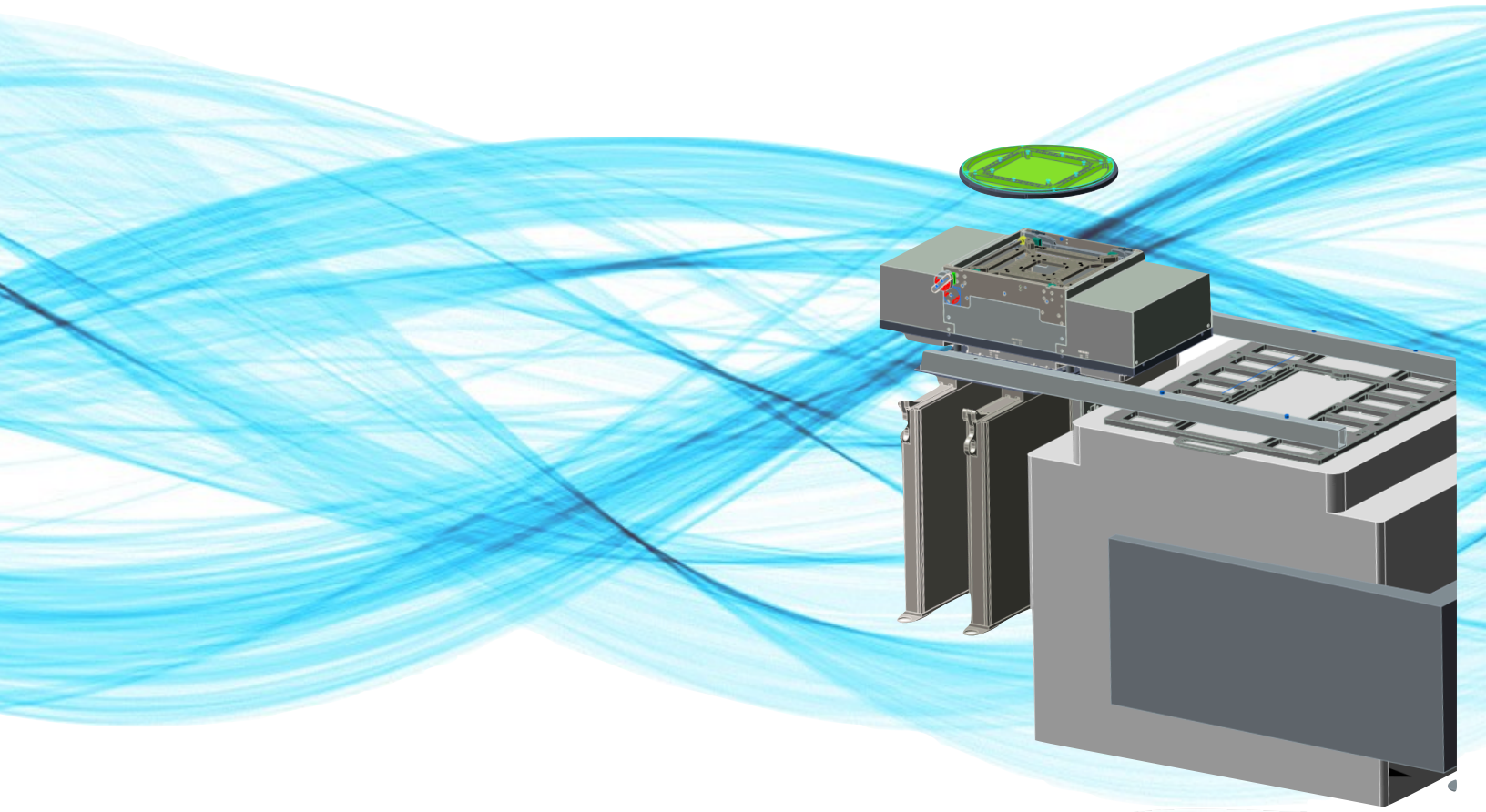
Teradyne Developer Training

Online Course Syllabus



Roos Instruments

DESCRIPTION

Teradyne Developer Training is an online course for new users of the RI + Teradyne ATE System. The course provides test engineers and developers with an introduction to the RI + Teradyne ATE test system and instruction on how to create, debug, and maintain test programs. Topics include the instrument capabilities and software features of the test system with an emphasis on fundamental production test and measurement techniques for DC, digital, mixed signal, and microwave applications. Course material and example test cases combine conceptual understanding with application workflow on the various software tools for developing on RI + Teradyne.

Visit https://learn.roos.com to register for the course and access learning material..

COURSE OBJECTIVES

The training course will establish a fundamental understanding of and familiarity with the test equipment and workflow of the RI + Teradyne ATE system with the goal of establishing proficiency with the instrumentation and programming environment. Upon completion of the course, attendees will:

1. Understand RI hardware components, software tools, and test development workflow.
2. Be familiar with RI instruments, their use/control, and how to configure a system for various device testing.
3. Utilize the software applications responsible for creating, developing, and maintaining test plans, fixture configurations, devices definitions, etc.
4. Gain an understanding of fundamental RF concepts and terminology
5. Apply RF measurement techniques for device test, debug, diagnostics, calibration, and verification in test applications.

PREREQUISITES

Attendees should be personnel responsible for the development of device test programs, program debugging, and/or test program maintenance.

Online training requires the use of Oracle VirtualBox to access the Cassini software simulator environment and Zoom Desktop client for screen sharing and interactive instruction. **A large display and mouse is STRONGLY ENCOURAGED for the Cassini virtual workstation and lessons.** A local Administrator account is required for application installation and unblocked outbound access to a Guru Server at "lab.roos.com" tcp port 50000 is required to access networking resources in the simulator environment. Some corporate networks have "guest WiFi" that can be used to access the Lab Guru server.

ORGANIZATION

This course is a collection of a live online meetings, instructional videos and interactive labs with topics provided by Roos Instruments instructors and engineers. Attendees receive instruction on the concepts and use of Cassini software tools, instruments, and measurement capabilities of the test system along with use-case examples that provide practical applications of lesson concepts. Live lessons will be recorded and made available to attendees.

SCHEDULE OVERVIEW

Attendees will have access to instructional presentations and live demonstrations using the Cassini Virtual Workstations to complete exercises during four (4) scheduled Live Instructor Sessions. These Q&A sessions with the instructors are scheduled for approximately 1.5 hours per day during local business hours. Note that start times and duration of Zoom meetings are subject to time zone availability of presenters and attendees. The course is divided into 12 sections that should take about 14 days to complete covering the topics listed on the following page:

Topics	Description
Orientation	• Cassini: Philosophy of a Modular Test System
Hardware	• Instruments • Device Interface Environment: Fixtures • Infrastructure & System Controller • RF Modular System Configuration
Software Introduction	• Environment & UI Introduction • Instrument Configuration Management • Startup/Shutdown, Login/Logoff, Users, Permissions • Tester Environment Shortcuts • System Messaging
Data & Test Resource Management	• Guru: Data & Test Management System • Viewing and identify test resource objects • Importing, exporting test resource objects • Testplan revision control & recovery
Interfacing a Device to Cassini: Fixtures, DIBs & Device Control	• Defining Fixture Paths & Control • Adding Switching & Measurement Resources • Device Definitions & Control • Protocol-Aware Device Interaction • Path Definition and Calibration
Test Programming & Instrument Control	• Test Workflow • Synapse: Automated Test Optimizer • Viewing & Control of Test Execution
Building Measurements, Test Flow & Viewing Test Data	• Test & Measurement Design • Plot Viewing & Data Worksheets • Test Repeats, Test Statistics • Breakpoints: In-Situ Test Debugging
Test Executive: Production Test Packaging	• Handler Control • Hard & Soft Binning Rules • Creating & Naming STDF • Production Operator GUI Control
Help Guides & Troubleshooting	• Error & Warning Message Logs • Instrument Diagnostics & Verify • System Reboot & Recovery • Resolving Network Connectivity