

GUIDED WAVE MODEL 412 - MAINTENANCE TRAINING

Tuesday

Course Starts 8:30 AM

- All Students

Introduction: 8:30 to 10:00

Company Profile & History -Dr. Todd

NIR Primer—Dr. Todd

BREAK and Facility Tour: 10:00 to 10:30

Spectroscopy Overview: 10:30 to 12:00
- Mike

- What NIR can do
- Beer's Law and Linearity
- Spectral Parameters
- Range & Path
- Sample Sets
- Temperature & Flow Concerns
- Fibers Types
- Probe Placement
- Possible Noise & Error Sources
- Interferences
- General Guidance
- Analyzer Software Operation with Class -PA

LUNCH: Noon to 1:00 PM
Hosted by Guided Wave

- Maintenance Students ONLY

Analyzer Startup and CLASS-PA Set-up:
1:00 to 4:30 – Jim

- Host Computer Requirements
- File Types
- First Time Class-PA Configuration

BREAK: 2:00 to 2:15

- Connecting and Loading the Analyzer
- Self-Diagnostics
- Reference and Scanning
- Analyzer Warm-up

BREAK: 3:15 to 3:30

Tuesday End: 4:30 PM

Wednesday

Course Starts 8:30 AM

Review Class-PA: 8:30 to 10:00 - Jim

I/O Set-up with Class-PA

BREAK: 10:00 to 10:15

Spectrometer Hardware Overview: - Jim

- Monochromator Assembly
- Input Modules
- ECM
- Power Supply

LUNCH: Noon to 1:00 PM
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Theory of Operation: 1:00 to 2:00 - Jim

- Review Block Diagram

BREAK: 2:00 to 2:15

Components Replacement – Tear Down
and Rebuild: 2:15 to 4:30

BREAK: 3:15 to 3:30

Wednesday End: 4:30 PM

DINNER: 6:30 PM

Hosted by Guided Wave
Location to be announced



Thursday

Course Starts 8:30 AM

Preventative Maintenance: 8:30 to 10:00
- Jim

- Changing the Lamp
- Cleaning Probe
- Checking and Cleaning Fiber Connections/Condition
- Lamp Voltage Adjustment

BREAK: 10:00 to 10:15

Analyzer Failure Modes: - Jim

- Probe Failures
- Grating & Analog/Servo Failures
- Calibration Failures
- Lamp & Lamp/Servo Failures
- Lamp, Grating, Filter Failure
- Communications Failure

LUNCH: Noon to 1:00 PM
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Troubleshooting and Diagnostics: - Jim

- Review of Diagnostics Built Into Class-PA
- Collecting Symptomatic Data
- Logs, Help File, LED Status
- Problem Scan Interpretation
- Returning Components for Repair—RMAs

BREAK: 2:00 to 2:15

- What Spares to Keep on Hand?

BREAK: 3:15 to 3:30

• **Fiber Termination Workshop**

• **Wrap-up Question and Answer**

- How to Create a GMF File for Dirty Probe Alarms

Thursday Course Ends: 4:30 PM

Guided Wave Incorporated
3033 Gold Canal Drive
Rancho Cordova, CA 95670
USA

Phone: +1 916-638-4944
Fax: +1 916-635-8458
gwinfo@guided-wave.com



www.Guided-Wave.com

8017-11-06

Guided Wave Europe BVBA
Leo de Béthunelaan 105/0001
9300 Aalst
Belgium

Tel: +32-53-631165
Fax: +32-53-631696
gwinfo.europe@guided-wave.com