



Metrologie S.r.l.

Via S. Predengo, 27/29 – Costa S. Abramo

26022 Castelveverde (CR)

Tel. 0372 807529

e-mail info@metrologie.it

www.metrologie.it

TRAINING COURSES

Metrologie, thanks to the cooperation with qualified teachers, designs and tailors targeted training courses in order to update companies' technical staff.

REGISTRATION:

It is necessary to fill in the **registration form** available on our website www.metrologie.it in the Training and Consulting section or by contacting the company directly.

In addition to the courses listed below, it is possible to request customized courses that will be studied defined and developed by Metrologie according to the specific needs of the customer.

All courses will be activated only with **at least 4 participants**

A **certificate of attendance** will be issued at the end of the course.

LOCATIONS:

The courses can be organized at the Metrologie headquarters in Cremona, in Varese or other locations if requested by the customer.

RIGHT OF WITHDRAWAL:

METROLOGIE reserves the right to postpone or cancel the course, in this case each variation will be promptly reported.

In case of cancellation by the participant Metrologie should be informed within 5 working days before the start of the course, a 30% fee will be required.

In the case of an unreported absence of the participant, the company will be required to pay the full participation fee.

PAYMENT METHOD:

This information is provided directly by the staff when the registration form is requested.

Included in the participation fee: **teaching materials - lunch - coffee-break**

Payment options: to be agreed

COURSES CALENDAR

TYPE OF COURSE:

- THE ISO IEC 17025 STANDARD
- THE ISO IEC 9001-17025-10012 STANDARD
- ELECTRICAL MEASURES
- BASIC METROLOGY
- TEMPERATURE MEASUREMENTS

Following the courses programs in detail:

Training course: "The ISO IEC 17025 standard"

Duration: 3 days

Dates: to be agreed

Note: The course will be activated with a minimum of 4 participants

SCHEDULE:

Quality concept Regulatory bodies - Reference standards

- Standard 17025
- Application Purpose and scope
- Terms and definitions
- Management requirements - Quality manual
- Technical requirements - Operating manual
- Documents and records control
- Metrology Confirmation Calibration Process - Metrology Verification - Acceptance Limits
- Measurement Procedures



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Training course: "The ISO IEC 9001 - 17025-10012 standard"

Duration: 3 days

Dates: to be agreed

The course will be activated with a minimum of 4 participants

SCHEDULE:

Quality concept Regulatory bodies - Reference standards Illustration of Standard 9000-9001

- Standard 17025
- Application Purpose and scope
- Terms and definitions
- Technical requirements - Operating manual
- Documents and records control
- Standard 10012
- Application Purpose and scope
- Terms and definitions
- Metrologic Confirmation Process

Training course: "Electrical Measurements"

Duration: 3 days

Dates: to be agreed

Note: The course will be activated with a minimum of 4 participants

SCHEDULE:

The aim of the course is to enable low frequency electrical measuring instruments users to ensure the traceability of measurements to national samples and to meet the criteria required by the company in line with the requirements of ISO 9001:2008 and ISO/IEC 17025 series.

- Introduction to Electric Metrology
- The traceability of an electrical measurement laboratory: Laboratory characteristics, measurement methods and metrological chains
- Generators and meters multifunction instruments
- Interpretation of instrumental specifications

- Criteria for drawing up management procedures standard instruments and calibration procedures for external clients
- Example of calibration certificate of a meter/generator in accordance with current legislation.
- Practical examples of laboratory calibration

Training course: "Basic metrology"**Duration: 3 days****Dates: to be agreed****Note: The course will be activated with a minimum of 4 participants****SCHEDULE:**

The course is the foundation for to all other courses in the metrology area.

It is targeted for technicians who intend to deepen the topics of metrological referability for a correct setting of measuring systems and certification systems of products and services with information on the National Calibration System and its links with the International Metrological Organizations.

- International Organisation of Metrology
- The National Calibration System (SNT), the national samples and their dissemination
- Calibration Service in Italy and quality assurance of measures
- Referability and uncertainty: PUMA method and decision-making rules
- Legislation and practice for the management of tools in companies
- European metrology directives and their legal implementation
- Assurance of the traceability of measures in holdings
- Verification of regulatory aspects required by ISO 9000
- Metrological confirmation of instrumentation according to ISO 10012
- The management of the instrumentation within the company and the management of the personnel assigned
- Evaluators of quality systems feedback



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Training course: "Temperature measurements"

Duration: 2 days

Dates: to be agreed

Note: The course will be activated with a minimum of 4 participants

SCHEDULE:

- Method of operation:
 - o Thermocouple thermometers
 - o Resistance thermometers
- Connections
- Testing method
- Reference legislation:
 - o Classification
 - o Reference table
 - o Tollerances
- Description of calibration methods for comparison
- Measurement results analysis
 - o Measurement uncertainty
 - o Measurement error
 - o Accuracy
 - o Correction and correction factor
- Calibration certificates and reports

Training course: "Validation of thermal processes"

Duration: 3 days

Dates: to be agreed

Note: The course will be activated with a minimum of 4 participants

PRESENTATION

The correct setting of a validation and good knowledge of thermal processes leads to greater confidence and security of their facilities.



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In particular, the certification of products, machinery and systems requires proper organization and traceability of measures to European directives.

The course presents the essential aspects for the organization and execution of a validation in the production environment and services in a simple and practical way.

PURPOSE

The course is targeted for technicians, who carry out or follow within their pharmaceutical company validating machinery, environments and processes and who want to deepen and clarify the issues and problems related to the approach, the drafting, compilation and implementation of validation.

SCHEDULE:

- History of sterilization
- Sterilization principles
- Sterilization regulations
- Sterilization control regulations (chemical and biological indicators)
- Packaging regulations
- Installation qualification
- Operation qualification
- Benefits qualification
- F0 and FH
- Sterilization and deprogenation
- Calibration of autoclave and furnace instrumentation
- Validation operations equipment
- Approach to validation
- Validation results evaluation
- Steriliser tuning during validation
- Use of biological indicators
- Overkill approach
- Bioburden