

# Spectrum Analysis Measurements

## Course Overview

Course Numbers:

Keysight Training Center: H7215A #201

Onsite Training: H7215B #201

Gain a better understanding of spectrum analysis measurements

### Course Overview

This two-day course presented by Keysight Technologies, Inc. is designed to provide the theoretical fundamentals and in depth hand-on experience on practical spectrum analysis measurements. The content is based on frontpanel overview and operation of the Keysight ESA (E440x). The course also applies to the functionality of the Keysight 856x, 859x spectrum analyzer series.

### What you will learn

- Gain basic operation skills for the 856x, 859x or ESA series spectrum analyzers
- Understand the fundamental block diagram and technical specifications of a spectrum analyzer
- Understand dynamic range considerations
- Gain experience evaluating measurement accuracy
- Practical lab experience

### Specifications

Course Type

User/Application Training

Audience

Engineers and Technicians who are using Spectrum Analyzers.

Prerequisites

RF & Microwave Fundamentals or equivalent

Course Length

2 days

Course Format

60% Lecture and 40% Lab

Delivery Method

*Scheduled* at Keysight locations, or

*Dedicated* at a customer site.

To save you time and travel, many Keysight courses can be delivered at your site. Keysight can provide required equipment, or you can save money by furnishing your own.

### Detailed Course Agenda

Day 1

- Spectrum Analyzer Fundamentals
- Sensitivity, Resolution, Accuracy
- Block-Diagram
- Hands-on practice for better understanding of Spectrum Analyzer Theory
  - Tune, Zoom, Measure
  - Resolving equal and unequal amplitude signals
  - Noise sidebands
  - Measurement of small signals
  - Dynamic range analysis
- Demonstration: Prevent bad analyzer measurements

Day 2

- Spectrum, Modulation, S/N - Measurements and more
- Measurement Uncertainties and Errors
- Hands-on practice for better understanding of Modulation Measurements
  - AM/FM measurements
  - AM/FM demodulation
  - Pulsed RF measurements
- Demonstration: Utilize the built-in features of the Keysight ESA spectrum analyzer in order to simplify complex measurements

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