INFRARED TRAINING CENTER

Product list

EMEA

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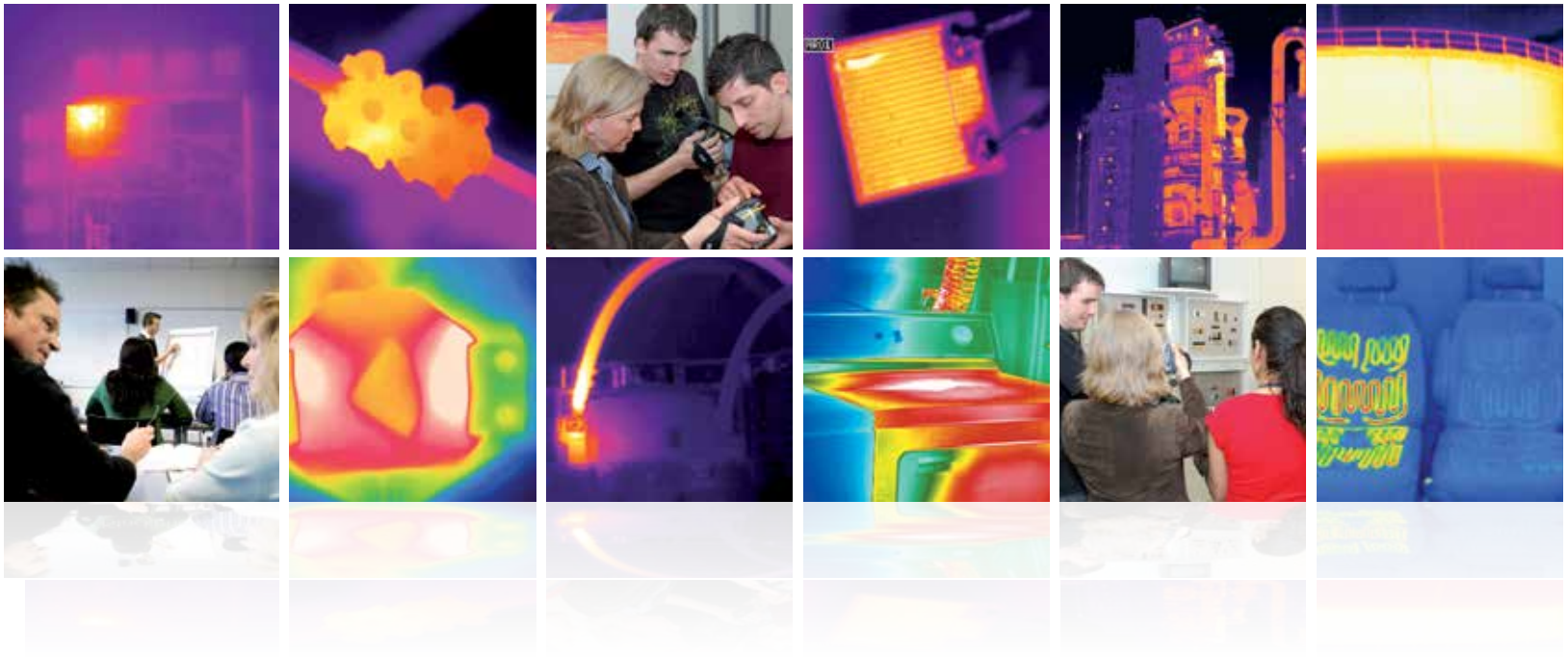
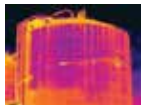
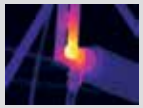
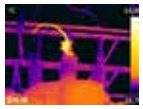
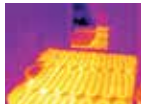
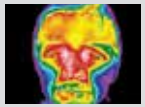
INFRARED
TRAINING
CENTER

ITC, the leading source of knowledge
within infrared science and its applications.



ITC product	Practical	Description and content	Part No. course	Part No. student
ITC Level 1 (Category 1) Thermography Course ISO 18436-7 	**Duration:** 40 hours. **Exam:** Yes. **Target group:** Practical users. **Prerequisites:** Familiar with the basic operation of an infrared camera and have the recommended experience of thermography according to relevant standards.	This course prepares you for qualification as a category 1 certified thermographer. You will learn about the basics of infrared, how to operate the camera under different conditions and for various purposes, how to appropriately judge a measurement situation in the field, and how to identify potential error sources. After the course, you will be able to undertake infrared inspections following written guidelines and to report the results of this inspection.	ITC-CER-5109	ITC-CER-5101 (ITC-CER-5105 additional student for an on-site class)
ITC Level 2 (Category 2) Thermography Course ISO 18436-7 	**Duration:** 40 hours. **Exam:** Yes. **Target group:** Professional users. **Recommendations:** Ability to manipulate basic algebraic equations. **Prerequisites:** Valid Level 1 thermography certificate, recommended experience of thermography according to relevant standards. A case study will need to be prepared and presented in the Level 2 course and submitted toward qualification at the course close.	This course prepares you for qualification as a category 2 certified thermographer. You will learn about topics in infrared thermography to both deepen and broaden your knowledge about infrared physics, heat science, and infrared measurement equipment and its application. As a Level 2 thermographer, you are able to provide guidance to category 1 personnel in the areas of equipment selection, techniques, limitations, data analysis, corrective action, and reporting.	ITC-CER-5209	ITC-CER-5201 (ITC-CER-5205 additional student for an on-site class)
ISO 9721 TT Certification Course Level 1 	**Duration:** 40 hours plus exam. **Exam:** Yes. **Target group:** Professional users. **Recommendations:** Having attended the 2 day introduction course. **Prerequisites:** • Familiar with the basic operation of an infrared camera. • Educated to at least technician level or equivalent. • Documented evidence of satisfactory vision. • Proof of practical experience within the field of thermography according to DIN EN ISO 9712.	This course prepares you for qualification as a category 1 certified thermographer to DIN EN ISO 9712. You will learn about infrared physics, electromagnetic radiation, camera technology and usage, measurement, thermodynamics, and thermographic applications. Practical exercises and laboratory sessions are integral parts of the course. After the course, you will be able to undertake infrared inspections following written guidelines and to report the results of this inspection.	ITC-CER-6109 (excl. certification)	ITC-CER-6101 (course), ITC-FEE-0120 (exam plus certification)
ITC Professional Building Inspection 	**Duration:** 24 hours. **Exam:** Final test. **Target group:** Professional users in building applications who want to become experts in building thermography. **Recommendations:** Knowledge of building techniques. **Prerequisites:** Valid Level 1 thermography certificate, and infrared-related education and experience.	This course bridges the gap between infrared thermography, background science, and applications. You will learn the physical concepts of heat transfer and apply them together with relevant building science. After the course, you will be able to undertake qualified building inspections on the basis of existing laws, standards, and regulations.	ITC-ADV-3019	ITC-ADV-3011

ITC product	Practical	Description and content	Part No. course	Part No. student
ITC Professional Optical Gas Imaging 	**Duration:** 20 hours. **Exam:** Final test. **Target group:** Specialized users in gas detection. **Recommendations:** Basic understanding and knowledge of natural sciences, and a technical background. **Prerequisites:** None.	This course bridges the gap between infrared thermography, background science, and applications. You will learn the fundamentals of heat and chemistry, and how to operate FLIR's OGI cameras as well as how to adjust them for environmental conditions to find gas leaks. Laboratory and/or field practice in finding leaks are key parts of this class. Basic inspection procedures are covered, including equipment set-up, route planning, access requirements, safety practices/equipment and reporting. After the course, you will be able to undertake qualified inspections on the basis of existing laws, standards, and regulations.	ITC-ADV-3039	ITC-ADV-3031 (ITC-ADV-3035 additional student for an on-site class)
ITC Professional Furnace Inspection 	**Duration:** 20 hours. **Exam:** None. **Target group:** Specialized users in furnace inspection. **Recommendations:** Basic understanding and knowledge of natural sciences, and a technical background. **Prerequisites:** None.	This course bridges the gap between infrared thermography, background science and applications. You will learn the fundamentals of heat and chemistry, how to set up and operate a furnace camera, and how to adjust it for environmental conditions related to furnace applications. Laboratory and/or field practice is a key part of this course. Basic inspection procedures will be covered, including equipment check-out, route planning, site access requirements, safety practices/equipment, and reporting concepts.	ITC-ADV-3059	ITC-ADV-3051 (ITC-ADV-3055 additional student for on-site class)
ITC Introduction to Thermography 	**Duration:** 8 hours. **Exam:** None. **Target group:** Beginners and anyone interested in infrared thermography and its applications. **Recommendations:** Interest in the technology and its applications. **Prerequisites:** None.	This is a full 1 day course for beginners and anyone interested in infrared thermography and its applications. The course covers the basics of infrared theory, and includes demonstrations, hands-on camera experience, and practical exercises using relevant key laboratory sessions.	ITC-EXP-1019	ITC-EXP-1011
ITC Introduction to Building Thermography 	**Duration:** 16 hours. **Exam:** None. **Target group:** Beginners and anyone interested in infrared thermography and building applications. **Recommendations:** Interest in the technology and its applications. **Prerequisites:** None.	This course gives a general introduction to infrared thermography and an overview on its specific use for the inspection of buildings. It aims at giving you clues on what you can do with your camera. During the first day, you learn the basics of thermography and how to use your camera the best way. The second day you will start with a brief summary of thermal transfer before you learn about the building envelope, important physical parameters, and typical faults. Emphasis is put on case studies, selected from the field.	ITC-EXP-2019	ITC-EXP-2011
ITC Introduction to Electrical Thermography 	**Duration:** 16 hours. **Exam:** None. **Target group:** Beginners and anyone interested in infrared thermography and electrical applications. **Recommendations:** Interest in the technology and its applications. **Prerequisites:** None.	This course gives a general introduction to infrared thermography and an overview on its specific use for inspections of electrical systems. It aims at giving you clues on what you can do with your camera. During the first day, you learn the basics of thermography and how to use your camera the best way. The second day starts with a brief summary of thermal transfer before you learn about electrical systems and components, material properties, and typical problems and faults. Emphasis is placed on real case studies.	ITC-EXP-2049	ITC-EXP-2041

ITC product	Practical	Description and content	Part No. course	Part No. student
ITC Introduction to Solar Panel Inspection 	**Duration:** 16 hours. **Exam:** None. **Target group:** Anyone, including beginners, interested in the use of infrared thermography for the inspection of photovoltaic solar systems. **Recommendations:** Basic knowledge of electrical installations or another technical field. **Prerequisites:** None.	This course gives a general introduction to infrared thermography and an overview on its specific use for inspections of photovoltaic solar systems. During the first day, you learn about the basics of thermography, how a thermal camera works, and how to use it correctly. The second day starts with the basics of photovoltaic solar systems and solar panel installations. You learn about influences that are critical for solar panel inspections with a thermal camera, how to interpret the displayed thermal images, and how they can be associated with typical problems and faults. Emphasis is put on case studies, selected from the field, as well as on practical exercises.	ITC-PRA-2019	ITC-PRA-2011
ITC Introduction to HVAC and Plumbing 	**Duration:** 16 hours. **Exam:** None. **Target group:** Beginners and anyone interested in infrared thermography, plumbing and HVAC applications. **Recommendations:** Interest in the technology and its applications. **Prerequisites:** None.	This course gives a general introduction to infrared thermography and an overview on its specific use for inspections of heating and HVAC systems and related installations. It aims at giving you clues on what you can do with your camera. During the first day, you learn the basics of thermography, and how to use your camera the best way. On the second day you are introduced to various heating systems before learning about typical faults and how thermography will help you to locate and analyze these. Emphasis is placed on real case studies.	ITC-EXP-2069	ITC-EXP-2061
ITC Introduction to Human Temperature Measurement 	**Duration:** 16 hours. **Exam:** None. **Target group:** Anyone with a professional interest in human febrile temperature screening, airline operative personnel, reception personnel. **Recommendations:** Basic technical knowledge. The course should be organized alongside a full-scale test in the field. **Prerequisites:** None.	This full 2 day course aims at explaining how to set up a procedure for the temperature control of a population. It is designed for persons who might have to implement a control (medical authorities, customs, civil security, etc.). It starts with a brief reminder of thermal transfer and the fundamentals of thermography. Key factors such as NETD, drift and drift compensation, baseline measurement and update, and the factors influencing a diagnosis are explained in detail. Camera set-up is included. ITC recommends organizing the course simultaneously with a full-scale test (airport, ferry port, seaport, river port, stadium, etc.).	ITC-EXP-2029	ITC-EXP-2021 (ITC-EXP-2025 additional student for an on-site class)
ITC Introduction to Software and Reporting 	**Duration:** 8–16 hours. **Exam:** None. **Target group:** Anyone interested in or users of the specific software. **Recommendations:** Basic knowledge of thermography and related areas. **Prerequisites:** Laptop with installed software (full version or 30 day demo—download from www.flir.com).	These courses are for users of FLIR software such as FLIRTools and FLIR ResearchIR. The content and exercises depend on the software used.	ITC-SOW-0009	ITC-SOW-0001

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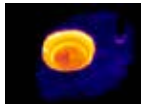
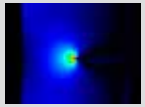
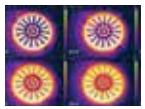
ITC In-house Training 	**Duration:** Customized. **Exam:** Depends on the specific course provided. **Target group:** Employees of a company or particular department who would like to minimize travel costs and receive training directly on their daily working site. **Recommendations:** Refer to the prerequisites and recommendations applicable to the equivalent in-house course. **Prerequisites:** Refer to the prerequisites and recommendations applicable to the equivalent in-house course.	On-site training that can be customized to your needs. You will learn about infrared thermography, inspections, measurements, applications, and reporting corresponding to the level needed for performing measurements and inspection in your working environment. The trainer will give useful advice on how to best implement infrared thermography in your business.	ITC-EXP-1029 (Note: price is per day)	ITC-EXP-1021 (Note: price is per day)
FLIR Industrial R&D Measurements 	**Duration:** 16 hours. **Target group:** Users of FLIR uncooled thermal cameras working with FLIR software such as ThermaCAM Researcher, QuickPlot or ResearchIR with infrared applications in industry or at research institutions. **Recommendations:** • Basic knowledge of thermography and related areas. • Experience of measurement techniques and general software skills. **Prerequisites:** None.	This 2 day course consists of lectures on theoretical subjects, plus hands-on practice. After a general review of heat and heat transfer, you will learn about radiative heat transfer and thermography equipment. Intensive practice is provided for software.	ITC-EXP-2036 (Note: group size is 6 persons)	
FLIR Advanced R&D Measurements 	**Duration:** 16 hours. **Exam:** None. Target group. • Users of FLIR cooled thermal cameras and systems. • Users of uncooled thermal cameras with an interest in advanced thermal measurement applications. **Recommendations:** Basic knowledge of thermography and related areas. • Experience in measurement techniques and general software skills. **Prerequisites:** None.	The core of the course (2 days) consists of lectures on theoretical subjects, plus practice. Additional days can be booked (ITC-ADV-3006). After a general review of heat and heat transfer, you will learn about radiative heat transfer. Starting with the standard measurement situation, you will learn about the importance of emissivity and the reflected apparent temperature. You will compute and estimate emissivity and compensate for the reflected apparent temperature. You will also learn about calibration and the Hypercal software. Depending on the needs of the students and the time available, additional topics may be measurement through windows, measurable figures of merit, signal generation, the influence of integration time, ROIC, etc., triggering and synchronization, and NUC and bad pixel replacement.	ITC-ADV-3046 (Note: group size is 6 persons)	
ITC Additional Training Day 	**Duration:** 8 hours. **Exam:** None. **Target group:** Users of FLIR cooled thermal cameras and systems and users of uncooled thermal cameras with an interest in advanced thermal measurement applications who want additional training.	An additional day can be booked when the customer wants to extend the training content, software exercises, or guided field practice. Additional days can be added to the following courses: ITC-ADV-3046 and ITC-EXP-2036	ITC-ADV-3006 (Note: group size is 6 persons)	

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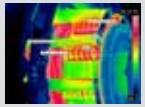
ITC Infrared Application and System Consultancy 	**Duration:** Customized. **Target group:** Advanced users who wish to receive in-depth guidance on complex problems related to infrared equipment, applications, and measurement questions. **Recommendations:** Basic knowledge of thermography and related areas. • Experience of measurement techniques and general software skills. **Prerequisites:** None.	Consultancy can be described as any action or arrangement that is not strictly a training course. Most likely, a thermal camera will be involved. It can be, but is not restricted to: • In-depth pre-sales equipment or software demonstration. • In-depth equipment and software demonstration and explanation. • Advanced technical support. • Application support. • Comparative study involving a camera, either alone or in conjunction with other instruments. • General measurements in a difficult or unusual situation.	ITC-EXP-1050 (Note: price is per day)	
ITC Customized workshop 	**Duration:** 8 hours. **Target group:** Highly specialized users with advanced and scientific applications as well as anyone interested in these applications and related infrared equipment. **Recommendations:** • Basic knowledge of thermography and related areas. • Experience of measurement techniques and general software skills. **Prerequisites:** None.	This is a special course with an emphasis on specifications of equipment for use in particular applications (e.g., triggering or high speed). It mainly addresses the needs of high-end camera users in scientific and industrial fields.		ITC-EXP-1041 (Note: price is per day and person)
Travel and lodging expenses for instructor		Fee for travel and lodging sorted by course and country.	ITC-TOL-1001 (Europe, Balkans, Turkey, Cyprus) ITC-TOL-1002 (Russia/GUS, North Africa) ITC-TOL-1003 (Middle East, Central and South Africa) ITC-TOL-1004 (various) ITC-TOL-1005 (other)	
ITC travel time for instructor		Fee compensating for the instructor's travel time (at cost).	ITC-TFT-0100	
ITC online courses 	**Duration:** 30 minutes or more. **Target group:** Can be course dependent but, in general, anyone interested in infrared thermography and its applications. **Recommendations:** Interest in the technology and its applications. **Prerequisites:** PC/mobile device with a speaker/headset and internet access.	New thermographers can learn the basics of thermal imaging, and experienced thermographers can refresh their knowledge. While there is no substitute for hands-on thermography certification training, these online courses provide students with important foundational knowledge.	http://www.irtraining.com For some courses, fees may apply	
ITC webinars 	**Duration:** Usually 1 hour. **Target group:** Anyone interested in infrared thermography and its applications. **Recommendations:** Interest in the technology and its applications. **Prerequisites:** PC/mobile device with a speaker/headset and internet access.	ITC's live webcasts and on-demand webinars cover a variety of topics, both product and application related.	http://www.irtraining.eu/en/webinars/webinars.html	

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