

Scandinavian Academy Training Center

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Riyadh - Al Khaleej District - Sheikh Abdul Aziz Bin Abdul Rahman Bin Bishr Street - 13223 - Office No. 5 | P.O.BOX : 13224

Course: ACI Code Requirements & Specifications for Concrete Design, Construction & Repair

Code	City	hotel	Start	End	price	Language - Hours
CV-519SA	Abha	Hotel Meeting Room	2027-05-23	2027-05-27	12950 SR	En - 25

Course Description

The concrete design and construction precaution in ACI will be discussed deeply to assist the trainer be familiar with this code and know about its strong and week point. The acceptance and evaluation of concrete is the main aim for engineers working in concrete construction so it will be clarified in this course.

The design of form work and steel detailing will be introduce in this course in scope of ACI requirements. To protect steel bars from corrosion the ACI provides many specifications and recommendation to avoid steel corrosion so the course will highlight this issue and addition to that the construction of concrete in hot climate.

ACI recently introduce its standards for evaluating the existing structure according to certain procedure so in this course will present it and provide the code procedure for repair. Moreover, the ACI define the structure system in case of earthquake load so this course will introduce it with specification equirement to design the structure, which are effected by earthquake.

Course Objective

The objective of this seminar is to train people who are interested in using American Concrete Institute Standard ACI to be familiar with using this standard. The concept and basics of codes and standard will be introduced concerning the probability of failure specifically in ACI. The recent ACI code will be presented for design and construction for concrete structure.

Course Outline

Day One

- Concept of ACI design codes
- Concrete properties
- Load affecting structure based on ACI
- Strength requirement
- Probability of failure based on ACI
- Serviceability requirement
- Concrete mix design
- Specifications requirement
- Standards and codes

Day Two

- Standards for tests and materials
- Main element design as beam, slab and column
- Material specifications
- Concrete quality for mixing
- Concrete curing
- Hot concrete requirement
- Evaluation and acceptance of concrete
- Corrosion protection of concrete
- Standard of coated steel bars

Day Three

- Concrete construction requirements
- Design of Formwork
- Detailed of reinforcement
- Surface condition of reinforcement

- Design of different structure element
- Earthquake precaution
- Design system for earthquake

Day Four

- Strength evaluation of existing structure
- Structure evaluation
- Visual inspection technique
- Non destructive testing
- Pullout test
- Ultrasonic test

Day Five

- Define repair procedure based on ACI
- Prepare cracks to repair
- Using polymers and additives
- Using epoxy for repair
- Design temporary support

The Scandinavian Academy for Training Center adopts the latest scientific and professional methodologies in training and human resource development, aiming to enhance the efficiency of individuals and organizations. Training programs are delivered through a comprehensive approach that includes:

- Theoretical lectures supported by PowerPoint presentations and visual materials (videos and short films).
- Scientific evaluation of participants before and after the program to measure progress and knowledge acquisition.
- Brainstorming sessions and practical role-playing to simulate real-life scenarios.
- Case studies tailored to align with the training content and participants work nature.
- Assessment tests conducted at the end of the program to evaluate the achievement of training objectives.

Each participant receives the training material (both theoretical and practical) in printed form and saved on a CD or flash drive. Detailed reports, including attendance records, final results, and overall program evaluations, are also provided.

Training materials are prepared professionally by a team of experts and specialists in various fields. At the end of the program, participants are awarded a professional attendance certificate, signed and accredited by the Scandinavian Academy for Training Center.

Program Timings: 9:00 AM to 2:00 PM

The program includes:

- A daily buffet provided during the sessions to ensure participants comfort.
- A closing ceremony on the final day to distribute certificates and celebrate participants achievements.
- **Note: All prices are exclusive of 15% Value Added Tax (VAT).**

Our Success Partners

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