1. Course Details:

Course Code : CSEN-004
Course Title : Civil Engineering for Non-Civil Engineers
Course Duration : 5 Days

2. Course Overview:

- Course enables delegates to be familiar with concrete structure principles for design and construction. Upon attendance, the participants will have the capability to supervise any monitor any civil work activities. Different specifications for concrete or steel structures, key element in civil engineering, will also be covered. Course provides basic concepts for concrete technology; plus, concrete, steel and foundation design.

- Different structure systems for concrete and steel building as well as different types of foundations will be introduced. Codes and specifications precaution about load, steel and concrete design will be discussed. Different methods of construction, its advantage, disadvantage and behavior after construction will also be discussed. In addition, economic evaluation between different structure systems and the cost estimate technique for civil work will be reviewed.

3. Learning Outcomes:

- Learn the fundamentals of concrete technology
- Have the capability to do Concrete quality control
- Have basic concept of concrete and steel design
- Be able to define the different loads on the building
- Be able to choose between different structure system
- Know how to choose the suitable structure system
- Be able to define the required codes (EC, ACI, BS codes)
- Learn to review the foundation design
- Understand how to know the types of foundation
- Be able to overview different construction types and the required equipment
- Be able to perform cost estimate for civil work

4. Course Contents:

- Civil activities in project life cycle
- Expected outcomes in appraise, FEED and define stage for civil work
- Civil and structural engineering activities

- The fundamentals of concrete technology
- Properties of concrete and steel
- Concrete quality control
- Principal of structural mechanics
- Principal of structure analysis
- Basic concept of concrete and steel design
- Basic concept and types of pre-stressed concrete
- Forces in the members and its behavior
- Effect of different loads on the building.
- Comparison Between different structural systems
- Overview of using the suitable structure system
- Different structure system in steel projects
- Principal, limitations for different codes (EC, ACI, BS codes)
- Case study: Complete steel structure project
- Loads in oil and gas industry
- Loads from tanks, Piperack, pressure vessel
- Soil investigation
- Principal of foundation design
- Basic Concept of foundation design
- Types of foundation
- Shallow foundation
- Foundation under machines
- Soil test
- Soil investigation report
- Survey work
- Topographic survey
- Grid point and contour line
- Overview of different construction types and the required equipment.
- Principal of road design
- Performing cost estimate for civil work.
- Construction methods
- Plant layout

5. Our Methodology:

- Make coaching and monitoring innovative and using modern
- Media training also using on the go training by using interactive means and focusing on
- The exercises, practical applications and real situations study.
- Live delivery method, instructor-led training.
- Experienced consultant, trainers, and professional.

- Qualified trainer with high-level experience

6. Attendance Reports:

- Send daily attendance reports to trainingdep
- Send full attendance report to training dep. by the end of thecourse
- Attend 100 % from the course days also providedaily
- Issue attendance certificate for participant who attend minimum 80% from the course duration

7. Pre/Post Reports:

- Pre- assessment before starting training.
- Post assessment after finish training
- Full report for the deferent between Pre-& Post assessment

8. Who Should Attend?

- Design Structural Engineers
- Civil Engineers
- Construction Engineers
- Non-Civil Engineers
- Mechanical and Electrical Engineers who are interested in the area of civil work.