

CrossLab From Insight to Outcome

2017 Edition - United States and Canada

AGILENT UNIVERSITY COURSE CATALOG





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Investments in education improve laboratory staff productivity by enhancing skills necessary for routine procedures. Education leads to utilizing the full potential of instruments, as staff members gain knowledge and insights into the latest techniques. Well-educated staff members — taught by subject matter experts and certified trainers — are more dedicated to your organization and feel more confident in their accomplishments.



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Contact us to register today!

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Agilent University Training Credits (TC)

Now you can plan and budget your training requirement with Agilent University Training Credits that enable you to assign training funds without having to choose specific dates, locations, or topics. Agilent University Training Credits give you an ideal way to manage your training budget and ensure essential learning.

1 training credit = \$1.10 USD or \$1.40 CAD (subject to change)

6/13/2017

6/16/2017

Wood Dale

Wood Dale

IL

ΙL

Atomic Spectroscopy Courses

COURSE NO. COURSE NAME DATE CITY STATE/PROV

» ATOMIC ABSORPTION

AA-FLM-2000cV2 **Techniques of Flame AA Spectroscopy**

This is an introductory course for the AA novice, as well as those who want to learn basic principles and gain a more thorough understanding of current flame AA technology. Learn about the AA productivity tools available such as SIPS, SPS-3 and Fast Sequential AA. Discover ways of troubleshooting and maintaining your equipment for greater uptime. Learn to overcome interferences and optimize your methods for improved accuracy and precision.

Hands On | TC 1500 | 3 Days

AA-FLM-2200cV2 Flame AA Maintenance and Troubleshooting

This one day introductory course is intended for the AA novice and those that want to learn basic maintenance and troubleshooting techniques for the Flame AA. A basic knowledge of Flame AA theory and SpectrAA software is advantageous, but not critical. Students will learn how to disassemble the sample introduction system, optimize the lamps and Burner head, and learn how to troubleshoot and resolve the most common issues.

Hands On | TC 600 | 1 Day

AA-FURN-2000c **Techniques of Furnace AA Spectroscopy**

This course is for those who want to learn basic principles of AA and gain a more thorough understanding of current graphite furnace AA technology. Become skilled at maintaining your furnace for maximum productivity. Also learn to overcome sample matrix problems and find the most efficient ways to develop methods that deliver accurate results.

Hands On | TC 1500 | 3 Days

Please check the website for course availability

Atomic Spectroscopy Courses

COURSE NO. COURSE NAME DATE CITY STATE/PROV

» FTIR

FTIR-OGEN-1101c Introduction to Agilent FT-IR Microscopes

This one day course is for users of Agilent FTIR systems coupled to an FTIR microscope. It covers the theory behind the microscope and features of the microscope and software important to proper usage. The course covers both theory and practical laboratory exercises. A working knowledge of the Resolution Pro Software environment is necessary.

Please check the website for course availability

On-Site Only | TC 600 | 1 day

FTIR-0GEN-2000c **Techniques of FTIR Resolutions Pro**

This course is designed for the Agilent Cary 600-series FTIR user. The course will introduce the basic theory of Fourier transform infrared spectroscopy. The student will learn how to select the correct sampling accessory for an application, setup methods, efficiently collect data, and finally, apply post-processing algorithms (both qualitative and quantitative). Introductory spectral interpretation will be reviewed along with spectral search libraries. The course will conclude with troubleshooting and maintenance.

Please check the website for course availability

On-Site Only | TC 1200 | 2 days

» ICP-MS

ICPMS-7700-2100c 7700 Series ICP-MS Techniques & Operation

The course is designed as a beginner to intermediate level training for Agilent customers and is aimed at providing a comprehensive overview of the Agilent 7700 Series ICP-MS technique and Agilent's MassHunter software. Some advanced topics (e.g., laser ablation, direct organic solvent sampling and chromatography sample introduction) are introduced, but not covered in depth.

Please check the website for course availability

Onsite Only | TC 3200 | 4 days

ICPMS-7900-2100c 7900 Series ICP-MS Techniques & Operation

The course is designed as a beginner to intermediate level class for Agilent customers. It is aimed at providing a comprehensive overview of the Agilent 7900 Series ICP-MS technique, and Agilent's MassHunter software. Laboratory exercises are designed to allow students to progressively apply the materials given in the lecture and to practice using the MassHunter software.

IL 1/31/2017 Wood Dale 4/25/2017 Wood Dale Ш 7/18/2017 Wood Dale IL Wood Dale IL 10/17/2017 1/23/2018 Wood Dale IL

Hands On | TC 3200 | 4 days

3/21/2017

9/26/2017

Wilmington

Wilmington

DE

DE

Atomic Spectroscopy Courses

COURSE NO. COURSE NAME DATE CITY STATE/PROV

ICPMS-8800-2100c 8800 Series ICP-MS Techniques & Operation >> ICP-OES

The course is designed as a beginner to intermediate level class for Agilent customers and is aimed at providing a comprehensive overview of the Agilent 8800 Series ICP Triple Quad and Agilent's MassHunter software. Some advanced topics such as, laser ablation, direct organic solvent sampling and chromatography sample introduction are introduced.

Hands On | TC 3200 | 4 days

» ICP-OES

ICPOES-OGEN-1000c Introduction to ICP-OES

This is a two day entry-level course designed for the novice to ICP-OES as well as those who want to review basic principles and gain a more thorough understanding of the operation of the ICP-OES instrument. This course covers introductory ICP-OES topics, hardware and accessories, some software, and introductory troubleshooting and maintenance. Upon completion attendees can check the system to ensure that it is passing factory tests, and build and run basic methods.

Please check the website for course availability

On-Site only | TC 1000 | 2 Days

ICPOES-700ES-2000c Agilent 700ES Techniques of Simultaneous ICP-0ES

This course covers the basic principles of Inductively Coupled Plasma Optical Emission Spectroscopy (ICP-OES), focusing on operation and optimization of the Agilent 700-ES series ICP-OES. The learning goals are focused on automating the system to reduce analysis time as well as exploring techniques for sample handling and overcoming interferences for better data accuracy and precision.

Please check the website for course availability

On-Site Only | TC 1800 | 3 Days

ICPOES-700ES-3010c Agilent 700ES Advanced Techniques of **Simultaneous ICP-0ES**

This course covers method development for the ICP-OES system taking the user from an unknown sample to a final method. Students will decide which hardware components to select for sample introduction and elements/wavelengths to be monitored. Students will then optimize the method and minimize any matrix and interferences in the sample. The final method will be characterized for its analytical performance and the concentration ranges where it is applicable.

Hands On | TC 1800 | 3 Days

5/23/2017 Wood Dale IL

3/14/2017

9/12/2017

4/4/2017

10/11/2017

Wood Dale

Wood Dale

Wood Dale

Wood Dale

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IL

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Atomic Spectroscopy Courses

COURSE NO. COURSE NAME DATE CITY STATE/PROV

ICPOES-5100-2000cV2 **Agilent 5100 Techniques for Simultaneous ICP-0ES**

This course covers method development for the ICP-OES system taking the user from an unknown sample to a final method. Students will decide which hardware components to select for sample introduction and elements/wavelengths to be monitored. Students will then optimize the method and minimize any matrix and interferences in the sample. The final method will be characterized for its analytical performance and the concentration ranges where it is applicable.

Hands On | TC 1800 | 3 Days

» MP-AES

MPAES-0GEN-2000cV2 **Techniques of Microwave Plasma-Atomic Emission Spectroscopy**

This is an introductory course for the MP-AES novice, as well as those who want to learn basic principles and gain a more thorough understanding of MP-AES technology. Learn about the automated MP-AES method development tools such as torch and nebulizer optimization, along with novel background correction techniques to overcome interferences. Discover ways of troubleshooting and maintaining your instrument for optimum performance. Gain new insight in to the novel Microwave Plasma world with 11 exciting hands on laboratory exercises.

Hands On | TC 1800 | 3 Days

UVVIS

Agilent UV-Vis Spectrophotometers: Basic Operation, UVVIS-0GEN-2200c Maintenance, and Troubleshooting

This one-day introductory course is intended for the UV-Vis novice and those that want to learn basic maintenance and troubleshooting techniques for the Agilent UV-Vis instruments. No previous knowledge is required. At completion of the course, students will learn how the UV-Vis instruments work, and be able to install, validate, and troubleshoot any basic system.

On-Site only | TC 600 | 1 day

Please check the website for course availability

Gas Chromatography Courses

COURSE NO. COURSE NAME	DATE	CITY	STATE/PROV
» GC			
GC-0GEN-2000c Practical Gas Chromatography This is a hands-on course providing the student with knowledge of the techniques of GC including details of the separation process, general GC procedures, temperature programming, instrumentation, troubleshooting, quantification, and method development. This course concentrates on the technique of gas chromatography as opposed to operation using a specific instrument or software. Hands On TC 2000 4 Days	2/21/2017 5/16/2017 8/15/2017 10/24/2017	Chicago Chicago Chicago Chicago	IL IL IL
GC-6890-2100c 6890 GC & ChemStation Operation This course is designed to introduce the fundamental concepts of GC and the operation of the Agilent 6890 Gas Chromatograph using capillary columns and GC ChemStation software revision B.04. On-site Only TC 2500 5 Days	Please check th course availabi		
GC-6890-2200c 6890 GC Maintenance This course is designed for those who have the responsibility for the preventive maintenance and first level repair of the Agilent 6890 GC. The course covers preventive maintenance for split/splitless inlets, FID and TCD detectors and mainframe and electronics hardware. The current version of ChemStation will be used during the training but the course is software independent and will apply regardless of your instrument controller. Hands On TC 2400 4 Days	1/10/2017 5/9/2017 9/26/2017 1/23/2018	Alpharetta Alpharetta Alpharetta Alpharetta	GA GA GA GA

GC-6890-2202c **6890 GC Troubleshooting & Preventative Maintenance**

This 1 day course presents an introduction to troubleshooting and maintenance of the Agilent 6890 GC.

On-site Only | TC 600 | 1 Day

Please check the website for course availability

Agilent 6890 GC Maintenance

I found this course to be very relevant to my day-to-day work. The course was well designed, I enjoyed learning about the analyzer in sections; theory, then hands-on.

> Casey Boquet Refining Chemist Gonzales, LA

Gas Chromatography Courses

COURSE NO. COURS	E NAME	DATE	CITY	STATE/PROV
•	7890A/B GC & OpenLab CDS ChemStation Operation It to introduce the fundamental concepts of GC and the operation of GC using capillary columns and GC OpenLab ChemStation software D 5 Days	2/6/2017 4/24/2017 6/12/2017 10/16/2017 12/11/2017	Alpharetta Alpharetta Alpharetta Alpharetta Alpharetta	GA GA GA GA
software operation of a lecture format with in		3/21/2017	Alpharetta	GA
This course is designed and first level repair of preventive maintenance and mainframe and ele	890A/B GC Troubleshooting & Maintenance If for those who have the responsibility for the preventive maintenance the Agilent 7890A/B GC and 7683/7693 ALS. The course covers the for Purged Packed and Split/Splitless inlets, FID and TCD detectors the detectors hardware. The current version of OL ChemStation will be used the course is software independent and will apply regardless of your 1 4 Days	2/14/2017 4/11/2017 6/20/2017 8/8/2017 10/24/2017 12/5/2017	Alpharetta Alpharetta Alpharetta Alpharetta Alpharetta Alpharetta	GA GA GA GA GA
GC-7890-2206c	7890 GC Routine Maintenance	Please check	the website for	

This 1 day course presents an introduction to troubleshooting and maintenance of the Agilent 7890 GC and the 7683/7693 ALS.

On-site Only | TC 600 | 1 Day

course availability

Gas Chromatography Courses

COURSE NO. COURSE NAME DATE CITY STATE/PROV

Agilent 7890/9000 GC with OpenLAB 2.x Essential and GC-9000-2101c **Advanced Operation**

3/14/2017 Alpharetta GA 8/22/2017 Alpharetta GA

This 4-day course is designed for those operators who desire to learn both essential and advanced features to run samples and sequences, review data, set up methods that include calibration, and perform routine maintenance.

Hands On | TC 2200 | 4 Days

GC-0LCS-2100cV2 7890 GC OpenLab CDS ChemStation **Data Analysis & Reporting**

5/2/2017 Wilmington DE 9/19/2017 Cedar Creek TX

This course is designed to teach the operation of the Agilent 7890 GC ChemStation software through instructor explanations, extensive hands-on, and laboratory exercises. The primary focus of the course is data analysis and reporting. If you require instruction in the fundamental concepts of gas chromatography and the operation of the instrument, please see GC-0GEN-2000c or GC-7890-2100cV2.

Computer Only | TC 1800 | 3 Days



Practical Gas Chromatography

The course instructor was excellent, very knowledgeable, organized and approachable. The course materials and instructions were hands-on and thorough, covering all aspects from theory to mechanics.

> Kathi Turner Strem Chemicals Inc. Newburyport, MA

Liquid Chromatography Courses

COURSE NO. COURSE NAME DATE CITY STATE/PROV

» LC

HPLC-0GEN-2000c **Techniques of HPLC**

This hands-on laboratory and lecture course is designed to increase the participants understanding and ability to apply the modern practices of High Performance Liquid Chromatography. The participant will learn how to select appropriate instrumentation and HPLC columns, optimize separations, and interpret and troubleshoot chromatograms. Participants will learn how theoretical considerations will help increase their ability to produce robust methods and solve analytical problems. HPLC practices and evaluation of system performance will help students increase their efficiency and data quality. The hands-on aspect of the course will allow a novice HPLC user to gain important practical operational experience with the HPLC.

1/31/2017 Alpharetta GA 3/27/2017 Chicago IL5/9/2017 Lexington MA 7/11/2017 Chicago ΙL 10/10/2017 Chicago ΙL 11/14/2017 Lexington MA

Hands On | TC 2400 CAD | 4 Days

HPLC-0GEN-3070c **Ultra High Performance Liquid Chromatography**

This training course focuses on the advanced topic of UHPLC utilizing both a theoretical and practical approach. In addition to UHPLC, this course will cover method development and method optimization. Participants will learn how to develop, optimize and translate modern HPLC methods through lectures and hands-on laboratory experiments. The resultant methods will be much faster and/or higher resolution. The key parameters affecting HPLC and their influence on resolution, capacity, selectivity and efficiency will be discussed.

Please check the website for course availability

On-site Only | TC 2400 | 4 Days

HPLC-1200-2100c Agilent 1200 Series HPLC 3D ChemStation Operation

This course provides the user with laboratory exercises on the operation and maintenance of the Agilent 1100/1200 Series Liquid Chromatograph equipped with a Diode Array controlled by the HPLC (3D) ChemStation.

Please check the website for course availability

On-site Only | TC 2400 | 4 Days

HPLC-1200-2102c Agilent 1200 Series HPLC (3D) ChemStation B Techniques and Operation

This 4 day laboratory and lecture course is designed to introduce users to the practical aspects of performing routine analyses using the Agilent 1100/1200 Series Liquid Chromatographs with the HPLC ChemStation. Topics include instruction in the basics of liquid chromatography, instrument maintenance, calibration tables, sequencing, and chromatographic troubleshooting

Please check the website for course availability

On-site Only | TC 2000 | 4 Days

Liquid Chromatography Courses

COURSE NO. COURSE NAME	DATE	CITY	STATE/PROV
HPLC-1200-2200c 1100/1200 Series Troubleshooting & Maintenance This course covers maintenance and troubleshooting for the Agilent 1100/1200 series modules with a major focus on the maintenance and limited repair of these modules. This course is not for Infinity Series HPLCs. Hands On TC 1200 2 Days	1/18/2017 3/14/2017 5/16/2017 7/25/2017 9/12/2017 11/7/2017 1/23/2018	Alpharetta Lexington Lexington Lexington Lexington Lexington Lexington Lexington	GA MA MA MA MA MA

HPLC-1200-2202c Agilent 1100/1200 Series Troubleshooting and **Maintenance Seminar**

This one day course is designed to introduce the operator of the Agilent 1100/1200 Series LC to troubleshooting and maintenance of the isocratic, binary, and quaternary pumping systems. The vacuum degasser, autoinjector, variable wavelength detector and diode array detector will also be discussed. This course does not cover the Infinity Series HPLCs.

On-site Only |TC 600 | 1 Day

HPLC-CS-2100c **Agilent HPLC Data Analysis and Reporting with** ChemStation B (2D)

This 2-day computer course is designed for those operators who want to enhance their skills in the use of the Agilent HPLC (2D) ChemStation software revision B.04. The topics covered include method creation, data analysis, integration and reporting.

On-site Only | TC 1200 | 2 Days

HPLC-CS-2101c **Agilent HPLC Data Analysis and Reporting with** ChemStation B (3D)

This 3-day computer course is designed for those operators who want to enhance their skills in the use of the Agilent HPLC (3D) ChemStation software revision B.04. The topics covered include method creation, data analysis, integration and reporting. Special topics pertaining to the diode array detector are also covered such as diode array optimization and spectral data analysis.

On-site Only | TC 1800 | 3 Days

Please check the website for course availability

Please check the website for course availability

Please check the website for course availability

Liquid Chromatography Courses

COURSE NO. COURSE NA	DATE	CITY	STATE/PROV	
This course is designed for t software operation of the A The course utilizes a lecture qualitative and quantitative	Agilent Infinity Series HPLC (3D) ChemStation C Operation those who want to enhance their skills in the techniques and gilent 1220, 1260 or 1290 Infinity Series HPLC 3(D) ChemStation. Format with instrument laboratories. Topics include creating methods, sequencing, diode array optimization, and hardware	1/24/2017 4/18/2017 7/18/2017 10/24/2017 1/30/2018	Alpharetta Lexington Lexington Lexington Lexington	GA MA MA MA
maintenance.	Dave			

Hands On | TC 2000 | 4 Days

HPLC-INF-2106c Agilent Infinity Series HPLC (3D) EZChrom Operation

This course is designed for those who want to enhance their skills in the techniques and software operation of the Agilent Infinity Series HPLC 3(D) with OpenLab EZChrom. The course utilizes a lecture format with instrument laboratories. Topics include creating qualitative and quantitative methods, sequencing, diode array optimization, OpenLab basic administration and hardware maintenance.

Please check the website for course availability

On-site Only | TC 1500 | 3 Days

HPLC-INF-2200cV2 **Infinity Series HPLC Troubleshooting & Maintenance**

This 2 day course is designed to provide hands-on experience performing routine maintenance and troubleshooting on the Agilent Infinity Series HPLC systems. The Agilent 1220, 1260 and 1290 will be covered. The following instrument modules will be addressed: vacuum degassers, isocratic, gradient and binary pumps, standard and high performance autosamplers, thermostatted column compartments, variable wavelength UV-Vis detectors and diode array UV-Vis detectors. Instrument diagnostic software will be used to show how to troubleshoot the Infinity Series instrumentation.

2/22/2017	Alpharetta	GA
4/26/2017	Lexington	MA
6/27/2017	Lexington	MA
9/20/2017	Lexington	MA
12/6/2017	Lexington	MA

Hands On | TC 1200 | 2 Days

4/4/2017

MA

Lexington

Liquid Chromatography Courses

COURSE NO. COURSE NAME DATE CITY STATE/PROV

HPLC-INFII-2101c Agilent Infinity Series HPLC with OpenLAB 2.x Essential and Advanced Operation

This 4-day course is designed for those operators who desire to learn both essential and advanced features to run samples and sequences, review data, set up methods that include calibration, and perform routine maintenance on their Agilent Infinity Series HPLC with OpenLAB 2.1.

Hands On | TC 2200 | 4 Days

HPLC-OLCS-2105c **Agilent HPLC Data Analysis and Reporting with** ChemStation C (3D)

This course is designed for those operators who want to enhance their skills in the use of the Agilent HPLC 2D or 3D OpenLab ChemStation software revision C.01. The course utilizes a lecture format with laptop computers.

On-site Only | TC 1800 | 3 Days

Please check the website for course availability



LC Troubleshooting & Maintenance

Before attending this course I had little understanding of the HPLC Systems. The instructor was able to simplify the system with her knowledge and skill. Her presentation skills and hands-on experience allowed me to fully grasp LC troubleshooting and maintenance. By gaining this knowledge I am able to efficiently and effectively perform my daily job function.

> Shayla Gamble Insmed Inc. Monmouth Junction, NJ

COURSE NO. COURSE NAME DATE CITY STATE/PROV

» GC/MS

GCMS-0GEN-2000c Techniques of GC/MS

This course is designed to introduce the student to the techniques necessary to perform qualitative and quantitative analysis using a quadrupole GC/MS system. This is a lecture-only course which emphasizes student participation through extensive class exercises focused on the total analysis of an unknown sample.

On-Site Only | TC 1500 | 3 Days

Please check the website for course availability

Brossard

Wilmington

Cedar Creek

QCDE

TX

5/9/2017

5/16/2017

10/3/2017

GCMS-0GEN-3060c **Interpretation of Mass Spectra**

This course is designed to present the fundamental concepts necessary to obtain high-quality data in SCAN mode from a GC/MS System for spectral interpretation purposes. The most commonly employed tools used in identifying compounds based on their mass spectra are introduced, the physical reasons for their efficacy explained, and their use reinforced through problem solving. The most common decomposition mechanisms responsible for fragment ions will also be introduced.

Lecture Only | TC 1800 | 3 Days

GCMS-0GEN-3063c **Introduction to Mass Spectral Interpretation I**

This course introduces the most commonly employed tools used in identifying unknown compounds from their mass spectra. Students will reinforce learned interpretation tools by solving a number of problems. The emphasis of this course is primarily calculational and students should bring a calculator as an aid in problem solving.

On-site Only | TC 600 | 1 Day

Please check the website for course availability

GCMS-0GEN-3064c **Intermediate Mass Spectral Interpretation II**

This course introduces two common decomposition mechanisms responsible for many fragment ions in mass spectra. The use of these mechanisms can help the analyst to determine an appropriate structure from among a number of possible isomers.

Please check the website for course availability

On-site Only | TC 600 | 1 Day

GCMS-5975-2100c Agilent 5973/5975 GC/MSD Operation with ChemStation

This hands-on lecture and laboratory course is designed for those who want to enhance their skills in the use of an Agilent GC/MSD with MS ChemStation E.02. If you have a 5977 MSD with MassHunter Acquisition software, please refer to courses GCMS-5977-2100cV2 or GCMS-5977-2103cV2, depending on the data analysis software you are using

Hands On | TC 3000 | 5 Days

1/30/2017 Alpharetta GA 3/20/2017 Alpharetta GA GA 6/5/2017 Alpharetta GA 9/25/2017 Alpharetta Alpharetta GA 12/4/2017

For more detailed course information: www.agilent.com/crosslab/university

COURSE NO. COURSE NAME		DATE	CITY	STATE/PROV
GCMS-5975-2200c	Agilent 5973/5975 GC/MSD Troubleshooting & Maintenance	3/14/2017 6/13/2017	Alpharetta Alpharetta	GA GA
•	or those who want to learn the routine troubleshooting and procedures for the 5973 or 5975 GC/MSD.	9/19/2017 1/23/2018	Alpharetta Alpharetta	GA GA
Hands On TC 1800 3 Days				

GCMS-5975-2203c Agilent 5973/5975 GC/MSD **Troubleshooting & Maintenance**

This course is designed for the GC/MSD Operator who wants an introduction to troubleshooting and preventive maintenance of the most frequently occurring operational problems of the Agilent 5973 or 5975 Mass Selective Detector. The course will emphasize how to perform preventative maintenance to avoid these problems. This is a lecture-only course accompanied by a discussion of typical tunes, problem tunes, class exercises and summary of results.

On-Site Only | TC 800 | 1 Day

GCMS-5975T-2100c Agilent 5975 Transportable GC/MS Techniques & Operation

This 4-day, hands-on 5975T training course will provide both the theory and operation of the Agilent 5975T GC/MS using the ChemStation. The instrumentation, tuning, data acquisition, data analysis, retention time locking, libraries, quantification, reporting DRS, sequencing and routine maintenance will be discussed.

On-site Only | TC 2400 | 4 Days

Please check the website for course availability

Please check the website for

course availability

and Data Analysis methods acquisition in scan and SIM m		1/24/2017 3/28/2017 5/16/2017 7/25/2017 10/3/2017 1/9/2018	Alpharetta Alpharetta Alpharetta Alpharetta Alpharetta Alpharetta	GA GA GA GA GA
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GCMS-5977-2103cV2	5975/5977 GC/MS Operation with	4/11/2017	Alpharetta	GA
	ChemStation Data Analysis	10/24/2017	Alpharetta	GA

This course is designed to teach users how to operate the Agilent 5975 or 5977 GC/MS with MassHunter Acquisition and ChemStation Data Analysis software. Topics include Scan and SIM acquisition and tuning using MassHunter Data Acquisition. ChemStation Data Analysis will be utilized for library searching, quantitative data analysis and reporting.

Hands On | TC 2400 | 4 Days

11/29/2017

GA

Alpharetta

Mass Spectrometry Courses

COURSE NO. COURSE NAM	IE .	DATE	CITY	STATE/PROV
GCMS-5977-2200cV2	Agilent 7890B/5977 GC/MS Maintenance & Troubleshooting	1/18/2017 4/18/2017	Alpharetta Alpharetta	GA GA
troubleshooting on the Agiler MassHunter Acquisition is als and tools, routine GC, vacuur	It to teach students how to perform maintenance and not 7890B/5977 GC/MSD. The current 5975 shipping with so relevant to this course. The student will learn about diagnostics in system, ion source, quadrupole and detector maintenance and f your GC/MSD is controlled by ChemStation software, please	7/18/2017 10/11/2017 1/17/2018	Alpharetta Alpharetta Alpharetta	GA GA GA
Hands On TC 1800 3 [Days			
GCMS-5977-2201c 59	975/5977 GC/MS Routine Maintenance & Troubleshooting	5/5/2017	Santa Clara	CA
on the Agilent 7890B/5977 (Acquisition is also relevant to tools, routine GC, vacuum sys	ned to inform students about the maintenance and troubleshooting GC/MSD. The current 5975 shipping with MassHunter this course. The student will learn about diagnostics and stem, ion source, quadrupole and detector maintenance and f your GC/MSD is controlled by ChemStation software, please see	10/13/2017	Cedar Creek	TX
Lecture Only TC 600 1	Day			
	gilent 5975/5977 and MassHunter EnviroQuant Operation	1/10/2017 7/11/2017	Alpharetta Alpharetta	GA GA

This bundle of 3 online learning modules and one, 3-day classroom training will provide you with the necessary skills to work with the Agilent 5977 or 5975 and MassHunter Enviroguant software. Prior to the classroom training, access approximately 2 hours of eLearning to prepare for the instructor-led portion of the Enviroquant training. The bundle consists of the following four courses:

- 1. Mass Spectrometry and Agilent 5975/5977 Essentials (eLearning) e12
- 2. Agilent 5975/5977 EnviroQuant Communication and Software Configuration Overview (eLearning) e13
- 3. Scan and SIM Data Acquisition Principles (Recorded) r14
- 4. Agilent 5975/5977 MassHunter Enviroquant Operation i16

You can access the eLearning portion of the bundle 10 times in a one year period. We will use MassHunter Acquisition B.07.02, MassHunter Qualitative Analysis B.07 and MassHunter Quantitative Analysis B.07.

eLearning + Hands On | TC 3200 | 3 Days

COURSE NO. COURSE NAME	DATE	CITY	STATE/PROV
GCMS-7000-2100cV2 Agilent 7000 Series Triple Quadrupole Techniques & Operation	1/10/2017 2/28/2017	Alpharetta Alpharetta	GA GA
This 4-day, hands-on course will give analysts the experience to develop MRM methods using	3/28/2017	Alpharetta	GA
the Agilent Triple Quadrupole GC/MS. The topics include a complete look at data acquisition and scan types, MassHunter Qualitative and Quantitative Analysis software packages, reporting and routine maintenance of the instrument.	5/2/2017 6/6/2017 8/15/2017	Alpharetta Alpharetta Alpharetta	GA GA GA
	10/17/2017	Alpharetta	GA
Hands On TC 3200 4 Days	11/7/2017	Alpharetta	GA
	12/12/2017	Alpharetta	GA
	1/30/2018	Alpharetta	GA
GCMS-7000-2301c Agilent Triple Quadrupole GC/MS Pesticide Analyzer Operation	1/4/2017 5/23/2017	Alpharetta Alpharetta	GA GA
This 3-day, hands-on course will give analysts the experience to develop MRM methods and use the Pesticide Analyzer database the Agilent Triple Quadrupole GC/MS. The topics include a complete look at data acquisition and scan types, MassHunter Qualitative and Quantitative Analysis software packages, reporting and routine maintenance of the instrument.	11/14/2017	Alpharetta	GA
Hands On TC 2400 3 Days			
GCMS-CS-2100c GC/MSD ChemStation Data Analysis & Reporting This course is designed for those operators who went to enhance their skill in the use of the	Please check course availal	the website for	

This course is designed for those operators who want to enhance their skill in the use of the Agilent GC/MSD ChemStation. If you require instruction in tuning and data acquisition, please see GCMS-5975-2100c.

On-site Only | TC 2400 | 3 Days

GCMS-MH-2100c MassHunter GC/MS Data Analysis and Reporting

This course will give analysts an opportunity to learn how to use MassHunter Qualitative Analysis, Quantitative Analysis, and Reporting as it applies to gas phase unit mass resolution mass spectrometers (GC single quadrupoles & GC triple quadrupoles). This course is designed for those students who already have significant background in GC/MS, but need to learn about the MassHunter software. Please take the appropriate "Techniques and Operation" course if you need specific instrument training.

Computer Only | TC 1200 | 2 Days

2/15/2017 Brossard QC 5/3/2017 Santa Clara CA10/11/2017 Cedar Creek TX QC10/18/2017 Brossard

COURSE NO. COURSE NAME DATE CITY STATE/PROV

» LC/MS

LCMS-6100-2100c 6100 Series SQ LC/MSD Techniques & Operation

This course is designed for those who want to enhance their skills in the operation of the Agilent 6100 Series SQ LC/MSD hardware and Openlab ChemStation C.01 software. This course utilizes a lecture and lab format with laboratories using a laptop computer and an 6100 Series LC/MSD for hands-on instruction.

Please check the website for course availability

2/28/2017

7/11/2017

On-site Only | TC 3200 | 4 Days

LCMS-6100-2109c Agilent 6100 Series SQ LC/MS with OpenLAB 2.1 Essential and Advanced Operation

This 4-day course is designed for those operators who desire to learn both essential and advanced features to run samples and sequences, review data, set up methods that include calibration, and perform routine maintenance.

10/3/2017 TX Cedar Creek 1/9/2018 Cedar Creek TX

Cedar Creek

Cedar Creek

TX

TX

Hands On | TC 3200 | 4 Days

LCMS-6200-2100c 6200 Series TOF LC/MS Techniques & Operation with MassHunter

This course is designed for those who want to enhance their skills in the use of the Agilent 6200 Series LC/MS TOF including tuning, acquisition, optimization, and data analysis. This course includes hands-on instrument operation.

Hands On | TC 4000 | 4 Days

1/24/2017	Cedar Creek	TX
3/28/2017	Cedar Creek	TX
6/20/2017	Cedar Creek	TX
8/22/2017	Cedar Creek	TX
10/31/2017	Cedar Creek	TX
1/30/2018	Cedar Creek	TX



Agilent 6400 Series QQQ LC/MS **Techniques & Operation**

I found this trip to be extremely worthwhile. After finishing the first day alone, I knew I made the right choice attending this training. The amount of knowledge imparted during the course was phenomenal.

> Lela Fokumlah Forensic Scientist III Mesa PD Forensic Services

COURSE NO. COURSE NAME		DATE	CITY	STATE/PROV
LCMS-6400-2100c	6400 Series QQQ LC/MS Techniques & Operation	1/10/2017	Lexington	MA
This course is designed for	or those who want to enhance their skills in the operation of the Agilent	1/24/2017	Lexington	MA
6400 Series Triple Quadrupole LC/MS. The course will cover triple quadrupole techniques,		2/7/2017	Lexington	MA
•	duction, quantitation, reporting, and maintenance. This course includes	3/7/2017	Lexington	MA
hands-on instrument ope	· · · · · · · · · · · · · · · · · · ·	3/21/2017	Lexington	MA
	s for the 6490 are not covered during the course.	4/4/2017	Lexington	MA
	-	4/25/2017	Lexington	MA
Hands On TC 4000 4 Days		5/16/2017	Lexington	MA
		6/20/2017	Lexington	MA
		7/11/2017	Lexington	MA
		7/25/2017	Lexington	MA
		8/8/2017	Lexington	MA
		8/22/2017	Lexington	MA
		9/12/2017	Lexington	MA
		9/26/2017	Lexington	MA
		10/17/2017	Lexington	MA
		11/7/2017	Lexington	MA
		11/28/2017	Lexington	MA
		12/12/2017	Lexington	MA
		1/9/2018	Lexington	MA
		1/23/2018	Lexington	MA
LCMS-6400-2105c	Agilent 6400 Series LC/QQQ MassHunter	1/18/2017	Santa Clara	CA
	Data Analysis & Reporting	4/11/2017	Lexington	MA
This source is designed f		7/12/2017	Wilmington	DE
This course is designed for those who want to enhance their skills in Qualitative and Quantitative data analysis and reporting using data acquired with the Agilent QQQ LC/MS. The course		10/11/2017	Lexington	MA
utilizes a lecture format with laptop laboratories. Topics include general principles of LC/MS/MS, MassHunter Qualitative and Quantitative Analysis software and Reporting.		1/24/2018	Santa Clara	
Computer Only TC 1	600 2 Days			
LCMS-6400-2200c	Improving Your OOO LC/MS Untime	Plages chack	the website for	

LCMS-6400-2200c Improving Your QQQ LC/MS Uptime

This one-day seminar covers the top 3 issues that impact your QQQ LC/MS uptime along with actions the operator can take to correct or prevent loss of system sensitivity, analysis reproducibility and system tuning issues. A list of helpful reference materials and web sites will be provided so users can access technical information to assist them in their troubleshooting & maintenance efforts to maximum uptime of their system.

Lecture Only | TC 600 | 1 Day

Please check the website for course availability

COURSE NO. COURSE NAME	DATE	CITY	STATE/PROV
LCMS-6500-2100c Q-TOF LC/MS Techniques & Operation for Small Molecules	1/31/2017	Lexington	MA
This course is designed for those who want to enhance their skills in the techniques and		Lexington	MA
software operation of the Agilent Q-TOF LC/MS. The course utilizes a lecture format with	3/28/2017	Lexington	MA
instrument laboratories that emphasize small molecule application workflows. Topics include	4/18/2017	Lexington	MA
tuning, acquisition, optimization, Worklists, MassHunter Qualitative and Quantitative software and hardware maintenance.		Lexington	MA
		Lexington	MA
Note: Ion funnel features for the 6550 are not covered during the course.	7/18/2017	Lexington	MA
	8/15/2017	Lexington	MA
Hands On TC 4000 4 Days	9/19/2017	Lexington	MA
	10/24/2017	Lexington	MA
	11/14/2017	Lexington	MA
	12/5/2017	Lexington	MA
	1/30/2018	Lexington	MA
LCMS-6500-2102c Q-TOF LC/MS Techniques & Operation for Large Molecules	2/14/2017	Lexington	MA
This course is designed for those who want to enhance their skills in the techniques and	5/2/2017	Lexington	MA
software operation of the Agilent Q-TOF LC/MS. The course utilizes a lecture format with		Lexington	MA
instrument laboratories that emphasize large molecule application workflows. Topics include tuning, acquisition, optimization, Worklists, MassHunter Qualitative and Quantitative software and hardware maintenance.	11/28/2017	Lexington	MA
Note: Ion funnel features for the 6550 are not covered during the course.			
Hands On TC 4000 4 Days			
LCMS-6500-2105c Agilent Q-TOF MassHunter Data Analysis & Reporting	1/4/2017	Alpharetta	GA
This course is designed for those who want to enhance their skills in the qualitative and	5/10/2017	Cedar Creek	TX
quantitative software operation of the Agilent Q-TOF LC. The course utilizes a lecture format with software exercises on laptop computers. Topics include, MassHunter Qualitative and Quantitative software, Mass Profiler and Bioconfirm. No instruments are present during this course.	9/6/2017	Lexington	MA
Computer Only TC 1600 2 Days			

Software & Informatics Courses

COURSE NO. COURSE NAME		DATE	CITY	STATE/PROV
SI-7697A-2100c 7697A Headspace Operation This lecture and hands on course will give the analyst understanding of basic headspace sampling theory and parameters, the components and operation of the 7697A headspace sampler, method development, and experience with maintenance and troubleshooting procedures.		1/18/2017 8/16/2017	Alpharetta Alpharetta	GA GA
Hands On TC 1000	2 Days			
SW-ECM-2800c	OL ECM Advanced User & Administration	3/8/2017	Alpharetta	GA
This two-day lecture and computer labor atory course is designed to instruct users on fundamental theory and operation of OL ECM. It prepares individuals to configure and maintain the Agilent OL ECM system on servers and client workstations. Discussion and hands-on exercises are designed to emphasize user interaction with Agilent OL ECM.		6/21/2017 9/12/2017 11/29/2017	Alpharetta Alpharetta Alpharetta	GA GA GA
Computer Only TC	1800 2 Days			
SW-MPP-3100cV2	Mass Profiler Professional (MPP) Workshop	1/31/2017	Wilmington	DE
determine relationships software. Different Agil- LC/MS, ICP-MS. Proper including ANOVA, PCA,	I advanced workflows to lead customers through differential analysis to between two or more sample groups & variables using Agilent MPP ent & non-Agilent data types will be explored including GC/MS, r experimental design & data preparation will be discussed. Tools volcano plots, hierarchical trees, self-organizing maps and K-means xplore real-life data sets.	5/2/2017 7/25/2017 10/3/2017 12/12/2017	Lexington Santa Clara Lexington Cedar Creek	MA CA MA TX
Computer Only TC				
ChemStation version B	OpenLab ChemStation Update Workshop will provide update training specific for users that are well-versed in using who need to learn the differences that will be encountered when moving ses on laptops are included. 500 1 Day	Please check the website for course availability		
014 01 2470	0 1 1 000 1 4 111 4 10 4 11	DI I I		
writer. Topics progress f	OpenLab CDS Intelligent Reporting will provide skills in utilizing the new Intelligent OpenLAB report from using the Report Wizard and basic template layouts to ab exercises on laptops are included.	Please check course availal	the website for pility	

Computer Only | TC 600 | 1 Day

COURSE NO. COURSE NAME	DATE	CITY	STATE/PROV
SW-OLII-1100cV2 OpenLAB 2.x CDS Operations for Workstation This two-day course is designed for routine operators and technicians using instruments connected to OpenLAB 2.x in a workstation environment to run a variety of instruments (LC/GC/LCMS/GCMS). Students will learn to run single samples and sequences as well as new data analysis workflows including integration, calibration, and reporting. Computer Only TC 1000 2 Days	4/26/2017	Alpharetta	GA
	7/19/2017	Santa Clara	CA
	10/18/2017	Lexington	MA
	1/24/2018	Cedar Creek	TX
SW-OLII-1101cV2 OpenLAB 2.x CDS Operations for Client/Server This two-day course is designed for routine operators and technicians using instruments connected to OpenLAB 2.x in a client/server environment to run a variety of instruments (LC/GC/LCMS/GCMS). Students will learn to run single samples and sequences as well as new data analysis workflows including integration, calibration, and reporting. Computer Only TC 1000 2 Days	Please check the website for course availability		
SW-OLII-1800cV2 OpenLAB 2.x CDS Control Panel Administration This one-day course is designed for IT administrators, lab managers and users of the OpenLAB 2.x CDS Control Panel software to configure roles and permissions, instruments, projects, and the overall system. Instrument monitoring, licensing and software diagnostics will also be addressed. Computer Only TC 500 1 Day	4/25/2017	Alpharetta	GA
	7/18/2017	Santa Clara	CA
	10/17/2017	Lexington	MA
	1/23/2018	Cedar Creek	TX
SW-OLII-2800cV2 OpenLAB 2.x CDS Administration for Client/Server This one-day course is designed for IT administrators, lab managers or anyone administering the OpenLAB 2 CDS client/server software to manage and maintain their centralized Content Management database. Students will review changes in the Control Panel between workstation versions and client/server versions, as well as tools for administrators, and best practices. Computer Only TC 600 1 Day	Please check the website for course availability		
SW-PA-3100cV2 Pathway Architect Workshop This workshop will provide students with the ability to take results of single or multi-omics experiments and map them to canonical biological pathways. Students will create pathways and then analyze and visualize experiments with those pathways. This is a follow-on course to the Mass Profiler Professional (MPP) Workshop R2260A and builds on skills acquired during that session.	2/3/2017	Wilmington	DE
	5/5/2017	Lexington	MA
	7/28/2017	Santa Clara	CA
	10/6/2017	Lexington	MA
	12/15/2017	Cedar Creek	TX

Computer Only | TC 1000 | 1 Day

Vacuum Courses

COURSE NO. COURSE NAME	DATE	CITY	STATE/PROV
VAC-0GEN-1010c Basic Vacuum Practice This course provides practical information on vacuum system operation, performance, and maintenance, as well as a comprehensive treatment of vacuum technology. Lecture Only TC 1400 3 Days	1/24/2017 1/31/2017 3/14/2017 4/11/2017 6/6/2017 7/18/2017 9/12/2017 10/10/2017	Santa Clara Mississauga Lexington Santa Clara Lexington Santa Clara Lexington Santa Clara	ON MA CA MA CA MA
VAC-0GEN-1210c Vaccum Leak Rate Test and Measurement This course is a companion to the Basic Vacuum Practice course, building on the vacuum and helium mass spectrometer leak detector (HMSLD) fundamentals learned in BVP. Lecture Only TC 500 1 Day	1/27/2017 2/3/2017 3/17/2017 4/14/2017 6/9/2017 7/21/2017 9/15/2017 10/13/2017	Santa Clara Mississauga Lexington Santa Clara Lexington Santa Clara Lexington Santa Clara	ON MA CA MA CA MA

VAC-0GEN-3010c **Advanced Vacuum Practice**

Building on the Basic Vacuum Practice course, this course begins with a short review of vacuum theory and moves on to calculations for building and characterizing a vacuum system designed to perform at specified pressures.

Lecture Only | TC 2000 | 3 Days

Please check the website for course availbility

General Training Information

CANCELLATION POLICY

Cancellation or rescheduling must be made within 10 business days prior to the start of the course to avoid a 50% billing fee to the attendee. A one-day cancellation or non-attendance will result in full billing.

Agilent reserves the right to cancel any course 10 business days prior where minimum enrollment is not met. The purchase of non-refundable airline tickets is not recommended due to possible course cancellations.

Agilent training classes are intended solely for end-users of Agilent instrumentation and Agilent approved service providers.

LOCATION INFORMATION

For location information, visit www.agilent.com/crosslab/ university, select "View Training Course Offerings," and filter by location. The class schedule includes:

- Training location address
- · Hotel recommendations

CLASS TIMES

Registration begins at 8:30 a.m. on the first day of class. Class runs from 9:00 a.m. to 5:00 p.m. each day. Class ends by 5:00 p.m. For 4 and 5 day classes the instructors try to end early on the final day of class to accommodate students travel arrangements.

PRICES

Prices are listed on the Agilent Customer Training website. These prices are subject to change without notice.

TRAINING CREDITS

Agilent training courses are also priced in Agilent University Training Credits. These prepaid credits can be applied to any Agilent training course within 24 months of purchase. For more information on Agilent University Training Credits visit:

www.agilent.com/chem/trainingunits.

ON-DEMAND COURSES

Some courses are offered on an "On-Demand" basis. If you are interested in a course that is not currently scheduled or not offered in your area, call our registrar, and place your name on a wait list.

FOR MORE INFORMATION

PHONE: 1-800-227-9770 Option 1, 3

www.agilent.com/crosslab/university

Notes	



Agilent CrossLab combines the innovative laboratory services, software, and consumables competencies of Agilent Technologies and provides a direct connection to a global team of experts who deliver vital, actionable insights at every level of the lab environment. Our insights drive improved economic, operational, and scientific outcomes.

For more information

Phone:

1-800-227-9770, Option 1, 3

Web:

www.agilent.com

This information is subject to change without notice

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