



# Advanced Agilent VEE Pro

## Course Overview

### Course Numbers:

Agilent Training Center: H7218A-300

Onsite Training: H7218B-300

**Learn to master the Agilent Visual Engineering Environment to create dynamic problem solving models and to create programs faster.**

### Course Overview

This course will present detailed instruction, explanation and training for advanced programming of the current version of VEE Pro.

### What you will learn

- Perform advanced instrument control programming
- Specify and design efficient, supportable and structured VEE Pro programs
- Control applications using ActiveX Automation
- Add new functionality into VEE Pro using ActiveX Controls
- Invoke MATLAB® scripts from VEE Pro
- Access the extensive Microsoft® .NET Framework from VEE Pro
- Integrate VEE Pro with C/C++ compiled programs

### Specifications

#### Course Type

User/Application Training

#### Audience

The advanced course is designed for scientists, engineers and programmers.

#### Prerequisites

Students must have taken "Introduction to VEE Pro," or have at least six months experience in VEE Pro program development.

#### Course Length

Four days

#### Course Format

60% Lecture; 40% Labs

#### Delivery Method

*Scheduled* (at Agilent training locations) or *Dedicated* (at customer site)  
To save you time and travel, many Agilent courses can be delivered at your site. Agilent can provide required equipment, or save money by furnishing your own.

### Detailed Course Agenda

#### Day 1

VEE Pro Basics Introduction and Review

Advanced Instrument Control

- Software architecture description (program/drivers/VISA/SICL/Interface)
- Driver interests (share, maintenance)
- Direct I/O implementation: how it works, SCPI implementation, tips, control inputs
- Advanced I/O objects: interface operations, device events, implementing interrupts
- Creating an I/O library: design considerations, error handling, state tracking, multiple instance, initialized function
- PCI plug-in card support
- Direct access of VXI registers and memory



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## Day 2

### Advanced Programming Practices

- Developing software requirements
- Constructing an effective VEE Pro program integrated C language programs:
  - Using C functions library
  - Importing libraries
  - Definition files
  - Error trapping

## Day 3

### ActiveX

- Overview of ActiveX
- Controlling Microsoft Excel using ActiveX Automation
- VEE Pro as an ActiveX Automation server
- Adding ActiveX controls to VEE Pro programs

## Day 4

### Microsoft .NET Framework

- Overview of the .NET Framework
- Using the System menu
- Adding custom .NET functionality to VEE Pro programs

### MATLAB Scripts

- MATLAB script basics
- Passing VEE Pro data to MATLAB script
- Passing MATLAB script results to VEE Pro
- Using MATLAB's signal processing toolbox

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