

2020/21

T3

**TRAINING &
DEVELOPMENT**

Training in Architecture
Engineering & Construction

Virtual Learning Courses



Training in Architecture
Engineering & Construction

OVERVIEW

ABOUT US

We are a National Training Provider offering a variety of Apprenticeship Programmes at Level 3 & Level 4. We also offer a number of short courses, online courses and NVQ only training at our training suite in Barnsley or on site/in the workplace. All our training is aimed at the Architectural, Engineering & Construction sectors and is delivered by our team of industry experts.

We needed to address the significant lack of formal/specialist training in the construction industry for engineers and technicians. Therefore, we have developed a unique and intensive specialist training programme along with high quality training and assessment methods to deliver apprentices into the workplace with the skills, knowledge and understanding required of their job role.

We have built upon the experience of our founding companies and directors to build programmes that bring value to your business and are tailored to meet the needs of the learners and the employers. Our aim is to bridge the gap between young talent and experience to deliver apprentices into the workplace ready to deliver whilst educating and inspiring them to succeed in this industry.

We are a private training provider with the flexibility to offer bespoke training and development to meet your business's needs.

CONTACT DETAILS

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BENEFITS OF THE VIRTUAL LEARNING COURSES:

- Easy sign up and log in
- All online training courses come with an e-book
- 20-25 GLH for each course
- Access to course and ebook for 12 months
- Complete at own pace
- Certificate issued on completion
- Learn a wide range of new techniques

AUTOCAD ESSENTIALS

Course Aim:

This course is aimed at new users of AutoCAD or AutoCAD LT. It is taught at beginners' level and consists of 20 modules.

Individual modules contain clear learning objects and practical task-based step by step examples, covering the software's core features and functionality, ensures you are productive from the very start of your learning.

Course outline:

- **ACD-E 01 Introduction to AutoCAD**
- **ACD-E 02 Creating Basic Shapes**
- **ACD-E 03 Creating a Simple Drawing and Shapes**
- **ACD-E 04 Drawing Accuracy**
- **ACD-E 05 Manipulating Objects AutoCAD Intermediate**
- **ACD-E 06 Additional Exercises**
- **ACD-E 07 Organising the Drawing**
- **ACD-E 08 Creating Advanced Shapes**
- **ACD-E 09 Analysing Model and Object Properties**
- **ACD-E 10 Practical Example Projects**
- **ACD-E 11 Advanced Object Editing**
- **ACD-E 12 Using Element Block Libraries**
- **ACD-E 13 Practical Example Projects**
- **ACD-E 14 Configuring a Layout**
- **ACD-E 15 Printing a Drawing**
- **ACD-E 16 Practical Printing Examples**
- **ACD-E 17 Annotating Drawings**
- **ACD-E 18 Hatching Regions**
- **ACD-E 19 Dimensioning Drawings AutoCAD Advanced / 3D**
- **ACD-E 20 Practical Annotation Examples**

Cost: £500 per person.

AUTOCAD INTERMEDIATE

Course Aim:

This course is aimed for users who have already completed the AutoCAD essentials course who want to move to intermediate level. The course consists of 12 modules which follow on from introductory level, therefore previous knowledge of AutoCAD is required. You will learn a wide range of techniques, providing you with significant productivity gains.

Individual modules will contain clear learning objectives and practical, task-based step by step examples, covering the software's core features and functionality, ensures you are productive from the very start of your learning.

Course outline:

- **ACD-I 01 Efficient Use of AutoCAD**
- **ACD-I 02 Accurate Positioning**
- **ACD-I 03 Practical Productivity Examples**
- **ACD-I 04 Working with Parameters**
- **ACD-I 05 Blocks**
- **ACD-I 06 Practical Blocks Examples**
- **ACD-I 07 Template Creation**
- **ACD-I 08 Advanced Layouts**
- **ACD-I 09 Creating New Styles**
- **ACD-I 10 Practical Examples - Drawing Setup**
- **ACD-I 11 Working with External References**
- **ACD-I 12 Practical Examples-Drawings**

Cost: £500 per person.

AUTOCAD ADVANCED/3D

Course Aim:

This course is aimed at advanced users of AutoCAD. We introduce advanced techniques throughout the 11 modules which teaches you to be proficient in your use of AutoCAD. We do this by teaching you how to recognise the best tool for the task, the best way to use that tool, and how to create new tools to accomplish tasks more efficiently focusing on 3D.

Individual modules contain clear learning objectives and practical, task-based step by step examples, covering some of the software's more advanced features and functionality, ensures you are productive from the very start of your learning.

Course outline:

- **ACD-A 01 Practical-Advanced Blocks and Attributes**
- **ACD-A 02 Output and Publishing AutoCAD Civil 3D**
- **ACD-A 03 Collaboration Tools C3D 01 UI Tour**
- **ACD-A 04 Cloud Collaboration and Model Integration**
- **ACD-A 05 3D Essentials**
- **ACD-A 06 Basic Solids**
- **ACD-A 07 User Coordinate System**
- **ACD-A 08 3D Solids and Surfaces**
- **ACD-A 09 3D Editing**
- **ACD-A 10 Visualisation**
- **ACD-A 11 Drawings from 3D Models**

Cost: £500 per person.

AUTOCAD - CIVIL 3D

Course Aim:

This easy to follow course is a perfect hands on accompaniment to learning, aimed at all civil engineering practitioners, whatever their skill levels, to quickly become proficient with the tools and work flows surrounding Autodesk Civil 3D. Every chapter explains the fundamental of the software, in the context of market best practice, whilst referencing prevailing standards and protocols.

Individual modules contain clear learning objectives with practical task-based step by step examples, covering the software's core features and functionality, ensures you are productive from the very start of your learning.

Course outline:

- **C3D 01 UI Tour**
- **C3D 02 Introduction to Styles**
- **C3D 03 Point Files and Point Groups**
- **C3D 04 Surface Creation, Modification and Manipulation**
- **C3D 05 Land Development with Parcels**
- **C3D 06 Modelling New Terrain**
- **C3D 07 Geometric Design – Horizontal Design**
- **C3D 08 Geometric Design – Vertical Design**
- **C3D 09 Geometric Design – Corridor Design**
- **C3D 10 Quantity Calculations and Cross Sections**
- **C3D 11 Gravity Pipe Network Modelling and Analysis**
- **C3D 12 Pressure Network Modelling**
- **C3D 13 Production Drafting and Drawing Layouts**

Cost: £500 per person.

REVIT FOR ARCHITECTURE

Course Aim:

This easy to follow course is a perfect hands on accompaniment to learning, aimed at helping all architectural practitioners, whatever their skill levels, to quickly become proficient with Building Information Modelling (BIM) workflows, using the Autodesk Revit platform. Every chapter explains to fundamentals of the software, in the context of BIM methodology and market best practice, whilst referencing prevailing standards and protocols. Individual modules contain clear learning objectives with practical task-based examples, covering the software's core features and functionality, ensures you are productive from the very start of your learning.

Course outline:

- **RAC 00 Revit in a nutshell**
- **RAC 01 Introducing Revit as a BIM tool**
- **RAC 02 UI Tour, Project Nav and View Creation**
- **RAC 03 Element Selection and Manipulation**
- **RAC 04 Visibility Control and Categorization**
- **RAC 05 Model Development Methodology**
- **RAC 06 Wall Creation and Manipulation**
- **RAC 07 Floors, Roofs and Ceilings**
- **RAC 08 Window, Door and Component Use**
- **RAC 09 System Family Editing**
- **RAC 10 Basic Schedules and Legends**
- **RAC 11 Geometry Formation and In-Place Families**
- **RAC 12 Massing Tools and the Building Maker**
- **RAC 13 Stairs, Ramps and Railings**
- **RAC 14 Basic Curtain Walls**
- **RAC 15 Room Data and Colour-Fill**
- **RAC 16 2D Drafting and Annotation**
- **RAC 17 Sheet Compilation and Publication**
- **RAC 18 Basic Subdivision and Collaboration**
- **RAC 19 Introduction to the Principles of Family Editing**

Cost: £500 per person.

REVIT FOR BUILDING SERVICES

Course Aim:

This easy to follow course is a perfect hands on accompaniment to learning, aimed at helping all building services practitioners, whatever their skill levels, to quickly become proficient with Building Information Modelling (BIM) workflows, using the Autodesk Revit platform. Every chapter explains the fundamentals of the software, in the context of BIM methodology and market best practice, whilst referencing prevailing standards and protocols.

Individual modules contain clear learning objectives with practical task-based examples, covering the software's core features and functionality, ensures you are productive from the very start of your learning.

Course outline:

- RME 00 Revit in a Nutshell
- RME 01 Introduction to the Principles of BIM
- RME 02 UI Tour, Project Nav. and View Creation
- RME 03 Element Selection and Manipulation
- RME 04 Visibility Control and Categorization
- RME 05 Model Development Methodology
- RME 06 Establishing a Project
- RME 07 Introduction to Building Elements
- RME 08 Equipment, Fixtures and Fittings
- RME 09 Introducing Systems
- RME 10 Basic Schedules and Legends
- RME 11 Geometry Formation and In-Place Families
- RME 12 Mechanical Systems
- RME 13 Electrical Systems
- RME 14 Plumbing Systems
- RME 15 Spaces, Zones, Areas and Volumes
- RME 16 2D Drafting and Annotation
- RME 17 Sheet Compilation and Publication
- RME 18 Basic Subdivision and Collaboration
- RME 19 Introduction to the Principles of Family Editing

Cost: £500 per person.

REVIT FOR LANDSCAPE ARCHITECTURE

Course Aim:

This easy to follow course is a perfect hands on accompaniment to learning, aimed at helping all architectural practitioners, whatever their skill levels, to quickly become proficient with Building Information Modelling (BIM) workflows, using the Autodesk Revit platform. Every chapter explains to fundamentals of the software, in the context of BIM methodology and market best practice, whilst referencing prevailing standards and protocols.

Individual modules contain clear learning objectives with practical task-based examples, covering the software's core features and functionality, ensures you are productive from the very start of your learning.

Course outline:

- **RLA 00 Revit in a Nutshell**
- **RLA 01 Introducing Revit as a BIM tool**
- **RLA 02 UI Tour, Project Nav. and View Creation**
- **RLA 03 Element Selection and Manipulation**
- **RLA 04 Visibility Control and Categorization**
- **RLA 05 Model Development Methodology**
- **RLA 06 Create a Terrain Model**
- **RLA 07 Working with other disciplines**
- **RLA 08 Preparing the Plot**
- **RLA 09 Working with Slabs**
- **RLA 10 Kerbs and Profiles**
- **RLA 11 Adding Site Components**
- **RLA 12 Remodelling the Site**
- **RLA 13 Contextual Massing**
- **RLA 14 Scheduling Elements**
- **RLA 15 Hatching Regions**
- **RLA 16 2D Drafting and Annotation**
- **RLA 17 Sheet Compilation and Publication**
- **RLA 18 Rendering**
- **RLA 19 Introduction to the Principles of Family Editing**

Cost: £500 per person.

REVIT FOR STRUCTURE

Course Aim:

This easy to follow course is a perfect hands on accompaniment to learning aimed at helping all structural practitioners whatever their skill levels, to quickly become proficient with Building Information Modelling (BIM) workflows, using the Autodesk Revit platform. Every chapter explains the fundamentals of the software, in the context of BIM methodology and best market practice, whilst referencing prevailing standards and protocols.

Individual modules contain clear learning objectives with practical task-based examples, covering the software's core features and functionality, ensures you are productive from the very start of your learning.

Course outline:

- **RST 00 Revit in a Nutshell**
- **RST 01 Introduction to the Principles of BIM**
- **RST 02 UI Tour, Project Nav. and View Creation**
- **RST 03 Element Selection and Manipulation**
- **RST 04 Visibility Control and Categorisation**
- **RST 05 Model Development Methodology**
- **RST 06 Settings, Units and Linking Revit**
- **RST 07 Modelling Basics**
- **RST 08 Foundations and Piling**
- **RST 09 System Family Editing**
- **RST 10 Basic Schedules and Legends**
- **RST 11 Geometry Formation and In-Place Families**
- **RST 12 Slab and Roof Tools**
- **RST 13 Stairs Ramps and Railings**
- **RST 14 Beam and Truss Systems**
- **RST 15 Construction Sequencing (Phasing)**
- **RST 16 2D Draughting and Annotation**
- **RST 17 Sheet Compilation and Publication**
- **RST 18 Basic Subdivision and Collaboration**
- **RST 19 Introduction to the Principles of Family Editing**
- **RST 20 Considering Options and Alternatives**

Cost: £500 per person.

ADVANCED REVIT

Course Aim:

This easy-to-follow course is a perfect hands-on accompaniment to learning, aimed at helping practitioners of all disciplines, to become more proficient in Building Information Modelling (BIM) workflows, using the Autodesk Revit platform. We avoid calling them advanced topics because to some, these will be fundamental skills, essential to the job.

Each chapter picks out a different aspect of the software and explores the topic in the context of BIM methodology and market best practice, whilst referencing prevailing standards and protocols. Individual modules contain clear learning objectives with practical task based step-by-step examples. The course contains helpful tips and tricks and will be an invaluable reminder of the topics covered in your learning and a source of reference for years to come.

Course outline:

- **RVT 01 Considering Options and Alternatives**
- **RVT 02 Construction Sequencing (Phasing)**
- **RVT 03 Project Setup**
- **RVT 04 Energy Analysis**
- **RVT 05 Placing Structural Elements**
- **RVT 06 Family Series 1 – 2D Content Part 1**
- **RVT 07 Family Series 2 – Principles of Nesting**
- **RVT 08 Family Series 3 – 2D Content Part 2**
- **RVT 09 Family Series 4 – Parameters & Formulae**
- **RVT 13 Preparing the Analytical Model**
- **RVT 14 Creating Parametric Trusses**
- **RVT 15 Applying Loads**
- **RVT 16 Working with Parametrics**
- **RVT 17 Reinforcement**
- **RVT 18 Steel Connections**
- **RVT 19 RC Detailing**
- **RVT 20 Robot Interoperability**

Cost: £500 per person.

3DS MAX

Course Aim:

This easy-to-follow course is a perfect hands-on accompaniment to learning, aimed at helping novices and all practitioners, whatever their role or skill levels, to quickly become proficient in the production of still and animated visualisation using Autodesk 3ds Max. Individual modules contain clear learning objectives and practical, task-based step-by-step examples, covering the software's core features and functionality, ensures you are productive from the very start of your learning.

This course is designed for users of Autodesk 3ds MAX, therefore it is recommended you have a basic knowledge of MS windows.

Course outline:

- **3MD 00 3ds Max in a Nutshell**
- **3MD 01 Introducing 3ds Max as a BIM tool**
- **3MD 02 Introduction, UI Tour and Tool Navigation**
- **3MD 03 Working concepts, Key tools and basic file setup Inventor**
- **3MD 04 Basic object creation, transform and modify**
- **3MD 05 2D spline and 3D modelling basics**
- **3MD 06 Creating and Manipulating Editable Polys**
- **3MD 07 Importing and working with DWG & MAX files**
- **3MD 08 Creating and Applying Materials & Textures**
- **3MD 09 Creating light and shadow**
- **3MD 10 Camera setup, clipping and manipulation**
- **3MD 11 Rendering images and simple animation**

Cost: £500 per person.

BIM PROJECT CERTIFICATION TRAINING

Course Aim:

This easy-to-follow course is designed specifically to aid those in a position of management within the Architectural, Engineering, Construction and Operation sectors (AECO) or members of a project team tasked with producing deliverables along Building Information Modelling (BIM) principles.

The content has been fully updated to incorporate the requirements of the new international ISO 19650 standards and compliance with BIM Stage 2 maturity.

The intention is to understand BIM from different stakeholder perspectives, rather than a single, blinkered approach; to realise how data can and should be structured to maximise usage; to explore what the data can do if collated and presented in a collaborative way. This course uses a combination of theory, workshop, and hands-on exercises to explore and understand the relevant national and international standards as well as market best practice.

Course outline:

- **What is BIM?**
- **Case Study Examples**
- **Introducing the CDE**
- **The Project Design Brief**
- **EIRs, AIRs and the NBS BIM Toolkit**
- **The BIM Execution Plan**
- **Client Information Exchange – Introducing COBie**
- **COBie Data Drop at Stage 1**
- **Security-Minded BIM**
- **Design Concept (Mass) Modelling**
- **Environmental - Energy Analysis**
- **Developing the Concept (Mass) Model**
- **Coordination Review**
- **COBie Data Drop at Stage 2**
- **Discipline-Specific Design Authoring**
- **Model Transmittal**
- **Design Review**
- **Resolve identified model issues**
- **Model Federation and Clash Detection**
- **Validate the model Publish design data**
- **COBie Data Drop at Stage 3**
- **Rendering and Visual Production**
- **4D Construction Simulation**
- **5D - Cost Model**
- **5D - Quantity Take-Off**
- **Populating the Model with Data**
- **COBie Data Drop at Stage 4**
- **Introduction to BIM in FM**
- **COBie Data Drop at stage**

Cost: £500 per person.

INTRODUCTION TO BUILDING INFORMATION MODELLING

Course Aim:

A 1 day module aimed at providing managers and principles with a high-level explanation, in layman's terms, of the terminology and principles of BIM and how it may affect them and their business.

This easy-to-follow course is aimed at helping you to quickly become proficient with BIM related methodology, workflow and market best practice. This course has been fully revamped to incorporate the ISO 19650 international standards and other protocols. This can be completed independently, or incorporated with other White Frog modules to form a comprehensive training course, with streams focussing on practitioner-level technology training with modules covering a range of BIM-related software applications, all in the context of BIM principles; through to management and strategic level training, covering the legal, financial and social impact of BIM.

Course outline:

- **What BIM is, and the contextual requirement for BIM level 2**
- **The implications and value proposition of BIM within your organisation**
- **The requirement for the management and exchange of information between supply chain members and clients**

Cost: £500 per person.

NAVISWORKS MANAGE

Course Aim:

This easy to follow course is a perfect hands-on accompaniment to learning, aimed at helping all practitioners, whatever their role and skills level, to quickly become proficient with Building Information Modelling (BIM) workflows, using Autodesk Navisworks Manage.

Every chapter explains the fundamentals of the software, in the context of BIM methodology and market best practice, whilst referencing prevailing standards and protocols.

Individual modules contain clear learning objectives with practical task-based step by step examples, covering the software core features and functionality, ensures you are productive from the very start of your learning.

This course is designed for new users of Autodesk Navisworks Manage, therefore it is recommended you have a basic knowledge of MS windows and experience using Task - Scheduling software.

Course outline:

- **NVS 00 Navisworks in a Nutshell**
- **NVS 01 Introducing Navisworks as a BIM tool**
- **NVS 02 UI Tour**
- **NVS 03 Compiling and managing a project**
- **NVS 04 Exploring the model**
- **NVS 05 Reviewing, redlining, links and switchback**
- **NVS 06 Viewpoint creation, sectioning and animation**
- **NVS 07 Animation and Interactivity**
- **NVS 08 Autodesk Rendering**
- **NVS 09 Simulation and the Time-Liner**
- **NVS 10 Interference management - Clash Detective**
- **NVS 11 Material Take-off – Quantification**

Cost: £500 per person.