

Autodesk Inventor API Training Course

Course Overview

Course Length: 16-Hours

- 16-Hours – 8 x 2-hour training sessions
- Remote training over MS Teams
- Sessions are recorded and download links for each session are provided for future use
- Training for up to 1-3 people
- Sessions can start within 7 days upon ordering
- Flexible sessions (for example, consecutive or Monday, Wednesday, Friday)
- Courses are private and topics can be customised to suit
- Includes Certificate of Completion

The Inventor API Training Course provides practical instructor-led training for mechanical engineers, CAD managers, software developers, manufacturing professionals, design automation specialists, and Autodesk Inventor users wanting to automate engineering workflows and develop custom applications using the Autodesk Inventor API.

This course focuses on Inventor API development using C#, .NET, Visual Studio, and Autodesk Inventor's object model. Participants learn how to create custom add-ins, automate modelling workflows, generate drawings, manipulate assemblies, manage iProperties, integrate external data sources, and develop engineering automation tools that improve productivity and reduce repetitive design tasks.

Delivered through live remote training sessions over Microsoft Teams, this Autodesk Inventor Programming Course combines software development principles with practical engineering automation exercises to help organisations streamline product development, standardise processes, and improve engineering efficiency.

Whether you are searching for Inventor API Training, an Inventor .NET Course, or an Inventor Add-In Development Course, this training provides practical development skills that can be immediately applied to real-world manufacturing and engineering projects.

Topics Covered

This Inventor API Training Course can be customised to focus on specific Autodesk and Microsoft technologies including:

- Autodesk Inventor API
- C#
- VB.NET
- .NET Framework
- Visual Studio

- iLogic
- JSON
- REST APIs
- SQL Server
- Microsoft Excel Automation
- Autodesk Platform Services (APS)
- ERP and PLM Integrations

Prerequisites

A fundamental understanding and knowledge of Inventor and terminology. Previous experience of iLogic is also recommended.

Training Guide Contents

Chapter 1: Introduction to Inventor API Development

- Inventor API Architecture
- Development Environment Setup
- Visual Studio Configuration
- Inventor Object Model
- Development Best Practices

Chapter 2: Creating Inventor Add-Ins and Commands

- Add-In Structure
- Command Development
- User Interaction
- Command Registration
- Deployment and Distribution

Chapter 3: Working with Inventor Documents

- Part Documents
- Assembly Documents
- Drawing Documents
- Document Management
- Opening and Saving Files Programmatically

Chapter 4: Part Modelling Automation

- Sketch Creation and Editing
- Feature Automation
- Parametric Modelling
- Geometry Creation
- Automated Design Workflows

Chapter 5: Assembly Automation

- Component Placement
- Constraints and Joints
- Assembly Management
- Assembly Configuration

- Product Design Automation

Chapter 6: Drawings, BOMs and iProperties

- Drawing Automation
- Drawing View Creation
- Annotation Automation
- Bill of Materials Generation
- iProperty Management

Chapter 7: User Interface Development

- Ribbon Customisation
- Custom Commands
- Dialog Boxes
- Windows Forms
- WPF Interfaces
- User Experience Design

Chapter 8: Data Integration and Autodesk Platform Services

- Excel Integration
- CSV and JSON Processing
- Database Connections
- REST APIs
- Autodesk Platform Services (APS)

Chapter 9: Advanced API Development

- Event Handling
- Transaction Management
- Error Handling
- Debugging Techniques
- Performance Optimisation
- API Development Best Practices

Chapter 10: Custom Inventor API Project Development**

- Reviewing Business Requirements
- Defining Project Objectives
- Designing Application Architecture
- Developing Custom Automation Tools
- Testing and Deployment
- Future Enhancement Planning

**Creating a custom add-in, code or scripts may take additional time than allocate within the 16-hours and can be pre-determined prior to commencement of training.