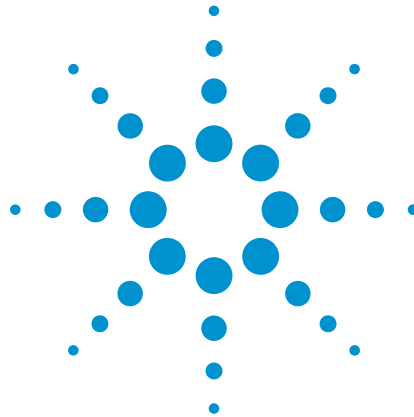


# GENESYS Concepts

## Course Overview

Course numbers: Agilent Training Center: N3244A • Onsite Training Center: N3244B



## Learn through a combination of lecture and hands-on exercises

### Course Overview

Agilent Technologies offers this three-day, hands-on course presenting simulation and synthesis methodologies for both circuits and systems. Topics include linear and nonlinear simulation in addition to synthesis.

### What you will learn

- The GENESYS user interface, features, schematic capture, simulation setup and results display.
- Synthesis of filters, mixers, oscillators
- Basic design and measurement concepts where applicable

### Specifications

#### Course type

User/ Application Training

#### Audience

Engineers, designers, and high-level technicians who need GENESYS for design, testing, and characterization of circuits and systems.

#### Prerequisites

A basic understanding of circuit and system design principles

#### Course length

3 days

#### Course format

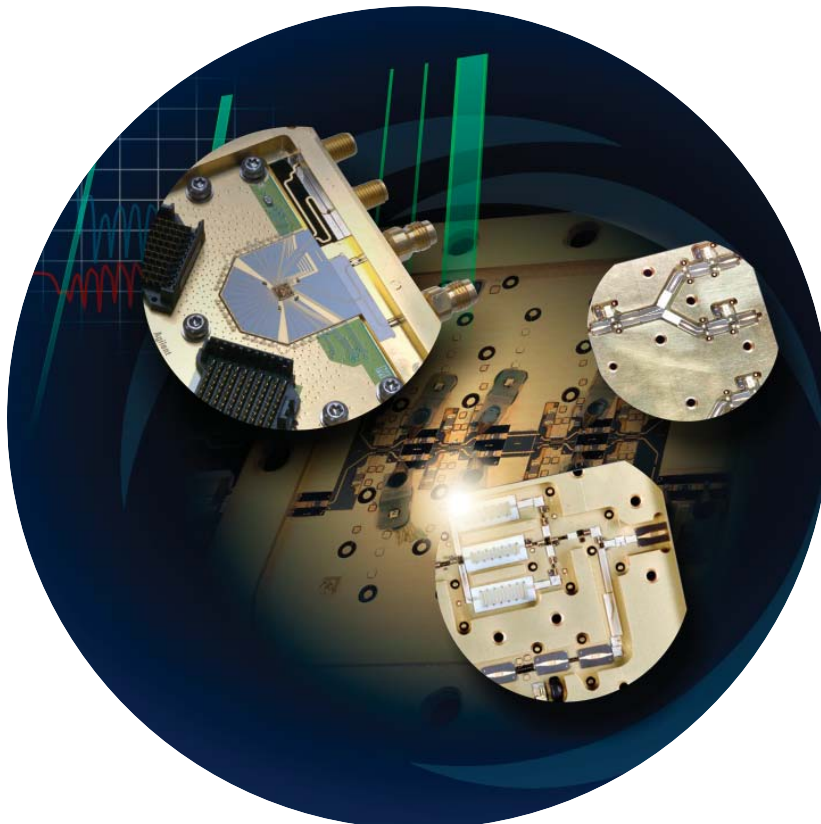
Lecture and Lab

#### Delivery method

*Scheduled* (at Agilent training locations), or

*Dedicated* (at a customer site)

To save you time and travel, many Agilent courses can be delivered at your site. Agilent can provide the required equipment.



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# Detailed Course Agenda

## DAY 1

### GENESYS Basics

- Starting and using GENESYS, including conversion from older wsp to wsx. Analysis capabilities: linear, non-linear and synthesis, plus the system tool. Workspace basics — overview of how to use the workspace, directory tree and files, tune window, schematic basics with keyboard keys, global settings, parts selector, basic analysis and resulting dataset and plot.

### Filter Synthesis, Layout and EMPower

- Overview of synthesis features and synthesis dialogs. Show filter synthesis and tune the filter. Show the layout and how it works with schematic. Show EMPower.

### Libraries, Parts, and Models

- Overview of libraries and how they are used, including how library parts are created and how parameters are used — also including symbol creation.

## DAY 2

### Linear Analysis, Sweeps, and Optimization

- Quick overview of DC, AC, and S-Parameter setups and results. How to use ports and pins for SP analysis. How to set up a sweep and plot results. Overview of optimization setup and types available.

### Non-linear Analysis and Data

- Overview of HB (Harbec) for 1- and 2-tone setups. Sweeping power and plotting with equations. More on data analysis.

### Synthesis: Matching, Mixers and Oscillators

- Introduction to synthesis, basic concepts and limitations, user interface basics. Show types and results.

## DAY 3

### WhatIF

- Describe Frequency Planning: WhatIF. Describe the application and why existing solutions are limited. Focus on the using WhatIF.

### SpectraSys Basics

- Introduction to SpectraSys — basic concepts, models, and available measurements.

### SpectraSys Applications

- Typical applications for SpectraSys, including noise performance investigations, a feedforward amplifier and switch matrix/sub-circuits.

For the latest information on class schedules and locations, visit:  
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Printed in USA March 27, 2007  
5989-6424EN



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