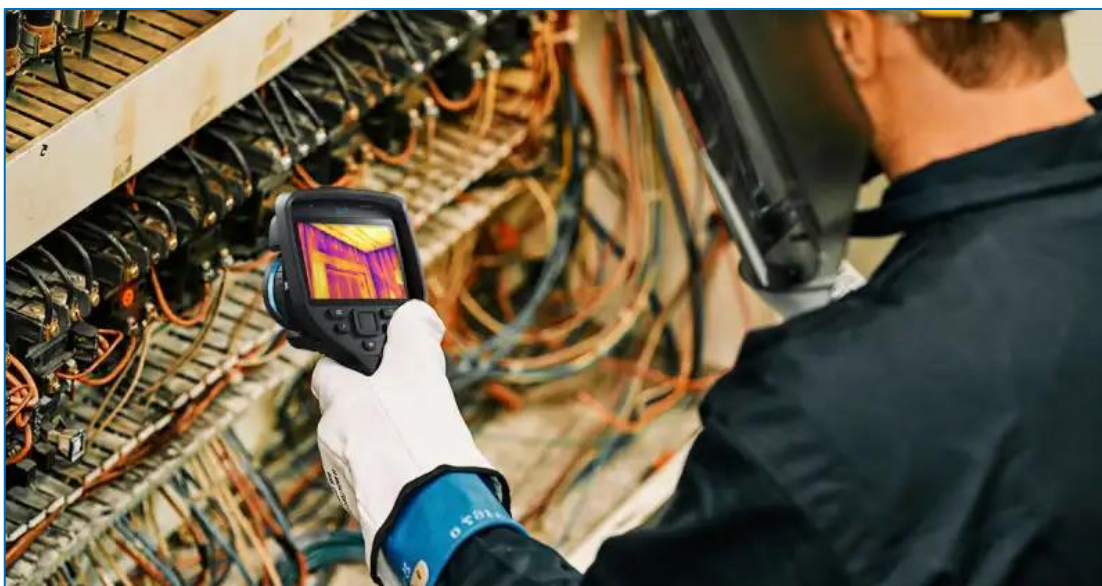




ME210: Thermal Imaging Expert

Training Description:

This training course equips you with the foundational knowledge and practical skills to confidently leverage thermal imaging technology in various professional settings. Dive into the fascinating world of heat detection, exploring the science behind thermal cameras, mastering image acquisition and analysis techniques, and discovering diverse applications across industries. Whether you're a building inspector, maintenance technician, or simply passionate about this cutting-edge technology, this course will unlock your path to becoming a Thermal Imaging Expert.

Training Objectives:

By the end of the training, participants will be able to:

- ✓ Master the fundamentals of thermal physics and heat transfer
- ✓ Demystify the technology behind thermal imaging cameras: types, capabilities, limitations
- ✓ Become proficient in setting up, operating, and maintaining thermal imaging equipment
- ✓ Develop expert image acquisition skills: targeting, scanning techniques, data collection methods
- ✓ Learn advanced image analysis techniques using software tools and interpretation strategies
- ✓ Identify and diagnose common issues in buildings, electrical systems, and industrial equipment using thermal data
- ✓ Discover diverse applications of thermal imaging: building inspections, energy audits, predictive maintenance, security and surveillance, search and rescue
- ✓ Understand legal and ethical considerations for using thermal imaging technology
- ✓ Develop effective communication skills to present thermal findings to diverse audiences

Training Designed for:

This course is intended for Individuals with no prior experience with thermal imaging. Professionals seeking to expand their skillset and incorporate thermal imaging into their work. Anyone curious about the potential of thermal technology and its exciting applications.

Training Requirement:

"Hand's on practical sessions, equipment and software will be applied during the course if required and as per the client's request."

Contents can be adapted to your specific wishes. It is therefore possible to focus on specific modules of the training course as per client's learning needs and objectives. Further, it should be forwarded to us a month prior to the course dates.

Training Program:

FIVE DAYS:

- ❖ Introduction
- ❖ Module 1: Introduction to Thermal Imaging
 - Understanding the concept of heat and infrared radiation
 - Exploring different types of thermal cameras: resolution, sensitivity, features
 - Image quality factors: ambient temperature, emissivity, calibration
 - Safety protocols and best practices for operating thermal imaging equipment

- ❖ **Module 2: Image Acquisition and Analysis**
 - Setting up and operating thermal imaging cameras effectively
 - Targeting techniques and scan patterns for optimal data collection
 - Utilizing software tools for image analysis: contrast and color adjustments, annotations, measurements
 - Interpreting thermal patterns and anomalies: hot spots, cold spots, temperature gradients
- ❖ **Module 3: Building Applications**
 - Identifying air leaks, insulation deficiencies, and moisture intrusion in buildings
 - Detecting electrical faults, overheating components, and potential fire hazards
 - Evaluating building envelope performance and energy efficiency with thermal imaging
 - Conducting pre-purchase inspections and building diagnostics using thermal data
- ❖ **Module 4: Industrial and Maintenance Applications**
 - Locating mechanical faults, wear, and misalignment in equipment using thermal imaging
 - Detecting electrical faults, overheating components, and potential fire hazards
 - Implementing predictive maintenance programs based on thermal data analysis
 - Optimizing industrial processes and improving equipment reliability with thermal inspections
- ❖ **Module 5: Security, Surveillance, and Search and Rescue**
 - Utilizing thermal imaging for perimeter security, intruder detection, and night vision
 - Search and rescue operations in low-visibility conditions or hazardous environments
 - Tracking wildlife and monitoring environmental processes with thermal data
 - Understanding legal and ethical considerations for thermal imaging use in security and surveillance applications
- ❖ **Module 6: Reporting and Communication**
 - Developing effective reporting skills for presenting thermal findings in written and visual formats
 - Explaining thermal data to non-technical audiences in a clear and concise manner
 - Preparing professional reports and presentations with thermal images and analysis results
- ❖ Course Conclusion
- ❖ POST-ASSESSMENT and EVALUATION

Training Methodology:

This interactive training course includes the following training methodologies as a percentage of the total tuition hours:

- 30% Lectures, Concepts, Role Play
- 70% Workshops & Work Presentations, Techniques, Based on Case Studies & Practical Exercises, Gamification, Software & General Discussions
- Pre and Post Test

Training Certificate(s):

CMCT Internationally recognized certificate(s) will be issued to each participant who completed the course.

Training Fees:

TBA as per the course location - This rate includes participant's manual, hand-outs, buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Note: The 5% VAT (Value Added Tax), will be effective starting 01st of January 2018 as per the new regulation from the UAE Government. The VAT applies for all quotation both for local and abroad.

Training Timings:

Daily Timings:

07:45 - 08:00	Morning Coffee / Tea
08:00 - 10:00	First Session
10:00 - 10:20	Recess (Coffee/Tea/Snacks)
10:20 - 12:20	Second Session
12:20 - 13:00	Recess (Prayer Break & Lunch)
13:00 - 14:00	Last Session

For training registrations or in-house enquiries, please contact:

Aisha Relativo - Training & Career Development Manager

aisha@cmc-me.com / training@cmc-me.com

Tel.: +971 2 665 3945 or +971 2 643 6653 | Mob.: +971 52 2954615