

CIVIL DESIGNER TRAINING

LEARN HOW YOU CAN DESIGN MORE ACCURATELY

LEARN HOW TO SAVE HOURS AND EVEN DAYS OF TIME

LEARN CLEVER SHORTCUTS FROM OTHER MASTER DESIGNERS

The value of Knowledge Base training cannot be emphasized enough as a way to enhance your productivity. Our training programs have been developed according to our users' requirements and from the experience that we have gained over the years. Our innovative tuition provides delegates with ample opportunity to practice their new skills in a supportive learning environment.

WE OFFER THE FOLLOWING TYPES OF TRAINING:

OUTCOMES BASED TRAINING: Comprehensive and generic training at one of our venues with all necessary equipment, refreshments and lunch provided. The class will be a maximum of eight delegates, usually from different companies. The courses run from 08h30 to 16h30. The cost is R2300.00 per person per day, excluding VAT.

Exercises are completed during the course and a comprehensive evaluation of each delegate is presented upon completion of the course. Each student will receive a certificate of competence which will indicate their attendance and results of their efforts.

PROJECT BASED TRAINING: Our national training managers have worked on many diverse projects in the design industry and can assist you and train your team on the software for your current projects. Costs vary depending on requirements.

IN-HOUSE TRAINING AND INTERNATIONAL TRAINING: We come to you and conduct the training in your offices. You supply the venue and computers with between one and eight delegates in a class. We supply the software, trainer, training manuals and data projector.

Have a look at the schedules below which describe some of the functionality that will be covered when attending the courses. More specific detail can be found on the training page on the Civil Designer Website.

DESIGN CENTRE MODULE

Keyboard Shortcuts (Accelerator Keys)	Annotation Functions
ASCII Control Characters	Starting a New Drawing / Project
WGS84 – World Geodetic System 1984	Triangulation
The Screen Layout	Contouring & Annotation



CPD POINTS AWARDED:

Another advantage with our training courses is that delegates can accumulate CPD points with each course attended and passed.

Continual Professional Development (CPD) points became compulsory for all categories of registration with the Engineering Council of South Africa. This means that engineers, technologists and technicians, who wish to acquire and retain their professional registration status, will need to accumulate 25 credits over a period of five years.

Civil Designer modular training carries a total weight of 11 points, making our training courses a must have for the future growth of engineers.

CLAIM MONEY BACK:

Knowledge Base training courses are NQF aligned and accredited through the Sector Education and Training Authority, ISETT SETA. This means that companies can claim back the money spent on our courses when they submit their Skills Development Plan to their respective SETA's.

Our Accreditation number is: 02 000 877 and may be used in all Skills Levy Correspondence when claiming your training rebates.

Global Settings & Creating Drawing Template Files	Adding Background Drawings
Creating a New Drawing	Plotting and Creating Sheetfiles
Drawing Functions	Dynamic Sheet Files
Display Commands	External Drawing Reference (XREF)
Object Snaps	Multiple Viewport Plots
Editing Objects	Printing

**Completion of Design Centre Module is a prerequisite for all other modules*

SURVEY & TERRAIN MODULE

Understand Cape Datum Vs. WGS84	Use Strings
Work with Survey Data	Use String Vertexes, Tapers and Range Editing
Use Visualisation Techniques	Use Advanced Terrain Modelling Features
Generate 3D Views	Calculate and Check Dam Volumes
Utilize Bitmaps for Effect	Use DTM, Polygon and Dam Volumes
Extract Flow Direction and Utilize Drainage Network	Extract Longitudinal and Cross Sections
Create Terraces or Platforms	Create Pipeline Long Sections
Generate Fixed or Variable Banks	Create a Pipe Database
Calculate Earthwork Volumes	Check for Pipe Clashes
Check Volumes Using the End Area Method	Calculate Trench Volumes

ROADS MODULE

Create a Project Containing an Urban Layout	Add Auxiliary Lanes
Incorporate Multiple Bitmaps	Utilize Speed Profiling
Utilize and Manipulate the Design Criteria TRH17	Manipulate Visualization in a Road Layout Plan
Enter and Manipulate a Horizontal Alignment	Check Minimum Sight Distance
Extract Cross Sections from the DTM	Verify the Design
Enter and Manipulate a Vertical Alignment	Calculate Mass Haul and Bulk Earthwork Volumes
Utilize and Manipulate Road Templates	Calculate Layerwork Volumes
Utilize Kerbs	Calculate Kerb Quantities
Utilize a TRH4 Pavement Layer Designer	Utilize the Roads Index
Use the Cumulative E80 Calculator for Classification	Insert a Skew Section
Implement Super Elevation	Plot Plan, Long & Cross Section Drawings

CASH GRANT ASSISTANCE:

Many of our BEE clients are unaware that they can apply to the Department of Trade and Industry (DTI) for a cash grant to help with business development services aimed at improving core competencies.

As Civil Designer software and our training courses are business development services that allow our clients to remain at the forefront of business, the cash grant will go a long way in helping to alleviate this cost. If you are a BEE Company and would like further information on the Grant, please contact us.

WHO IS KNOWLEDGE BASE:

Knowledge Base is the biggest supplier of civil engineering software on the African continent. We are able to drive businesses through the power of design by supplying completely integrated civil engineering and CAD design solutions:



Delivering quality software, support, training and other services across the board is what our clients demand and expect. After 22 years in the industry all our clients can be confident of getting the best possible solution that really does deliver unparalleled value.

ADVANCED ROADS (SEPARATE COURSE)

Design a Single Carriageway Template	Utilise Sight Distance Checking
Utilise Special Vertical Movement Codes	Optimise Cross Sections
Use Point Location Codes PLC.S	Utilise New Jersey Barriers
Utilise Height Constraints	Define and Calculating Kerb Quantities
Create Dual Carriageway Templates	Apply Road Construction in two Phases
Define Unique Pivot Points	Utilise Difference Contours and Merged Surfaces
Define Kerbs & Pavement Layers Trh4	Work with Bridges Templates & Road Furniture
Set up Design Criteria TRH17	Calculate Integral Quantity Calculations
Optimise Road Rehabilitation	Create a 3D View and Utilise a Fly Path
Offset the Horizontal Alignment	Create and Read Mass Haul Diagrams
Add Auxiliary Lanes	Accomplish an Intersection Design
Manipulate The HC With Long or Short Chains	Verify and Use Checks on Intersection Layouts
Manipulate Templates to not Accommodate Medians	

**Training on the Roads module or significant experience working with it, is a prerequisite for attending the Advanced Roads training course.*

SEWER MODULE

Set the Sewer Default Settings	Enter Inflow Data
Manipulate Design Parameters	Add Road Reserve or Mid-Block Erf Connections
Set Geometric Controls	Analyze Erf Connections
Set Flow Controls to Utilise a Particular Design Method	Edit and Manipulate the Sewer Model
Use Minimum Full-Bore Velocity	Add a Pump to Nodes
Utilise Pumps	Use Visualisation Constructively
Use Link Tables	Check Link Covers & Service Clashes
Use Erf Connection Design	Analyse the Sewer Model
Initialise a Sewer Model	Calculate Quantities
Import Data Sets and Data Preparation	Generate Layout & Longsection Drawings
Convert Drawing Entities to Sewer Database	

STORMWATER MODULE

Set the Stormwater Default Settings	Convert Drawing Entities to Stormwater Database
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VENUES & CONTACT DETAILS

We can provide training at one of our Training Centres located in Johannesburg, Cape Town and Durban. Alternatively training can be conducted in-house. For international users, we are happy to fly our training manager to you.

CAPE TOWN



Email: Shantell@knowbase.co.za

Web: www.civildesigner.com

Block I, The Terraces, Steenberg Office Park, Tokai 7945.

Tel: +27 21 7011850

Fax: +27 21 7011822

JOHANNESBURG



Email: Barbara@knowbase.co.za

Web: www.civildesigner.com

Suite E7, Somerset Office Estate, Kudu Street, Allensnek 1735.

Tel: (011) 675 3959

Fax: (011) 675 3958

Manipulate Design Parameters	Input Catchment Characteristics
Set Geometric Controls	Add Subcatchments
Set Flow Controls	Analyse the Network
Utilize Reservoir or Retention Ponds	Edit and Manipulate the Stormwater Model
Utilise Infiltration & Soil Classification	Add a Pump or Reservoir to Nodes
Utilise Design Storms	Input a Dual Runoff System
Utilise Pumps	Use Visualisation Constructively
Use Link Tables	Check Link Covers & Service Clashes
Initialise a Stormwater Model	Calculate Quantities
Import Data Sets and Data Preparation	Generate Layout & Longsection Drawings

DURBAN



Email: Nalini@knowbase.co.za

Web: www.civildesigner.com

Quadrant 1, Unit 9 The Centenary, 30 Meridian Drive, Umhlanga New Town Centre, 4051.

Tel: (031) 566 3323

Fax: (031) 566 3326

WATER MODULE

Data Preparation for Water Design	Valve Selection and Manipulation
Triangulate a Digital Terrain Model	Analyse the Water Model
Look at Water Fundamentals - Supply Schemes	Adjust Demands in the Network
Use Essential Embedded Knowledge-Demand Patterns	Utilise Hydraulic Grade Contours
Manipulate Design Data	Utilise Pressure Contours
Utilise Graphical Implementation	Manipulate the Design from the Vertical Alignment
Do Water Design and Implementation thereof	View Results
Edit Supply Node Information	Print Reports
Reservoir Manipulation	Create Final Layout Plans
Pump Station Manipulation	Plot Longitudinal Sections

Please note: Courses are limited to 8 students a day to ensure the attainment of high standards by all delegates. Payment is to be made before your reservations are confirmed or, if a government department, an order number is to be provided. Thank you!

Visit our websites for more information.

Web: www.knowbase.co.za
www.civildesigner.com
www.allycad.com

