



AUTODESK/AUTOCAD TRAINING

Autodesk Inventor Course

Master 3D mechanical design and product simulation with Autodesk Inventor. Create complex prototypes and drive innovation.

DURATION

Flexible

LEVEL

Intermediate

FORMAT

Instructor-Led

- Globally Recognized Certification

- Expert-Led Hands-On Training

- Flexible Scheduling

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COURSE OVERVIEW

This intermediate-level Autodesk Inventor course is meticulously designed to transform aspiring and current engineers, product designers, and manufacturing professionals into proficient users of Autodesk's powerful 3D mechanical CAD software. Participants will delve deep into the principles of parametric modeling, learning to create complex 3D parts, robust assemblies, and detailed manufacturing drawings. The curriculum emphasizes hands-on application, covering advanced sketching techniques, feature-based modeling, assembly design, simulation basics, and professional documentation practices, ensuring you can tackle real-world design challenges with confidence and precision.

Mastering Autodesk Inventor equips you with a critical skill set demanded across various engineering and manufacturing sectors. Beyond simply learning software commands, this course focuses on best practices for design efficiency, data management, and collaborative workflows. Graduates will be empowered to accelerate product development cycles, reduce prototyping costs, and communicate design intent with unparalleled clarity, ultimately contributing significantly to innovation and operational excellence within any organization.

Level	Intermediate
Vendor	Autodesk/AutoCAD

COURSE CURRICULUM

01 Module 1: Advanced Sketching and Part Creation Fundamentals

- Review of Sketching Environment and Constraints
- Parametric Sketching Techniques and Driven Dimensions
- Working with Sketch Blocks and Adaptive Sketches
- Advanced Extrude, Revolve, Sweep, and Loft Operations
- Applying Fillets, Chamfers, Shells, and Draft Features
- Introduction to Work Features (Planes, Axes, Points)

02 Module 2: Complex Part Modeling and Multi-body Design

- Creating Advanced Holes, Threads, and Patterns (Rectangular, Circular, Sketch-driven)
- Building Complex Forms using Loft and Sweep Profiles
- Understanding and Utilizing Multi-body Part Design
- Working with Surface Modeling Techniques (Basic Surfacing for Complex Shapes)
- Introduction to Sheet Metal Design Environment and Features

03 Module 3: Professional Assembly Design and Management

- Assembly Environment Interface and Navigation
- Placing Components and Applying Assembly Constraints (Mates, Flushes, Angles)
- Working with Joints and Contact Sets for Realistic Motion
- Building Sub-assemblies and Top-Down vs. Bottom-Up Design Approaches
- Utilizing the Content Center for Standard Components
- Creating Assembly Exploded Views and Presentations

04 Module 4: Generating Manufacturing Drawings and Documentation

- Creating Base, Projected, Auxiliary, and Section Views
- Detailing Drawings with Dimensions, Annotations, and Callouts
- Generating Bills of Material (BOMs) and Parts Lists
- Customizing Drawing Templates and Styles
- Working with Weldment Features and Documentation

- Exporting Drawings for Manufacturing (DWG, PDF)

05 Module 5: Basic Simulation, Visualization, and Data Exchange

- Introduction to Inventor Stress Analysis (FEA Fundamentals)
- Performing Basic Motion Studies and Interference Analysis
- Rendering and Visualization Techniques (Materials, Lighting, Cameras)
- Introduction to iParts and iAssemblies for Design Automation
- Data Exchange with Other CAD Systems (Import/Export Formats)
- Collaboration Tools and Vault Integration Concepts

CAREER PATHWAYS

Graduates of this program are prepared for the following roles:

- > **Mechanical Design Engineer (Proficient in 3D CAD modeling for product development and machinery design)**
- > **CAD/CAM Specialist (Expert in creating precise models for manufacturing processes like CNC machining and 3D printing)**
- > **Product Development Analyst (Utilizing Inventor for early-stage design analysis, visualization, and validation)**

FREQUENTLY ASKED QUESTIONS

Q: What prior experience or knowledge is recommended before enrolling in this intermediate Autodesk Inventor course?

To gain the most from this intermediate course, participants should have a foundational understanding of 2D CAD principles and basic mechanical drafting concepts. Prior exposure to any 3D CAD software, or completion of an introductory Inventor course covering basic sketching and part modeling (Extrude, Revolve, basic features), would be highly beneficial. This course builds upon those basics, diving deeper into advanced functionalities and design workflows.

Q: How will mastering Autodesk Inventor through this course enhance my career prospects in mechanical design and engineering?

This course elevates your proficiency beyond basic CAD operation, making you a highly capable mechanical designer. You will gain expertise in advanced parametric modeling, efficient assembly design, and professional documentation, which are critical skills sought after by employers in product development, automotive, aerospace, and general manufacturing sectors. Graduates will be equipped to take on more complex projects, improve design quality, and contribute to faster product cycles, making them indispensable assets in any engineering team.

Q: Does this course cover any aspects of advanced manufacturing or analysis workflows, such as CAM integration or advanced simulations?

While the primary focus of this course is on intermediate-level 3D mechanical design and drafting within Autodesk Inventor, we do introduce foundational concepts related to advanced workflows. Specifically, Module 5 provides an introduction to basic stress analysis (FEA fundamentals) and motion studies. It also touches upon data exchange protocols relevant for CAM integration. However, dedicated advanced courses on Inventor CAM or in-depth simulation using Autodesk Nastran In-CAD would be recommended for comprehensive expertise in those specialized areas.

ABOUT COMPUTER PRIDE



East Africa's Premier IT Training Center

With over 15 years of excellence, Computer Pride delivers globally recognized certification programs from leading technology vendors. Located on Kenyatta Avenue in Nairobi's CBD, our state-of-the-art facilities and expert instructors have empowered thousands of professionals across East Africa.

15+

Years of Excellence

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READY TO ENROL?

Take the next step in your technology career.

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