



# **ACI Concrete Design, Construction and Repair Requirements Training Course**

8 – 12 November 2026  
Langkawi

## ACI Concrete Design, Construction and Repair Requirements Training Course

**Ref:** 485\_138795 **Date:** 8 – 12 November 2026 **Location:** Langkawi **Fees:** 8000 Euro

### Overview

ACI Concrete Design, Construction and Repair Requirements Training Course is a five-day advanced course for structural, civil, quality, inspection, and repair functions who leave with a Concrete Compliance and Repair Review File. Participants connect ACI CODE-318-25, ACI SPEC-301-20, and ACI CODE-562-25 across design, detailing, construction quality, assessment, and repair. The course turns separate checks into an evidence-based review workflow. Agile Leaders Training Center presents ACI concrete requirements through traceable engineering records.

### Who Should Attend

- Structural-design functions responsible for reinforced concrete analysis and detailing
- Civil-engineering functions responsible for coordinating design and construction requirements
- Construction-supervision functions responsible for concrete placement and acceptance controls
- Quality and inspection functions responsible for testing, records, and nonconformance review
- Assessment and repair functions responsible for existing concrete structures

The course assumes participants can read structural drawings and perform basic concrete calculations and leaves out jurisdiction-specific adoption advice, certification preparation, and software commands.

### Departments and Industries

The course supports departments and industries that design, build, inspect, assess, or repair structural concrete.

- Structural and civil engineering consultancies
- Construction, precast, and concrete production organizations
- Industrial, energy, transport, and logistics capital-project teams
- Property, facilities, and infrastructure asset-management functions
- Quality assurance, inspection, and technical-audit teams

### Learning Objectives

By the end of this course, participants will be able to:



- Apply ACI code scope and document hierarchy to project reviews
- Analyze strength, serviceability, durability, and detailing requirements
- Evaluate concrete construction specifications and acceptance records
- Diagnose condition, damage, and repair-design evidence
- Compare design, construction, and repair documentation
- Build a concrete compliance and repair review file

## **Course Agenda**

### **Day 1: ACI Framework and Design Basis**

- ACI Document Scope and Applicability Map
- ACI CODE-318-25 Requirement Navigation Matrix
- Structural System and Load-Path Review Method
- Strength and Serviceability Design Checksheet
- Durability Exposure and Material Requirement Register

### **Day 2: Member Design and Detailing**

- Flexural and Axial Design Review Grid
- Shear and Torsion Requirement Checklist
- Reinforcement Development and Splice Schedule
- Member Detailing and Constructability Crosscheck
- Structural Drawing Compliance Markup

### **Day 3: Construction Specifications and Quality**

- ACI SPEC-301-20 Project Specification Crosswalk
- Mixture, Production, and Placement Control Plan
- Formwork, Joint, Finishing, and Curing Checklist
- Testing, Inspection, and Acceptance Record
- Concrete Nonconformance Evaluation Log

### **Day 4: Assessment and Repair Requirements**

- ACI CODE-562-25 Assessment Planning Sheet
- Field Investigation and Material Property Record
- Damage, Deterioration, and Capacity Evaluation Matrix
- Repair Design and Interface-Bond Review
- Repair Specification and Quality Assurance Checklist



## **Day 5: Concrete Compliance and Repair Practice**

- Suggested Exercise: Navigate Design Requirement Conflicts
- Suggested Exercise: Review Reinforcement and Construction Records
- Suggested Exercise: Diagnose Concrete Condition Evidence
- Suggested Exercise: Coordinate Repair Design and Specification
- Capstone Exercise: Concrete Compliance and Repair Review File

## **Practical Exercises**

The course uses suggested activities to connect ACI concrete requirements with reviewable engineering evidence.

- Suggested activity: map applicable design, specification, assessment, and repair requirements to project documents.
- Suggested activity: check member design, reinforcement details, durability provisions, and drawing coordination.
- Suggested activity: evaluate placement, curing, testing, inspection, acceptance, and nonconformance records.
- Suggested activity: assemble assessment findings, repair decisions, specifications, and quality controls into one review file.

## **FAQs**

### **What do ACI concrete design, construction, and repair requirements address?**

ACI concrete requirements address structural design and detailing, construction specifications and quality records, and assessment and repair of existing concrete structures through distinct but coordinated documents.

### **Who suits ACI concrete requirements training, and what does it assume?**

Structural, civil, construction, quality, inspection, and repair functions suit the training. It assumes participants can read structural drawings and perform basic concrete calculations.

### **How does advanced ACI concrete requirements training differ from introductory reinforced concrete design?**

Advanced ACI training connects code navigation, design checks, construction specifications, acceptance evidence, condition assessment, and repair review. Introductory design training concentrates on basic member behavior and calculations.



## **How do ACI CODE-318-25 and ACI SPEC-301-20 work together?**

ACI CODE-318-25 defines structural concrete design and detailing requirements, while ACI SPEC-301-20 provides a reference specification for concrete construction. Project teams coordinate both through drawings, specifications, submittals, inspection, testing, and acceptance records.

## **When is ACI CODE-562-25 used in concrete repair review?**

ACI CODE-562-25 supports assessment of damage and deterioration and the design of repair and rehabilitation strategies for existing concrete structures within its stated applicability.

## **Conclusion**

Participants take back a Concrete Compliance and Repair Review File linking design requirements, details, specifications, quality records, assessment evidence, and repair decisions. It changes disconnected checks into a coordinated engineering review. The file gives design, construction, inspection, and repair functions a shared basis for resolving gaps and documenting decisions.