CERTIFIED INFRARED THERMOGRAPHER® LEVEL I (IRT I)

QUALITATIVE THERMOGRAPHY

📅 Course Period : 4 Consecutive Days
📝 IRT I Exam : 4th Day

HRDC CLAIMABLE COURSE

CERTIFICATION BY

LUBETRAIN RESOURCES SDN BHD
www.lubetrainresources.com

INTRODUCTION

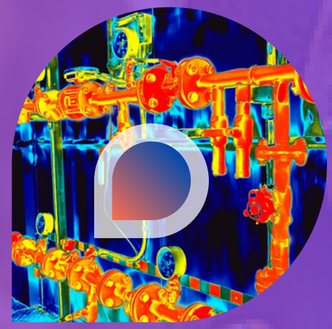
The Level I Certified Infrared Thermographer®

Infrared certification is written proof that a person has completed formal infrared training and/or possesseses a certain skill set. Certification has long been one measure of thermographer competence within the infrared community much in the same way a diploma or degree is used among educational institutions. With over 40 years in business and over 10,000 graduates of our training courses worldwide, Infraspection Institute is the oldest and most respected name in infrared training and thermographer certification. Recognizing our reputation for excellence, smart engineers demand Infraspection Certified Infrared Thermographers® for their projects. The Infraspection Institute Certified Infrared Thermographer® program is compliant with international standards organizations such as ISO and ASNT.

Infraspection Institute is recognized by the Society for Maintenance & Reliability Professionals (SMRP) as an approved provider of continuing education and training aligned with key subject areas related to reliability and physical asset management.

is a comprehensive four-day course designed for professionals using qualitative thermal imaging in predictive/preventive maintenance, condition monitoring, quality assurance, forensic investigations, and building sciences. The course covers key topics such as infrared theory, heat transfer principles, thermal imager operation and selection, image analysis, and report generation. Participants are trained to detect and document thermal anomalies related to poor design, material failure, or workmanship across various systems including electrical, mechanical, steam, refractory, underground piping, building envelopes, and flat roofs. Attendees are encouraged to bring their own thermal imagers for personalized, hands-on learning.

Upon successfully completing the course and passing the certification exam (minimum score of 80%), participants will earn the Infraspection Institute Certified Infrared Thermographer® credential, along with a diploma and ID card. The course includes a Student Reference Manual and all instructional materials. It is eligible for 35 NETA Continuing Technical Development Credits (CTDs), 32 hours of continuing education with InterNACHI for the Infrared Certified designation, and 32 Continuing Education Hours (CEH) through IIBEC. Graduates also earn 20 points toward the Infraspection Master Thermographer® Program.



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COURSE OUTLINE 1

01 Basic Infrared Theory

- Heat transfer
- Electromagnetic spectrum
- Emittance, reflectance, and transmittance
- Atmospheric transmission
- IR wavebands, imaging systems, and lens materials

02 Infrared Equipment

- Selection criteria
- Range and level settings
- Image and data recording
- Class demonstrations
- Hands-on use in class OR self-directed learning activities

03 Infrared Electrical System Inspections

- Theory and thermal signatures of problems
- Seven types of detectable defects
- Conducting an inspection
- Safety practices
- Confirming exceptions
- Data recording
- Standards for inspections

04 Infrared Mechanical System Inspections

- Theory and thermal signatures of problems
- Rotating equipment
- Power transmission components
- High-temperature insulation
- Steam systems, process equipment, heat exchangers, storage vessels
- Active thermographic inspection techniques
- Safety practices
- Confirming exceptions
- Data recording
- Standards for inspections

05 Infrared Roof Inspections

- Theory and component construction
- Insulation and material characteristics
- Inspection techniques
- ground based / aerial
- Weather variables and influences
- Required site conditions
- Safety practices
- Thermal signatures of latent moisture
- Verification of data
- Data recording
- Alternate methods of moisture detection
- Standards for inspections

06 Infrared Building Inspections

- Theory and component construction
- Insulation and material characteristics
- Inspection techniques
  1. Interior / exterior
- Weather variables and influences
- Required site conditions
  1. Creating sufficient Delta T
- Thermal signatures
  1. Missing & damaged insulation
  2. Air leakage
  3. Latent moisture
  4. Pest damage
- Mold detection
- Other tools
- Verification of data
- Data recording
- Standards for inspections

07 Implementing an IRT Predictive Maintenance Program

- 9 steps to setting up a program
- Integrating with other predictive technologies
- Cross-verifying with other predictive technologies
- Why programs fail, how they succeed
- Generating standards-compliant reports

COURSE OUTLINE 2

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HOW TO BECOME CERTIFIED IRT® I

Training

To earn the Infraspection Certified Infrared Thermographer® Level I designation, a candidate must complete an Infraspection Institute Level I infrared training course.

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infraspection institute

Examination

After completing the course, participants may sit for the open-book certification exam, which is based on the course content.

A minimum passing score of 80% is required to receive the official Infraspection Institute Certified Infrared Thermographer® Level I Certificate. Certification is valid for life, with no renewal requirements or fees, making it a long-term professional credential.

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WHO SHOULD ATTEND

THIS COURSE IS SUITABLE FOR, BUT NOT LIMITED TO, THE FOLLOWING PROFESSIONALS INVOLVED IN THERMOGRAPHY, MAINTENANCE, AND RELIABILITY:

Electrical Engineers

Responsible for electrical system integrity and diagnostics

Maintenance Technicians

Involved in routine inspections and fault detection

Plant Engineers

Overseeing facility operations and system performance

Maintenance Managers

Managing maintenance strategies and predictive programs

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2026

Register Now

Contact Us

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