



Category 1 Thermography Course—attendance by 1 person

P/N: ITC-CER-5101

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Website

<http://www.flir.com>

Customer support

<http://support.flir.com>

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General description

This course prepares the student for qualification as a category 1 certified thermographer. The participant will learn about the basics of infrared, how to operate an infrared camera under different conditions and for various purposes, how to appropriately judge the measurement situation in the field, and how to identify potential error sources. After the course, the participant will be able to undertake infrared inspections following written guidelines and to report the results of this inspection.

Content

- Introduction to thermography.
- Understand your thermal camera.
- Basic physics of heat.
- Basic physics of infrared.
- Thermal pattern recognition and infrared applications.
- Infrared temperature measurement techniques.
- Thermography in condition-monitoring.
- Applications and inspections.
- Surveys and reporting.

Student presentation

- During the seminar, students will generate a small case study to be presented to the class, based on the laboratory exercises.

Laboratory sessions

- Camera handling.
- Level and span.
- Conduction pattern.
- Forced convection.
- Direct and indirect thermal measurement.
- Thermal capacity.
- Steady state and transient heat flow.
- Evaporation and condensation.
- Electrical application.
- Emissivity and reflected apparent temperature.
- Spatial resolution.
- Location and temperature measurement of a hot/cold spot.
- Image transfer to the computer.



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Course information	
Available languages	Chinese, Danish, Dutch, English, Finish, French, German, Greek, Hebrew, Italian, Japanese, Korean, Norwegian, Polish, Portuguese (Brazilian), Romanian, Russian, Serbo-Croatian, Spanish, Swedish, Thai.
Target group	<ul style="list-style-type: none"> • Practical users. • Beginners in thermography with some experience of camera handling and limited infrared knowledge who want to take their first step to becoming a professional thermographer and to qualifying as a Category 1 certified thermographer.
Typical student	<ul style="list-style-type: none"> • Persons with a professional technical background such as technicians, engineers, consultants, or researchers who work in maintenance, building inspection, mechanical, or electrical applications, production, or R&D. • Persons who already have some basic experience of infrared thermography. • Persons with knowledge of the basic functions of an infrared camera. • Persons who want to become a certified thermographer to gain a competitive advantage or who need the certification because of legal reasons or company internal regulations.
Prerequisites	<ul style="list-style-type: none"> • Familiar with the basic operation of an infrared camera. • Has the recommended experience of thermography to the relevant standards.

Course details	
Duration	35–40 hours.
Structure	Theory and camera practice (hands on) on alternate days with additional laboratory sessions and software exercises on some days.
Exam	Written exam (closed book) including multiple-choice questions and practical image interpretation on the last day. The maximum duration is as defined by the relevant certification standards.
Course fee includes	<ul style="list-style-type: none"> • Tuition by an ITC-licensed instructor. • Training materials in printed format. • Refreshments. • Diploma of attendance. • Certificate of conformance with certification requirements (subject to passing the exam). • Attendance by 1 person. • May include more, such as lunch, depending on the location and the organizing body.

Course organization	
ITC	The ITC Category 1 Thermography Course is offered worldwide by ITC subsidiaries and ITC partners as listed in "Courses offered by ITC partners" (T560393). Specific customer requests should be forwarded to the closest ITC subsidiary listed in the "ITC Directory" (1560096).
ITC trainers and licensed trainers	"Courses taught by ITC instructors" (T560392) lists all licensed trainers and ITC trainers authorized to teach the ITC Category 1 Thermography Course.

ALPINE

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"Alpine Components" is the abbreviated trading name for "Alpine Components Limited"
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