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KEY=WITH - HAMILTON JORDAN

Engineering Design with SolidWorks 2011

SDC Publications Engineering Design with SolidWorks 2011 is written to assist students, designers, engineers and professionals. The book provides a solid foundation in SolidWorks by utilizing projects with step-by-step instructions for the beginning to intermediate SolidWorks user. Explore the user interface, CommandManager, menus, toolbars and modeling techniques to create parts, assemblies and drawings in an engineering environment. Follow the step-by-step instructions and develop multiple parts and assemblies that combine machined, plastic and sheet metal components. Formulate the skills to create, modify and edit sketches and solid features. Learn the techniques to reuse features, parts and assemblies through symmetry, patterns, copied components, design tables, Bills of Materials, Custom Properties and Configurations. Address various SolidWorks analysis tools: SimulationXpress, Sustainability / SustainabilityXpress and DFMXpress and Intelligent Modeling techniques. Learn by doing, not just by reading! Desired outcomes and usage competencies are listed for each project. Know your objective up front. Follow the steps in Project 1 - 8 to achieve the design goals. Work between multiple documents, features, commands and custom properties that represent how engineers and designers utilize SolidWorks in industry.

Review individual features, commands and tools with the enclosed Multimedia CD. The projects contain exercises. The exercises analyze and examine usage competencies. Collaborate with leading industry suppliers such as SMC Corporation of America, Boston Gear and 80/20 Inc. Collaborative information translates into numerous formats such as paper drawings, electronic files, rendered images and animations. On-line intelligent catalogs guide designers to the product that meets both their geometric requirements and performance functionality. The authors developed the industry scenarios by combining their own industry experience with the knowledge of engineers, department managers, vendors and manufacturers. These professionals are directly involved with SolidWorks everyday. Their responsibilities go far beyond the creation of just a 3D model. The book is designed to compliment the SolidWorks Tutorials contained in SolidWorks 2011.

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Engineering Design with SolidWorks 2012 and Multimedia DVD

A Step-by-step Project Based Approach Utilizing 3D Solid Modeling

Engineering Analysis with SolidWorks Simulation 2012

SDC Publications Engineering Analysis with SolidWorks Simulation 2012 goes beyond the standard software manual. Its unique approach concurrently introduces you to the SolidWorks Simulation 2012 software and the fundamentals of Finite Element Analysis (FEA) through hands-on exercises. A number of projects are presented using commonly used parts to illustrate the analysis features of SolidWorks Simulation. Each chapter is designed to build on the skills, experiences and understanding gained from the previous chapters. Topics covered: Linear static analysis of parts and assemblies Contact stress analysis Frequency (modal) analysis Buckling analysis Thermal analysis Drop test analysis Nonlinear analysis Dynamic analysis Random vibration analysis h and p adaptive solution methods Modeling techniques Implementation of FEA in the design process Management of FEA projects FEA terminology

Engineering Graphics with SolidWorks 2012

SDC Publications Engineering Graphics with SolidWorks 2012 and Video Instruction DVD is written to assist technical school, two year college, four year university instructor/student or industry professional that is a beginner or intermediate SolidWorks user. The book combines the

fundamentals of engineering graphics and dimensioning practices with a step-by-step project based approach to learning SolidWorks with the enclosed 1.5 hour Video Instruction DVD. Learn by doing, not just by reading! The book is divided into two parts: Engineering Graphics and SolidWorks 3D CAD software. In Chapter 1 through Chapter 3, you explore the history of engineering graphics, manual sketching techniques, orthographic projection, isometric projection, multi-view drawings, dimensioning practices and the history of CAD leading to the development of SolidWorks. In Chapter 4 through Chapter 8, you apply engineering graphics fundamentals and learn the SolidWorks User Interface, Document and System properties, simple parts, simple and complex assemblies, design tables, configurations, multi-sheet, multi-view drawings, Bill of Materials, Revision tables, basic and advanced features. Follow the step-by-step instructions in over 70 activities to develop eight parts, four sub-assemblies, three drawings, and six document templates. Formulate the skills to create and modify solid features to model a 3D FLASHLIGHT assembly. Chapter 9 provides a bonus section on the Certified SolidWorks Associate CSWA program with sample exam questions and initial and final SolidWorks models. Passing the CSWA exam proves to employers that you have the necessary fundamental engineering graphics and SolidWorks competencies. Review individual features, commands, and tools for each project with the book's 1.5 hour Video Instruction DVD and SolidWorks Help. The chapter exercises analyze and examine usage competencies based on the project objectives. The book is designed to compliment the SolidWorks Tutorials located in the SolidWorks Help menu. Each section explores the SolidWorks Online User's Guide to build your working knowledge of SolidWorks. Desired outcomes and usage competencies are listed for each project. Know your objectives up front. Follow the step-by-step procedures to achieve your design goals. Work between multiple documents, features, commands, and properties that represent how engineers and designers utilize SolidWorks in industry. The authors developed the industry scenarios by combining their own industry experience with the knowledge of engineers, department managers, vendors, and manufacturers. These professionals are directly involved with SolidWorks everyday. Their responsibilities go far beyond the creation of just a 3D model.

Commands Guide Tutorial for SolidWorks 2013

SDC Publications The Commands Guide Tutorial for SolidWorks 2013 is a comprehensive reference book written to assist the beginner to intermediate user of SolidWorks 2013. SolidWorks is an immense software package, and no one book can cover all topics for all users. This book provides a centralized reference location to address many of the tools,

features and techniques of SolidWorks 2013. This book covers the following: System and Document properties FeatureManagers PropertyManagers ConfigurationManagers RenderManagers 2D and 3D Sketch tools Sketch entities 3D Feature tools Motion Study Sheet Metal Motion Study Sustainability Sustainability Xpress FlowXpress PhotoView 360 Pack and Go Intelligent Modeling techniques and more. Chapter 1 provides a basic overview of the concepts and terminology used throughout this book using SolidWorks 2013 software. If you are completely new to SolidWorks, you should read Chapter 1 in detail and complete Lesson 1, Lesson 2 and Lesson 3 in the SolidWorks Tutorials. If you are familiar with an earlier release of SolidWorks, you still might want to skim Chapter 1 to become acquainted with some of the commands, menus and features that you have not used; or you can simply jump to any section in any chapter. Each chapter (18 total) provides detailed PropertyManager information on key topics with individual stand alone short tutorials to reinforce and demonstrate the functionality and ease of the SolidWorks tool or feature. All models for the 240 plus tutorials are located on the enclosed book CD with their solution (initial and final). Learn by doing, not just by reading! Formulate the skills to create, modify and edit sketches and solid features. Learn the techniques to reuse features, parts and assemblies through symmetry, patterns, copied components, design tables, configurations and more. The book is design to compliment the Online Tutorials and Online Help contained in SolidWorks 2013. The goal is to illustrate how multiple design situations and systematic steps combine to produce successful designs. The authors developed the tutorials by combining their own industry experience with the knowledge of engineers, department managers, professors, vendors and manufacturers. These professionals are directly involved with SolidWorks everyday. Their responsibilities go far beyond the creation of just a 3D model.

Assembly Modeling with SolidWorks 2012

SDC Publications Assembly Modeling with SolidWorks 2012 is written to assist the beginning SolidWorks user with a few months of design experience to the intermediate SolidWorks user who desires to enhance their skill sets in assembly modeling. The book provides a solid foundation in assembly modeling using competency-based projects. In step-by-step instructions, the book provides examples to: Start a SolidWorks session and to understand the following interfaces: Menu bar toolbar, Menu bar menu, Drop-down menus, Context toolbars, Consolidated drop-down toolbars, System feedback icons, Confirmation Corner, Heads-up View toolbar, CommandManager, and more. Set System Options and Document Properties as they apply to a part and assembly template. Create new

SolidWorks folder locations: Document Templates, Reference Documents, and Design Library. Download components from 3D ContentCentral and rename and save components using SolidWorks Explorer. Apply the Bottom-up assembly approach with two levels of configurations using the Configure Component tool, the Configure Dimension tool, Design Tables, and the Add Configuration tool. Create new parts based on component features utilizing the Bottom-up assembly approach. Apply Standard Mates, SmartMates, and the Design Library Toolbox. Apply the Top-down assembly approach with two levels of configurations with In-Context components. Understand the following: Out-of-Context components, External References, InPlace Mates, redefining and replacing components and motion studies. Apply the Derived Feature Component Pattern tool, Linear Component Pattern tool, and the Mirror Component tool along with the Explode Line Sketch tool. Create a multi sheet, multi view assembly drawing. Knowledge of Custom Properties in a part/assembly and linked notes, with the ability to incorporate configurations of an Exploded view, Bill of Materials, Revision tables, and more. Address the Layout-based assembly approach and Global Variables and Equations to control relationships. Each chapter begins with the desired outcomes and usage competencies. Explore assembly modeling techniques through a series of design situations, industry scenarios, projects and objectives. Chapter 9 provides a bonus section on the Certified SolidWorks Associate CSWA program with sample exam questions and initial and final SolidWorks models. Passing the CSWA exam proves to employers that you have the necessary fundamental engineering graphics and SolidWorks competencies. The book compliments and enhances the SolidWorks Tutorials. Although over 150 SolidWorks tools and commands are utilized in Assembly Modeling with SolidWorks 2012, the book is not a reference guide. The book is a self-paced tutorial in a realistic design setting. Complex models expose you to large assembly modeling techniques. You focus on the design process while learning the commands relative to assemblies. To obtain the most from this text, you should be familiar with the SolidWorks User Interface or other parametric modeling software application. Your skill sets should include the ability to create simple parts, assemblies, and drawings and manipulate documents through the Windows operating system. The authors developed the industry scenarios by combining their own industry experience with the knowledge of engineers, department managers, vendors and manufacturers. These professionals are directly involved with SolidWorks everyday. They create assemblies with thousands of components and drawings with hundreds of sheets. Their responsibilities go far beyond the creation of just a 3D model.

Engineering Design with

SOLIDWORKS 2019

SDC Publications Engineering Design with SOLIDWORKS 2019 is written to assist students, designers, engineers and professionals. The book provides a solid foundation in SOLIDWORKS by utilizing projects with step-by-step instructions for the beginner to intermediate SOLIDWORKS user featuring machined, plastic and sheet metal components. Desired outcomes and usage competencies are listed for each project. The book is divided into five sections with 11 projects. Project 1 - Project 6: Explore the SOLIDWORKS User Interface and CommandManager, Document and System properties, simple and complex parts and assemblies, proper design intent, design tables, configurations, multi-sheet, multi-view drawings, BOMs, and Revision tables using basic and advanced features. Additional techniques include the edit and reuse of features, parts, and assemblies through symmetry, patterns, configurations, SOLIDWORKS 3D ContentCentral and the SOLIDWORKS Toolbox. Project 7: Understand Top-Down assembly modeling and Sheet Metal parts. Develop components In-Context with InPlace Mates, along with the ability to import parts using the Top-Down assembly method. Convert a solid part into a Sheet Metal part and insert and apply various Sheet Metal features. Project 8 - Project 9: Recognize SOLIDWORKS Simulation and Intelligent Modeling techniques. Understand a general overview of SOLIDWORKS Simulation and the type of questions that are on the SOLIDWORKS Simulation Associate - Finite Element Analysis (CSWSA-FEA) exam. Apply design intent and intelligent modeling techniques in a sketch, feature, part, plane, assembly and drawing. Project 10: Comprehend the differences between additive and subtractive manufacturing. Understand 3D printer terminology along with a working knowledge of preparing, saving, and printing CAD models on a low cost printer. Project 11: Review the Certified SOLIDWORKS Associate (CSWA) program. Understand the curriculum and categories of the CSWA exam and the required model knowledge needed to successfully take the exam. The author developed the industry scenarios by combining his own industry experience with the knowledge of engineers, department managers, vendors and manufacturers. These professionals are directly involved with SOLIDWORKS every day. Their responsibilities go far beyond the creation of just a 3D model.

Engineering Design with SOLIDWORKS 2020

SDC Publications • A comprehensive introduction to SOLIDWORKS using tutorial style, step-by-step instructions • Designed for beginning or intermediate SOLIDWORKS users • Learn to create parts and assemblies using machined, plastic and sheet metal components • Also covers

Simulation, Sustainability, and Intelligent Modeling techniques • Includes bonus chapters on the CSWA exam and 3D printing Engineering Design with SOLIDWORKS 2020 is written to assist students, designers, engineers and professionals. The book provides a solid foundation in SOLIDWORKS by utilizing projects with step-by-step instructions for the beginner to intermediate SOLIDWORKS user featuring machined, plastic and sheet metal components. Desired outcomes and usage competencies are listed for each project. The book is divided into five sections with 11 projects. Project 1 - Project 6: Explore the SOLIDWORKS User Interface and CommandManager, Document and System properties, simple and complex parts and assemblies, proper design intent, design tables, configurations, multi-sheet, multi-view drawings, BOMs, and Revision tables using basic and advanced features. Additional techniques include the edit and reuse of features, parts, and assemblies through symmetry, patterns, configurations, SOLIDWORKS 3D ContentCentral and the SOLIDWORKS Toolbox. Project 7: Understand Top-Down assembly modeling and Sheet Metal parts. Develop components In-Context with InPlace Mates, along with the ability to import parts using the Top-Down assembly method. Convert a solid part into a Sheet Metal part and insert and apply various Sheet Metal features. Project 8 - Project 9: Recognize SOLIDWORKS Simulation and Intelligent Modeling techniques. Understand a general overview of SOLIDWORKS Simulation and the type of questions that are on the SOLIDWORKS Simulation Associate - Finite Element Analysis (CSWA-FEA) exam. Apply design intent and intelligent modeling techniques in a sketch, feature, part, plane, assembly and drawing. Project 10: Comprehend the differences between additive and subtractive manufacturing. Understand 3D printer terminology along with a working knowledge of preparing, saving, and printing CAD models on a low cost printer. Project 11: Review the Certified SOLIDWORKS Associate (CSWA) program. Understand the curriculum and categories of the CSWA exam and the required model knowledge needed to successfully take the exam. The author developed the industry scenarios by combining his own industry experience with the knowledge of engineers, department managers, vendors and manufacturers. These professionals are directly involved with SOLIDWORKS every day. Their responsibilities go far beyond the creation of just a 3D model.

SolidWorks 2007 for Designers

Engineering Design with

SOLIDWORKS 2018 and Video Instruction

SDC Publications Engineering Design with SOLIDWORKS 2018 and video instruction is written to assist students, designers, engineers and professionals. The book provides a solid foundation in SOLIDWORKS by utilizing projects with step-by-step instructions for the beginner to intermediate SOLIDWORKS user featuring machined, plastic and sheet metal components. Desired outcomes and usage competencies are listed for each project. The book is divided into five sections with 11 projects. Project 1 - Project 6: Explore the SOLIDWORKS User Interface and CommandManager, Document and System properties, simple and complex parts and assemblies, proper design intent, design tables, configurations, multi-sheet, multi-view drawings, BOMs, and Revision tables using basic and advanced features. Additional techniques include the edit and reuse of features, parts, and assemblies through symmetry, patterns, configurations, SOLIDWORKS 3D ContentCentral and the SOLIDWORKS Toolbox. Project 7: Understand Top-Down assembly modeling and Sheet Metal parts. Develop components In-Context with InPlace Mates, along with the ability to import parts using the Top-Down assembly method. Convert a solid part into a Sheet Metal part and insert and apply various Sheet Metal features. Project 8 - Project 9: Recognize SOLIDWORKS Simulation and Intelligent Modeling techniques. Understand a general overview of SOLIDWORKS Simulation and the type of questions that are on the SOLIDWORKS Simulation Associate - Finite Element Analysis (CSWSA-FEA) exam. Apply design intent and intelligent modeling techniques in a sketch, feature, part, plane, assembly and drawing. Project 10: Comprehend the differences between additive and subtractive manufacturing. Understand 3D printer terminology along with a working knowledge of preparing, saving, and printing CAD models on a low cost printer. Project 11: Review the Certified Associate - Mechanical Design (CSWA) program. Understand the curriculum and categories of the CSWA exam and the required model knowledge needed to successfully take the exam. The author developed the industry scenarios by combining his own industry experience with the knowledge of engineers, department managers, vendors and manufacturers. These professionals are directly involved with SOLIDWORKS every day. Their responsibilities go far beyond the creation of just a 3D model.

Engineering Design with SolidWorks

2013 and Video Instruction

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Engineering Design with SolidWorks 2014 and Video Instruction

SDC Publications Engineering Design with SolidWorks 2014 and video instruction is written to assist students, designers, engineers and professionals. The book provides a solid foundation in SolidWorks by utilizing projects with step-by-step instructions for the beginner to

intermediate SolidWorks user. Explore the user interface, CommandManager, menus, toolbars and modeling techniques to create parts, assemblies and drawings in an engineering environment. Follow the step-by-step instructions and develop multiple parts and assemblies that combine machined, plastic and sheet metal components. Formulate the skills to create, modify and edit sketches and solid features. Learn the techniques to reuse features, parts and assemblies through symmetry, patterns, copied components, design tables, Bills of Materials, Custom Properties and Configurations. Address various SolidWorks analysis tools: SimulationXpress, Sustainability/SustainabilityXpress and DFMXpress and Intelligent Modeling techniques. Learn by doing, not just by reading. Desired outcomes and usage competencies are listed for each project. Know your objective up front. Follow the steps in Project 1 - 8 to achieve the design goals. Work between multiple documents, features, commands and custom properties that represent how engineers and designers utilize SolidWorks in industry. Review individual features, commands and tools with the Video Instruction. The projects contain exercises. The exercises analyze and examine usage competencies. Collaborate with leading industry suppliers such as SMC Corporation of America, Boston Gear and 80/20 Inc. Collaborative information translates into numerous formats such as paper drawings, electronic files, rendered images and animations. On-line intelligent catalogs guide designers to the product that meets both their geometric requirements and performance functionality. The author developed the industry scenarios by combining his own industry experience with the knowledge of engineers, department managers, vendors and manufacturers. These professionals are directly involved with SolidWorks every day. Their responsibilities go far beyond the creation of just a 3D model. The book is design to compliment the SolidWorks Tutorials contained in SolidWorks 2014.

Engineering and Computer Graphics Workbook Using SolidWorks 2012

SDC Publications Engineering & Computer Graphics Workbook Using SolidWorks 2012 is an exercise-based workbook that uses step-by-step tutorials to cover the fundamentals of SolidWorks 2012. The intended audience is college undergraduate engineering majors, but it could also be used in pre-college introductory engineering courses or by self learners. The text follows an educational paradigm that was researched and developed by the authors over many years. The paradigm is based on the concurrent engineering approach to engineering design in which the 3-D solid model data serves as the central hub for all aspects of the design

process. The workbook systematically instructs the students to develop 3-D models using the rich tools afforded in SolidWorks. The exercises then proceed to instruct the students on applications of the solid model to design analysis using finite elements, to assembly modeling and checking, to kinematic simulation, to rapid prototyping, and finally to projecting an engineering drawing. The workbook is ideally suited for courses in which a reverse engineering design project is assigned. This book contains clear and easy to understand instructions that enable the students to robustly learn the main features of SolidWorks, with little or no instructor input.

Engineering Design with SOLIDWORKS 2016 and Video Instruction

SDC Publications Engineering Design with SOLIDWORKS 2016 and video instruction is written to assist students, designers, engineers and professionals. The book provides a solid foundation in SOLIDWORKS by utilizing projects with step-by-step instructions for the beginner to intermediate SOLIDWORKS user. Explore the user interface, CommandManager, menus, toolbars and modeling techniques to create parts, assemblies and drawings in an engineering environment. Follow the step-by-step instructions and develop multiple parts and assemblies that combine machined, plastic and sheet metal components. Formulate the skills to create, modify and edit sketches and solid features. Learn the techniques to reuse features, parts and assemblies through symmetry, patterns, copied components, Design Tables, Bills of Materials, Custom Properties and Configurations. Address various SOLIDWORKS analysis tools and Intelligent Modeling techniques along with Additive Manufacturing (3D printing). Learn by doing not just by reading. Desired outcomes and usage competencies are listed for each project. Know your objective up front. Follow the steps in Projects 1 - 9 to achieve the design goals. Review Project 10 on Additive Manufacturing (3D printing) and its benefits and features. Understand the terms and technology used in low cost 3D printers. Work between multiple documents, features, commands and custom properties that represent how engineers and designers utilize SOLIDWORKS in industry. Review individual features, commands and tools with the Video Instruction. The projects contain exercises. The exercises analyze and examine usage competencies. Collaborate with leading industry suppliers such as SMC Corporation of America, Boston Gear and 80/20 Inc. Collaborative information translates into numerous formats such as paper drawings, electronic files, rendered images and animations. On-line intelligent catalogs guide designers to the product that meets both their geometric requirements and performance functionality. The author

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Engineering Design with SolidWorks 2015 and Video Instruction

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book to enhance the user experience. SolidWorks Interface 2D Sketching, Sketch Planes and Sketch tools 3D Features and Design Intent Creating an Assembly Fundamentals in Drawings Part 1 & Part 2

Engineering Design with SOLIDWORKS 2017 and Video Instruction

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Learning Autodesk Inventor 2015

SDC Publications This book will teach you everything you need to know to start using Autodesk Inventor 2015 with easy to understand, step-by-step tutorials. This book features a simple robot design used as a project throughout the book. You will learn to model parts, create assemblies, run simulations and even create animations of your robot design. An unassembled version of the same robot used throughout the book can be bundled with the book. No previous experience with Computer Aided Drafting (CAD) is needed since this book starts at an introductory level. The author begins by getting you familiar with the Inventor interface and its basic tools. You will start by learning to model simple robot parts and before long you will graduate to creating more complex parts and multi-view drawings. Along the way you will learn the fundamentals of parametric modeling through the use of geometric constraints and relationships. You will also become familiar with many of Inventor's powerful tools and commands that enable you to easily construct complex features in your models. Also included is coverage of gears, gear trains and spur gear creation using Autodesk Inventor. This book continues by examining the different mechanisms commonly used in walking robots. You will learn the basic types of planar four-bar linkages commonly used in mechanical designs and how to use the GeoGebra Dynamic Geometry software to simulate and analyze 2D linkages. Using the knowledge you gained about linkages and mechanism, you will learn how to modify your robot and change its behavior by modifying or creating new parts. In the final chapter of this book you learn how to combine all the robot parts into assemblies and then run motion analysis. You will finish off your project by creating 3D animations of your robot in action. There are many books that show you how to perform individual tasks with Autodesk Inventor, but this book takes you through an entire project and shows you the complete engineering process. By the end of this book you will have modeled and assembled nearly all the parts that make up the TAMIYA® Mechanical Tiger and can start building your own robot.

SolidWorks 2012 Tutorial

SDC Publications SolidWorks 2012 Tutorial with Video Instruction is target towards a technical school, two year college, four year university or industry professional that is a beginner or intermediate CAD user. The text provides a student who is looking for a step-by-step project based approach to learning SolidWorks with an enclosed 1.5 hour video instruction DVD, SolidWorks model files, and preparation for the CSWA exam. The book is divided into two sections. Chapters 1 - 7 explore the SolidWorks User Interface and CommandManager, Document and System properties, simple machine parts, simple and complex assemblies, design

tables, configurations, multi-sheet, multi-view drawings, BOMs, Revision tables using basic and advanced features along with Intelligent Modeling Techniques, SustainabilityXpress, SimulationXpress and DFMXpress. Chapters 8 - 11 prepare you for the new Certified SolidWorks Associate Exam (CSWA). The CSWA certification indicates a foundation in and apprentice knowledge of 3D CAD and engineering practices and principles. Follow the step-by-step instructions and develop multiple assemblies that combine over 100 extruded machined parts and components. Formulate the skills to create, modify and edit sketches and solid features. Learn the techniques to reuse features, parts and assemblies through symmetry, patterns, copied components, design tables and configurations. Learn by doing, not just by reading! Desired outcomes and usage competencies are listed for each chapter. Know your objective up front. Follow the steps in each chapter to achieve your design goals. Work between multiple documents, features, commands, custom properties and document properties that represent how engineers and designers utilize SolidWorks in industry.

Drawing and Detailing With Solidworks 2012

SDC Publications Drawing and Detailing with SolidWorks 2012 is written to educate and assist students, designers, engineers, and professionals in the drawing and detailing tools of SolidWorks. Explore the learning process through a series of design situations, industry scenarios, projects, and objectives target towards the beginning to intermediate SolidWorks user. Work through numerous activities to create multiple-view, multiple-sheet, detailed drawings, and assembly drawings. Develop Drawing templates, Sheet formats, and Custom Properties. Construct drawings that incorporate part configurations, assembly configurations, and design tables with equations. Manipulate annotations in parts, drawings, assemblies, Revision tables, Bills of Materials and more. Apply your drawing and detailing knowledge to over thirty exercises. The exercises test your usage competency as well as explore additional topics with industry examples. Advanced exercises require the ability to create parts and assemblies. Drawing and Detailing with SolidWorks 2012 is not a reference book for all drafting and drawing techniques and tools. The book provides information and examples in the following areas: History of engineering graphics, manual sketching techniques, orthographic projection, isometric projection, multi-view drawings, dimensioning practices, fasteners in general, tolerance and fit and the history of CAD leading to the development of SolidWorks. Start a SolidWorks 2012 session and to understand the following interfaces: Menu bar toolbar, Menu bar menu, Drop-down menus, Context toolbars, Consolidated drop-down toolbars, System feedback icons, Confirmation Corner, Heads-up View

toolbar, Document Properties and more. Apply Document Properties to reflect the ASME Y14 Engineering Drawing and related Drawing Practices. Import an AutoCAD file as a Sheet format. Insert SolidWorks System Properties and Custom Properties. Create new SolidWorks Document tabs. Create multi-sheet drawings from various part configurations and develop the following drawing views: Standard, Isometric, Auxiliary, Section, Broken Section, Detail, Half Section (Cut-away), Crop, Projected Back, with a Bill of Materials and a Revision Table and Revisions. Insert and edit: Dimensions, Feature Control Frames, Datums, Geometric Tolerancing, Surface Finishes, and Weld Symbols using DimXpert and manual techniques. Create, apply, and save Blocks and Parametric Notes in a drawing. Chapter 10 provides a bonus section on the Certified SolidWorks Associate CSWA program with sample exam questions and initial and final SolidWorks models. The book is designed to compliment the SolidWorks Users Guide, SolidWorks Reference Guide, Standards, Engineering Drawing/Design and Graphics Communications reference books. The authors recognize that companies utilize additional drawing standards. The authors developed the industry scenarios by combining industry experience with their knowledge of engineers, sales, vendors and manufacturers. These professionals are directly involved with SolidWorks everyday. Their work goes far beyond a simple drawing with a few dimensions. They create detailed drawings, assembly drawings, marketing drawings and customer drawings. SolidWorks users work between drawings, parts, assemblies and many other documents to complete a project on time.

Engineering Design with SOLIDWORKS 2022

A Step-by-Step Project Based Approach Utilizing 3D Solid Modeling

SDC Publications A comprehensive introduction to SOLIDWORKS using tutorial style, step-by-step instructions Designed for beginning or intermediate SOLIDWORKS users Learn to create parts and assemblies using machined, plastic and sheet metal components Also covers Simulation, Sustainability, and Intelligent Modeling techniques Includes bonus chapters on the CSWA exam and 3D printing Engineering Design with SOLIDWORKS 2022 is written to assist students, designers, engineers and professionals. The book provides a solid foundation in SOLIDWORKS by

utilizing projects with step-by-step instructions for the beginner to intermediate SOLIDWORKS user featuring machined, plastic and sheet metal components. Desired outcomes and usage competencies are listed for each project. The book is divided into five sections with 11 projects. **Project 1 - Project 6:** Explore the SOLIDWORKS User Interface and CommandManager, Document and System properties, simple and complex parts and assemblies, proper design intent, design tables, configurations, multi-sheet, multi-view drawings, BOMs, and Revision tables using basic and advanced features. Additional techniques include the edit and reuse of features, parts, and assemblies through symmetry, patterns, configurations, SOLIDWORKS 3D ContentCentral and the SOLIDWORKS Toolbox. **Project 7:** Understand Top-Down assembly modeling and Sheet Metal parts. Develop components In-Context with InPlace Mates, along with the ability to import parts using the Top-Down assembly method. Convert a solid part into a Sheet Metal part and insert and apply various Sheet Metal features. **Project 8 - Project 9:** Recognize SOLIDWORKS Simulation and Intelligent Modeling techniques. Understand a general overview of SOLIDWORKS Simulation and the type of questions that are on the SOLIDWORKS Simulation Associate - Finite Element Analysis (CSWSA-FEA) exam. Apply design intent and intelligent modeling techniques in a sketch, feature, part, plane, assembly and drawing. **Project 10:** Comprehend the differences between additive and subtractive manufacturing. Understand 3D printer terminology along with a working knowledge of preparing, saving, and printing CAD models on a low cost printer. **Project 11:** Review the Certified SOLIDWORKS Associate (CSWA) program. Understand the curriculum and categories of the CSWA exam and the required model knowledge needed to successfully take the exam. The author developed the industry scenarios by combining his own industry experience with the knowledge of engineers, department managers, vendors and manufacturers. These professionals are directly involved with SOLIDWORKS every day. Their responsibilities go far beyond the creation of just a 3D model.

Engineering Design and Graphics with SolidWorks 2014

Peachpit Press Engineering Design and Graphics with SolidWorks 2014 shows students how to use SolidWorks to create engineering drawings and designs. The book focuses on the creation of engineering drawings, including dimensions and tolerances and the use of standard parts and tools. Each chapter contains step-by-step sample problems that show students how to apply the concepts presented in the chapter. Effective pedagogy throughout the text helps students learn and retain concepts: **Objectives:** Each chapter begins with objectives and an introduction to the material. **Summaries:** Each chapter concludes with a summary and exercise

problems. Numerous illustrations: The multitude of illustrations, accompanied by explanatory captions, present a visual approach to learning. Students see in the text what they see on the screen with the addition of explanatory text. **Practical application:** The text provides hundreds of exercise projects of varying difficulty (far more than any other computer graphics text). These exercises reinforce each chapter's content and help students learn by doing. **Flexibility:** With the hundreds of problems presented in the book, instructors can assign different problems within the same class and from year to year without repeating problems for students. **Meets standards:** The text teaches ANSI standards for dimensions and tolerances. This helps students understand how their designs are defined for production and the importance of proper tolerancing. **Step-by-step approach:** In presenting the fundamentals of engineering drawing using SolidWorks, the text uses a step-by-step approach that allows students to work and learn at their own pace.

Engineering Design with SOLIDWORKS 2021

SDC Publications Engineering Design with SOLIDWORKS 2021 is written to assist students, designers, engineers and professionals. The book provides a solid foundation in SOLIDWORKS by utilizing projects with step-by-step instructions for the beginner to intermediate SOLIDWORKS user featuring machined, plastic and sheet metal components. Desired outcomes and usage competencies are listed for each project. The book is divided into five sections with 11 projects. **Project 1 - Project 6:** Explore the SOLIDWORKS User Interface and CommandManager, Document and System properties, simple and complex parts and assemblies, proper design intent, design tables, configurations, multi-sheet, multi-view drawings, BOMs, and Revision tables using basic and advanced features. Additional techniques include the edit and reuse of features, parts, and assemblies through symmetry, patterns, configurations, SOLIDWORKS 3D ContentCentral and the SOLIDWORKS Toolbox. **Project 7:** Understand Top-Down assembly modeling and Sheet Metal parts. Develop components In-Context with InPlace Mates, along with the ability to import parts using the Top-Down assembly method. Convert a solid part into a Sheet Metal part and insert and apply various Sheet Metal features. **Project 8 - Project 9:** Recognize SOLIDWORKS Simulation and Intelligent Modeling techniques. Understand a general overview of SOLIDWORKS Simulation and the type of questions that are on the SOLIDWORKS Simulation Associate - Finite Element Analysis (CSWSA-FEA) exam. Apply design intent and intelligent modeling techniques in a sketch, feature, part, plane, assembly and drawing. **Project 10:** Comprehend the differences between additive and subtractive manufacturing. Understand 3D printer terminology along with a working knowledge of preparing, saving, and printing CAD models on a low cost

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A Comprehensive Introduction to Solidworks 2013

Schroff Development Corporation

Product Performance Evaluation using CAD/CAE

The Computer Aided Engineering Design Series

Academic Press This is one book of a four-part series, which aims to integrate discussion of modern engineering design principles, advanced design tools, and industrial design practices throughout the design process. Through this series, the reader will: Understand basic design principles and modern engineering design paradigms. Understand CAD/CAE/CAM tools available for various design related tasks. Understand how to put an integrated system together to conduct product design using the paradigms and tools. Understand industrial practices in employing virtual engineering design and tools for product development. Provides a comprehensive and thorough coverage on essential elements for product performance evaluation using the virtual engineering paradigms Covers CAD/CAE in Structural Analysis using FEM, Motion Analysis of Mechanical Systems, Fatigue and Fracture Analysis Each chapter includes both analytical methods and computer-aided design methods, reflecting the use of modern computational tools in engineering design and practice A case study and tutorial example at the end of each chapter provide hands-on practice in implementing off-the-shelf computer design tools Provides two projects at the end of the book showing the use of Pro/ENGINEER® and SolidWorks® to implement concepts discussed in the book

Machine Drawing

New Age International 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

Chemical Engineering Design

Principles, Practice and Economics of Plant and Process Design

Elsevier Chemical Engineering Design, Second Edition, deals with the application of chemical engineering principles to the design of chemical processes and equipment. Revised throughout, this edition has been specifically developed for the U.S. market. It provides the latest US codes and standards, including API, ASME and ISA design codes and ANSI standards. It contains new discussions of conceptual plant design, flowsheet development, and revamp design; extended coverage of capital cost estimation, process costing, and economics; and new chapters on equipment selection, reactor design, and solids handling processes. A rigorous pedagogy assists learning, with detailed worked examples, end of chapter exercises, plus supporting data, and Excel spreadsheet calculations, plus over 150 Patent References for downloading from the companion website. Extensive instructor resources, including 1170 lecture slides and a fully worked solutions manual are available to adopting instructors. This text is designed for chemical and biochemical engineering students (senior undergraduate year, plus appropriate for capstone design courses where taken, plus graduates) and lecturers/tutors, and professionals in industry (chemical process, biochemical, pharmaceutical, petrochemical sectors). New to this edition: Revised organization into Part I: Process Design, and Part II: Plant Design. The broad themes of Part I are flowsheet development, economic analysis, safety and environmental impact and optimization. Part II contains chapters on equipment design and selection that can be used as supplements to a lecture course or as essential references for students or practicing engineers working on design projects. New discussion of conceptual plant design, flowsheet development and revamp design Significantly increased coverage of capital cost estimation, process costing and economics New chapters on equipment selection, reactor design and solids handling processes New sections on fermentation, adsorption, membrane separations, ion exchange and chromatography Increased coverage of batch processing, food, pharmaceutical and biological processes All equipment chapters in

Part II revised and updated with current information Updated throughout for latest US codes and standards, including API, ASME and ISA design codes and ANSI standards Additional worked examples and homework problems The most complete and up to date coverage of equipment selection 108 realistic commercial design projects from diverse industries A rigorous pedagogy assists learning, with detailed worked examples, end of chapter exercises, plus supporting data and Excel spreadsheet calculations plus over 150 Patent References, for downloading from the companion website Extensive instructor resources: 1170 lecture slides plus fully worked solutions manual available to adopting instructors

Engineering Graphics with SOLIDWORKS 2019

SDC Publications Engineering Graphics with SOLIDWORKS 2019 is written to assist students, designers, engineers and professionals who are new to SOLIDWORKS. The book combines the fundamentals of engineering graphics and dimensioning practices with a step-by-step project based approach to learning SOLIDWORKS. The book is divided into four sections with 11 Chapters. Chapters 1 - 3: Explore the history of engineering graphics, manual sketching techniques, orthographic projection, Third vs. First angle projection, multi-view drawings, dimensioning practices (ASME Y14.5-2009 standard), line type, fit type, tolerance, fasteners in general, general thread notes and the history of CAD leading to the development of SOLIDWORKS. Chapters 4 - 9: Comprehend the SOLIDWORKS User Interface and CommandManager, Document and System properties, simple machine parts, simple and complex assemblies, proper design intent, design tables, configurations, multi-sheet, multi-view drawings, BOMs, and Revision tables using basic and advanced features. Follow the step-by-step instructions in over 80 activities to develop eight parts, four sub-assemblies, three drawings and six document templates. Chapter 10: Prepare for the Certified SOLIDWORKS Associate (CSWA) exam. Understand the curriculum and categories of the CSWA exam and the required model knowledge needed to successfully take the exam. Chapter 11: Provide a basic understanding between Additive vs. Subtractive manufacturing. Discuss Fused Filament Fabrication (FFF), STereoLithography (SLA), and Selective Laser Sintering (SLS) printer technology. Select suitable filament material. Comprehend 3D printer terminology. Knowledge of preparing, saving, and printing a model on a Fused Filament Fabrication 3D printer. Information on the Certified SOLIDWORKS Additive Manufacturing (CSWA-AM) exam. Review individual features, commands, and tools using SOLIDWORKS Help. The chapter exercises analyze and examine usage competencies based on the chapter objectives. The book is designed to complement the SOLIDWORKS Tutorials located in the SOLIDWORKS Help menu. Desired outcomes and usage competencies are listed for each

project. Know your objectives up front. Follow the step-by step procedures to achieve your design goals. Work between multiple documents, features, commands, and properties that represent how engineers and designers utilize SOLIDWORKS in industry. The author developed the industry scenarios by combining his own industry experience with the knowledge of engineers, department managers, vendors and manufacturers.

Engineering Graphics with SOLIDWORKS 2021

SDC Publications Engineering Graphics with SOLIDWORKS 2021 is written to assist students, designers, engineers and professionals who are new to SOLIDWORKS. The book combines the fundamentals of engineering graphics and dimensioning practices with a step-by-step project based approach to learning SOLIDWORKS. The book is divided into four sections with 11 Chapters. Chapters 1 - 3: Explore the history of engineering graphics, manual sketching techniques, orthographic projection, Third vs. First angle projection, multi-view drawings, dimensioning practices (ASME Y14.5-2009 standard), line type, fit type, tolerance, fasteners in general, general thread notes and the history of CAD leading to the development of SOLIDWORKS. Chapters 4 - 9: Comprehend the SOLIDWORKS User Interface and CommandManager, Document and System properties, simple machine parts, simple and complex assemblies, proper design intent, design tables, configurations, multi-sheet, multi-view drawings, BOMs, and Revision tables using basic and advanced features. Follow the step-by-step instructions in over 80 activities to develop eight parts, four sub-assemblies, three drawings and six document templates. Chapter 10: Prepare for the Certified SOLIDWORKS Associate (CSWA) exam. Understand the curriculum and categories of the CSWA exam and the required model knowledge needed to successfully take the exam. Chapter 11: Provide a basic understanding between Additive vs. Subtractive manufacturing. Discuss Fused Filament Fabrication (FFF), STereoLithography (SLA), and Selective Laser Sintering (SLS) printer technology. Select suitable filament material. Comprehend 3D printer terminology. Knowledge of preparing, saving, and printing a model on a Fused Filament Fabrication 3D printer. Information on the Certified SOLIDWORKS Additive Manufacturing (CSWA-AM) exam. Review individual features, commands, and tools using SOLIDWORKS Help. The chapter exercises analyze and examine usage competencies based on the chapter objectives. The book is designed to complement the SOLIDWORKS Tutorials located in the SOLIDWORKS Help menu. Desired outcomes and usage competencies are listed for each project. Know your objectives up front. Follow the step-by step procedures to achieve your design goals. Work between multiple documents, features, commands, and properties that represent how engineers and designers utilize SOLIDWORKS in industry. The author developed the industry

scenarios by combining his own industry experience with the knowledge of engineers, department managers, vendors and manufacturers.

SolidWorks 2012 Part I - Basic Tools

SDC Publications SolidWorks 2012 Part I - Basic Tools introduces new users to the SolidWorks interface, SolidWorks tools and basic modeling techniques. It provides readers with a strong understanding of SolidWorks and covers the creation of parts, assemblies and drawings. Every lesson and exercise in this book was created based on real world projects. Each of these projects have been broken down and developed into easy and comprehensible steps for the reader. Furthermore, at the end of every chapter there are self test questionnaires to ensure that the reader has gained sufficient knowledge from each section before moving on to more advanced lessons. This book takes the approach that in order to understand SolidWorks, inside and out, the reader should create everything from the beginning and take it step by step.

Introduction to Solid Modeling Using SolidWorks 2012

McGraw-Hill Science/Engineering/Math Introduction to Solid Modeling Using SolidWorks® 2012 presents "keystroke-level" tutorials, providing users new to the SolidWorks® program with all the detail they need to become confident using the software. Topics are illustrated and infused with examples from the real world such as flanges, brackets, helical springs, and more. Additionally, this easy-to-use guide has modular chapters, allowing for flexible organization of a course or self-study. Accessible and updated for the newest version of software, Introduction to Solid Modeling Using SolidWorks® 2012 by Howard and Musto relates solid modeling exercises to engineering concepts in a way that introduces the engineering design process while simultaneously building student proficiency with a state-of-the-art software tool. The Student Design Kit is no longer available as a download. Instructors can receive free 1 year copies of SolidWorks for their students by going to www.solidworks.com/studentaccess. Schools must be on subscription to receive free student software.

SOLIDWORKS 2017 Reference Guide

SDC Publications The SOLIDWORKS 2017 Reference Guide is a comprehensive reference book written to assist the beginner to intermediate user of SOLIDWORKS 2017. SOLIDWORKS is an immense

software package, and no one book can cover all topics for all users. This book provides a centralized reference location to address many of the tools, features and techniques of SOLIDWORKS 2017. This book covers the following: System and Document propertiesFeatureManagersPropertyManagersConfigurationManagersRenderManagers2D and 3D Sketch toolsSketch entities3D Feature toolsMotion StudySheet MetalMotion StudySOLIDWORKS SimulationPhotoView 360Pack and Go3D PDFsIntelligent Modeling techniques3D printing terminology and more Chapter 1 provides a basic overview of the concepts and terminology used throughout this book using SOLIDWORKS 2017 software. If you are completely new to SOLIDWORKS, you should read Chapter 1 in detail and complete Lesson 1, Lesson 2 and Lesson 3 in the SOLIDWORKS Tutorials. If you are familiar with an earlier release of SOLIDWORKS, you still might want to skim Chapter 1 to become acquainted with some of the commands, menus and features that you have not used; or you can simply jump to any section in any chapter. Each chapter provides detailed PropertyManager information on key topics with individual stand-alone short tutorials to reinforce and demonstrate the functionality and ease of the SOLIDWORKS tool or feature. The book provides access to over 250 models, their solutions and additional support materials. Learn by doing, not just by reading. Formulate the skills to create, modify and edit sketches and solid features. Learn the techniques to reuse features, parts and assemblies through symmetry, patterns, copied components, design tables, configurations and more. The book is designed to compliment the Online Tutorials and Online Help contained in SolidWorks 2017. The goal is to illustrate how multiple design situations and systematic steps combine to produce successful designs. The author developed the tutorials by combining his own industry experience with the knowledge of engineers, department managers, professors, vendors and manufacturers. He is directly involved with SOLIDWORKS every day and his responsibilities go far beyond the creation of just a 3D model.

An Introduction to SOLIDWORKS Flow Simulation 2016

SDC Publications An Introduction to SOLIDWORKS Flow Simulation 2016 takes you through the steps of creating the SOLIDWORKS part for the simulation followed by the setup and calculation of the SOLIDWORKS Flow Simulation project. The results from calculations are visualized and compared with theoretical solutions and empirical data. Each chapter starts with the objectives and a description of the specific problems that are studied. End of chapter exercises are included for reinforcement and practice of what has been learned. The fourteen chapters of this book are directed towards first-time to intermediate level users of SOLIDWORKS Flow Simulation. It is intended to be a supplement to undergraduate Fluid

Mechanics and Heat Transfer related courses. This book can also be used to show students the capabilities of fluid flow and heat transfer simulations in freshman and sophomore courses such as Introduction to Engineering. Both internal and external flow problems are covered and compared with experimental results and analytical solutions. Covered topics include airfoil flow, boundary layers, flow meters, heat exchanger, natural and forced convection, pipe flow, rotating flow, tube bank flow and valve flow.

BIM Handbook

A Guide to Building Information Modeling for Owners, Designers, Engineers, Contractors, and Facility Managers

John Wiley & Sons Discover BIM: A better way to build better buildings Building Information Modeling (BIM) offers a novel approach to design, construction, and facility management in which a digital representation of the building product and process is used to facilitate the exchange and interoperability of information in digital format. BIM is beginning to change the way buildings look, the way they function, and the ways in which they are designed and built. The BIM Handbook, Third Edition provides an in-depth understanding of BIM technologies, the business and organizational issues associated with its implementation, and the profound advantages that effective use of BIM can provide to all members of a project team. Updates to this edition include: Information on the ways in which professionals should use BIM to gain maximum value New topics such as collaborative working, national and major construction clients, BIM standards and guides A discussion on how various professional roles have expanded through the widespread use and the new avenues of BIM practices and services A wealth of new case studies that clearly illustrate exactly how BIM is applied in a wide variety of conditions Painting a colorful and thorough picture of the state of the art in building information modeling, the BIM Handbook, Third Edition guides readers to successful implementations, helping them to avoid needless frustration and costs and take full advantage of this paradigm-shifting approach to construct better buildings that consume fewer materials and require less time, labor, and capital resources.

SOLIDWORKS 2018 Reference Guide

SDC Publications The **SOLIDWORKS 2018 Reference Guide** is a comprehensive reference book written to assist the beginner to intermediate user of **SOLIDWORKS 2018**. **SOLIDWORKS** is an immense software package, and no one book can cover all topics for all users. This book provides a centralized reference location to address many of the tools, features and techniques of **SOLIDWORKS 2018**. This book covers the following: System and Document properties, FeatureManagers, PropertyManagers, ConfigurationManagers, RenderManagers, 2D and 3D Sketch tools, Sketch entities, 3D Feature tools, Motion Study, Sheet Metal, Motion Study, SOLIDWORKS Simulation, PhotoView 360, Pack and Go, 3D PDFs, Intelligent Modeling techniques, 3D printing terminology and more. Chapter 1 provides a basic overview of the concepts and terminology used throughout this book using **SOLIDWORKS 2018** software. If you are completely new to **SOLIDWORKS**, you should read Chapter 1 in detail and complete Lesson 1, Lesson 2 and Lesson 3 in the **SOLIDWORKS Tutorials**. If you are familiar with an earlier release of **SOLIDWORKS**, you still might want to skim Chapter 1 to become acquainted with some of the commands, menus and features that you have not used; or you can simply jump to any section in any chapter. Each chapter provides detailed **PropertyManager** information on key topics with individual stand-alone short tutorials to reinforce and demonstrate the functionality and ease of the **SOLIDWORKS** tool or feature. The book provides access to over 250 models, their solutions and additional support materials. Learn by doing, not just by reading. Formulate the skills to create, modify and edit sketches and solid features. Learn the techniques to reuse features, parts and assemblies through symmetry, patterns, copied components, design tables, configurations and more. The book is designed to complement the **Online Tutorials** and **Online Help** contained in **SOLIDWORKS 2018**. The goal is to illustrate how multiple design situations and systematic steps combine to produce successful designs. The author developed the tutorials by combining his own industry experience with the knowledge of engineers, department managers, professors, vendors and manufacturers. He is directly involved with **SOLIDWORKS** every day and his responsibilities go far beyond the creation of just a 3D model.

Introduction to Mechanism Design

with Computer Applications

CRC Press Introduction to Mechanism Design: with Computer Applications provides an updated approach to undergraduate Mechanism Design and Kinematics courses/modules for engineering students. The use of web-based simulations, solid modeling, and software such as MATLAB and Excel is employed to link the design process with the latest software tools for the design and analysis of mechanisms and machines. While a mechanical engineer might brainstorm with a pencil and sketch pad, the final result is developed and communicated through CAD and computational visualizations. This modern approach to mechanical design processes has not been fully integrated in most books, as it is in this new text.

SolidWorks 2016 Reference Guide

A comprehensive reference guide
with over 250 standalone tutorials

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through symmetry, patterns, copied components, design tables, configurations and more. The book is designed to compliment the Online Tutorials and Online Help contained in SOLIDWORKS 2016. The goal is to illustrate how multiple design situations and systematic steps combine to produce successful designs. The author developed the tutorials by combining his own industry experience with the knowledge of engineers, department managers, professors, vendors and manufacturers. He is directly involved with SOLIDWORKS every day and his responsibilities go far beyond the creation of just a 3D model.

Engineering Graphics with SOLIDWORKS 2018 and Video Instruction

SDC Publications Engineering Graphics with SOLIDWORKS 2018 and Video Instruction is written to assist students, designers, engineers and professionals who are new to SOLIDWORKS. The book is divided into four sections: Chapters 1 - 3 explore the history of engineering graphics, manual sketching techniques, orthographic projection, Third vs. First angle projection, multi-view drawings, dimensioning practices (ASME Y14.5-2009 standard), line type, fit type, tolerance, fasteners in general, general thread notes and the history of CAD leading to the development of SOLIDWORKS. Chapters 4 - 9 explore the SOLIDWORKS User Interface and CommandManager, Document and System properties, simple machine parts, simple and complex assemblies, proper design intent, design tables, configurations, multi-sheet, multi-view drawings, BOMs, and Revision tables using basic and advanced features. Follow the step-by-step instructions in over 80 activities to develop eight parts, four sub-assemblies, three drawings and six document templates. Chapter 10 provides a section on the Certified Associate - Mechanical Design (CSWA) program with sample exam questions and initial and final SOLIDWORKS models. Chapter 11 helps you understand the differences between additive and subtractive manufacturing. Comprehend 3D printer terminology along with a working knowledge of preparing, saving, and printing a 3D CAD model on a low cost printer. Review individual features, commands, and tools using the video instruction and SOLIDWORKS Help. The chapter exercises analyze and examine usage competencies based on the chapter objectives. The book is designed to complement the SOLIDWORKS Tutorials located in the SOLIDWORKS Help menu. Desired outcomes and usage competencies are listed for each project. Know your objectives up front. Follow the step-by step procedures to achieve your design goals. Work between multiple documents, features, commands, and properties that represent how engineers and designers utilize SOLIDWORKS in industry.

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Engineering Graphics with SolidWorks 2013 and Video Instruction

SDC Publications Engineering Graphics with SolidWorks 2013 and Video Instruction DVD is written to assist technical school, two year college, four year university instructor/student or industry professional that is a beginner or intermediate SolidWorks user. The book combines the fundamentals of engineering graphics and dimensioning practices with a step-by-step project based approach to learning SolidWorks with the enclosed 1.5 hour Video Instruction DVD. Learn by doing, not just by reading. The book is divided into two parts: Engineering Graphics and SolidWorks 3D CAD software. In Chapter 1 through Chapter 3, you explore the history of engineering graphics, manual sketching techniques, orthographic projection, isometric projection, multi-view drawings, dimensioning practices and the history of CAD leading to the development of SolidWorks. In Chapter 4 through Chapter 8, you apply engineering graphics fundamentals and learn the SolidWorks User Interface, Document and System properties, simple parts, simple and complex assemblies, design tables, configurations, multi-sheet, multi-view drawings, Bill of Materials, Revision tables, basic and advanced features. Follow the step-by-step instructions in over 70 activities to develop eight parts, four sub-assemblies, three drawings, and six document templates. Formulate the skills to create and modify solid features to model a 3D FLASHLIGHT assembly. Chapter 9 provides a bonus section on the Certified SolidWorks Associate CSWA program with sample exam questions and initial and final SolidWorks models. Passing the CSWA exam proves to employers that you have the necessary fundamental engineering graphics and SolidWorks competencies. Review individual features, commands, and tools for each project with the book's 1.5 hour Video Instruction DVD and SolidWorks Help. The chapter exercises analyze and examine usage competencies based on the project objectives. The book is designed to complement the SolidWorks Tutorials located in the SolidWorks Help menu. Each section explores the SolidWorks Online User's Guide to build your working knowledge of SolidWorks. Desired outcomes and usage competencies are listed for each project. Know your objectives up front. Follow the step-by-step procedures to achieve your design goals. Work between multiple documents, features, commands, and properties that represent how engineers and designers utilize SolidWorks in industry. The authors developed the industry scenarios by combining their own industry experience with the knowledge of engineers, department managers, vendors, and manufacturers. These professionals are directly involved with

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