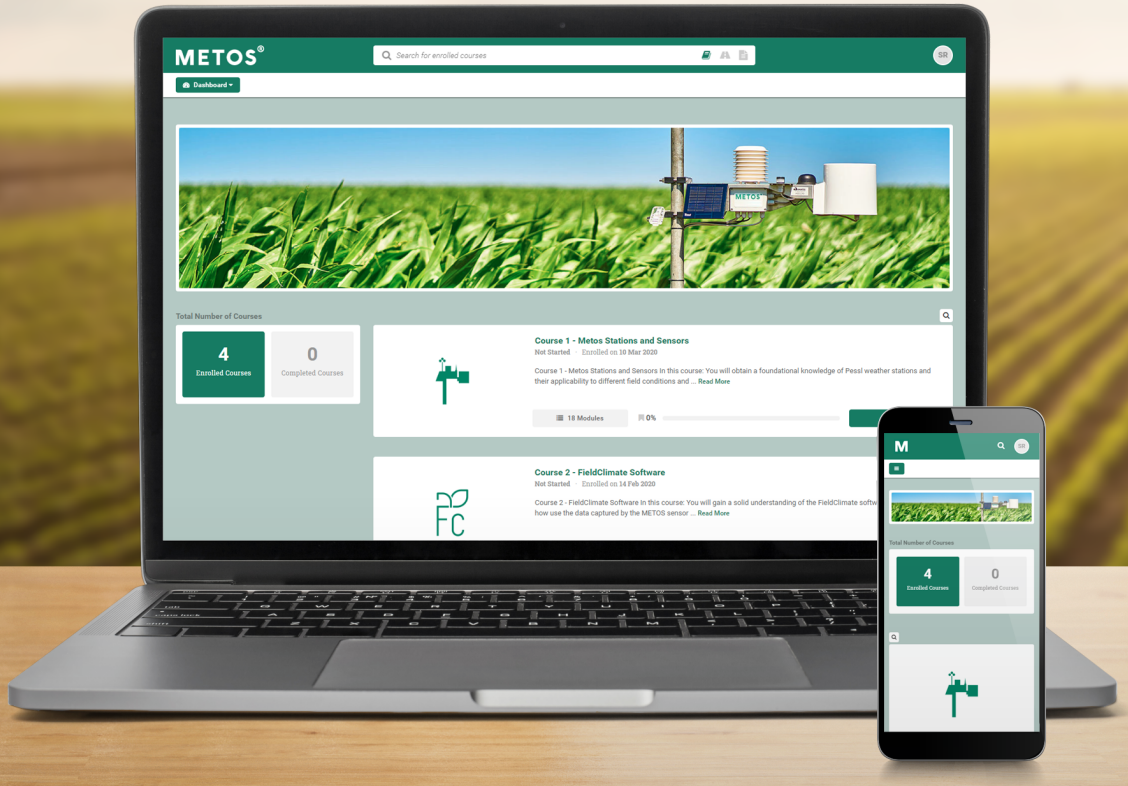
METOS®

TECHNICIAN / INSTALLER
eLEARNING & CERTIFICATION



METOS®

METOS - CERTIFICATION PROGRAM

METOS STATION & FIELDCLIMATE SOFTWARE CERTIFICATION

Course 1
Metos Stations and Sensors

In this course:

You will obtain a foundational knowledge of Metos stations and their applicability in different field conditions and needs. Common station sensors are covered in detail, in addition to soil moisture, related sensors and environmental monitoring hardware.

Estimated Learning Time: 70 min

Topics covered:

Pessl Suite of Stations
- Selection of a Device

Common Station Sensors
- Global Solar Radiation Sensor (Pyranometer)
- Hygroclip Temperature and RH Sensor
- Leaf Wetness Sensor
- Pessl Instruments Temperature and RH Sensor
- Precipitation Sensor (Rain Bucket)
- Wind Speed and Direction Sensors

Soil Moisture Theory
- Introduction to Soil Moisture Theory
- Field Capacity, Refill, Wilting Point
- Evapotranspiration

Soil Moisture Sensors
- Overview and Tensiometric Sensors
- Volumetric Sensors
- Soil Moisture Sensor Hardware

By the end of this course you will be able to:

- Understand the main features and differences between Metos most popular in-field stations and sensors
- Develop a basic understanding of soil moisture including soil types, field capacity, and key terms
- Understand the various soil and environmental sensors curated and available through METOS

1 Exam
Pass or Retake the Course

Course 2
FieldClimate Software

In this course:

You will gain a solid understanding of the FieldClimate software platform and how use the data captured by the METOS sensors and hardware. Topics covered include adding users, stations, and devices; the general layout and display settings; soil moisture displays; and, forecast, disease, and work planning tools.

Estimated Learning Time: 86 min

Topics covered:

Adding Users
- Registration and Login

Adding Stations & Devices
- Adding a Station or Device

General Layout, Configuration, Display
- General Interface
- Dashboard
- Station Settings
- Sensor Data

Soil Moisture Layout and Tools
- Soil Moisture Page Introduction
- Soil Moisture Data - Part 1
- Soil Moisture Data - Part 2
- Soil Moisture Tools - Part 1
- Soil Moisture Tools - Part 2

Forecast, Disease, and Work Planning Tools
- Forecasting Tools
- Disease Modeling Tools
- Work Planning Tools

By the end of this course you will be able to:

- Register a FieldClimate account, add users and connect hardware
- Navigate the FieldClimate software effectively
- Access and interpret basic soil moisture data
- Access forecasting, disease modeling, and work planning tools

2 Exam
Pass or Retake the Course

Questions? Please contact:

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METOS STATION & FIELDCLIMATE SOFTWARE CERTIFICATION

Course 3
Station Preparation & Installation

In this course:

You will discover the steps required to prepare for and complete the installation of your station, including tips, tricks and key considerations.

Estimated Learning Time: 60 min

Topics covered:

Component Preparation
- Unboxing - iMETOS 3.3
- Unboxing - ECO D3

Updating the Firmware
- Firmware Updates - iMETOS 3.3
- Firmware Updates - ECO D3

SIM Cards
- Understanding SIM cards for your devices

Device Set Up in FieldClimate
- Adding a station to FieldClimate

Site Locations & Installations
- Confirming Connectivity - Local
- Station Assembly
- Validating Station Functionality

Soil Moisture Sensor Installations
- Soil Moisture Sensor Installation

Confirming Communication To Pessl
- Confirming Connectivity - Remote

By the end of this course you will be able to:

- Unpack and prepare your station for installation
- Assemble and install your station
- Identify and install a variety of common soil moisture sensor types
- Test and validate station functionality both locally and remotely

3 Exam
Pass or Retake the Course

Course 4
Maintenance, Repair, and Off Season Storage

In this course:

You will discover the support tools and processes available to you, including step by step diagnostics, tips, tricks, and key considerations.

Estimated Learning Time: 100 min

Topics covered:

Maintenance and Troubleshooting
- iMETOS and ECO D3
- Rain Gauge
- Leaf Wetness, Air Temperature, RH
- Pyranometer, Wind
- Water Level, Soil Moisture and Temperature

Communication Tools
- Connecting to a Station
- Terminal Mode
- Manual Firmware Update
- Connecting Tera Term

Manuals
- Product Manuals

Diagnostics, Procedures & Repairs
- Tera Term – Intro
- Tera Term – Data Logger
- Tera Term – Modem
- Tera Term – Sensors
- Tera Term – Clear Sensor Configuration
- Rain Gauge – Test
- Replacing rain gauge cable

Off Season Storage
- Off-season storage

Submitting Support Tickets
- Contacting Metos Support

By the end of this course you will be able to:

- Perform regular maintenance on a variety of hardware
- Connect to and diagnose hardware and software issues using Tera Term
- Understand the requirements for proper off-season storage
- Find additional technical information and request expert support from Pessl

4 Exam
Pass or Retake the Course

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METOS STATION & FIELDCLIMATE SOFTWARE CERTIFICATION

Course 5
iMETOS IMT Weather Station

In this course:

You will dive deeper into the iMETOS 3.3 station, including a guided overview of the hardware, sensor options, assembly and installation.

Estimated Learning Time: 42 min

Topics covered:

IMT Station - Detailed Product Info
- iMetos 3.3 Course Introduction

IMT Station - Sensor Review
- Motherboard Layout of an iMetos 3.3
- Sensor Compatibility
- Hardware Overview and Assembly

IMT Station - Installations
- Station & Sensor Installation

Circuit Board Details
- iMETOS Board and Functionality
- iMETOS Motherboard Functional Overview
- LED and Light Indicators

Firmware Specifications
- Updating your iMETOS 3.3

By the end of this course you will be able to:

- Identify key components of the iMETOS 3.3 hardware
- Identify the motherboard connections for each sensor and system component
- Assemble and install the iMETOS 3.3 system
- Demonstrate a working knowledge of the best practices and key considerations for installation

5 Exam
Pass or Retake the Course

Course 6
ECO D3 Station

In this course:

You will dive deeper into the ECO D3 station, including a guided overview of the hardware, sensor options, assembly and installation.

Estimated Learning Time: 42 min

Topics covered:

ECO D3 - Detailed Product Info
- ECO D3 Course Introduction

ECO D3 Station - Sensor Review
- Motherboard Layout
- Sensor Compatibility
- Hardware Overview and Assembly

ECO D3 Station - Installations
- Station & Sensor Installation

Circuit Board Details
- ECO D3 Board and Functionality
- Motherboard Functional Overview
- LED Indicator Lights

Firmware Specifications
- Updating your ECO D3

By the end of this course you will be able to:

- Identify key components of the ECO D3 hardware
- Identify the motherboard connections for each sensor and system component
- Assemble and install the ECO D3 system
- Demonstrate a working knowledge of the best practices and key considerations for installation

6 Exam
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METOS STATION & FIELDCLIMATE SOFTWARE CERTIFICATION

Course 7
iSCOUT

In this course:

You will dive deeper into the iSCOUT station, including a guided overview of the hardware, trap options, assembly and installation.

Estimated Learning Time: 40 min

Topics covered:

- Introduction and Types of iSCOUTS
- Setting up your iSCOUT
- PC Connection and Preparation for Installation
- Installation
- Assessing Images in FieldClimate
- Value Proposition and Summary

By the end of this course you will be able to:

- Identify key components and types of the iSCOUT
- Connecting and setting up the iSCOUT
- Installation of the iSCOUT system
- Account setup and assessing pictures in FieldClimate
- Value proposition and summary

7 **Exam**
Pass or Retake the Course

Course 8
CropVIEW Cameras

In this course:

You will dive deeper into the CropVIEW station, including a guided overview of the hardware, camera options, assembly and installation.

Estimated Learning Time: 65 min

Topics covered:

- Introduction and Types of CropVIEW
- Setting up your CropVIEW
- Focus Process
- Preparation for Installation
- Installation
- Using your CropVIEW
- Value Proposition and Summary

By the end of this course you will be able to:

- Identify key components and types of the CropVIEW
- Connecting and setting up the CropVIEW system
- Focusing the cameras
- Installing the CropVIEW
- Account setup and assessing pictures in FieldClimate
- Value proposition and summary

8 **Exam**
Pass or Retake the Course

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METOS STATION & FIELDCLIMATE SOFTWARE CERTIFICATION

Course 9
Spray Applications

In this course:

You will learn the various weather factors, sensors and solutions that are required for successful spray applications.

Estimated Learning Time: 68 min

Topics covered:

- Agenda and Factors
- Weather Factors
- Weather Factors and Delta T
- Delta T Alerts and Summary
- Value Proposition
- Work Planning
- Forecasted Protection Model
- Demo of Spray Applications
- Benefits and Summary

By the end of this course you will be able to:

- Know which sensors are required for spray applications
- Know which weather factors and forecasts are important
- Understand how Delta T is calculated and which values are important
- Understand how the plant protection model works
- Have an understanding of the benefits and ROI for spray applications

9 **Exam**
Pass or Retake the Course

Course 10
Disease Applications

In this course:

You will learn the various weather factors, models and solutions that are required for disease management.

Estimated Learning Time: 46 min

Topics covered:

- Agenda and Disease Modeling Background
- Disease Modeling and Constraints, and Localized Weather Factors
- Value Proposition for Wheat Disease Models
- Fusarium Model Example
- Work Planning Tools - Plant Protection, Growing Degree Days, CropView
- Disease Applications and CropView
- Demonstration of Disease Modeling
- ROI, Benefits and Summary

By the end of this course you will be able to:

- Understand the disease triangle
- Know which sensors are required for disease management
- Know which weather factors and forecasts are important
- Understand how a disease model is created and used
- Understand the importance of localized meteorological factors
- Understand how other tools are combined with disease modeling
- Understand how the disease model works in FieldClimate
- Have an understanding of the benefits and ROI for disease management

10 **Exam**
Pass or Retake the Course

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METOS STATION & FIELDCLIMATE SOFTWARE CERTIFICATION

Course 11
Forecast Applications

In this course:

You will learn about site specific weather forecasts-monitoring and how these are combined in work planning tools for your fields.

Estimated Learning Time: 51 min

Topics covered:

- Holistic Solutions for Smart Ag and Precision Forecasting
- Meteorological Monitoring and Site Specific Forecasts
- Forecasting in FieldClimate
- Value Proposition and Actionable Forecast Tools - Interpreting the Data
- Precision Forecasts and Field Specific Work Planning Tools
- Live Demo in FieldClimate
- Return of Investments, Benefits and Summary

By the end of this course you will be able to:

- Understand what precision forecasting is
- Know what meteorological monitoring is and what is required
- Understand site specific forecasts for field operations
- Understand FieldClimate's site specific forecasts
- Know the value proposition and actionable forecast tools – interpreting the data
- Know how precision forecasts and field specific work planning tools are combined
- Explore the return on investment, benefits and summary

11 Exam
Pass or Retake the Course

Course 12
Soil Moisture and Plant Nutrition

In this course:

You will understand the relationship between soil moisture and nitrogen for crop development and yield.

Estimated Learning Time: 78 min

Topics covered:

- Agenda and Introduction
- Where and How, Plant Available Water (PAW)
- Modeled Soil Moisture
- Measuring Soil Moisture
- Soil Moisture and Yield Potential
- Live Demo in FieldClimate
- ROI, Cost Benefits and Summary

By the end of this course you will be able to:

- Understand why soil moisture is fundamental for crop development and yield
- Where and how water is held in the soil and what is PAW
- Understand the terms field capacity, wilting point and available water for different soils
- Understand how soil moisture is determined - both modeled and measured methodologies
- Understand the impact of soil moisture and nitrogen on yield potential
- Explore various methods on yield prediction based on soil moisture
- Explore the return on investment, benefits and summary
- Examine live actionable tools for soil moisture and nutrient management

12 Exam
Pass or Retake the Course

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METOS STATION & FIELDCLIMATE SOFTWARE CERTIFICATION

Course 13
MobiLab: Nutrient Management

In this course:

You will explore how to test for soil nutrients from your fields right in your office and you will also learn about sample collection, field apps, desktop software and hardware for nutrient testing, using Electrophoresis.

Estimated Learning Time: 80 min

Topics covered:

- Introduction, What Chemical can be Measured and Components of MobiLab
- Setting up the System
- Sample Preparation (Soils)
- Sample Measurement
- Cleaning and Other Things You Should Know
- Live Demo - Putting it all Together, How it Works
- ROI, Summary and Benefits
- Manuals, Trouble Shooting Guide, MobiLab App Manual

By the end of this course you will be able to:

- Know what chemicals can be measured
- Know the components of MobiLab – LoaC
- Understand how to set up the system
- Know how to sample preparation (Soils)
- Know how to make a sample measurement
- Know how to clean the MobiLab
- Know what other things you should know
- Understand the live demo on putting it all together
- Understand the ROI, summary and benefits

13 Exam
Pass or Retake the Course

Course 14
MicroMetos: LoRA and NB-IoT

In this course:

You will dive deeper into the µMicro station, including a guided overview of the communication types, hardware, sensor options, assembly and installation.

Estimated Learning Time: 40 min

Topics covered:

- Introduction to µMetos Solutions
- µMetos Solution Types and Specifications
- Components and Starting Up the µMetos
- Setup and Installing of the µMetos
- Using Your µMetos Device in FieldClimate and General Maintenance
- µMetos Quick Start Up Guide

By the end of this course you will be able to:

- Understand the µMETOS Soil and Clima Solutions
- Understand the LPWAN Data Logger for Remote and Urban Areas (with LoRaWAN® or NBIoT connectivity)
- Understand the µMETOS Solution Types
- Understand the µMETOS Soil Specifications
- Understand the µMETOS CLIMA Specifications
- Understand the components of µMETOS Soil and CLIMA
- Know how to start the µMETOS Soil and CLIMA
- Know how to set up the µMETO Soil and CLIMA
- Know how to use your µMETOS
- Know how to maintain your µMETOS

14 Exam
Pass or Retake the Course

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METOS STATION & FIELDCLIMATE SOFTWARE CERTIFICATION

Course 15
Metos FarmView

In this course:

You will explore FarmView, a tailor-made geospatial tool that helps you to understand fields through space and time. It combines existing iMETOS® hardware and software with satellite data to deliver a complex but easy to use monitoring system for your fields – actionable tools.

Estimated Learning Time: 60 min

Topics covered:

- Introduction to FarmView
- Layout and Setup of FarmView
- Setup of the Irrimet Tool
- Using the Irrimet Decision Support Tool
- Setup and Using the Sum Soil Moisture Decision Support Tool
- Example of the Water Balance and Sum Soil Moisture Decision Support Tools
- New Features Coming to FarmView
- FarmView Benefits, ROI and Summary
- Live Demo and Quick Setup of FarmView

By the end of this course you will be able to:

- Understand what FarmView is
- Explore FarmView layout and setup
- Understand how to define Cropzones
- Know how to setup the Irrimet module
- Know how to use the Irrimet decision support tool
- Know how to setup soil moisture sum for sensors
- Know how to use the soil moisture sum decision support tool
- Explore examples of water balance and soil moisture sum modules
- Explore the new features coming to FarmView
- Understand the ROI, summary and benefits

15 Exam
Pass or Retake the Course

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