



Category 1 Thermography Certification Course 5 day workshop

Gain an internationally recognised qualification in a rapidly growing industry.

November 2024 Course

11th - 15th November 2024,
Auckland & Christchurch

Presented by

Eurotec Ltd

No matter what brand of camera you have, this course will teach you how to use your thermal imaging camera to its full potential!



Testimonials

"The tutor helped me understand the theoretical and real world implementation of thermography. I learnt some real world examples and explanation and understood the theory behind thermography. I would be able to see the flow of energy."

Bruce Marshall, Feisst Electrical

"The course helped me understand the complex information of thermography and what can be achieved. I would be able to actually use the camera and apply the information to electrical."

Alice Wright

To get the most out of the hands on workshops, if available please bring your camera with you.
Don't have a camera? Eurotec can provide cameras for the duration of the course.

Cat
1

5 Day Category 1 Certification/Operator Course Outline



This course meets or exceeds the recommended training curriculum of ASNT-TC-1A for Category 1 Thermal/Infrared Certification as well as ISO 18436-7. The course is a good mixture of audio, visual, and kinetic presentation material.

The hands-on workshops ensure that the students leave the course with confidence in their ability to operate their IR equipment. Certification will be granted to students who successfully complete the written requirements. Class size is limited to give maximum interaction between instructor and students.

Introduction to Infrared Thermography and predictive maintenance

Basic Thermal Physics

Introduction to Temperature
Matter, Energy, Temperature
Temperature scales
Introduction to Heat

Basic Heat Transfer Theory

Thermodynamics
Change of State
Specific Heat
Conduction, Convection, Radiation

Electromagnetic Radiation

The Electromagnetic Spectrum
Infrared Explained
Introduction to Planck's Curves

The Infrared Image

How an Infrared Image is Produced

Qualitative Thermography

Operating Your Equipment

How Your Camera Works
Detectors-Focal Plane Arrays (FPA)
3 Main Controls: Focus, Level, Span
Getting a Good Image Workshop

Infrared Radiation Physics

The Stephan Boltzmann Law
Wein's Law
Planck's Law
Emission, Reflection, Transmission
Emissivity

Temperature Measurement Workshop
Emissivity Testing Workshop

Imaging and Analysis Factors

Inspection Techniques
Atmospheric Attenuation
Field of View
Instantaneous Field of View
Instantaneous Measurement Field of View
IMFOV Workshop
Infrared Lenses
Infrared Windows

Applications (As pertinent to class)

Introduction to Applications
Reporting
Electrical Inspections
Mechanical Inspections
Process Inspections
Building Inspections
Flat Roof Inspections
Class Application Discussions
Workshop

Software

General Software Discussion

Category 1 Examination



EUROTEC *People • Technology • Solutions*

HVAC • Refrigeration • Electrical • Measurement

— member of CAREL group

CAREL

Eurotec has been offering Thermography Certification Course since 2014. This course meets or exceeds the recommended training curriculum of ASNT-TC-1A for Category 1 Thermal/Infrared Certification as well as ISO 18436-7. Since our courses have commenced, almost 300 students have completed the courses with A+ grade and 90% pass rate.

Our course provides a comprehensive, hands-on introduction to thermal imaging and measurement systems for predictive maintenance and building integrity applications. No experience in thermography is necessary!

Through this course, you will be able to

- learn how to collect quality data, accurate temperature readings, and account for measurement effects such as distance and emissivity using infrared cameras.
- avoid costly mistakes- learn to distinguish between hot spots and reflections, direct vs. indirect readings and qualitative vs. quantitative thermography.
- develop the skills you need to take full potential of your thermal imaging camera & better serve your clients.

The team at Eurotec are highly qualified and experienced in thermography with all Electrical & Instrumentation team members being Category 1 qualified thermographers.

Since its establishment in 1986, Eurotec has been building an enviable reputation not only as an importer and marketer of a wide range of superior quality Controls, Instrumentation, Gas Detection, Humidification and Ice-making equipment for the HVAC, Refrigeration, Industrial Process, Electrical and Food industries, but also as a company whose people are committed to providing their clients with total quality service. This commitment sees the Eurotec Team working closely with clients as well as designers and specifiers, ensuring that the advice offered in terms of products and applications are in the best interests of our clients.

Our Mission: Through the Knowledge and Ability of our People and the Technology of our Products we deliver the best possible Solutions to our Customers.