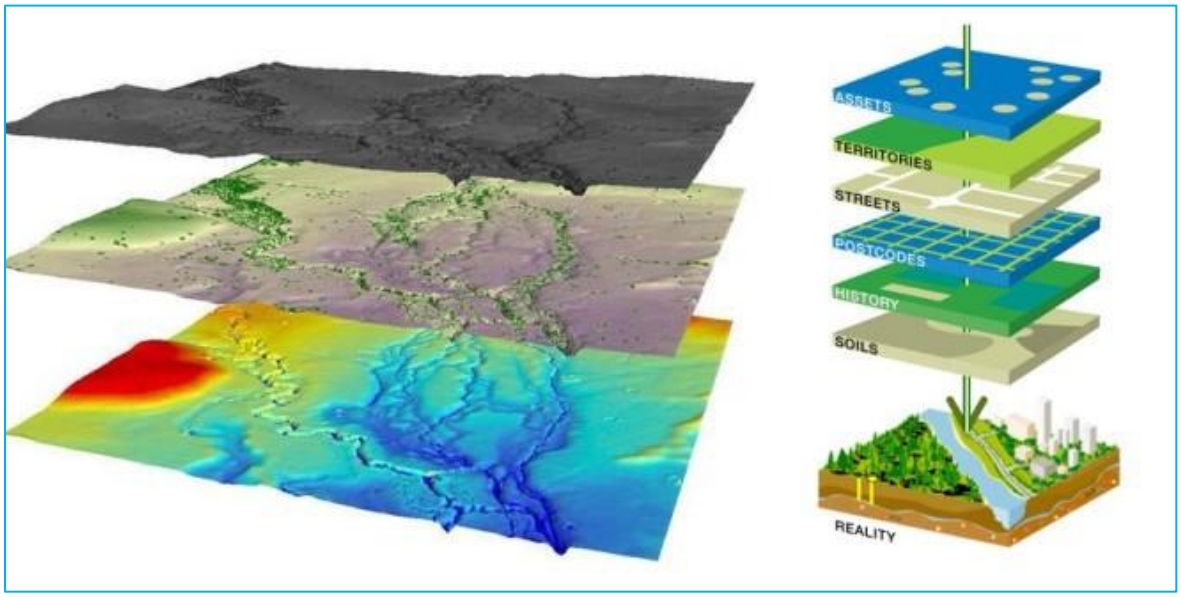
Tel No:+97126654546 | Fax No:+97126654182 | Email: training@cmc-me.com | www.cmc-me.com



GE010:
Geographical Information System (GIS)

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Training Description:

Geographic Information Systems (GIS) are a set of powerful computerized tools designed to store, retrieve, analyze and display geographically referenced information. GIS are used to explore complex geographic relationships and discover patterns that were previously undetectable through conventional methods. GIS analysis has become important in many industries and provides students with employable skills in several fields of study.

This intensive training course examines the components and functions of GIS, the characteristics of spatial data, and spatial analysis and display. Participants will be introduced to GIS theory which will be reinforced with hands-on practical exercises.

Training Objectives:

By the end of the training, participants will be able to:

- ✓ Understand the concepts behind the use of GIS
- ✓ Understand the types of data that GIS supports and how to manipulate them
- ✓ Analyzing and representing on map the data of interest
- ✓ Perform spatial analysis
- ✓ Create a decision-making model
- ✓ Produce a map layout or export format to sharing
- ✓ Explore the benefits in applying geographic information systems (GIS) in a petroleum workflow
- ✓ Integrate spatial and non-spatial data and integrate, manage and analyze data to produce information for decision-making
- ✓ Create 3d model from data sources from an operating field
- ✓ Implement metadata in a petroleum focused spatial data infrastructure

Training Designed for:

Geographic information systems are used in multiple processes today. This training aims at providing a complete spectrum of GIS potential over multiple disciplines dealing with spatial data.

Training Requirement:

"Hand's on practical sessions, equipment and software will be applied during the course if required and as per the client's request." (This hands-on, highly-interactive training includes simulator, real-life case studies and exercises).

Contents can be adapted to your specific wishes. It is therefore possible to focus on specific modules of the training course as per client's learning needs and objectives. Further, it should be forwarded to us a month prior to the course dates.

Training Program:

FIVE DAYS:

- ❖ Introduction to GIS
  - Understand the components, goals, and reasons so many professionals use GIS
- ❖ GIS Basics
  - Essential GIS concept and tools and data types; principle of cartographic geo-referencing

- Coordinates Systems & Projection
  - Introduction to principal coordinate system and projections
  - Understand the datum and coordinates conversion. Maps classification
- Georeferencing
  - Theory and practice of georeferencing. Error estimation and maps re-projection
- Vector & Raster Model
  - Definition of raster and vector model. Concept of pixel, resolution and grid model. Definition of point, polyline, polygon. Shapefile model, table of attributes, field definition, records and entities.
- Data Editing
  - Shapefile creation, graphic and alphanumeric editing.
- Geoprocessing Operators
  - Operators for extraction, selection, proximity and statistics. Data overlaying, intersection and buffering.
- Numeric Cartography
  - Digitalization and standardization of cartography. Topographic databases and their characteristics.
- Geodatabase Model
  - Relational and object-oriented geodatabase. Normalizations rules, database creation and maintenance.
- SQL Language
  - Presentation of SQL language for database interrogation. Usage of SQL syntax to extract data from a database. Definition of logical (AND, OR, NOT, XOR…) and mathematical operators.
- Topologies
  - Definition of topologies, relations among points, lines and polygons. Topological rules and their utilization.
- Relations, Join & Spatial Join
  - Creation of join and spatial join among shapefiles and tables. Rules definition and implementation.
- Raster Algebra
  - Operations among raster data. Zonal and local operations.
- Spatial Data Analysis
  - Performing data analysis on spatial data, criteria, potential and future development. Selecting features; interactive selection; select by attributes; select by location; using the right tool of selection.
- Decision Model Creation
  - Creation of decisional models, validation and standardization.
- GIS Project Creation
  - Consolidate all the knowledge with the creation of a complete GIS project.
- Layouts Printing & Reporting
  - Creation of printing layouts and automatic reporting.
- Course Conclusion
- POST-ASSESSMENT and EVALUATION

Training Methodology:

This interactive training course includes the following training methodologies as a percentage of the total tuition hours:

- 30% Lectures, Concepts, Role Play
- 70% Workshops & Work Presentations, Techniques, Based on Case Studies & Practical Exercises, Gamification, Software & General Discussions
- Pre and Post Test

Training Certificate(s):

CMCT Internationally recognized certificate(s) will be issued to each participant who completed the course.

Training Fees:

TBA as per the course location - This rate includes participant's manual, hand-outs, buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Note: The 5% VAT (Value Added Tax), will be effective starting 01st of January 2018 as per the new regulation from the UAE Government. The VAT applies for all quotation both for local and abroad.

Training Timings:

Daily Timings:

07:45 - 08:00	Morning Coffee / Tea
08:00 - 10:00	First Session
10:00 - 10:20	Recess (Coffee/Tea/Snacks)
10:20 - 12:20	Second Session
12:20 - 13:00	Recess (Prayer Break & Lunch)
13:00 - 14:00	Last Session

For training registrations or in-house enquiries, please contact:
Aisha Relativo - Training & Career Development Manager
aisha@cmc-me.com / training@cmc-me.com
Tel.: +971 2 665 3945 or +971 2 643 6653 | Mob.: +971 52 2954615