

# Training Agenda: Chemometrics / Method Development

**GUIDED WAVE** Offers a basic and advanced Chemometrics / Method Development course. Each course is a one day training with both classroom and hands-on-lab activities. Classes are kept small for more one-on-one instruction, and are taught by knowledgeable experts, each with extensive professional experience at Guided Wave. Copies of all training materials are provided electronically. Please contact us for course price, dates and availability.

## BASIC Course Agenda

### Spectroscopy Overview

- What Is NIR
- What NIR Can Do
- Beer's Law and Linearity
- Spectral Parameters

### NIR Hardware and Measurement

- Probe Selection
- Probe Placement
- Calibration Samples
- Temperature & Flow concerns
- Fiber Optic Considerations
- Possible Noise & Error Sources
- General Guidance

### Chemometrics & The Unscrambler

- Overview
- Calibration / Validation

### Analyzer Software Operation with Class-PA

- Model installation
- Prediction results

### Questions and Answers

## ADVANCED Course Agenda

### Chemometrics & The Unscrambler

- Calibration Methods
- Validation
- ASTM
- Examples Working With Data Sets
- Model Evaluation Techniques
  - Variable selection methods
  - Outlier rejection
  - Accuracy evaluation
  - Parameters impacting precision

### Hands on Examples with Datasets

- Chemical
- Refinery
- Mixtures

### Dealing with Sampling and Other Problems

- Non-linearities
- Bubbles
- Temperature variation
- Duplicate samples

### Prediction Script Review

### How To Put Your Model Online

### Questions and Answers