# NDT Training Programs



GE Inspection Technologies is a global technology-driven organization committed to delivering innovative and reliable training solutions that consistently bring value to our customers.



## Convenient and Enhanced NDT Training Options

## Why Choose GE Inspection Technologies NDT Academies?

#### **Expertise**

Expertise speaks to the very foundation of GE Inspection Technologies' NDT Training Academies. Our facilities have decades of industrial application experience in NDT, and are positioned to draw ongoing knowledge from the talented professionals who develop NDT technologies, troubleshoot customer problems, and operate inspection equipment in production environments around the globe.

#### Credibility

Training received from GE Inspection Technologies is recognized around the world by customers and quality auditors. GE Inspection Technologies Level 1 and Level 2 courses go beyond the general examination requirements of SNT-TC-1A, MIL-STD-410E, NAS410 and ATA105. GE Inspection Technologies has earned an international reputation for providing the theory and practical skills needed to safely and properly operate inspection devices.

#### Convenience

Courses are regularly conducted at our well equipped Training Academies in North America, Europe, and the Middle East.

- Cincinnati, OH, USA
- Lewistown, PA, USA
- Boston, MA, USA
- Huerth, Germany
- Hechingen, Germany
- Saudi Arabia
- Abu Dhabi

Training partners throughout North America, UK, and Norway.

Standard or customized courses can also be conducted at your facility offering a cost-effective way to meet your specific training needs.



#### Heritage

Decades of strong history in NDT excellence. Pioneering, applying, building and leading with industry proven brands:

- AGFA NDT
- Everest VIT
- Hocking
- Krautkramer
- Seifert

#### **Instructor Passion**

"We train our students with the same care as if we were going to hire them ourselves", states the motto of the NDT Training Academy.

Our ASNT certified instructors are well prepared to provide the best training available. Each is a proven NDT professional who effectively ties classroom lessons to actual inspection practices.



#### **How We Operate**

#### **Hands-On Training**

On average 50%-60% of class time is devoted to hands-on training (30%-50% for VT/RVI). Courses are carefully designed to give inspectors the skills needed to excel.

Detailed class-work and proven "handson" exercises quickly bring the student to a thorough understanding of the theory and inspection concepts which leads to a higher level of competence.

Each student has access to a vast array of NDT instruments, systems, and documented inspection samples to use under the direct supervision of our experienced staff.



#### **Course Content**

The presentation of theory is easy. The development of a top performing technician or supervisor is not. That step requires a thorough knowledge of the industry and an understanding of the problems faced by the people who make the industry work.

That's the kind of knowledge and understanding that goes into the development of GE Inspection Technologies course curriculums, making it the most valued and respected in the industry.

#### **Up-to-date Methods & Solutions**

GE Inspection Technologies NDT courses are maintained current with the latest inspection methods and technology, much of which we've developed. Students are always encouraged to bring practical problems to class to discuss and find testing solutions. With access to support from our worldwide network of application centers, no problem is too complex.

#### **Application Center Support**

The problem-solving experts are our engineers, technicians and specialists in our Application Centers. With 11 global centers, we have quick access to the highly-skilled people who possess the know-how to assist with the most complicated situations.

Our students come from a wide range of industries including (but not limited to):

- Aerospace
- Automotive
- Oil & Gas
- Power Generation

## Course offerings and descriptions

#### **Ultrasonic**

#### Level 1 (1)

- UT theory, calibration, thickness testing, inspection parameters.
- Straight, dual element, delay-line, and shear wave transducer calibration

#### Level 2 (1)

- Building from the level 1 course; angle beam, flaw location, evaluation and sizina.
- Quality control, flaws and ultrasonic inspection procedures

#### **Advanced**

 C-Scan and B-Scan, Spot-weld, DGS, TOFD and Phased Array

#### **Eddy Current**

#### Level 1 (1)

- Theory, advantages, limitations and applications, meter/impedance plane displays...
- Types of coils, surface probes, flaw evaluation, conductivity, crack detection...

#### Level 2 (1)

- Advanced theory, calibration and inspection procedures. Categories of discontinuities.
- Single/multi-frequency, applications, plating, coating, wall thickness, conductivity...

#### **Pulsed Eddy Current (PEC)**

- Principle of Pulsed Eddy Current
- Technology and familiarization with GE PEC equipment.

#### Radiography

#### Digital Overview (2)

- An overview of the technology, designed for anyone interested in digital applications... business leaders, supervisors, technicians, educators...
- Computed Radiography (CR), Direct Radiography (DR), Radioscopy and Film Digitization.

#### Level 1 (1) (2)

- Theory, generation, safety. Darkroom procedures and general safety.
- Intro to theory and applications of Radiographic inspection.

#### Level 2 (1) (2)

- Greater depth of study, procedures and techniques. Supervised practical exercises.
- Safety, darkroom procedures and radiographic interpretation.

#### Digital Radiography (2)

 A new course meeting the requirements of ANSI/ASNT CP105-2006 limit certificate in digital radiography. Includes section on Rhythm® software.

#### **Remote Visual**

#### **Visual Testing**

- Principle of examining and evaluating results through direct visual examination.
- Basic principles of optics, light, material conditions and discontinuities.
- Familiarity with standards, codes, procedures, and reports.

#### **Remote Visual Inspection (RVI)**

- Principles of examining and evaluating through video and digital imaging technology.
- Technology and familiarization with GE RVI equipment.
- Familiarization with basic operation of RVI equipment – including defect measurement, data capture, annotation, and file management capabilities.

#### **Specialized Courses**

## Basic Ultrasonic Inspection of Advanced Composite Materials

- Theory, equipment and transducers.
- Delamination, measurement, detection and flaw sizing.

#### **Weld Inspection**

- Welding flaw signatures, identification and sizing techniques, shear wave.
- DAC curve, AWS, documentation and data storage

#### **Resistance weld inspection**

- Principles, theory applied to spot weld inspection
- Inspection plan prep and usage. USLT 2000.

#### Thickness Gauge use and application

• UT theory, thickness equipment and transducers, insp parameters, data collection, and documentation

#### Level III Exam preparation (Ultrasonic)

- Philosophy, theory, mathematics, equipment, transducers.
- Quality control, UT procedure familiarization, and study recommendations.

#### Phased Array

- Phased Array principles and imaging concepts.
- Brief introduction to equipment, benefits, etc.

#### **Rhythm Software**

 Comprehensive course designed specifically for the users of GE Rhythm Software Solution Suite.

#### **RVI Application Software**

 Training to help implement RVI workflows for use in Menu Directed Inspection (MDI) and Rhythm Visual Software. Covers entire RVI inspection process, data management, and automated report generation.





- (1) A 40 hour (5 day) course that meets or exceed ANSI/ASNT CP105-2006, NAS-410, ATA-105, MIL-STD-410 and ISO-9712 requirements for general examination
- (2) Combination of distance learning and instructor led training courses available

## More training options

#### **Custom Training**

Custom courses can be tailored to meet your specific needs. Our goal is to teach the training you want your employees to have. Courses may be scheduled at your site to reduce training cost and scheduling complications.

#### **Blended Training**

Blended training combines classroom practical training with online CD-based training thus reducing travel costs and time away from work.

#### **Online Training**

Online course meeting ANSI/ASNT CP105-2006 for limited certification in both A-SCAN and Digital Thickness Gauging.

#### **Training Partners**

GE Inspection Technologies has training partners worldwide. We are continuously adding new partners. Please visit the website to learn more about our training partners in your area.

## Total life cycle NDT training



## Contact information and registration information

#### **Contact Information**

**North America:** +(1) 866-243-2638 (US toll free)

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#### GE Inspection Technologies: productivity through inspection solutions

GE Inspection Technologies provides technology-driven inspection solutions that deliver productivity, quality and safety. We design, manufacture and service ultrasonic, remote visual, radiographic and eddy current equipment and systems. We offer specialized solutions that will help you improve productivity in your applications in the aerospace, power generation, oil & gas, automotive or metals Industries.

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