

RPC Pro® Software Operation

3 day course

COURSE OUTLINE

- I. RPC Pro Fundamentals
 - A. What is RPC?
 - B. The six steps of RPC
 - C. Why RPC?
- II. Acquire data (step 1)
 - A. Road data collection and digitization considerations
 - B. Data acquisition equipment and preparation
 - C. Getting started in RPC Pro
 - D. Data validation
- III. Data preparation – edit and analyze (step 2)
 - A. Visual inspection
 - B. Frequency domain analysis
 - C. Graphical editing
 - D. Filtering
- IV. Channel setup
 - A. Networking and configuring hardware
 - B. Drive, response, and calculated response
 - C. Event-action setup
- V. Measuring the system FRF (step 3)
 - A. Sequential random excitation
 - B. Simultaneous random excitation
 - C. H1 and H2 FRF calculation
 - D. Linearity and coherence
- VI. Invert and prepare the FRF (step 4)
 - A. FRF inversion
 - B. Inverse FRF evaluation
 - C. Control channel selection
 - D. Control band estimation
- VII. Iterate (step 5)
 - A. Iteration process
 - B. Convergence and divergence
 - C. Time, frequency, and amplitude analysis
 - D. Correlation assessment
 - E. System repeatability
 - F. Turbo iteration process
- VIII. Run the test (step 6)
 - A. Defining test sequences
 - B. Monitoring correlation transducers
 - C. Resuming aborted tests
 - D. Modifying event-action sequences

This course shares the same lecture materials as the cRPC Pro Software Operation course. However, the training includes more in-depth simulation theory and devotes less time to RPC Pro application training. The training focus includes real-life simulation experiences on 4 Post and MAST systems. PC-based hands-on exercises reinforce concepts during each step of a typical simulation process. The pace of the hands-on exercises is intentionally faster to allow more complete coverage of simulation theory. This course is a pre-requisite for the RPC Pro Advanced course.

For an introduction to the cycle counting and fatigue damage calculation capabilities of RPC Pro, check out the RPC Pro Fatigue Tools add-on course.

Who should attend

Entry-level engineers or experienced technicians with some related experience. The course will provide the training necessary to allow simulation operators to understand simulation concepts and run RPC Pro software.

Prerequisites

A technical or engineering degree and proficiency in the latest Windows operating systems.