

Instrument Maintenance & Repair for System II Instruments

This course is recommended for service personnel or those responsible for maintaining FOSS NIRSystems System II instrumentation on-site. A combination of lecture, discussion and hands-on exercises explores system and subsystem functionality, performing and interpreting diagnostic tests, replacement and alignment of critical parts, system error codes, and evaluating the instrument electrical system. Emphasis is on maintenance and troubleshooting procedures.

Part Number: **ST-1015**

Agenda

- Introduction to NIR Laboratory & Process Systems
 - General system overview
 - Module overview
 - Component/Subsystem overview
 - Operation of the system
 - Perform diagnostics, observe & discuss results
 - Detector operation, optimization & gain test
 - Transmission & reflectance systems
 - Review and discussion
- Monochromator Assembly and Disassembly
 - Torquer replacement and alignment
 - Interrupter & order sorter
 - Explanation of error codes and failures
- Instrument Diagnostics
 - Wavelength linearization, bandwidth & noise
 - Discussion of Performance Test results
 - Voltage tests of main, lamp and amplifier boards

Upon completion of this course the participants will be capable of the following:

- Isolate a problem to the specific subassembly
- Remove and replace defective components
- Adjust or align the replaced component
- Communicate the suspected problem to FOSS Service personnel

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