

Duration:

4 Days

Who should attend?:

This course covers the essentials of 3D parametric design for new users of AutoCAD Inventor®.

Prerequisites:

Some design or engineering experience. It is recommended that you have a working knowledge of Microsoft supporting systems.

**Course Description:**

Students are introduced to the fundamental principles of 3D parametric part design; learn how to create intelligent parametric parts by capturing design intent, and how this helps to streamline the process of modifying and documenting designs.

The fundamental principles and recommended workflows for creating 3D assemblies, and learn the proper techniques and recommended workflows for creating, placing, and constraining custom and standard components in an assembly, also how to simulate mechanisms, animate their assembly designs, and check for interferences.

Finally, students learn the proper techniques and recommended workflows for creating base, projected, section, detail, and isometric views of 3D parts and assemblies. Students also learn how to define and follow drafting standards while dimensioning and annotating drawing views.

Objectives:

- Understand the fundamental concepts, workflows, and benefits of 3D parametric part and assembly design using AutoCAD Inventor
- Locate and navigate the AutoCAD Inventor user interface and the multiple design and documentation environments
- Start designing simple parts and assemblies using basic sketching and modelling tools
- Validate designs using various analysis tools
- Create basic engineering drawings from 3D part and assembly models
- Annotate drawings by retrieving dimensions from the 3D model and adding notes, symbols, and tables
- Update drawings as changes are made to the 3D model
- Create photo-realistic images and animations.

<p>Course Outline:</p> <p>Parametric Part Design and Basic Sketching</p> <ul style="list-style-type: none"> • Designing Parametric Parts • Creating 2D Sketches • Geometric Constraints • Dimensioning Sketches • Basic Shape Design • Creating Basic Sketched Features • Intermediate Sketching • Editing Parametric Parts • Creating Work Features • Creating Basic Swept Shapes • Creating Basic Blended Shapes <p>Detailed Shape Design</p> <ul style="list-style-type: none"> • Creating Chamfers and Fillets • Creating Holes and Threads • Patterning and Mirroring Features 	<ul style="list-style-type: none"> • Creating Thin-Walled Parts • Strengthening Parts with Ribs and Webs <p>Assembly Design Overview</p> <ul style="list-style-type: none"> • Designing Assemblies • Using Project Files for Assembly Design <p>Placing, Creating, and Constraining Components</p> <ul style="list-style-type: none"> • Placing Existing Components in an Assembly • Constraining Components • Placing Standard Components Using the Content Centre • Patterning Components • Basic Part Design in the Context of an Assembly <p>Basic View Creation</p> <ul style="list-style-type: none"> • Drawing Creation 	<p>Environment</p> <ul style="list-style-type: none"> • Base and Projected Views • Section Views • Detail Views • Broken Views • Managing Views <p>Dimensions, Annotations, and Tables</p> <ul style="list-style-type: none"> • Automated Dimensioning Techniques • Manual Dimensioning Techniques • Holes and Thread Notes • Hole Tables • Creating Centerlines, Symbols, and Leaders • Creating Tables <p>Drawing Standards and Resources</p> <ul style="list-style-type: none"> • Setting Drawing Standards • Drawing Resources
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* The suggested course duration is a guideline.

Course topics and duration may be modified by the instructor based upon the knowledge and skill level of the course participants.

The course is Autodesk Authorised with Courseware, and Certificate of Completion awarded

Maximum number of delegates: 6 per course

Training can either be taken on site or at one of our conveniently located local training centres.

To book a place on this course please call Graitec on **023 8086 8947**

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