Projacs
an egis company
بروجاكس للتدريب والتطوير
Projacs Training and Development

Roads, Bridges and Underground – Design Techniques

تقنيات تصميم الطرق، الجسور والأنفاق

19 – 23 July 2020

Dubai/ United Arab Emirates

A Member of:
PROJACS ACADEMY

ProjacsAcademy.com

Objectives

Teaching the civil engineer the skills and the experience needed in designing roads, bridges and tunnels as a multi−criterion problem. From his/her thorough knowledge of dynamics of constructions, of materials, finite elements and foundation technology, we will arrive at an application of this knowledge on very concrete construction works. From the point of view of Design Techniques, this program wishes to teach the behavior and design aspects of roads, bridges and tunnels along with some applications and Examples.

Who Should Attend?

Any civil engineer with interest in learning about analysis of design of roads, bridges and tunnels:

- Design structural engineers
- Construction engineers

Each may make the best of the experience in his or her way.
Course Content

Course Outline

Day 1:

- Road design functions &responsibilities
- High way design standards
- Alignment & super elevation
- Cross sections
- At grade intersections
- Interchanges & grade separations
- Pavement Design
- Drainage design & erosion control

Day 2:

- Evolutions in bridge construction
- Actions on bridges: static, dynamic, horizontal actions, deformations, fatigue, earthquakes
- Abutments, Piers and Walls
- Steel Structures
- Design Philosophies for Highway Bridges
- Highway Bridge Loads and Load Distribution
- Decks and Deck Systems
- Plate bridges

Day 3:

- Steel–Concrete Composite Box-Girder Bridges
- Orthotropic Deck Bridges
- Horizontally Curved Bridges
- Highway Truss Bridges
- Concrete Structures
- Conceptual Bridge Design
- Design Philosophies for Highway Bridges

Day 4:

- Structural Modeling
- Reinforced Concrete Bridges
- Pre-stressed Concrete Bridges

- Segmental Concrete Bridges
- Bearings
- Surface Drainage
- Substructure Details
- Structural Steel Details
- Pre-stressed Concrete Details

Day 5:

- Bridge Deck Details
- Expansion Joint Details
- Evolutions in tunnel construction
- Requirements of tunnel
- Main purposes
- Procedures involved
- Methods of tunneling
- Method of selection

Training Method

- Pre-assessment
- Live group instruction
- Use of real-world examples, case studies and exercises
- Interactive participation and discussion
- Power point presentation, LCD and flip chart
- Group activities and tests
- Each participant receives a binder containing a copy of the presentation
- slides and handouts
- Post-assessment

Program Support

This program is supported by interactive discussions, role-play, and case studies and highlight the techniques available to the participants.

Schedule

The course agenda will be as follows:

- Technical Session 08.30-10.00 am
- Coffee Break 10.00-10.15 am
- Technical Session 10.15-12.15 noon
- Coffee Break 12.15-12.45 pm
- Technical Session 12.45-02.30 pm
- Course Ends 02.30 pm

Course Fees*

- **2,950USD**
  **VAT is Excluded If Applicable*