MAWA EVENTS

Address: No. 857, Block A2. Leisure Commerce Square - No 9., 46150 Petaling Jaya, Selangor, Malaysia

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ADVANCED IN STEEL WORK DESIGN AND INSPECTION TRAINING

"Ensuring Strength, Safety, and Quality Through Advanced Steel Design and Inspection Techniques."

Schedule

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

► **Available delivery methods:** In-House Training

Introduction

Steel remains the backbone of modern infrastructure — from high-rise buildings and bridges to industrial structures and power plants. However, achieving structural integrity, safety, and efficiency in steel projects requires a deep understanding of design principles, fabrication processes, and inspection techniques.

The Advanced in Steel Work Design and Inspection Training course provides comprehensive technical knowledge of steel structures, emphasizing advanced design methodologies, code compliance, welding standards, and inspection practices. Participants will gain insight into the latest industry standards, design innovations, and non-destructive testing (NDT) methods to ensure high-quality fabrication and erection of steel structures.

This training bridges theoretical knowledge with field practice, enabling engineers, designers, and inspectors to ensure that steel structures are designed, built, and maintained to the highest performance standards.

Objectives

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

- Understand advanced concepts in steel structure design and detailing.
- Apply international codes and standards (AISC, BS, Eurocode) in design and inspection.
- Identify and evaluate key parameters influencing steel performance and safety.
- Assess fabrication and erection tolerances to ensure compliance.
- Conduct quality control (QC) and quality assurance (QA) during steel fabrication.
- Perform inspections for weld quality, corrosion, and material defects.
- Utilize Non-Destructive Testing (NDT) techniques for structural integrity verification.
- Develop effective inspection and documentation procedures.

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Why Attend

As modern infrastructure demands stronger, lighter, and more durable structures, professionals must adopt advanced techniques in design and quality control. This course empowers participants with both analytical and practical skills to handle complex steel design and inspection challenges. Attendees will leave with the ability to ensure that steelwork is designed, fabricated, and installed according to global best practices — ensuring safety, durability, and compliance.

Target Audience

This course is ideal for:

- Structural and Civil Engineers
- Steel Fabrication and Erection Supervisors
- Quality Control and Inspection Engineers
- Welding Inspectors and QA/QC Officers
- Project Managers and Construction Engineers
- Consultants and Design Professionals
- Professionals involved in steel structure manufacturing, inspection, or maintenance

Individual Benefits

- Gain mastery in advanced steel design techniques and inspection procedures.
- Improve capability to analyze, assess, and validate steel structure quality.
- Learn to interpret drawings, codes, and inspection reports effectively.
- Enhance your professional credibility and technical decision-making skills.
- Acquire hands-on experience in detecting and rectifying fabrication defects.
- Strengthen your ability to ensure compliance with international standards.

Organizational Benefits

- Improve overall quality and safety of steel structure projects.
- Reduce costly rework, delays, and failures due to fabrication errors.
- Strengthen compliance with design, welding, and inspection standards.
- Build internal capacity for quality control and technical supervision.
- Enhance productivity through better coordination between design and inspection teams.
- Promote a safety-driven culture through systematic inspection and verification.

Instructional Methodology

The training employs a combination of interactive and practical learning approaches, including:

- Expert-led lectures and technical presentations
- Real-world case studies of steel design and fabrication projects
- Demonstrations of NDT and inspection methods
- Group exercises in design analysis and defect identification
- Review of design codes and inspection documentation
- Practical workshops on quality assurance and reporting

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Course Outline

Module 1: Overview of Steel Structures and Design Principles

Module 2: Advanced Steel Design Concepts – Loads, Connections, and Stability

Module 3: Design Codes and Standards (AISC, BS 5950, Eurocode 3)

Module 4: Fabrication Processes, Welding Techniques, and Material Selection

Module 5: Quality Control in Steel Fabrication and Erection

Module 6: Inspection Procedures and Documentation Requirements

Module 7: Non-Destructive Testing (NDT) Methods – UT, RT, MT, PT, VT

Module 8: Common Fabrication Defects and Their Remedies

Module 9: Corrosion Prevention, Surface Treatment, and Coating Systems

Module 10: Case Studies on Failures, Lessons Learned, and Best Practices

Certification

Participants who successfully complete the course will receive a Certificate in Advanced Steel Work Design and Inspection, validating their expertise in advanced steel design, fabrication quality, and inspection standards aligned with global best practices.

Why Choose MAWA Events

- **Global Expertise:** More than 17 years of experience in professional training and consulting.
- **Industry-Leading Faculty:** Courses delivered by seasoned professionals with hands-on experience.
- **Practical Insights:** Learn to turn theory into actionable strategies for real-world business impact.
- **Client-Focused Solutions:** Customized programs designed to achieve your organisation’s unique goals.

In-House / Customized Training Interested in running this course for your team? Please contact us:	TEL: **+601116373203**	EMAIL: **info@mawaevents.net**