

# MAX300 Process Mass Spectrometry Training at Extrel CMS

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For an official quotation, please email [support@extrel.com](mailto:support@extrel.com).

Class hours are 8:30 a.m. to 4:30 p.m. Monday through Thursday. Friday is available for customer-specific application support at an additional fee. Students must be registered in advance. School attendance must meet the minimum of four students.

## Training Schedule

January 23 - 26, 2017	Friday option (January 27, 2017)
March 20 - 23, 2017	Friday option (March 24, 2017)
May 22 - 25, 2017	Friday option (May 26, 2017)
July 24 - 27, 2017	Friday option (July 28, 2017)
September 18 - 21, 2017	Friday option (September 22, 2017)
November 13 - 16, 2017	Friday option (November 17, 2017)

The course content will include the following topics presented in both classroom and laboratory contexts:

- Principles of operation of the MAX300 quadrupole mass spectrometer
- MAX300 hardware and electronics (5221 card cage)
- Questor5 software, including backup and restoration of databases
- Users and security including event logging and tracking of user changes
- Communications (standard network and various external options)
- Application review (stream evaluation in preparation for method development)
- Application setup (methods, derived and alarm sets and sequences)
- Tuning: Hardware and software
- Qualitative analysis: Survey scanning
- Quantitative analysis I: Method calibrations
- Quantitative analysis II: Manual analysis and automatic sequencing of analyses
- Presentation of results: Trend charts and real-time displays
- General procedures, e.g. startup and shutdown
- Maintenance procedures, including component cleaning and chamber leak testing
- Troubleshooting hardware, software and calibration issues

## Daily Topics

### MONDAY

- Morning: Introductions, introduction to mass spectrometry, brief chemistry review
- Afternoon: MAX300 hardware and electronics (5221 card cage)

### TUESDAY

- Morning: MAX300 hardware and electronics (5221 card cage) review, intro to Questor5 software
- Afternoon: Navigating Questor5 software, application setup (methods, derived tags, alarm sets, and sequences)

### WEDNESDAY

- Morning: Brief review of software, general procedures (startup and shutdown), maintenance procedures (Preventative Maintenance in Application Laboratory)
- Afternoon: Preventative Maintenance continued

### THURSDAY

- Morning: Tuning (hardware and software), method calibration, results (trend charts and real-time displays)
- Afternoon: Troubleshooting hardware, software and calibration issues, discussion of external communications (modbus, analog I/O, digital I/O, OPC I/O)

### FRIDAY

- Special topics as per trainees' availability and requests.