

Syllabus For Mechanical Engineering Vtu

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Mechatronics (Soft Cover) CBS Publishers & Distributors Pvt Limited, India

Special Features: This textbook is useful for the undergraduate students embarking introductory course in Mechatronics and Microprocessors and covers the revised syllabus prescribed by Visvesvaraya Technological University (VTU), Karnataka, India with effect from 2008 for third year Mechanical, Mechatronics and Automobile Engineering students.1. Updated coverage on microprocessors and programming as represented by the Syllabus Map.2. Working and applications provided for various components.3. Wide variety of solved problems with step-by-step solutions.4. Concepts well illustrated by labeled circuit diagrams.5. Related examples and microprocessors programs.6. Excellent pedagogy that includes:- 360+ illustrations and line diagrams.- 60+ solved examples.- 260+ review questions.- 160+ objective-type questions.- 30+ chapter-end problems.- 50+ explanatory examples.- Model question papers. About The Book: This textbook is useful for the undergraduate students embarking on an introductory course in Mechatronics and Microprocessors. The text focuses and is written for engineering students, and for those who would like to understand the principles of mechatronic systems and microprocessors. However, it is designed to meet with the requirements for mechanical, manufacturing and automobile engineering programmes prescribed by the Visvesvaraya Technological University (VTU), Karnataka, in India. It covers the revised syllabus prescribed by VTU Karnataka, with effect from 2008 for third year Mechanical, Mechatronics and Automobile Engineering students.- Updated coverage on microprocessors and programming as represented by the Syllabus Map.- Working and applications provided for various components.- Wide variety of solved problems with step-by-step solutions.- Concepts well illustrated by labeled circuit diagrams.- Related examples and microprocessors programs.- Excellent pedagogy that includes:" 360+ illustrations and line diagrams." 60+ solved examples." 260+ review questions." 160+ objective-type questions." 30+ chapter-end problems." 50+ explanatory examples.- Model question papers.

Mechanisms and Mechanical Devices Sourcebook, Fourth Edition Elements of MECHANICAL ENGINEERING Through ten editions, Fox and McDonald's Introduction to Fluid Mechanics has helped students understand the physical concepts, basic principles, and analysis methods of fluid mechanics. This market-leading textbook provides a balanced, systematic approach to mastering critical concepts with the proven Fox-McDonald solution methodology. In-depth yet accessible chapters present governing equations, clearly state assumptions, and relate mathematical results to corresponding physical behavior. Emphasis is placed on the use of control volumes to support a practical, theoretically-inclusive problem-solving approach to the subject. Each comprehensive chapter includes numerous, easy-to-follow examples that illustrate good solution

technique and explain challenging points. A broad range of carefully selected topics describe how to apply the governing equations to various problems, and explain physical concepts to enable students to model real-world fluid flow situations. Topics include flow measurement, dimensional analysis and similitude, flow in pipes, ducts, and open channels, fluid machinery, and more. To enhance student learning, the book incorporates numerous pedagogical features including chapter summaries and learning objectives, end-of-chapter problems, useful equations, and design and open-ended problems that encourage students to apply fluid mechanics principles to the design of devices and systems.

Fundamentals of Machine Component Design New Age International

Fundamentals of Machine Component Design presents a thorough introduction to the concepts and methods essential to mechanical engineering design, analysis, and application. In-depth coverage of major topics, including free body diagrams, force flow concepts, failure theories, and fatigue design, are coupled with specific applications to bearings, springs, brakes, clutches, fasteners, and more for a real-world functional body of knowledge. Critical thinking and problem-solving skills are strengthened through a graphical procedural framework, enabling the effective identification of problems and clear presentation of solutions. Solidly focused on practical applications of fundamental theory, this text helps students develop the ability to conceptualize designs, interpret test results, and facilitate improvement. Clear presentation reinforces central ideas with multiple case studies, in-class exercises, homework problems, computer software data sets, and access to supplemental internet resources, while appendices provide extensive reference material on processing methods, joinability, failure modes, and material properties to aid student comprehension and encourage self-study.

Engineering Thermodynamics Cengage Learning

AN INTRODUCTION TO MECHANICAL ENGINEERING introduces students to the ever-emerging field of mechanical engineering, giving an appreciation for how engineers design the hardware that builds and improves societies all around the world. Intended for students in their first or second year of a typical college or university program in mechanical engineering or a closely related field, the text balances the treatments of technical problem-solving skills, design, engineering analysis, and modern technology. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Fox and McDonald's Introduction to Fluid Mechanics I. K. International Pvt Ltd

The book gives an exhaustive exposition of the fundamental concepts, techniques and devices in Basic Electronics Engineering. The book covers the basic course in basic electronics of almost all the Indian technical universities and some foreign universities as well. It is particularly well suited undergraduate students of all Engineering disciplines. Diploma students of EEE and ECE will find useful too. Basic Electronics is designed as the one-stop solution for those attempting to teach as well as study a course on Basic Electronics. The carefully developed pedagogy will help the instructor pick thought-provoking questions for tutorials and examinations, as

well as allow plenty of practice for the students. Salient Features • Approach modular, and exposition of subject matter through illustrations • Block-diagrams and circuit diagrams used aplenty to enhance understanding • Pedagogy count and features: • Solved Examples- 136 • MCQs- 189 • Review Questions- 235 • Problems- 163 • Diagrams- 409 Springer

The only book available that integrates a realistic design approach with a theoretical approach! This outstanding new book focuses on the central theoretical and practical issues involved in modem design. The first half deals with the basic issues of base-band and passband data transmission and contains descriptions of applications to specific digital transmission systems. The second half specifically addresses design issues including timing and carrier recovery, channel characterization, adaptive equalization, and trellis coding. The author uses simulation programs in Matlab and C to help readers: * Determine the power spectral density of complex data encoding rules * Simulate the performance of passband data transmission techniques * Design and assess the performance of carrier recovery systems * Develop time domain models for a variety of channels * Design and assess the performance of adaptive equalizers * Use existing programs as the framework for creating simulation modules

FUNDAMENTALS OF STRENGTH OF MATERIALS Technical Publications

This book provides comprehensive coverage of the fundamental concepts and all the key topics of interest in Strength of Materials with an emphasis on solving practical problems, from the first principles, related to the design of structural members, mechanical devices and systems in several fields of engineering. The book is organized to present a thorough treatment of stress analysis first. This treatment of basic principles is followed by appropriate application of analysis techniques and design approaches to trusses and cables, torsion in circular shaft, deflection of beams, buckling of straight columns and struts, and analysis of thick- and thin-walled cylinders under internal and external pressure. The book features clear explanations, a wealth of excellent worked-out examples of practical applications, and challenging problems. The book is intended for the undergraduate students of civil, mechanical, electrical, chemical, aeronautical, and production and industrial engineering. Key Features Provides a large number of worked-out examples to help students comprehend the concepts with ease. Gives chapter-end review questions to test students' understanding of the subject. Includes chapter-end numerical problems to enhance the problem-solving ability of students. Many of the problems depict realistic situations encountered in engineering practice. Incorporates objective type questions to help students assess their overall mastery of the subject.

Fluid Mechanics John Wiley & Sons Incorporated

This book provides an in-depth discussion of the principles of thermodynamics. It focuses on engineering applications of theory and sound techniques for solving thermodynamic problems. The book presents the fundamental concepts of thermodynamics and describes the theory of work and heat. The text covers in detail the first law and the second law of thermodynamics with their applications. It also explains the concepts of entropy and availability and irreversibility. In addition, the book presents thermodynamic properties of pure substances, ideal gases and mixtures of ideal gases, as well as real gases. This book is designed for undergraduate students of mechanical engineering, industrial and production engineering, automobile engineering and aeronautical engineering for their courses in thermodynamics.

Textbook of Elements of Mechanical Engineering Tata McGraw-Hill Education

Fluid Mechanics is the branch of physics concerned with the mechanics of fluids and forces acting on them. It includes unlimited practical applications ranging from microscopic biological systems to automobiles, airplanes and spacecraft propulsion. Fluid Mechanics is the study of fluid behavior at rest and in motion. It also gives information about devices used to measure flow rate, pressure and velocity of fluid. The book uses plain, Lucid language to explain fundamentals of this subject. The book provides logical method of explaining various complicated concepts and stepwise methods to explain the important topics. Each chapter is well supported with necessary illustrations, practical examples and solved problems. All the chapters in the book are arranged in a proper sequence that permits each topic to build upon earlier studies. All care has been taken to make readers comfortable in understanding the basic concepts of the subject.

Elements Of Mechanical Engineering (vtu) Firewall Media

Following the long tradition of the Schuler Company, the Metal Forming Handbook presents the scientific fundamentals of metal forming technology in a way which is both compact and easily understood. Thus, this book makes the theory and practice of this field accessible to teaching and practical implementation. The first Schuler "Metal Forming Handbook" was published in 1930. The last edition of 1966, already revised four times, was translated into a number of languages, and met with resounding approval around the globe. Over the last 30 years, the field of forming technology has been radically changed by a number of innovations. New forming techniques and extended product design possibilities have been developed and introduced. This Metal Forming Handbook has been fundamentally revised to take account of these technological changes. It is both a text book and a reference work whose initial chapters are concerned to provide a survey of the fundamental processes of forming technology and press design. The book then goes on to provide an in-depth study of the major fields of sheet metal forming, cutting, hydroforming and solid forming. A large number of relevant calculations offers state of the art solutions in the field of metal forming technology. In presenting technical explanations, particular emphasis was placed on easily understandable graphic visualization. All illustrations and diagrams were compiled using a standardized system of functionally oriented color codes with a view to aiding the reader's understanding.

ELEMENTS OF CIVIL ENGINEERING AND ENGINEERING MECHANICS OUP India

Operation Research has emerged as the most spectacular aspect of optimization techniques. Practising professionals usually rate operations research as the most useful subjects studied in college. Operations Research is designed for the students of industrial engineering and management. This book comprises 12 chapters and provides the introduction of each chapter and various problems of real practical situation in the organizations as well as in daily life.

An Introduction to Digital Communications McGraw Hill Professional

Thoroughly up-to-date and packed with real world examples that apply concepts to engineering practice, **HEAT AND MASS TRANSFER, 2e**, presents the fundamental concepts of heat and mass transfer, demonstrating their complementary nature in engineering applications. Comprehensive, yet more concise than other

books for the course, the Second Edition provides a solid introduction to the scientific, mathematical, and empirical methods for treating heat and mass transfer phenomena, along with the tools needed to assess and solve a variety of contemporary engineering problems. Practical guidance throughout helps students learn to anticipate the reasonable answers for a particular system or process and understand that there is often more than one way to solve a particular problem. Especially strong coverage of radiation view factors sets the book apart from other texts available for the course, while a new emphasis on renewable energy and energy efficiency prepares students for engineering practice in the 21st century. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

MECHANISM AND MACHINE THEORY Cengage Learning

This book, in its third edition, continues to focus on the basics of civil engineering and engineering mechanics to provide students with a balanced and cohesive study of the two areas (as needed by them in the beginning of their engineering education). A basic undergraduate textbook for the first-year students of all branches of engineering, this book is specifically designed to conform to the syllabus of Visvesvaraya Technological University (VTU). Imparting the basic knowledge in various facets of civil engineering and the related engineering structures and infrastructure such as buildings, roads, highways, dams and bridges, the third edition covers the engineering mechanics portion in eleven chapters. Each chapter introduces the concepts to the reader, stepwise.

Providing a wealth of practice examples, the book emphasizes the importance of building strong analytical skills. Practice problems, at the end of each chapter, give students an opportunity to absorb concepts and hone their problem-solving skills. The book comes with a companion CD containing the software developed using MS-Excel, to work out the problems on Forces, Centroid, Friction and Moment of Inertia. The use of this software will enable the students to understand the concepts in a relatively better way. **NEW TO THIS EDITION**

- Introduces a chapter on Kinematics as per the revised Civil Engineering syllabus of VTU
- Updates with the latest examination Question Papers, including the one held in the month of December 2013

A Textbook of Fluid Mechanics Firewall Media

Engineering Metrology and Measurements is a textbook designed for students of mechanical, production and allied disciplines to facilitate learning of various shop-floor measurement techniques and also understand the basics of mechanical measurements.

Operations Research New Age International

In **Computer Aided Engineering Drawing**, the author draws upon his vast experience of teaching and presents a student friendly step-by-step demonstrative approach, similar to that of classroom teaching. **Key Features:**

- * Use of updated B.I.S. conventions.
- * Incorporates standard assumptions in case of incomplete data by framing special problems.
- * Introduces various softwares for computer-aided engineering drawings.
- * Includes solved problems using different methods.
- * A concise summary at the end of each chapter for quick revision.
- * Includes solutions to difficult problems using 3-D diagrams.
- * Examination problems of VTU and other universities have been included in the exercise section for practice. Hints have been given to solve the problems where necessary.
- * The complete book has been written with classroom teaching approach.

Design of Machine Elements I PHI Learning Pvt. Ltd.

This book provides a comprehensive and wide-ranging introduction to the fundamental principles of mechanical engineering in a distinct and clear manner. The book is intended for a core introductory course in the area of foundations and applications of mechanical engineering, prescribed for the first-year students of all disciplines of engineering. The book develops an intuitive understanding of the basic principles of thermodynamics as well as of the principles governing the conversion of heat into energy. Numerous illustrative examples are provided to fortify these concepts throughout. The book gives the students a feel for how thermodynamics is applied in engineering practice in the areas of heat engines, steam boilers, internal combustion engines, refrigeration and air conditioning, and to devices such as turbines, pumps and compressors. The book also provides a basic understanding of mechanical design, illustrating the principles through a discussion of devices designed for the transmission of motion and power such as couplings, clutches and brakes. No book on basic mechanical engineering is complete without an introduction to materials science. The text covers the treatment of the common engineering materials, highlighting their properties and applications. Finally, the role of lubrication and lubricants in reducing the wear and tear of parts in mechanical systems, is lucidly explained in the concluding chapter. The text features several fully worked-out examples, a fairly large number of numerical problems with answers, end-of-chapter review questions and multiple choice questions, which all enhance the value of the text to the students. Besides the students studying for an engineering degree, this book is also suitable for study by the students of AMIE and the students of diploma level courses.

Mechanics of Fluids SI Version Firewall Media

Engineering Mathematics

Engineering Mathematics, Volume-1 (For VTU,

Karnataka, As Per CBCS) I. K. International Pvt Ltd

About the Book: This book **Engineering Mathematics-II** is designed as a self-contained, comprehensive classroom text for the second semester B.E. Classes of Visveswararajah Technological University as per the Revised new Syllabus. The topics included are Differential Calculus, Integral Calculus and Vector Integration, Differential Equations and Laplace Transforms. The book is written in a simple way and is accompanied with explanatory figures. All this make the students enjoy the subject while they learn. Inclusion of selected exercises and problems make the book educational in nature. It shou.

Mechanical Engineering (O.T.) Laxmi Publications

About the Book: Written by three distinguished authors with ample academic and teaching experience, this textbook, meant for diploma and degree students of Mechanical Engineering as well as those preparing for AMIE examination, incorporates the latest st

Metal Forming Handbook Laxmi Publications

Revised extensively, the new edition of this text conforms to the syllabi of all Indian Universities in India. This text strictly focuses on the undergraduate syllabus of Design of Machine Elements I and II, offered over two semesters.