

Technical training

# Advanced field balancing

## Key benefits

*Gain a deep understanding of machine train balancing methods to be used in the field, and build real-world confidence through hands-on practice on test rotors.*

## Course objectives

- Conduct effective balancing of machine trains in the field, including: trial weight calculation, data integrity trouble-shooting, result evaluation, and decision-making
- Select appropriate strategies to help lower disruption costs and ensure proper data quality
- Choose the most effective calculation tools for each specific situation, efficiently evaluate inputs and outputs, and recalculate between balancing methods and data conventions.

## Program components

- **Balancing fundamentals** – diagnose unbalance issues and other similar malfunctions – select proper balancing strategies – ensure repeatability – decrease non-linearity – calculate trial weights
- **Basic calculations and conventions** – perform vector operations – locate the unbalance position – find angular location on a rotor
- **Single plane balancing** – workshop
- **Static/couple balancing** – workshop
- **Influence vector method (multiplane) balancing**
- **Balancing using Bently Balance\*** – acquire data – configure and import data – perform calculations and evaluate solutions – workshop: balance in two planes using Bently Balance
- **Static/couple vs. influence vector methods**
- **Influence vectors workshop** – import data – export data – recalculate between methods
- **Balancing for compromise conditions**
- **Evaluating balancing quality** – interpret balancing reports
- **Final workshop and examination** – balance in multiple planes



**Course duration**  
5 days (35 hours)



**Equipment types**  
Machine Trains



**Audience**

- Machinery diagnosticians
- Startup engineers
- Remote diagnostic center specialists



**Prerequisites**  
Machinery Diagnostics (MD) course