Keysight provides a comprehensive portfolio of technical training courses that allow you to achieve the technical proficiency necessary to optimize the effectiveness of your Keysight test equipment.
Continuous Professional Development (CPD) is essential to ensure that you maximize your technical competence. Keysight Technologies maintains a comprehensive portfolio of technical training courses designed to allow you to achieve the mastery necessary to optimize the use of your Keysight test equipment.

The courses are structured into training modules that focus on specific areas of technical or equipment expertise. Mastery modules exist for RF/MW, the PNA-X, Phase Noise measurements, Modulation measurements and others.

A complete list of the modules available together with the associated courses is included in the Table of Contents of this document.

The catalog provides details for each of the courses in a convenient datasheet format. The datasheet gives an outline agenda, summarizes the material that will be covered and provides a link for you to register for the course.

Keysight is committed to supporting you in your CPD so you can get the most from its test equipment. We look forward to welcoming you to one or more of our technical courses.

Lon Hintze
Application Engineering District Manager
Keysight Technologies
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<td>Wireless LAN Technology</td>
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Course Overview
This class covers the principles of microwaves on transmission lines and power measurements, the proper use and care of cable and connectors, signal sources, mixers, and modulation techniques; and the use of signal types in test applications.

What you will learn
At the end of the course, you will be able to interpret specifications in data sheets, understand practical microwave measurements, the importance of proper impedance matching in high-frequency microwave circuits, how and why SWR, power, and noise measurements are made, and noise and its effect on microwave circuits.

Who should attend?
Engineers and technicians who work with RF & microwave test instruments and want to review the fundamentals.

Prerequisites
A general understanding of electronics and measurement principles.

Course Length & Format
Four days, 60% lecture and 40% demonstration and hands-on labs

Delivery Method
The course is scheduled at various Keysight locations, or, to save time and travel, it can be delivered at the customer’s site. The training will normally use the customer’s equipment, however, if required, for an additional fee Keysight can supply the equipment.

Additional Information
Information on the calendar of courses, tailored courses and how to register is available on the final page of this document.
Cable and Connector Care

RF/MW Mastery

Gain a better understanding of RF Microwave test equipment

Course Overview
This course trains users of RF & Microwave test equipment on the correct use of cables and connectors.

What you will learn
At the end of the course, you will have fundamental knowledge about the types of connectors, basic construction of a coaxial cable, principles of connector care and connector specifications. During the course you will use a network analyzer to make measurements such as noise figure, phase noise and occupied bandwidth that show the importance of connector care.

Who should attend?
All technicians and engineers in the RF and Microwave industry whose job involves handling cables and connectors.

Prerequisites
None

Course Length & Format
Half-day, lecture and demonstration

Delivery Method
To save you time and travel, this course is delivered at the customer’s site. The training will normally use the customer’s equipment, however, if required, for an additional fee Keysight can supply the equipment.

Additional Information
Information on the calendar of courses, tailored courses and how to register is available on the final page of this document.

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Gain a better understanding of transmission lines

Course Overview
This course gives an overview of transmission line theory and practice.

What you will learn
After completing this course, you will be able to describe the concept of characteristic impedance of a transmission line, describe the relationship between characteristic impedance, termination impedance and reflections, compute VSWR, return loss and reflection coefficient and convert among these measures of reflection.

Who should attend?
New college graduates, technicians and junior engineers entering the RF and microwave technology field.

Prerequisites
None.

Course Length & Format
Half-day, 100% lecture.

Delivery Method
To save you time and travel, this course is delivered at the customer’s site. The training will normally use the customer’s equipment, however, if required, for an additional fee Keysight can supply the equipment.

Additional Information
Information on the calendar of courses, tailored courses and how to register is available on the final page of this document.
General Spectrum Analysis

RF/MW Mastery

Gain a better understanding of spectrum analysis measurements

Course Overview
This course is designed to provide theoretical fundamentals and a demonstration of practical spectrum analysis measurements.

What you will learn
After completing this course, you will be able to operate Keysight spectrum analyzers, explain the fundamental block diagram and technical specifications of a spectrum analyzer, describe dynamic range considerations, and evaluate measurement accuracy.

Who should attend?
Engineers and technicians who are using spectrum analyzers.

Prerequisites
Test and Measurement Fundamentals or equivalent.

Course Length & Format
One day, lecture and demonstration.

Delivery Method
To save you time and travel, this course is delivered at the customer’s site. The training will normally use the customer’s equipment, however, if required, for an additional fee Keysight can supply the equipment.

Additional Information
Information on the calendar of courses, tailored courses and how to register is available on the final page of this document.

Agenda
- Spectrum analyzer fundamentals
- Sensitivity, resolution, accuracy
- Block diagram
- Demonstrations of spectrum analyzer theoretical concepts
  - Tune, zoom, measure
  - Resolving equal and unequal amplitude signals
  - Noise sidebands
  - Measurement of small signals
  - Dynamic range analysis
- Spectrum, modulation, S/N measurements and more
- Measurement uncertainties and errors
- Demonstrations of modulation measurements
  - AM/FM measurements
  - AM/FM demodulation
  - Pulsed RF measurements
- Simplifying complex measurements
Network Analysis

RF/MW Mastery

Gain a better understanding of network analysis measurements

Course Overview
This course is designed to provide theoretical fundamentals and demonstrations of practical network analysis measurements.

What you will learn
After completing this course, you will be able to describe the principles of network analysis, make basic measurements on one and two port devices, identify the major sources of errors in a microwave measurement, their impact on measurement uncertainty and how to correct for them, and understand mechanical, Ecal and TRL calibration methods.

Who should attend?
Engineers and technicians who are using vector network analyzers

Prerequisites
RF & Microwave Fundamentals Curriculum or equivalent

Course Length & Format
One day, 100% lecture

Delivery Method
To save you time and travel, this course is delivered at the customer's site. The training will normally use the customer’s equipment, however, if required, for an additional fee Keysight can supply the equipment.

Additional Information
Information on the calendar of courses, tailored courses and how to register is available on the final page of this document

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Agenda
- Network Analyzer Fundamentals
- Network Analyzer Block Diagram
- S-Parameter Measurements
- Amplitude Measurements
- Phase Measurements
- Group Delay Measurements
- Adapter Considerations
- Error Model
- Error Identification
- Calibration methods
- E Cal
- Calibration Exercise
- Time Domain

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Signal Generators and Sources

RF/MW Mastery

Gain a better understanding of signal generator and source basics

Course Overview
This course addresses the basics of signal generators and their applications in analog and digitally modulated systems.

What you will learn
After completing the course, you will be able to identify basic oscillator types, describe various specialized oscillators used for testing, describe RF continuous wave, frequency sweep, signal modulation, noise and interference, choose and specify a source, and explain signal-source applications.

Who should attend?
Recent engineering graduates; experienced R&D engineers transitioning to RF; technicians and engineers involved in manufacturing test; and telecom engineers needing to learn more about RF.

Prerequisites
None

Course Length & Format
Half-day, 100% lecture

Delivery Method
To save you time and travel, this course is delivered at the customer's site. The training will normally use the customer's equipment, however, if required, for an additional fee Keysight can supply the equipment.

Additional Information
Information on the calendar of courses, tailored courses and how to register is available on the final page of this document.
Gain a better understanding of power measurement principles

Course Overview
This course presents an overview of RF & Microwave power measurement principles, why and how to make power measurements.

What you will learn
After completing this course, you will be able to explain the basic technology involved in making RF and microwave power measurements, define relevant terms, identify types of power sensors, describe power transfer and insertion loss, and perform uncertainty measurements and calculations.

Who should attend?
New college graduates, technicians and junior engineers involved in making power measurements for product development, manufacturing or quality control.

Prerequisites
None

Course Length & Format
Half-day, 100% lecture

Delivery Method
To save you time and travel, this course is delivered at the customer’s site. The training will normally use the customer’s equipment, however, if required, for an additional fee Keysight can supply the equipment.

Additional Information
Information on the calendar of courses, tailored courses and how to register is available on the final page of this document.
Dual Source PNA-X Training

PNA-X Mastery

Introduction to the Keysight Technologies N524XA Dual Source PNA-X

Course Overview
This course is designed to introduce the students to the Keysight N524XA Dual Source PNA-X. It is important to note that the focus will be on the N524XA network analyzer and how it differs from the traditional network analyzer. The course will also cover network analyzer basics and the basics of calibration.

What you will learn
At the end of the course, you will be able to use the new PNA-X effectively, as well as understanding the internal architecture of the instrument.

Who should attend?
Engineers or technicians who are transitioning from using standard Vector Network Analyzers making S Parameter measurements, to making more complex measurements using a VNA with multiple sources.

Prerequisites
A very good understanding of Network Analysis Basics either from formal training or experience with Vector Network Analyzers.

Course Length & Format
Two days, lecture only class that will include various demonstrations to illustrate the testing concepts.

Delivery Method
To save you time and travel, this course is delivered at the customer’s site. The training will normally use the customer’s equipment, however, if required, for an additional fee Keysight can supply the equipment.

Additional Information
Information on the calendar of courses, tailored courses and how to register is available on the final page of this document.

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Agenda
Network analyzer fundamentals
- Transmission line theory
- S-parameters
- 4 blocks of a Network analyzer
- Display formats

PNA-X front panel & architecture
- Keys to setup a measurement
- 2 port configurations
- 4 port configuration

Sources of error and Calibration
- Measurement error modeling
- Adapter considerations
- Systematic measurement errors
- Types of error correction
- Choosing the right calibration

Application optimization
- Dynamic range
- De-Embedding fixture and adapters
- Power sweep
- Time Domain
- Group Delay
Course Overview
This course will discuss the unique challenges involved in testing high-power amplifiers using the N524XA network analyzers. The term high-power refers to the cases where the output power of the N524XA is not sufficiently high enough to measure the performance of the device under test (DUT), or the output power of the DUT exceeds the maximum input level to the Network Analyzer.

What you will learn
At the end of the course, you will understand how to overcome the challenges of making measurements on high power amplifiers.

Who should attend?
Engineers or Technicians who are making S Parameter and Gain Compression measurements of high power amplifiers for either handsets or base stations

Prerequisites
Prior attendance at the ‘Introduction to the N524XA Dual Source PNA-X’ class is desirable but equivalent hands on experience is acceptable.

Course Length & Format
One day, lecture only.

Delivery Method
To save you time and travel, this course is delivered at the customer’s site. The training will normally use the customer’s equipment, however, if required, for an additional fee Keysight can supply the equipment.

Additional Information
Information on the calendar of courses, tailored courses and how to register is available on the final page of this document
Advanced PNA-X Training

PNA-X Mastery

Advanced Level Training Using the Keysight Technologies N524XA PNA-X

Course Overview
This course introduces the students to the wide variety of testing that can be performed with this PNA-X. The class stresses a “One connection, Multiple Measurements” approach to amplifier and mixer testing, allowing the engineer to address several measurements with a single connection.

What you will learn
At the end of the course, you will be able to use the PNA-X to make Gain Compression, Hot S Parameters, PAE, IMD (Intermodulation Distortion), Noise Figure, and Mixer/Converter measurements.

Who should attend?
Engineers or technicians who are making complex measurements using a VNA with multiple sources

Prerequisites
Prior attendance at the ‘Introduction to the N524XA Dual Source PNA-X’ class is desirable but equivalent hands on experience is acceptable.

Course Length & Format
Four days, lecture only.

Delivery Method
To save you time and travel, this course is delivered at the customer’s site. The training will normally use the customer’s equipment, however, if required, for an additional fee Keysight can supply the equipment.

Additional Information
Information on the calendar of courses, tailored courses and how to register is available on the final page of this document

Agenda
Day 1 Introduction to Measurements
- Basic Concepts
- Amplifiers
- Gain Compression
- Hot S-Parameters
- PAE
- Intermodulation Distortion

Day 2 Noise Figure Measurements
- Overview of Noise Figure
- Noise Figure
- Accuracy Limitations
- PNA-X’s Unique Approach

Day 3-4 Mixer Measurements
- Introduction
- Mixer Theory
- Mixer Responses
- Scalar Mixer Correction (SMC)
- Vector Mixer Correction (VMC)
- VMC and Frequency Converters with embedded LO

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PNA Network Analyzers

PNA Mastery

Gain a better understanding of the Keysight Technologies PNA operation

Course Overview
This course provides instruction on how to operate the Keysight PNA using both the MS Windows interface and the front panel. The course also covers the internal architecture, calibration techniques and various test set configurations used for optimizing dynamic range and for making higher power measurements.

What you will learn
After completing this course, you will understand the fundamental operation of the PNA using the mouse/touchscreen interface and/or the front panel, and the internal architecture of the PNA

Who should attend?
RF microwave engineers and technicians

Prerequisites
An understanding of RF fundamentals.

Course Length & Format
One day, 50% lecture and 50% lab

Delivery Method
To save you time and travel, this course is delivered at the customer’s site. The training will normally use the customer’s equipment, however, if required, for an additional fee Keysight can supply the equipment.

Additional Information
Information on the calendar of courses, tailored courses and how to register is available on the final page of this document
PXA Signal Analyzer Operations

PXA Mastery

Learn how to operate the Keysight Technologies N9030A PXA Signal Analyzer

Course Overview
This course is designed to provide a basic understanding of how spectrum analyzers work, how to use them to their fullest potential, and how to make them more effective for particular applications. The course includes labs, which will demonstrate practical signal analysis measurements using the Keysight PXA analyzer.

What you will learn
After completing this course, you will be able to operate the Keysight N9030A PXA Signal Analyzer, explain the fundamental block diagram and technical specifications of a signal analyzer, and make use of the PXA’s powerful measurement capabilities to perform basic spectrum analysis and advanced signal analysis measurements.

Who should attend?
Engineers and technicians who are using the PXA Signal analyzer.

Prerequisites
Basic RF measurement concepts and terminology.

Course Length & Format
Two days, lecture and lab.

Delivery Method
The course is scheduled at various Keysight locations, or, to save time and travel, it can be delivered at the customer’s site. The training will normally use the customer’s equipment, however, if required, for an additional fee Keysight can supply the equipment.

Additional Information
Information on the calendar of courses, tailored courses and how to register is available on the final page of this document.

Agenda
- Spectrum analysis fundamentals
- Signal analysis block diagram architecture and evolution
- PXA Block diagram
- Spectrum analyzer mode measurements
- Analog and digital demodulation
- Phase noise mode
- Simplifying complex measurements

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Phase Noise Measurements

Phase Noise Mastery

Learn to use the Keysight E5500 Phase Noise Measurement System

Course Overview
This course is designed to introduce the principles of Phase Noise Measurements and train train operators to use the Keysight Technologies E5500 Phase Noise Measurement Systems. The course is designed to cover all the E550x A and B systems.

What you will learn
After completing this course, you will be able to appreciate the different methods of phase noise measurements and be competent in using the E5500 systems to measure Absolute or Residual Noise on oscillators and 2 port devices.

Who should attend?
Engineers and technicians using Keysight E550x Phase-Noise Measurements Systems.

Prerequisites
RF & Microwave Fundamentals and Spectrum-Analysis Basics.

Course Length & Format
Two days, 50% Lecture and 50% Lab

Delivery Method
To save you time and travel, this course is delivered at the customer’s site. The training will normally use the customer’s equipment, however, if required, for an additional fee Keysight can supply the equipment.

Additional Information
Information on the calendar of courses, tailored courses and how to register is available on the final page of this document.
Noise Figure Measurements

Noise Figure Mastery

Learn how to operate the NFA series of Noise Figure Analyzers

Course Overview
This course introduces the principles of Noise Figure Measurements, and trains operators in the use of the NFA series of noise figure analyzers to maximize application performance.

What you will learn
After completing this course, you will be able to describe the basics of noise processes in devices, understand how the NFA series of noise figure analyzers measures the noise figure of two-port devices, frequency converting noise figure measurements and the differences between single sideband and double sideband measurements, operate the NFA series of noise figure analyzers using front panel control of the measurement calibration, measurement and data output process, understand how to avoid measurement errors, reduce unavoidable errors, and quantify the uncertainties that remain.

Who should attend?
Test engineers and technicians

Prerequisites
Basic RF measurement concepts and terminology

Course Length & Format
One days, lecture and lab

Delivery Method
To save you time and travel, this course is delivered at the customer’s site. The training will normally use the customer’s equipment, however, if required, for an additional fee Keysight can supply the equipment.

Additional Information
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- Noise basics
  - Why is noise figure important?
  - Noise figure fundamentals
    - What is noise temperature
    - Noise figure to noise temperature
  - How to measure noise figure
    - Y-Factor method
- NFA series noise figure analyzers
  - Non-frequency converting (two port) measurements
  - Improving measurement accuracy
- Frequency converting measurements
  - Single side band
  - Double side band
  - Errors to avoid

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Line Sweep, Antenna Test and RF Interference Analysis

FieldFox Mastery

Gain a better understanding of network and spectrum analysis measurements

Course Overview
This course covers the theory and practical skills needed to operate and interpret test results using the Keysight N9330B, N9340B or the N99xxA Field Fox for spectrum analysis and transmission line testing.

What you will learn
After completing this course you will have a practical understanding of radio frequency concepts, transmitter and receiver operation, antenna fundamentals and be able to perform common test procedures using spectrum analysis and transmission line sweeping techniques. You will be able to effectively use the Keysight N9330B, N9340B or N99xxA Field Fox for locating and identifying interference and evaluating the condition of antennas and transmission lines.

Who should attend?
Field service technicians, switch technicians, design engineers, managers/field supervisors, field engineers, installers

Prerequisites
None

Course Length & Format
Three days, lecture with hands-on exercises.

Delivery Method
To save you time and travel, this course is delivered at the customer’s site. The training will normally use the customer’s equipment, however, if required, for an additional fee Keysight can supply the equipment.

Additional Information
Information on the calendar of courses, tailored courses and how to register is available on the final page of this document
Course Overview
This course covers the theory and practical skills needed to measure return loss and distance-to-fault in the installation, maintenance and operation of antenna systems utilizing the Keysight N9330B or N99xxA FieldFox.

What you will learn
After completing this course, you will have an understanding of the basics of antennas, cables and connectors; be able to identify and locate common problems affecting RF transmission and reception; make and interpret transmission line sweep measurements; and measure antenna characteristics such as SWR and operating frequency range, all using the N9330B or N99xxA FieldFox.

Who should attend?
Field service technicians, switch technicians, design engineers, managers/field supervisors, field engineers, installers

Prerequisites
None

Course Length & Format
Two days, lecture with hands-on exercises.

Delivery Method
To save you time and travel, this course is delivered at the customer’s site. The training will normally use the customer’s equipment, however, if required, for an additional fee Keysight can supply the equipment.

Additional Information
Information on the calendar of courses, tailored courses and how to register is available on the final page of this document.
RF Interference Analysis

FieldFox Mastery

Gain a better understanding of spectrum analysis measurements

Course Overview
This course covers the theory of spectrum analysis and will teach you how to use the Keysight N9340B CAT or the N99xxA Field Fox to perform common tests needed.

What you will learn
After completing this course you will have a practical understanding of radio frequency concepts, transmitters, receivers, antennas, and transmission lines and other devices used in radio systems. You will learn how to operate the Keysight N9340B or the N99xxA Field Fox to perform common tests needed for performance evaluation, troubleshooting, and detecting/locating interference.

Who should attend?
Field service technicians, switch technicians, design engineers, managers/field supervisors, field engineers, installers

Prerequisites
None

Course Length & Format
Two days, lecture with hands-on exercises.

Delivery Method
To save you time and travel, this course is delivered at the customer’s site. The training will normally use the customer’s equipment, however, if required, for an additional fee Keysight can supply the equipment.

Additional Information
Information on the calendar of courses, tailored courses and how to register is available on the final page of this document
Course Overview
This course will cover the basics of Vector Signal Analysis and an overview of the workings of a VSA. The Graphical User Interface will be covered as well as modulation analysis and modulation quality testing (EVM, Constellations, etc.)

What you will learn
At the end of the course, you will understand the fundamentals of sampling, signal processing, analog and digital demodulation, and time capture. You will learn the proper instrument set up for the measurement of a variety of signals of interest used in modern transceivers, and how to record your signals and play back for analysis.

Who should attend?
Engineers and technicians who want to improve their level of expertise with the 89600 VSA in general to demodulate and evaluate the modulation quality of digitally modulated RF signals.

Prerequisites
A strong understanding of digital modulation schemes

Course Length & Format
One day, lectures, demonstrations and hands-on.

Delivery Method
To save you time and travel, this course is delivered at the customer’s site. The training will normally use the customer’s equipment, however, if required, for an additional fee Keysight can supply the equipment.

Additional Information
Information on the calendar of courses, tailored courses and how to register is available on the final page of this document.
LTE Testing with the 89600 VSA

Modulation Mastery

Using the Keysight Technologies 89600 Vector Signal Analyzer to Test LTE Signals

Course Overview
This course will cover an LTE physical layer overview of both the UpLink and Down Link signals. It will then move on to LTE transmitter tests and signal analysis. The focus will be on modulation analysis and modulation quality testing (EVM, Constellations, etc.).

What you will learn
At the end of the course, you will understand the key concepts of LTE and how to use the VSA software to verify the quality of LTE transmit and receive signals.

Who should attend?
Engineers and Technicians who want to improve their level of expertise with the 89600 VSA to demodulate and evaluate the modulation quality of LTE RF signals.

Prerequisites
A strong understanding of OFDM digital modulation schemes

Course Length & Format
One day, lectures, demonstrations and hands-on.

Delivery Method
To save you time and travel, this course is delivered at the customer’s site. The training will normally use the customer’s equipment, however, if required, for an additional fee Keysight can supply the equipment.

Additional Information
Information on the calendar of courses, tailored courses and how to register is available on the final page of this document

Information subject to change
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Introduction to Keysight VEE Pro

VEE Mastery

Create problem-solving models and develop better test programs faster.

Course Overview
This course provides an introduction to Keysight Technologies’ Visual Engineering Environment programming language (VEE Pro). The course will present the fundamentals of the VEE Pro software allowing you to develop programs to automate your test instruments.

What you will learn
At the end of the course, you will be able to develop, debug, and maintain test or data analysis programs using Keysight VEE Pro software. You will understand graphical programming fundamentals and recommended graphical design practices, understand instrument control techniques, including Direct I/O with Standard Commands for Programmable Instruments (SCPI), Plug&Play, and IVI-COM drivers and control complex test execution with the VEE Sequencer Object

Who should attend?
Scientists, engineers and technicians who need to automate measurements and collect data for analysis.

Prerequisites
Programming experience is not essential but may enhance the student’s ability to understand the concepts presented. A working knowledge of MS Windows is useful.

Course Length & Format
Four days, 40% lecture and 60% lab

Delivery Method
The course is scheduled at various Keysight locations, or, to save time and travel, it can be delivered at the customer’s site. The training will normally use the customer’s equipment, however, if required, for an additional fee Keysight can supply the equipment.

Additional Information
Information on the calendar of courses, tailored courses and how to register is available on the final page of this document
Advanced Keysight VEE

VEE Mastery

Master Keysight VEE to create problem solving models and program 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
At the end of the course, you will be able to utilize VEE PRO’s built in Matlab Script Engine to bring enhanced data analysis and display capabilities to your applications, enhance VEE PRO applications with Microsoft .NET Framework Class Library functionality, integrate VEE Pro with C/C++ compiled programs and utilize MS Excel to set up your test equipment, test parameters, and store/visualize your data.

Who should attend?
Scientists, engineers and technicians who need to automate measurements and analyze data.

Prerequisites
Students should have taken “Introduction to VEE Pro,” or have at least six months experience in VEE Pro program development.

Course Length & Format
Four days, 60% lecture and 40% lab

Delivery Method
The course is scheduled at various Keysight locations, or, to save time and travel, it can be delivered at the customer’s site. The training will normally use the customer’s equipment, however, if required, for an additional fee Keysight can supply the equipment.

Additional Information
Information on the calendar of courses, tailored courses and how to register is available on the final page of this document.

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Agenda
Advanced Programming
- Design & Construction
- Using Excel templates for test setup

Configuration, Data Display, Storage
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ActiveX & .NET Framework
- ActiveX overview
- Microsoft .NET Framework
- Adding .NET controls

Microsoft .NET Framework
- System menu (VEE/.NET objects)
- Adding custom .NET functionality

MATLAB Scripts
- MATLAB script overview
- Passing VEE Pro data to MATLAB
- Passing MATLAB results to VEE Pro
- MATLAB signal processing tools
- Building a 3D waterfall display with MATLAB script plotting tools
An introductory course for engineers new to RF test

Course Overview
This course covers all aspects of basic high-frequency measurements.

What you will learn
After completing this course, you will be able to understand the fundamentals of RF measurement technology, RF measurement techniques, measurement uncertainty calculations, and the prerequisites for the effective use of RF instrumentation.

Who should attend?
Engineers working in wireless communication R&D, manufacturing or installation and maintenance and who are new to RF test.

Prerequisites
A general understanding of electronics and measurement principles.

Course Length & Format
Two days, 100% lecture.

Delivery Method
To save you time and travel, this course is delivered at the customer’s site. The training will normally use the customer’s equipment, however, if required, for an additional fee Keysight can supply the equipment.

Additional Information
Information on the calendar of courses, tailored courses and how to register is available on the final page of this document.
Learn the fundamentals of wireless LAN technology

Course Overview
This course provides an overview of the standards for wireless networking and their applications, including the technical detail of the IEEE 802.11 standards and protocols and the concepts of OFDM.

What you will learn
After completing this course, you will know the trends and driving forces behind wireless networking technology, understand the technical limitations and competing technologies, be able to describe the IEEE 802.11 (a/b/g/n) System Level Architecture and the Physical and Medium Access Control protocols that support the architecture, know the timing, power management and security techniques for IEEE 802.11 WLAN systems, and understand the concept of OFDM used in IEEE 802.11a.

Who should attend?
Engineers who need to understand the basic principles of wireless LAN technology and in particular IEEE 802.11 a and b standards

Prerequisites
None

Course Length & Format
One day, lecture and demonstration

Delivery Method
To save you time and travel, this course is delivered at the customer’s site. The training will normally use the customer’s equipment, however, if required, for an additional fee Keysight can supply the equipment.

Additional Information
Information on the calendar of courses, tailored courses and how to register is available on the final page of this document.
Keysight Technical Training

Additional Information
Keysight provides a comprehensive portfolio of technical training courses that allow you to achieve the technical proficiency necessary to optimize the effectiveness of your Keysight test equipment.

This catalog presents a range of standard courses that are available. These courses may be scheduled at Keysight locations when there is sufficient demand, but most of our courses are taught at our customers’ sites.

The training will normally use the customer’s equipment, however, if required, for an additional fee Keysight can supply the necessary equipment.

Courses may also be tailored to meet your particular needs. Contact your local Keysight representative for more information or complete the Course Request Form.

The Electronic Measurement Course Calendar is available on the Keysight website.

You can view the complete list of courses available from Keysight by following the link www.keysight.com/find/training

You can also enroll in a training course by calling:
Canada: +1 (877) 894-4414
United States: +1 (800) 829-4444

For more information on Keysight Technologies’ products, applications or services, please contact your local Keysight office. The complete list is available at: www.keysight.com/find/contactus

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A personalized view into the information most relevant to you.

Cancellations by Keysight
Keysight reserves the right to change or cancel a course at any time prior to the start date. We will review its enrollment and you will be notified at the time of such change or cancellation. Please keep this in mind when making non-changeable flight arrangements. In the event of cancellation Keysight is not responsible for any fees related to travel and lodging changes.