

# ACI CODE REQUIREMENTS & SPECIFICATIONS FOR CONCRETE DESIGN, CONSTRUCTION & REPAIR

## ةناسرخلادعمدوك تابلطتمو تافصراوم

"Design with Confidence. Build with Code. Repair with Precision"

### Schedule

Venue (InHouse)	Fees
At Your Organization Premises	Ask For The Quotation

► Available delivery methods: In-House Training

### Introduction

This course is designed to provide engineers, designers, site supervisors, and quality professionals with an in-depth understanding of the ACI (American Concrete Institute) Code requirements. It covers design principles, construction practices, and repair techniques in line with the latest ACI 318, ACI 301, and ACI 562 specifications. Real-world case studies and code interpretations will enable attendees to bridge theory and field applications confidently.

### Objectives

By the end of the course, participants will:

- Understand key ACI code provisions for design and construction
- Apply ACI 562 code for repair and rehabilitation of existing concrete
- Identify common deficiencies and how to avoid them in field practice
- Improve quality assurance practices and compliance

## Why Attend

- Stay compliant with international concrete standards
- Improve the safety and durability of your concrete structures
- Ensure proper implementation of design specs and repair methods

## Target Audience

- Structural and Civil Engineers
- Site Engineers & QA/QC Professionals
- Designers, Contractors, and Repair Specialists

## Individual Benefits

- Boost your expertise in international concrete codes
- Gain practical insights from field applications
- Improve your professional credibility

## Organizational Benefits

- Ensure code-compliant design, execution, and repair
- Reduce risk of failures and costly rework
- Enhance quality control processes

## Instructional Methodology

- Code Walkthroughs
- Case Studies and Failures
- Interactive Problem Solving
- Field Photos & Project Scenarios
- ACI Specification Interpretation

## Course Outline

DETAILED 5-DAY COURSE OUTLINE (Customizable) Training Hours: 07:30 AM – 03:30 PM Daily Format: 3–4 Modules | Coffee breaks: 09:30 & 11:15 | Lunch Buffet: 01:00 – 02:00

### Day 1: Overview of ACI Codes and Concrete Design Basics

- Module 1 (07:30 – 09:30): Introduction to ACI 318 & ACI 301
- Module 2 (09:45 – 11:15): Structural Elements – Beams, Slabs, Columns
- Module 3 (11:30 – 01:00): Load Path, Safety Factors, Material Assumptions

### Day 2: Reinforcement and Detailing Requirements

- Module 4: Reinforcement Placement & Cover
- Module 5: Tying, Lap Splices, Anchorage, and Detailing
- Module 6: Tolerances and Inspection Points

### Day 3: Construction Practices per ACI 301

- Module 7: Formwork, Compaction & Finishing
- Module 8: Curing, Hot & Cold Weather Concreting
- Module 9: Quality Assurance & Field Testing (ASTM/ACI overlap)

### Day 4: Concrete Repair Principles and ACI 562

- Module 10: Types of Concrete Distress & Root Causes
- Module 11: Evaluation Methods and Repair Materials
- Module 12: Repair Techniques – Patch Repair, Injection, Strengthening

### Day 5: Compliance, Documentation, and Final Review

- Module 13: ACI 117 Tolerances and Documentation
- Module 14: Code Compliance in Submittals and Approvals
- Module 15: Final Quiz, Workshop Wrap-up, and Best Practices

## Certification

Participants will receive a Certificate of Completion issued under international standards, confirming their understanding of ACI code-based design and repair.

## Why Choose MAWA Events

- **Global Expertise:** More than 17 years of experience in professional training and consulting.
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### In-House / Customized Training

Interested in running this course for your team?

Please contact us:

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