mechanics and Heat Transfer, Second Edition
Richard H. Pletcher 1997-04-01 This comprehensive text provides basic fundamentals of computational fluid dynamics and computational methods. The book is divided into two parts. The first part covers numerical fundamentals to understanding applications of finite difference methods. The second part illustrates the use of both methods as solving different types of coupled problems encountered in both mechanics and heat transfer. The book is relevant for advanced students and professionals who work on the end of each chapter.

Mechanics of Fluid Flow
Kaplan S. Basniev 2012-11-07 This textbook covers theoretical and experimental aspects of the mechanics of fluid flow including fluid structure interactions. The book begins by exploring the hydrodynamics of fluid mechanics and introduces the reader to several important topics such as the Navier-Stokes equations, boundary layers, momentum diffusion, turbulent flow, and others. The core problems and applications are presented throughout the book, while the appendices provide additional background.

Advanced Engineering Thermodynamics
Adrian Bejan 2016-09-19 An advanced, practical approach to the first and second laws of thermodynamics. Advanced Engineering Thermodynamics bridges the gap between engineering applications and the first and second laws of thermodynamics. Thoroughly updated to offer the latest in advanced topics of energy and work as they relate to various engineering fields, the practical explanations offer improved understanding of thermodynamics concepts, including entropy, efficiency, and exergy. Additionally, thermodynamics, energy, temperature, and heat transfer concepts are explained with a focus on real-world applications.

Computational Fluid Dynamics for Incompressible Flows
D.G. Roychowdhury 2020-08-20 This textbook covers fundamental and advanced concepts of unsteady fluid dynamics, a powerful and essential tool for fluid flow analysis. The book begins with the fundamentals of fluid mechanics and presents governing equations used in the field. It offers a detailed discussion of both finite difference and finite volume methods. The textbook is written clearly and with sufficient foundational background to strengthen fundamental knowledge of the subject, making it suitable for use in computational fluid dynamics courses for senior undergraduate and graduate students in mechanical, civil, and aerospace engineering.

Mechanics of Fluid Flow
Kaplan S. Basniev 2012-11-07 The mechanics of fluid flow is a fundamental engineering discipline explaining both natural phenomena and human activity. This knowledge is essential for engineers working in all fields from oil and gas industry. This book, written by some of the world’s leading experts in the field, offers a comprehensive overview of the mechanics of fluid flow for the engineer working in the field.

Advanced Engineering Thermodynamics
Adrian Bejan 2016-09-19 Written for the graduate student, this book links the theory of the hydrodynamics of waves with applications in the area. The mathematical development of the theory is explained lucidly for the subject for the first time, and plentiful exercises complete each chapter.