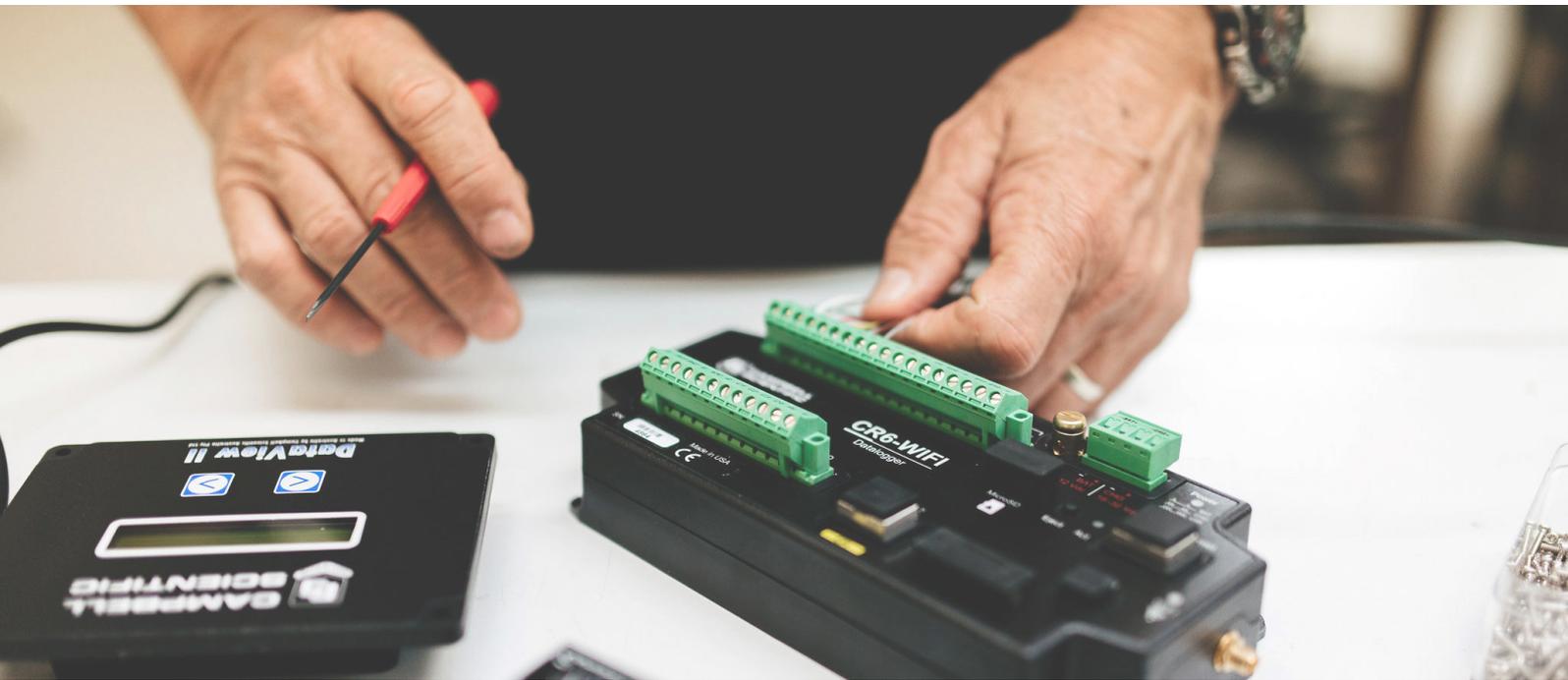


# Introduction to Dataloggers & CRBasic

## Getting the best from your Datalogger



This two day introductory training course will teach you the fundamentals of programming Campbell Scientific dataloggers, specifically the CR1000, CR300 and CR6 series of table based dataloggers using LoggerNet with CRBasic.

Day one of the course provides a good introduction to using LoggerNet to administer, program and collect data from Campbell's most popular dataloggers.

Day two of the course will teach you how to customise a datalogger program to suit different sensor and data storage requirements.

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The trainer is the best I have ever met. We got more than expected from Campbell. Thank you very much for the course and hospitality.

The facilities and equipment provided for the course were excellent.

It was extremely useful to get hands-on experience with a variety of instruments and learn how to use them with the logger.

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# Course Overview

## Day 1 : Software and Datalogger Hardware

### Device Configuration Utility

- Changing datalogger settings using Devconfig
- Sending an Operating System to the datalogger

### Introduction to Loggernet

- Creating a New Station Profile in the setup screen
- Connecting to a datalogger using Connect Screen
- Setting the datalogger clock
- Sending a program to the datalogger

### Working with Data

- Monitoring and graphing Real Time Data
- Downloading data from the datalogger
- Viewing historical data using View Pro

### More LoggerNet Features

- Accessing files via File Control
- Using the Terminal Emulator with SDI12 Sensors
- Downloading data on a schedule
- Monitoring schedules with the Status Monitor
- Displaying data with RTMC

### Troubleshooting

- Interpreting the Status Table and Log Tool

### Hardware and Measurement Theory

#### The CR1000 Wiring Panel

#### Datalogger Power Requirements

#### Analogue Measurement Channels

- Ground versus Analogue Ground
- Analogue Excitation Channels
- Pulse Counting Channels
- Digital I/O Channels

#### The Keypad Display

- Changing Settings using the Keypad
- Monitoring Data using the Keypad
- Custom Keypad Menus

## Day 2: Datalogger Programming

### Data Types and Formats

- Available Data Types
- FP2 versus IEEE4

### The CR Basic Editor

- Help System
- Commenting and Syntax Highlighting
- Introduction List

### Program Templates

- Introduction to Programming
- Measurement and Control Example Program
- Declaring Variables
- Declaring DataTables

### Creating a Main Program

- Measurement and Control Example Program
- Using If-Then-Else Statements
- Using Program Features
- Dim, Alias and Const instructions

### Sub Routines

#### For Loops

#### Sensor Examples

- Voltage Output Sensors
- Resistive Sensor
- 4-20 mA Sensor
- SDI-12 Sensor

#### Multiplexer

#### Programming with Shortcut

#### Choosing Sensors

#### Defining Data Tables

#### Wiring List and Output Files

## Important Information

- Course commences 9am each morning and finishes at 5pm, there is ample parking on site.
- Lunch and training materials are provided. Please advise of any special dietary requirements before the course.
- Accommodation and travel is not included but we can provide local recommendations.
- All courses are taught using the latest version of LoggerNet software, all equipment is provided.
- All fees must be paid in full prior to the course by either credit card or invoice. Full refunds are given up to 2 weeks before the course, cancellations after this time attract a 20% charge. No refund is given for cancellations 24 hours prior to commencement.
- Participant substitutes are welcome at any time prior to commencement of the course. No substitutes welcome after the course has begun.



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