



Inventor 2012 Intro to Solid Modeling (Essentials) Course Outline

Course Objectives

After completing this course, you will be able to:

- Capture design intent by learning the proper techniques and recommended workflows for creating intelligent 3D parametric parts.
- Create, place, and constrain custom and standard components in an assembly, simulate mechanisms, animate assembly designs, and check for interferences.
- Document designs using base, projected, section, detail, and isometric drawing views, and document assemblies using standard and exploded drawing views.
- Follow drafting standards while dimensioning and annotating drawing views with centerlines, symbols, leaders, hole and thread notes, hole tables, automated balloons, and parts lists.

Prerequisites

This course is designed for new Autodesk Inventor users who want to learn the essential tools and principles of 3D parametric part design, assembly design, and how to create production-ready part and assembly drawings using Autodesk Inventor.

It is recommended that you have:

- A basic understanding of mechanical drafting or design.
- A working knowledge of Microsoft Windows 7

Topics

PART I

1. Introduction to Inventor

Solid Modeling
Inventor Fundamentals
The Inventor Interface
Model Manipulation

2. Creating the Base Feature

Solid Base Features

3. Sketching Geometry

Sketch Geometry

4. Additional Sketching Tools

Advanced Editing Tools
Using Existing Geometry
Over-Dimensioned Sketches
Sketch Preferences

5. Sketched Secondary Features

Extruded Secondary Features
Revolved Secondary Features
Editing Sketched Secondary Features
3D Grip Modifications

6. Creating Pick and Place Features

Edge Chamfer
Constant Fillets
Variable Fillets
Face Fillets
Full Round Fillets
Straight Holes
Treads
Editing Pick and Place Features
Creation Sequence

7. Work Features

Work Planes
Work Axes
Work Points

8. Equations

Equations
Parameters

***9. Additional Features**

Face Draft
Splitting a Face or Part
Shells
Ribs
Bend Part

Autodraft, Inc. dba Adraft

email: info@adraft.com

www.adraft.com

ADRAFT, AN AUTODRAFT, INC. COMPANY

Rochester Office:

2815 Baird Road
Fairport, NY 14450-1244
Phone: (585) 389-1900
Fax: (585) 389-0953

Buffalo Office:

8201 Main Street, Suite 3
Williamsville, NY 14221
Phone: (866) 769-6163
Fax: (585) 389-0953

Syracuse Office:

126 Dwight Park Circle
Syracuse, NY 13209
Phone: (866) 769-6163
Fax: (585) 389-0953



10. Model and Display Manipulation

Reordering Features
Inserting Features
Suppressing Features
Section Views
Design Views

11. Fixing Problems

Sketch Failure
Feature Failure

***12. Sweep Features**

Sweep Features

***13. Loft Features**

Rail Lofts
Center Line Lofts
Advanced Loft Options

14. Duplication Tools

Rectangular Sketch Patterns
Circular Sketch Patterns
Rectangular Feature Patterns
Circular Feature Patterns
Mirror Parts or Features
Manipulate Patterns and Mirror Features

15. Feature Relationships

Establishing Relationships
Controlling Relationships
Investigating Relationships
Changing Relationships

PART II

16. Assembly Environments

Assembling Components
Content Center
Assembly Browser
Saving Files

17. Manipulating Assembly Display

Moving and Rotating
Assembly Components
Suppressing Constraints
Component Display
Selection Options in Assemblies

18. Model Information

Measurement Tools
Model Properties
Changing Part Units
Properties and Measurements
Model Measurements

19. Design Presentation and Animation

Exploded View Presentations

20. Assembly Tools

Replacing Components
Restructuring Components
Driving Constraints
Contact Solver
Interference
Error Recovery

21. Assembly Parts and Features

Assembly Parts
Assembly Features

22. Working with Projects

New Projects
Resolving Links
The Project Browser

23. Drawing Basics

New Drawing Views
Manipulating Views

24. Detailing Drawings

Dimensions
Parts List
Balloons
Styles and Standards
Hatching

25. Assembly Bill of Materials

Create Virtual Components
Create Bill of Materials

26. Drawing Annotations

Text
Symbols
Hole and Thread Notes
Chamfer Notes
Center Marks and Center Lines
Hole Tables
Revision Tables and Tags

***27. Customizing Inventor**

Application Options
Document Settings
File Properties
Productivity Tips

***Not covered in a 4 day class**

Duration: 4 Days

Classroom Tuition:
\$1,150.00/student

Group rates are available

Autodraft, Inc. dba Adraft

email: info@adraft.com
www.adraft.com

ADRAFT, AN AUTODRAFT, INC. COMPANY

Rochester Office:

2815 Baird Road
Fairport, NY 14450-1244
Phone: (585) 389-1900
Fax: (585) 389-0953

Buffalo Office:

8201 Main Street, Suite 3
Williamsville, NY 14221
Phone: (866) 769-6163
Fax: (585) 389-0953

Syracuse Office:

126 Dwight Park Circle
Syracuse, NY 13209
Phone: (866) 769-6163
Fax: (585) 389-0953