

Autodesk® Inventor® 2014

A Tutorial Introduction



L. Scott Hansen, Ph.D.

Visit the following websites to learn more about this book:



Table of Contents

Chapter 1: Getting Started	1-1
Create a simple sketch using the Sketch Panel	1-3
Dimension a sketch using the General Dimension command	1-8
Extrude a sketch in the Part Features Panel using the Extrude command	1-19
Create a fillet in the Part Features Panel using the Fillet command.....	1-20
Create a hole in the Part Features Panel using the Extrude command.....	1-23
Create a counter bore in the Part Features Panel using the Hole command	1-27
Chapter Problems	1-35
Chapter 2: Learning More Basics.....	2-1
Revolve a sketch in the Part Features Panel using the Revolve command	2-2
Use the Revolve Cut command to create a groove	2-7
Create a hole in the Part Features Panel using the Extrude command.....	2-19
Create a series of holes using the Circular Pattern command	2-34
Chapter Problems	2-37
Chapter 3: Learning to Create a Detail Drawing	3-1
Create an Orthographic view using the Drawing Views Panel	3-6
Create a Solid Model using the Edit Views command	3-11
Chapter Problems	3-16
Chapter 4: Advanced Detail Drawing Procedures	4-1
Create an Auxiliary View using the Drawing Views Panel	4-5
Create a Section View using the Drawing Views	4-9
Create a broken view using the Break command	4-14
Dimension views using the Drawing Annotation Panel	4-17
Create Text using the Drawing Annotation Panel.....	4-19
Chapter Problems	4-24
Chapter 5: Learning to Edit Existing Solid Models	5-1
Edit the part using the Sketch Panel	5-6
Edit the part using the Extrude command	5-12
Edit the part using the Circular Pattern command	5-20
Edit the part using the Fillet command	5-23
Chapter Problems	5-28

Chapter 6: Designing Part Models for Assembly	6-1
Learn to use the X, Y, and Z Planes	6-3
Learn to use the Wireframe viewing command	6-5
Learn to project geometry to a new sketch.....	6-7
Learn to use the Shell command.....	6-11
Chapter 7: Introduction to Assembly View Procedures	7-1
Learn to import existing solid models into the Assemble Panel.....	7-3
Learn to constrain all parts in the Assemble Panel	7-9
Learn to edit/modify parts while in the Assemble Panel	7-30
Learn to assign colors to different parts in the Assemble Panel.....	7-40
Learn to drive constraints to simulate motion	7-44
Learn to create an .avi or .wmv file while in the Assemble Panel	7-48
Chapter Problems	7-51
Chapter 8: Introduction to the Presentation Panel	8-1
Learn to import existing assembly models into the Presentation Panel	8-9
Learn to design parts trails in the Presentation Panel	8-13
Chapter Problems	817
Chapter 9: Introduction to Advanced Commands	9-1
Learn to create a sweep using the Sweep command	9-3
Learn to use the Rectangular Pattern command	9-8
Learn to create a loft using the Loft command	9-15
Learn to create a coil using the Coil command	9-18
Chapter Problems	9-21
Chapter 10: Introduction to Creating Threads	10-1
Learn to create a Polygon	10-2
Learn to create Threads	10-5
Chapter 11: Advanced Work Plane Procedures	11-1
Learn to create points on multiple sketches	11-5
Learn to use these points to create an offset work plane	11-8
Chapter Problems	11-13
Chapter 12: Introduction to Stress Analysis	12-1
Learn to create a simple part	12-2
Learn to apply material to a simple part	12-4
Learn to apply a fixture to a simple part	12-6
Learn to apply force to a simple part.....	12-7
Learn to perform a stress analysis on a simple part	12-8

Learn to interpret results of a stress analysis	12-9
Chapter Problems	12-10
Chapter 13: Introduction to the Design Accelerator	13-1
Learn to create a Disc Cam	13-10
Learn to edit a Disc Cam	13-13
Learn to animate the assembly	13-22
Chapter Problems	13-27

Index