MAWA EVENTS

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

Phone: +601116373203 | **Email:** info@mawaevents.net

NON-DESTRUCTIVE TESTING (NDT) ADVANCED LEVEL

"Enhance Your Expertise in High-Precision NDT Techniques for Critical Asset Integrity."

Schedule

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

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

Introduction

This advanced-level course in Non-Destructive Testing (NDT) is designed for professionals who already possess a foundation in NDT methods and seek deeper technical knowledge, interpretation skills, and application in high-risk environments. Participants will master the advanced principles, equipment calibration, flaw evaluation, and complex interpretations across major NDT techniques: UT, RT, MT, PT, ET, and advanced visual testing. The course also covers code compliance, advanced signal analysis, and digital imaging.

Objectives

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

- Apply advanced NDT techniques for complex materials and geometries
- Interpret signals, radiographs, and ultrasonic scans with high precision
- Evaluate critical defects, discontinuities, and structural flaws
- Calibrate and verify NDT equipment to standards
- Ensure compliance with ASME, API, ISO, and EN codes
- Develop and assess written procedures for NDT testing

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Why Attend

Professionals working in oil & gas, aerospace, power generation, and marine sectors must ensure high-precision evaluations of mission-critical components. This course helps ensure flaw detection, integrity assurance, and regulatory compliance at an expert level.

Target Audience

- Level II Certified NDT Technicians
- QA/QC Engineers and Inspectors
- Welding Inspectors and Integrity Engineers
- Asset Integrity and Maintenance Managers
- Aerospace, Power, and Oil & Gas Inspection Staff

Individual Benefits

- Advance toward Level III certification requirements
- Develop high-confidence interpretation skills
- Build technical leadership in asset integrity and inspection
- Increase job security and advancement opportunities

Organizational Benefits

- Reduce inspection errors and false calls
- Ensure compliance with client specifications and standards
- Increase uptime through precise and reliable testing
- Minimize risk and liability from structural failures

Instructional Methodology

- Case-based learning with advanced flaw interpretation
- Hands-on demonstrations with advanced equipment
- Practical group analysis of UT scans, radiographs, and signals
- Interpretation workshops and digital simulation
- Final exam and performance-based assessment

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Course Outline

DETAILED 5-DAY COURSE OUTLINE (CUSTOMIZABLE)

Training Hours: 7:30 AM – 3:30 PM **Daily Format:** 3–4 Learning Modules | Coffee Breaks: 09:30 & 11:15 | Lunch Buffet: 01:00 – 02:00

Day 1: Advanced NDT Techniques Overview

- Module 1: NDT Roles, Levels, and International Standards (ISO 9712, ASNT SNT-TC-1A) (07:30 – 09:30)
- Module 2: Advanced Visual Testing and Digital Imaging (09:45 – 11:15)
- Module 3: In-depth Material Properties and Defect Formation (11:30 – 01:00)
- Module 4: Complex Geometry and Difficult Access Scenarios (02:00 – 03:30)

Day 2: Ultrasonic Testing (UT) – Advanced Applications

- Module 1: Advanced Wave Propagation, Modes & Interpretation (07:30 – 09:30)
- Module 2: UT Calibration Blocks, TOFD, Phased Array Basics (09:45 – 11:15)
- Module 3: Data Interpretation and Flaw Sizing in Welds (11:30 – 01:00)
- Module 4: Practical: Flaw Detection in Complex Weld Configurations (02:00 – 03:30)

Day 3: Radiographic Testing (RT) & Magnetic Particle Testing (MT)

- Module 1: Advanced RT Film Interpretation and Digital Radiography (07:30 – 09:30)
- Module 2: Image Quality Indicators (IQI) and Exposure Techniques (09:45 – 11:15)
- Module 3: Magnetic Particle Testing – Equipment, Current Types, Crack Detection (11:30 – 01:00)
- Module 4: Case Review – Weld Defects and Critical Flaws in RT/MT (02:00 – 03:30)

Day 4: Penetrant Testing (PT) & Eddy Current Testing (ET)

- Module 1: Advanced Penetrant Testing – Fluorescent, Dual Sensitivity Techniques (07:30 – 09:30)
- Module 2: Eddy Current Testing – Surface & Subsurface Defect Detection (09:45 – 11:15)
- Module 3: Frequency Selection and Probe Design in ET (11:30 – 01:00)
- Module 4: Flaw Simulation Exercises and Signal Analysis (02:00 – 03:30)

Day 5: Procedure Writing, Case Studies & Certification

- Module 1: Developing and Reviewing NDT Procedures (07:30 – 09:30)
- Module 2: Risk-Based Inspection and Decision-Making in NDT (09:45 – 11:15)
- Module 3: Advanced Case Studies – Aerospace, Pipeline, and Pressure Vessels (11:30 – 01:00)
- Module 4: Final Exam, Performance Assessment & Certification Wrap-Up (02:00 – 03:30)

Certification

Participants who successfully complete the course and final evaluation will receive a Certificate of Completion – Advanced Level Non-Destructive Testing (NDT). The program aligns with global industry standards including ISO 9712, ASNT SNT-TC-1A, and EN 473 and supports preparation for Level III qualification.

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.

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

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