XCELERATE TRAINING INSTITUTE

your learning & development partner

CONSTRUCTION MANAGEMENT & CIVIL ENGINEERING

Construction and Building Envelope Inspection

DURATION	LANGUAGE	FORMAT
5 days	**English**	**Classroom / Online**

Upcoming dates

Dates	Venue	Format	Fee
26 – 30 Apr 2027	Live online	Online (live)	**€1,200**
3 – 7 May 2027	Amsterdam	Classroom	**€3,600**
4 – 8 Oct 2027	Live online	Online (live)	**€1,200**

Register or ask a question

Online: staging.x8ti.com/course/construction-and-building-envelope-inspection/

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Construction and Building Envelope Inspection

Introduction

Introduction

Construction projects always have approved designs and procedures documentation. Inspection of construction and building envelope ensures that these procedures are conformed to with strict adherence to best practices and industry standards. This course will give the participants detailed knowledge and understanding of inspection and various testing methods for concrete buildings and structures, steel structures, and various building envelopes. The nature and importance of this function cannot be overemphasized in any scenario, and this course ensures that professionals understand to great depth how to perform and dispense these functions efficiently.

All the types of inspection and testing methods and techniques involved in different construction projects will be covered thoroughly in this course. The skills and knowledge acquired from this course are part of mandatory training for any professional who wants to maintain quality and ensure proper workmanship is followed in their projects.

This Xcelerate Training Institute course is well designed to ensure the participants understand the building blocks, procedures, and standards when it comes to the construction and building envelope field. It will cover in detail some aspects of inspection such as why inspection and testing activities are important, how to focus on the practical and theoretical inspection ways, various quality management systems, integration of new inspection methods into the work domain, and how to apply the learnt skills of inspection and testing to the construction field.

Learning Objectives

- Enable participants to interpret well the necessary skills used in the inspection of construction projects
- Familiarize the undertakers of this course with the knowledge and skills required for workmanship and maintaining quality work in the building and construction field
- Help the participants learn and apply various processes used in the inspection and testing of all construction projects
- Enable learning, practice, and exercise of the techniques and methods used in testing engineering materials
- Facilitate knowledge acquiring of how to properly be involved in the standards conformance of any construction project
- Enable participants to apply the utmost and appropriate maintenance inspection practices to ensure equipment and processes remain to provide and deliver the intended quality capabilities most cost-effectively
- Facilitate the practice and exercise of all the necessary procedures used in inspecting building envelopes

Training Methodology

This program from Xcelerate Training Institute Talent Solutions is highly interactive and practical. All the

content and exercises will be facilitated by well-trained and professional individuals who have vast knowledge and experience in their areas of operation. It will involve individual exercises and group interactions for everyone to showcase how much they have learnt and understood. Each day will begin and end with a reflective exercise that will test how much learning each participant has done.

The following methods will be employed during the training of this course

- Group discussions
- Class notes
- Lectures
- Presentations
- Case studies and relevant examples

Benefits For Your Organization

Organizations that will engage professionals who have taken this course stand to benefit in the following ways:

- Improved and better cost reduction by avoiding unnecessary costs due to failed construction projects or buildings due to lack of proper inspection
- Better and enhanced quality inspection procedures and techniques that will improve the overall quality of any organization
- Better and improved maintenance schemes
- Detailed inspection of all construction projects and building envelopes
- Well-managed revenue from avoiding regulation breaches
- Application of advanced and enhanced tools in the inspection process
- Regular improvement of the quality of other employees by working alongside a well-trained professional

Benefits For You

Professionals who will undergo this training will benefit in the following ways:

- A thorough and complete understanding of the inspection process
- Greater understanding and deep knowledge of how to ensure the inspection process is followed to greater detail
- A sense of pride and achievement contributes to saving revenue to tunes of thousands by avoiding legal repercussions which are associated with poorly inspecting construction projects
- Enhanced foresight into the construction problems and risks
- Better understanding and exposure to working with improved and enhanced tools and technologies while applying the right methods and techniques
- Increased knowledge and confidence to spearhead the inspection process
- Enhanced skill sets and capabilities to assume higher-level responsibilities

Target Audience

- Chief architects work in different functions of building designs to ensure quality is adhered to while performing inspections

- Project managers oversee the day-to-day construction activities and operations
- Contractors undertake the responsibilities of building different construction projects
- Lab personnel are responsible for testing and ensuring adherence to quality standards
- Practicing and already experienced construction inspectors who wish to update their knowledge and techniques to modern ways
- Civil engineers
- Technicians and technologists who are involved with building constructions

Course Outline

Inspecting Steel Structures

- Welding joints and connections inspection
- Floor flatness and levelness testing methods for determining the F-Numbers
- Various techniques for fireproofing and assurance inspection
- Non-destructive testing methodology and technologies
- Engineering needs serving while handling soil classification
- Level II and Level III NDE
- Hold-downs systems, anchor bolts, joints, and Dowels inspection
- Inspecting steel structural constructions

Field Quality Assurance and Inspection

- What are the minimum components requirements for special inspection?
- Total quality management and assessment systems
- What is inspection and why does it matter?
- Special inspectors; roles and responsibilities
- Couple walls inspection
- Connections of structural elements
- Shear walls construction and nailing

Standard Architectural Inspection Guidelines

- Woodwork standards and installation guidelines for inspection
- Insulation installation, types, and quality inspection
- Architectural roofing types, installations, and quality inspection
- What makes up a building envelope?
- Foundation works
- Foundation standards
- Rough plumbing
- Damp-proof course
- Proper soil handling and treatment for insects
- Depth below finished grade
- Foundation size
- Anchoring devices or systems

- Amount and placement of reinforcing steel
- Factors affecting the specified foundation
- Building construction structures
- Form works and scaffolding
- Columns, slabs, staircases, general structure
- Elevation techniques
- Mechanical requirements
- Framing works'
- Walls
- Doors
- Windows
- Stair
- Openings
- Finishes
- Safety

Inspection Tools

- Sound meters
- Laser meter and how to ensure safety
- Wheel meters handling
- Tape measures readings
- Earth resistance meters and counterpart testers
- Concrete structure scanners (GSSI)
- Pocket digital light meter
- Radiation meter
- Completer
- Dust monitor
- Torque wrench

Digital Tools and How to Handle Them

- Digital moisture meter inspection kit
- Digital camera
- Digital Schmidt hammer
- Digital voltmeter
- Repairs and accuracy calibration

Soil Inspection Guidelines and Procedures

- Asphalt concrete inspection
- On-site soil inspection
- Earthwork and other techniques inspection
- Road construction inspection
- Field inspectors' responsibilities

- Detailed analysis
- Sample collection

General Guidelines for Inspection

- Concrete NDT
- Concrete structures and buildings inspection
- Field Inspectors
- Shotcrete inspection
- Steel reinforced bars inspection
- Structural masonry inspection

Stages of Construction Inspection

- Handover Inspection and how to ensure everything works correctly
- Footing and overall inspection
- Slab quality and standards inspection
- Frame inspection
- Lock-up details and quality inspection
- Fixing procedures and stage
- Practical operational stage

Joints and Connections Inspection

- Introduction
- The basic process of welding
- Fillet joints
- Welding problems
- LRFD of Welded connections
- Qualified welds
- Eccentric shear in Welds
- General provisions in connections
- Types of structural bolts and bolted connections
- Selecting standard connections using manuals
- Weld types in structural construction and their applications

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Registration Form

Construction and Building Envelope Inspection

Preferred dates: ..... Venue or online: .....

Duration: 5 days Language: .....

Please complete and email this form to us, or register online. We confirm your place and send the invoice within one working day.

Delegate information

Full name (Mr / Ms / Dr / Eng): .....

Position: ..... Telephone / mobile: .....

Official email: ..... Personal email: .....

Company information

Company name: .....

Address: .....

City / country: ..... VAT / tax number: .....

Person responsible for training & development

Full name (Mr / Ms / Dr / Eng): .....

Position: ..... Telephone / mobile: .....

Email: .....

Payment

☐ Please invoice me ☐ Please invoice my company

Signature: ..... Date: .....

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Email this form
info@x8ti.com

Register online
Open the course page