



Training Course :

**Risk Based Inspection And  
Maintenance For Reinforced  
Concrete Structure.**

Training Course For One Week In

**UAE , Abu Dhabi , Radisson Blu  
Hotel, Abu Dhabi Yas Island**

Which Be Held As Under Details :



## Abar Solutions Petroleum Consultancy Invite Your Employee To Participate With Us In Special Training Course As Under Details :

Course Name		Risk Based Inspection And Maintenance For Reinforced Concrete Structure.			
Code	Period	Language	Start	End	Location
CE 31	5 Days	Bilingual (Arabic & English)	13/08/2017	17/08/2017	UAE , Abu Dhabi , Radisson Blu Hotel, Abu Dhabi Yas Island
			03/09/2017	07/09/2017	
			08/10/2017	12/10/2017	
			12/11/2017	16/11/2017	
			10/12/2017	14/12/2017	
			14/01/2018	18/01/2018	
			11/02/2018	15/02/2018	
			11/03/2018	15/03/2018	
			15/04/2018	19/04/2018	
			20/05/2018	24/05/2018	
			10/06/2018	14/06/2018	
			20/08/2017	24/08/2017	
<b>** The Fees Includes : Lecturer , Training Material , Training Room With One Coffee Break Daily , Certificate Of Attendance In Last Day Training Course **</b>					

### Course Description

- ⇒ Systems should be developed, designed, and modified with reliability as a key goal. The attendees will apply practical tools for integrating engineering, business, operations, and maintenance perspectives into a total life cycle approach to asset and cost management.
- ⇒ This course provides the tools for prioritizing structure failures so that effective failure management strategies (i.e., maintenance plans, one-time repair) can be developed to control the risk of losses (e.g., productivity, safety, quality).

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- ⇒ This course is intended for civil engineers who are interested in the area of inspection, assessment and repair of concrete structures. This course enables delegates already familiar with what concrete is, to develop skills in effective specification, production and end users of concrete. The course also covers basics as well as advanced concepts up-to-date technology.
- ⇒ Through several workshops and exercises, the attendees will thoroughly cover both traditional and risk-based analysis methodologies by using quantitative risk assessment technique. Anyone interested in improving their structure maintenance program should consider attending the course.

### Course Objectives

- ⇒ This short course is intended to overview modern procedures in providing an optimizing maintenance plan for specific reinforced concrete structure or fleets of structures.
- ⇒ In this course will teach you how to develop cost-effective maintenance plans for onshore concrete and steel structure and fixed offshore structure by focusing on the following keyelements:
  - How to apply decision tree in conceptual design
  - Introduction to assessment of concrete structure
  - Understanding Risk Based Inspections
  - Developing an In-service Inspection Plan
  - How to implement maintenance plan?
  - The coaching to help develop your specific reliability-focused design strategy
  - Understanding why structure fails
  - Build on your knowledge of qualitative risk assessment methods to discover when and how to quantify the results
  - Gain a clear understanding of the most critical aspects of your structure

### Course Content & Outlines

- ⇒ **Overview of Planned Maintenance principles**
- ⇒ **Characteristics of world-class planned maintenance**

- ⇒ **Importance of a life-cycle approach to asset and cost management**
- ⇒ **Reliability and maintainability issues in each design phase**
- ⇒ **ACI, BS, and AISC codes for reliable structure**
- ⇒ **Structure redundancy**
- ⇒ **Failure mode of concrete structure**
- ⇒ **Corrosion effect on structure risk**
- ⇒ **Advanced inspection technique**
- ⇒ **Characterizing expected reliability-related performance of processes in design**
- ⇒ **Understanding life-cycle costs, including the cost of unreliable performance**
- ⇒ **Understanding Risk Based Inspections:**
- ⇒ **Maximized return on investment**
- ⇒ **Identifying and determining deterioration of concrete structure**
- ⇒ **Assessment of concrete structure**
- ⇒ **Fresh and hardening concrete test**
- ⇒ **Advanced technique in measured corrosion in the steel bars.**
- ⇒ **Defining scope, establishing a team, and creating a structures list**
- ⇒ **Collecting loading, strength and environmental data**
- ⇒ **Prepare annual inspection work scopes / workbooks**
- ⇒ **Inspection and quality control of concrete**
- ⇒ **Sampling and testing concrete on site**
- ⇒ **Effective supervision of repairs**
- ⇒ **Reinforced concrete site practice**
- ⇒ **Selection of materials — cements, aggregates, additions and reinforcement**
- ⇒ **Concrete mixes and specifications**
- ⇒ **Inspection, sampling and compliance testing**
- ⇒ **Types of repair the RC structure**