

## Component RPC Pro Software Operation

2.5 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
    1. Linearity and coherence
- VI. Invert and prepare the FRF (step 4)
  - A. Control band selection
- VII. Iterate (step 5)
  - A. Iteration process
  - B. Convergence and divergence
  - C. Time, frequency, and amplitude analysis
- VIII. Run the test (step 6)
  - A. Defining test sequences
  - B. Point by Point Monitoring

*Optional Materials – The instructor may provide handouts for self-guided study or cover the following during class, as time and class interest permits.*

*» Peak picking and peak slicing methods for block cycle testing*

*» Random vibration testing*

This course shares the same lecture materials as the RPC Pro Software Operation course. However, the training covers only essential basic simulation theory and devotes more time on cRPC Pro application training, following step-by-step procedures. PC-based hands-on exercises use simplified examples. The pace of the hands-on exercises is intentionally slower to ensure basic proficiency of all students. This class is not sufficient preparation for the RPC Pro advanced class.

### 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 cRPC Pro software.

### Prerequisites

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