TRAINING AND SKILLS ACQUISITION

Oil and Gas – Design *Plus* Web and Softwares Development

VOGW Concept LTD is the most effective centre to acquire skills for a new career or to advance your current career. Our step by step training packages are designed for both beginners and professionals.

We provide practical vocational training and strategies that will help you gather, evaluate and get a clearer understanding of the skills and knowledge you need. This training will give you practical tools and strategies that can guide you and help you stay ahead of your competitors now and through your future development.

Our short-term Programmes are offered to help you launch a new career or advance your current career in Web Development and Computer Aided Design (CAD) . In just few days, you will learn new application and techniques relevant to your skills to successfully organise specific needs. We have created an easy to follow step by step learning process.

Our Training Packages include:

❖ Computer Aided Design and Software Application For Oil And Gas Industries

- ➢ AutoCAD 2D & 3D modeling
- ➢ Pipeline/Plant design management system –PDMS
- ➢ Process Modeling and Simulation –HYSYS
- ➢ Piping Design and Stress Analysis – Caesar II …..e.t.c

❖ Website Development And Softwares Application

- ➢ Build dynamic website
- ➢ Build Practical Dynamic database driven website using PHP/MYSQL
- ➢ Build Practical Dynamic database driven website using ASP.Net
- ➢ Become a software developer using VB.Net e.t.c

Who should attend? Anyone who wants to make career advancement in oil and gas industries, information and communication technology (ICT) e.t.c

Prerequisites: Passion and Ambition on any of the package with willingness to contribute to Nigeria economic development.

Job opportunity: Opportunities are always at the door step of anyone with relevant and additional skills; you can get a job in IT companies, oil and gas, construction, consulting companies, self-employment (You can develop website and softwares application for clients') e.t.c.

Our facility: A serene environment with air conditioning, reflective lights which limit eye strain e.t.c. Training rooms to accommodate few people only. We deliver intensive practical training. We offer first come first serve basis, and to optimise your learning potential our courses are conducted one-on-one basis rather than by delivering lectures to a batch of tens or hundreds of students.

Schedule: Weekdays/Weekend training, Office/Executive/ training available, we also offer customised training to suit your individual specific need.

Fees: Training fees, course contents, terms and conditions are available on request, fees covers training materials. **Register Now!**

Registration & Payment

Payment is required for confirmation of place and should be made on or before the beginning of the course.

Oil And Gas - Design
Package (A) Computer Aided Design and Software Application in Oil And Gas Industries.
AutoCAD, Caesar II, PDMS, Hysys

AutoCAD 2D and 3D Modeling

Course Details
• Duration : Call or sms us to confirm
• Total Fee : Call or sms us to confirm
• Schedule : Call or sms us to confirm the date for the next session

Course Contents:

AutoCAD 2D Drafting

Interface
Workspace, Toolbars, Pull Down, Menu, Command, Palettes, Status Bar, Save Work Place Setting
      Opening, Viewing, And Saving Drawings
Opening, Mouse, Zoom, Multi
Save , Template   Drawing Fundamentals
Lines
Modes
Circle
Display
Controlling Drawing Units
Units
Architectural
Metric
      Controlling Accuracy
Cartesian
Osnap
Automate
      Specialized Draw Commands
Rectangle
Ellipse
Hatch
Polygon
Primary Modifications
Move Copy
Rotate
Offset
Erase
Undo   Selecting Entities
Selecting Window
Remove
Keyins
      Making Major Changes
Trim Extend, Fillet, Chamfer, Array, Mirror, Stretch, Scale
Grips, Explode, Pedit
Organizing Drawings
Layers
Properties
Control
By Layer
Previous   General Annotation
Single Text, Justification, Styles,
Mtext, Editing, Lists, Symbol
Spell Check
      Dimensioning
Dimensioning
Styles
Callout
Tweaks

Helpful Autocad Tools

Distance
Property
Calculator
        Sharing Data
Other Format
E Transmit
Dwf
        Plotting
Quick Plot, Pentable, Choose, Paper, Title Block, View Pot, Re-Use, Scale Factor, Size Text, Size Dims, It
Scale

AutoCAD 3D Modeling

Introduction To 3-D
Introduction To 3-D
Isometric Drawing
Working In 3 Dimensions
Viewing 3-D Objects
Basic Wireframe Models
Line Thickness
Regions And 3-D Faces
More About Extruding & Lofting
Revolved Objects
Adding Materials
Primitive Solids
Boolean Operations
Changing From The Wcs To The Ucs
Mapping Materials
Creating New Materials
Extra Projects And A Tutorial
Putting It All Together - Model A Building
Introduction To Rendering And Lighting
Autocad Template Files
Using Osnaps In Autocad
Linetypes And Linetype Scale
Autocad File Formats
Grip Editing
Autocad's Inquiry Tools
System Variables
Tables
Introduction To Set Sheets
Modifying And Creating Dimensions
Introduction To Customizing Autocad

Caesar II -Pipe Stress Analysis

CAESAR II is PC based pipe stress analysis software. This software is an engineering tool used in the mechanical design and analysis of piping system. The methodology that is used by this software is modeling the pipe as a simple beam element.

This course is designed for almost anyone involved with piping in the petroleum, chemical, power, gas transmission, and related industries. The training covers proper system modeling guidelines, methods of static and dynamic analysis of piping systems, evaluation of system designs, and effective approaches to system redesign which helps Piping/Vessel Maintenance Engineers, Piping Designers, New & Experienced CAESAR II Users, Mechanical/Design Engineers, Engineering Managers, Plant Managers, and fresh graduate mechanical engineers who wants to become a piping engineer and who would like to pursue their career in Plant design industry specifically as a PIPE Stress Analyst.

Course Details
• Duration : Call or sms us to confirm
• Total Fee : Call or sms us to confirm
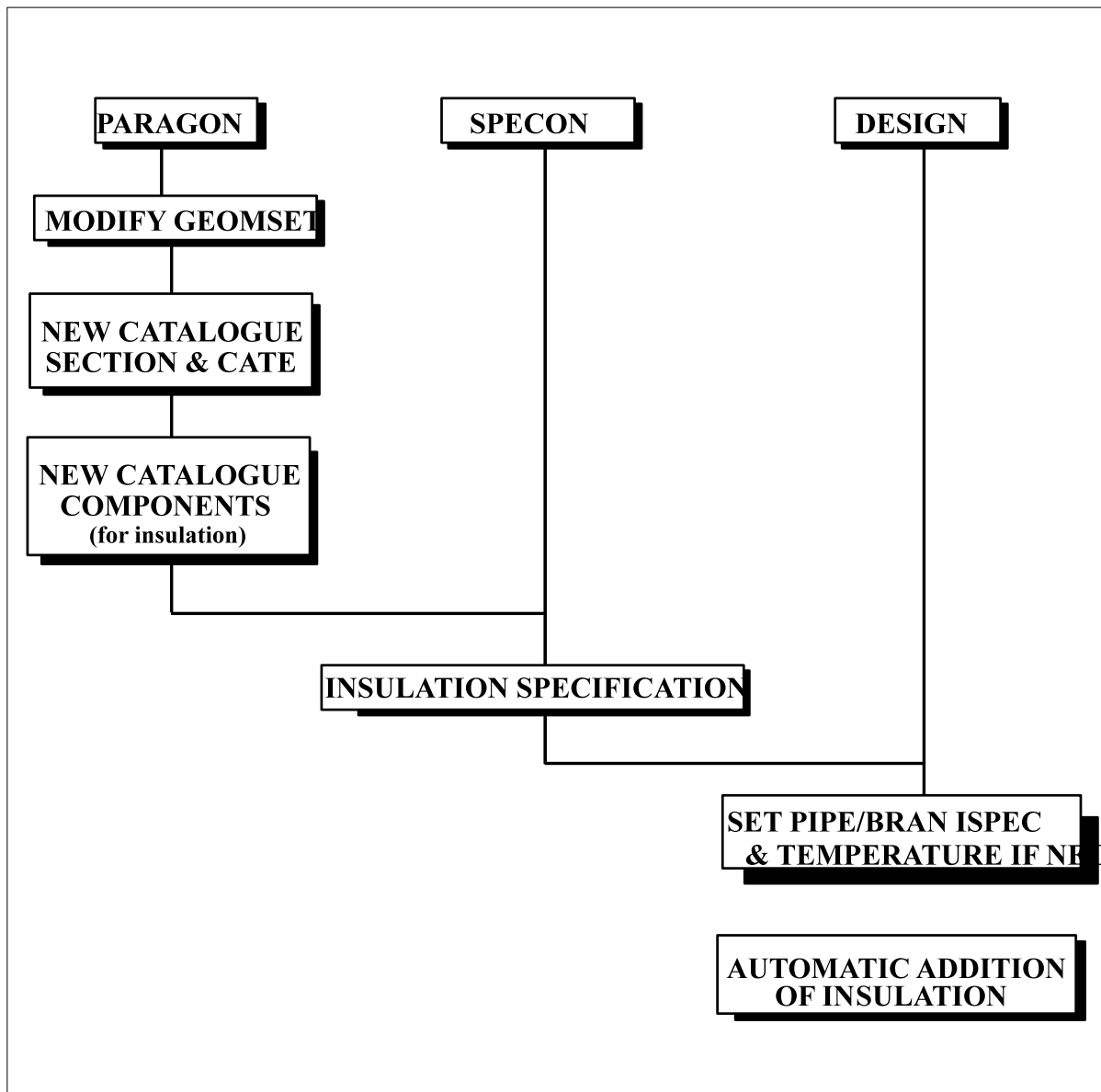• Schedule : Call or sms us to confirm the date for the next session

Course Contents:

- Role of the stress analyst
- When to perform stress analysis
- Piping Code History
- Stress theory; evaluating stresses on piping & knowing which ones matter
- Load types, Failure criteria; primary & fatigue failures
- Code equations, Stress Intensification (SIF)
- Overview of CAESAR II functions and how to use the program
- Detailed, important modeling issues – bends, reducers, valves, rigid elements, and control parameters, non-linearity of restraints, connecting nodes, built-in databases and assorted modeling issues.
- The mathematics behind CAESAR II – Stiffness-s matrices and related issues
- Practical examples using CAESAR II; input, analysis & redesign

- Theory - Designing for sustained loads; support configuration issues,
- spring hanger design, optimization of sustained loads.
- Practical example
- Theory - Designing for expansion loads; flexibility
- Practical Examples

- Detailed problem solving of a complex model, including:
- Imposed thermal displacements
- Expansion joint modelling & evaluation

- Structural steel modelling
- Spring hanger design
- Combining steel with piping
- Verification of API 610 pump loads
- Local vessel flexibilities using WRC 297
- Including vessel modelling
- Evaluation of local vessel stresses according to WRC 107
- Problem Solving Workshop – detailed example where each student works independently, applying what is learned to solve a variety of stress and equipment load problems.
- Buried pipe modeling.

- Dynamic analysis theory, types of loads & evaluation of system responses
- Modes and mode shapes
- Modal analysis
- Spectral Analysis; Impact & Earthquake analysis _ Time History Analysis _ Harmonic loads & harmonic analysis
- Flow induced vibration
- Mechanical vibration
- Impact load types & analysis
- Steam hammer
- Slug flow
- Relief valve firing
- Example problems including:
- Mechanically induced vibration problems & solutions
- Flow induced vibration problem & solution
- Time History analysis and evaluation of impact load (steam hammer) with
- dynamic restraint (snubber)
- Spectral analysis of impact load (Relief valve firing)
- Earthquake analysis

Plant Design Management System - PDMS

PDMS handles graphical and catalogue based plant design from conception to decommissioning. This course covers both **Module A - Design and Module B - Paragon**. PARAGON allows you to work with directories by creating and modifying pipeline elements, metal elements (profiles, components and fittings) and other elements of different specialties. The main feature PARAGON'a lies in the fact that all the components you create, you can immediately see on the screen. This allows you to instantly see the result of changes that take place with the component.

```
        PARAGON              SPECON                 DESIGN
           │                    │                      │
  ┌────────┴────────┐           │                      │
  │ MODIFY GEOMSET  │           │                      │
  └────────┬────────┘           │                      │
           │                    │                      │
  ┌────────┴────────┐           │                      │
  │ NEW CATALOGUE   │           │                      │
  │ SECTION & CATE  │           │                      │
  └────────┬────────┘           │                      │
           │                    │                      │
  ┌────────┴────────┐           │                      │
  │ NEW CATALOGUE   │           │                      │
  │ COMPONENTS      │           │                      │
  │ (for insulation)│           │                      │
  └────────┬────────┘           │                      │
           │                    │                      │
           └──────────┐         │                      │
                      │         │                      │
           ┌──────────┴─────────┴──┐                   │
           │ INSULATION SPECIFICATION│                  │
           └────────────┬───────────┘                   │
                        │                              │
                        └──────────────┐               │
                                       │               │
                          ┌────────────┴───────────────┴──┐
                          │ SET PIPE/BRAN ISPEC            │
                          │   & TEMPERATURE IF NEC.        │
                          └────────────┬──────────────────┘
                                       │
                          ┌────────────┴──────────────────┐
                          │ AUTOMATIC ADDITION            │
                          │   OF INSULATION               │
                          └───────────────────────────────┘
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This course aims to equip participants with the necessary knowledge and practical skills to use PDMS for design work. It gives an overview on the features and function of the product in each phase from conceptual design to the deliverables. This training will enhance participants' experience in the new revolutionary PDMS design tool in the engineering field applied in Power Plants, Oil & Gas Plants, Chemical Plants, Nuclear Plants and Pharmaceutical Plants.

Who Should Attend?

This course is targeted at Drafters, Designers, Engineers, Middle Management Executives and those who wish to acquire knowledge in using the PDMS for plant design

Course Details
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Course contents

Module A - Design (Equipment, piping, structural, access, stairs and ladder, cable trays for electrical and electronics &instrument engineers e.t.c)

• PDMS Design Database Hierarchy
• Navigation in PDMS
• Creation of equipment and PDMS primitives
• Creation of vessels, pumps, heat exchangers
• Creation of platform & ladders
• Creation of pipe work
•Structural steelwork (column, beams, panels and plates, wall and floors)for civil   and structural engineers
•ASL MODELLER (Access, stairs and ladder) for structural and civil engineers

The training will be based on ASME B31.3 &B31.4 CODE

Module B – Paragon

Course contents
•Appointment module PARAGON
•The structure of the directory database
•Creating components in paragon
•How to create and describe the set of points PointSets for piping components
•How to create a set of geometry (Geomset) and geometric primitives
•How to create a detailed text (Detail text), text material (Material text) and the general text elements and their attributes.
•System coding elements
•How to create and use tables of compatible compounds, elements responsible for the description of compounds and the use attribute Ckey module Spooler.
•Specification generator
•Component specification pipelines. Module SPECON
•Catview
•How to create Bolts
•Anchor point supports
•Isolation of components and specifications for the isolation
•How to create a dataset (Dataset).
•
PDMS PROPCON

•Introduction to PDMS PROPCON (PROPerties CONstructor),which are defined by physical properties of elements

Process Modeling and Simulation –HYSYS (Both Steady and Dynamic state)

Aspen HYSYS is an integrated steady-state and dynamic process simulation application that brings new levels of productivity and profitability throughout the plant lifecycle. Based on the experience of

AspenTech's team of world-class simulation and modeling development experts. Aspen HYSYS helps engineers to create simulation models for:
• Plant design
• Performance monitoring
• Troubleshooting
• Operational improvement
• Business planning
• Asset management

Course Details
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Course contents

• Introduction to HYSYS
• Interface
• Flowsheeting
• Thermodynamic
• Column operations
• Reactions
• Basic environment
• Oil characterization environment
• Simulation environment
• Propane Refrigeration loop
• Refrigerated Gas Plant
• NGL Fractionation Train
• Gas Gathering
• Two-Stage Compression
• Acid Gas Sweetening with DEA
• Natural Gas Dehydration with TEG
• Reporting in Aspen HYSYS

Hysys Dynamic Simulation

• Revision Of Steady State
• Basic Control Theory
• Pressure-Flow Relationship
• Transitioning From Steady State To Dynamics-Modifying The Steady State
• Sizing Unit Operations (De-Propanizer Column, Separators E.T.C)
• Using The Dynamics Assistant And Activating The Dynamic Mode
• Installing The Controllers (Pid)
• Setting Up Strip Charts
• Running And Monitoring Dynamic Simulation.
• Advanced Dynamics

Package (B) Website Development and Softwares Application

Website development, PHP/MYSQL, ASP.Net, VB.Net, Software development

Website Design

Course Details
• Duration : Call or sms us to confirm
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In this course we will cover HTML, FRONTPAGE EXTENTION, DREAMWEAVER, CSS. We build template, insert graphics and navigation menu buttons, add hyperlinks to the buttons and insert an editable region for the content area. We then generate all of our pages required to build the site, and add the content to each page, upload and test on the internet.

On completion of this course, students should be able to demonstrate an understanding of the following:

Basic understanding of the world-wide web and what the main components are that make up the internet

Understand the basics of establishing a website on the web and the background behind HTML and how the web page files are structured

Appreciate the principles of a table based layout and how table tags are used in the design as well as adding of content

Knowledge of the use of graphics and fonts for web design and the importance of page structure and layout

Understand the key components of designing a web page, layout considerations and site planning

Be able to open Expression Web2 and navigate the basic menu navigation and be able to create a page, save and publish to the web via the Remote Web Site feature

Concepts of how the pages are published on the web and the key file names involved and basic directory structures

Appreciate the difference between a table based layout and one using cascading style sheets

Understand the basic concepts of Cascading Style Sheets and the main styles required for setting up the structure of the web-site and general styling of navigation menus

Learn the basics of the box model theory and how positioning works especially with respect to images and text placement in pages

Build a CSS based template Learn the key styles for placement of content, headings, paragraphs and links

Build the final DIV's required to add the content to the site, upload to the internet and test

Database Driven website using PHP/MYSQL

Course Details
• Duration : Call or sms us to confirm
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This course covers the fundamentals of programming in PHP and Web-related issues such as linking a series of forms together into a session, maintaining state , cookies, security and other matters. We also cover PHP's interfacing to relational databases, with a particular study of MySQL.

PREREQUISITES

This course is intended for those with a little basic knowledge of HTML and web site structure is also useful. If you do not have knowledge of HTML we advice you to finish the Website Design course.

At the end of this course it is expected that course participants will be able to build practical solution oriented dynamic websites using php/mysql.

Create a Search Engine on your website
Create a Membership website System
Create a Forum website System
Create a mailing list System on your website

Course outline

Installation: Installing and configuring Mysql Database Server: Unbundling and Configuring PHP to work with Mysql Server and Local server.
Concepts
Basics
Making Choices
Loops & Control Structures
Data
Querying A Database
Interacting With The User
Intermediate Coding Techniques
Sessions & Users
Objects
Building A Data-Driven Website

MySQL and PHPMyadmin introduction
How to create a database
Explore the PHPMyadmin interface
Create new tables
Create new fields in the table
Execute SQL queries, view results, export or print

Database Driven website using ASP.Net

Course Details
• Duration : Call or sms us to confirm
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The course covers the main areas of ASP.Net programming. Understanding ASP Controls for creating effective web user interfaces. Understanding the application model and session management. Accessing data (Database access and Data Binding).

Prerequisite
Basic understanding of C# and C# syntax. Ability to use an editor write and save files.

Course Objective

At the end of this course it is expected that course participants will be able to build practical Oriented Dynamic ASP.NET Website using VB.NET, C# and SQL Server Express 2008. Create a Search Engine on your website, Create a Membership website System, Create a Forum website System, Create a mailing list System on your website.

Installation/introduction: Installation/Configuration of Visual Studio 2008 and other needed software's. Introduction to ASP.NET, SQL Server and ASP.NET Basics

Introduction to ASP.NET: Your First ASP.NET Program, Event-driven Programming, Virtual Directories

Basic Controls: Understanding Controls, Buttons, TextBoxes, Image and Link buttons, Checkboxes & Radio Buttons, DropDown Menus & ListBoxes

Complex Controls: Dynamic Content, Panels, Ad Rotator Control, alendar Control, Validation

Writing Applications: Code-Behind, Sessions, Application Design, Congfiguration, User Controls, Visual Studio

Accessing Data : Data Binding, DataGrids, Data Base Access

Softwares Development using VB.Net

Course Details

- Duration : Call or sms us to confirm
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Building VB Applications
Working with the Controls
Writing the Code
Managing VB Data
Working with Variables
Controlling Program Flow using If ....Then....Else....End If
Select Case....End Select Control Structure
Looping
VB Built-in Functions
Mathematical Functions
Formatting Functions
String Manipulation Functions
Creating User-Defined Functions
Creating VBA Functions for Microsoft Excel
Arrays
Working with Files
Graphics
Creating Multimedia Applications in VB : Part I,Part II,Part III, Part IV,
Creating Database Applications in VB-Part I, Part II
Creating VB Database Applications using ADO Control
Using Microsoft DataGrid Control 6.0
Using SQL Queries in VB 6
More SQL Queries in VB 6
Creating Internet and Web Applications Part 1: The Web Browser
Creating Internet and Web Applications Part 2: The FTP Program
Errors Handling in VB
Compiling and Distributing Your Programs
Creating Menus for Your Applications
Keyboard Handling
Using the Printer
Creating Reports in Visual Basic

For further enquiry and to book a seat Call or sms:
VOGW Concept LTD
Tel: 08055623360, 0708 574 9887,
Address: Suit 28, No 4 Irewole Street, Awosika B/S,
Opebi Allen Ikeja, Lagos State,
 Email: info@vogwconcept.com
Services/Consultancy/Training/Skills Acquisition/