

# GC & GC-MS Training Courses

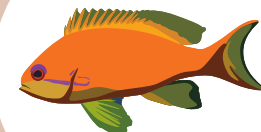
Comprehensive - Affordable - Instrument Independent

“The lively enthusiastic presentation style and use of specific examples from the instructors’ experience made the experience easy to follow and helped me understand the relevance of some techniques. As they say in book reviews: it’s a course of breathtaking scope. I was impressed with how much one can learn in only 5 days.”

*Irina Stefana, MRC National Institute for Medical Research.*

Train with the best

**Anthias** Consulting Ltd  
Bridging the Gap



# Who are we?

**Anthias Consulting is the world's leading independent authority on Gas Chromatography (GC), Gas Chromatography-Mass Spectrometry (GC-MS) and related techniques.**

With over three decades of hands-on experience in GC and related techniques, on a wide range of manufacturers' instrumentation (for example Agilent, Shimadzu, Thermo, Varian, SRI Instruments, ALMSCO and Leco GC & GC-MS systems; Zoex, Leco and Agilent GCxGC systems; CTC, GL, Gerstel, Markes International, PyroLab, CDS, Teledyne-Tekmar, OI Analytical and Horizon Technologies sample preparation and sample introduction systems), in a huge variety of applications and industries, we aim to fulfill your requirements whatever your needs may be.

We provide training to "bridge the gap", bringing experience of all aspects of the customer: supplier interface from both sides, providing an insight into the needs of each. We work with both the analysts who use the GC instrumentation and the instrument manufacturers, by providing both generic, manufacturer or software specific, theoretical, hardware, software, method development, maintenance and troubleshooting training and consultancy enabling you to get the best out of your analytical systems.

Our team is led by senior consultant and director, Diane Turner, who founded Anthias Consulting in 2005 to share her expertise and knowledge in GC & GC-MS. Diane has spent more than 15 years working with GC and was formerly an applications chemist, developing and troubleshooting applications, methods and instruments while working directly with customers.

Imran Janmohamed gained extensive experience in his doctoral studies in the use of GC, GC-MS and GCxGC-ToFMS for the analysis of trace-level contaminants in the environment. You will find him organising, running and teaching our classroom and laboratory-based courses at The Open University in Milton Keynes.

Katrina Copeland joined Anthias Consulting as a trainer and consultant. She has earned a BSc (Hons) degree in Chemistry supported by 7 years commercial experience of Gas and Liquid Chromatography within the Radiopharmaceutical industry. Katrina is delighted to join the Anthias team and is looking forward to helping our clients enhance their understanding and application of the science.



For full course details please go to: [www.anthias.co.uk](http://www.anthias.co.uk)

# Why choose Anthias courses?

- **Our courses cover the full expanse of Gas Chromatography**
- **Training can be scheduled or tailored; classroom or lab-based; theoretical and/or hands-on; generic or manufacturer/software specific; onsite or offsite; UK, worldwide or online**
- **Classroom-based courses have a strong practical & application focus, with lots of tips**
- **Maximum class sizes to encourage participant interaction but provide focused support for your needs**
- **Taught by practicing analytical chemists with current skills**
- **Non-manufacturer specific training, unbiased advice**
- **Flexible training available for all levels of experience**
- **Courses approved by the Royal Society of Chemistry**
- **Presented in English with visuals and props for clarity and instrument parts & consumables**
- **Plenty of opportunities to ask questions tailored to your needs**
- **Hundreds of attendees from a range of backgrounds successfully trained on our courses over the past 8 years**
- **Discounts available for early bird, student, professional body members and group bookings**
- **Price includes course manual, lunch and refreshments**
- **Prestigious venues including The Open University, UK and the NRC, Abu Dhabi**
- **In-house or alternative venues upon request**

# Which Course?

**We currently offer four different types of course:**

- 1. Generic classroom-based training courses with practical focus**
- 2. Generic laboratory based hands-on training courses**
- 3. Manufacturer and software specific training courses**
- 4. Online Training**



## What is a hands-on course?

A hands-on course is a one-day course, mixing 50:50 theory and hands-on practicals in a laboratory environment. Small groups of a maximum of 4, allow every individual's needs to be met and half of your time will be spent in the laboratory.

The knowledge you will gain spans both GC and MS and can be applied to both. You can mix and match hands-on courses to meet your exact requirements, allowing you to bridge the gaps in knowledge that you want to fill.

# Booking

## Training Course Calendar

For the latest calendar and details of venues, please visit [www.anthias.co.uk](http://www.anthias.co.uk). Reserve your place on the courses by completing an online registration form on our website, or requesting a form by sending an email to [courses@anthias.co.uk](mailto:courses@anthias.co.uk).

After making a booking, you will be sent a receipt of your course booking and a pre-course questionnaire.

Instructions on course venues, local hotels, airlines and course venue directions will then follow by email.



For full course details please go to: [www.anthias.co.uk](http://www.anthias.co.uk)



# Venues

## The Open University

Anthias is very proud of its partnership and relationship with The Open University. We provide Gas Chromatography and Mass Spectrometry Training Courses through the Open University's prestigious interdisciplinary research centre, CEPSAR, which brings together world-class researchers from the two Departments – of Physical Sciences and of Environment, Earth and Ecosystems.

The CEPSAR facility, through Dr Geraint (Taff) Morgan, is host to our training, demonstration and method development services.

## Hosting Venues

Anthias works with a range of prestigious academic and corporate venues in hosting its courses including; University of Glamorgan, Imperial College London, Liverpool University, Newcastle University, Nottingham University, Plymouth University, York University, MSD a subsidiary of Merck & Co., and the Emirate of Abu Dhabi National Rehabilitation Centre in the UAE. Anthias is always open to working with appropriate venues both nationally and internationally for hosting arrangements. Please contact us at [courses@anthias.co.uk](mailto:courses@anthias.co.uk) to discuss the opportunity.

## Online Training Courses

Anthias Consulting is working with Analytical Training Solutions to provide online training on GC & GC-MS. These are pre-recorded PowerPoint presentations with voiceover and presented by Anthias' Senior Consultant Diane Turner.

The courses are very modular allowing you to learn at your own pace whether you have 10 minutes or 2 hours available.

Refresh your knowledge on a subject area or learn a new topic. Like all of our classroom-based courses, they are packed with tips and rules of thumb allowing you to implement them as soon as you are back in the laboratory.

# Course Accreditation



Anthias are proud to be amongst the first companies to be given formal approval by the Royal Society of Chemistry for their courses under their new training course approval scheme.

According to Dr Andrea McGhee, the Royal Society of Chemistry's Accreditation Development Specialist: "The objectives of course approval are to highlight good quality training available to the community and encourage members' continuing professional development [CPD] while also supporting trainers to promote their courses globally. The approval process is one of peer review, involving assessment against set criteria by members that are experts in their field."

All of our approved courses can be found on the Royal Society of Chemistry's searchable database:

[www.rsc.org/cpd/training](http://www.rsc.org/cpd/training)

and on the anthias website:

[www.anthias.co.uk/content/training-courses](http://www.anthias.co.uk/content/training-courses)

*Royal Society of Chemistry members receive a 15% discount on all Royal Society of Chemistry accredited courses.*



# Generic classroom-based courses

These vary from 1 to 5 days and allow attendees to boost their knowledge, confidence and results in all aspects of gas chromatography and GC-MS. The courses have a strong focus on the practical side of the techniques rather than theoretical, which can be applied the instant you return to your laboratory. Although there will be a use of 'props' (instrument parts and consumables) within these courses for you to get a feel of and you'll be presented with lots of tips and tricks, there will NOT be any hands-on aspects to the courses within the laboratory environment.

## Absolute Basics of GC & GC-MS (1 day)

Audience: Absolute beginners in gas chromatography and GC-MS. The what, how, why, where and when of GC & GC-MS. This course covers the absolute basics and is a good starting point for beginners prior to attending the Practical Essentials, Complete, Complete Hands-on or Manufacturer specific courses. Topics covered (to intermediate level) include:

- Instrumentation
- Sample types
- Analytes
- Chromatograms
- Analytical columns
- Stationary phases
- Mobile phases
- Separation process
- GC oven
- Sample introduction
- On-column injections
- Split & splitless injections
- Detection
- Flame ionisation detector (FID)
- Electron capture detector (ECD)
- Mass selective detector (MSD)
- Qualitative data analysis
- Quantitative data analysis
- Sampling techniques
- Applications

## Practical Essentials of GC & GC-MS (3 days)

Audience: Some experience of GC or GC-MS is required or participants have attended the Absolute Basics of GC & GC-MS course. Topics covered (to advanced level) include:

Day 1	Day 2	Day 3
Introduction to GC	Analytical columns	Sampling
Gases & plumbing	Backflushing	Thermal desorption, Pyrolysis
Sample introduction: inlets	Detectors: FID, TCD, ECD, etc.	Headspace - static & dynamic
On-column injection	MSD: vacuum, ionisation, mass analysers & detectors	Solid-Phase Extraction, SPME, SBSE
Split & splitless injections	Quadrupole, ion trap, TOF, MS/MS, QQQ, magnetic sector	Purge & Trap, Liquid-Liquid Extraction
Large volume injection (LVI)	Data analysis: Libraries, Qualitative, Quantitative & Semi-quantitative analysis	Automation, Derivatisation, etc.



**“Comprehensive; informal presentation; opportunity to ask questions as we went along. Most interesting topic: Fundamentals of GC. Most useful topic: Sample preparation.”**

*Carolyn Willis, Research Director, Amersham Hospital attended the Absolute Basics course*

For full course details please go to: [www.anthias.co.uk](http://www.anthias.co.uk)

## The GC & GC-MS Clinic (2 days)

Audience: Good knowledge of GC or GC-MS is required or participants have attended the Practical Essentials of GC & GC-MS course. Topics covered (to advanced level) include:

Day 1 (4)	Day 2 (5)
Method development & optimisation. Validation & accreditation	Maintenance: from septa to liners to pumps & detectors to MSD tuning to contamination
Case study: choosing instrumentation & techniques, developing methods	Identifying when maintenance is required
Advanced techniques taster (basic level): Mass spectral interpretation	Troubleshooting: Preparing for problems
Selective discrimination	Identifying problems
Deconvolution, Chemometrics	The troubleshooting process
Multi-dimensional GC (GCxGC, heartcutting)	Practical: troubleshooting chromatograms

## The Complete GC & GC-MS Course (5 days)

Audience: GC or GC-MS users who wish to learn the techniques then continue on to develop methods and troubleshoot instruments. Complete beginners are advised to attend the Absolute Basics of GC & GC-MS first.

Topics: This course consists of the 3-day Practical Essentials of GC & GC-MS and the 2-day GC & GC-MS Clinic courses. Placed back to back, analysts can attend both courses at once, or alternatively, go away and implement them, then come back for the 2-day GC & GC-MS Clinic at a later date.


Individual days: You can also choose to attend a single day from the 5

days listed to brush up your knowledge on a particular topic, however it is advised to attend the full course or at least the Practical Essentials of GC & GC-MS to attend days 4 or 5.

## Mass Spectral Interpretation (3 days)

Audience: For those who have a good background in organic chemistry and at least six months experience as a GC-MS operator.

You will learn the fundamentals of mass spectral interpretation for the identification of unknowns or to enhance your understanding of fragmentation patterns produced from GC-MS analysis to aid in accurate identification when using library search programs.



**"A valuable course, with lots of learning, well paced and knowledgeable presenter. This course is up there with the best"**

*Chris Armstrong, EDF.  
Complete GC & GC-MS.*



# Generic laboratory-based courses

These courses vary from 1 to 5 days and cater for those eager to combine theory with practice. They are a mixture of classroom-based presentations with hands-on hardware training within the laboratory environment and software training within the lab and/or classroom. Our “hands-on” courses all have 50% of the time spent in the laboratory using the instrumentation.

## Hands-on Complete GC & GC-MS (5 days)

The Hands-on Complete GC & GC-MS course is made up of the 5 individual days of the Hands-on Gas Chromatography, GC Maintenance, Gas Chromatography-Mass Spectrometry, GC-MS Maintenance and GC & GC-MS Troubleshooting courses. Taken all together they provide you with a Hands-on Complete overview of GC and GC-MS theory, methods, maintenance and troubleshooting. You can also take a 3-day course focusing on just the GC or just the GC-MS.

This course is 50% theory and 50% practical and is suitable for all levels of knowledge; however for complete beginners it is advisable to attend the 1-day Absolute Basics of GC & GC-MS first to get a good overview of GC. A FREE glossary on GC & GC-MS is provided with this course! Attendees are entitled to 2 hours consultancy with Anthias' experts at the end of the course.

## Hands-on Sample Preparation (4 days)

The Hands-On Sample Preparation course combines the 4 individual hands-on sample preparation days covering Headspace, SPME, Thermal Desorption and Pyrolysis. These courses have a 50:50 mix of theory and hands-on practicals in a laboratory environment.

## Hands-on Advanced Injection Techniques (2 days)

This course combines the 2 advanced GC courses on Programmable Temperature Vapourisers (PTVs) and Large Volume Injection (LVI). This course will enable you to learn about and practice some advanced and powerful GC techniques which could be very useful for your analysis.

## Hands-on Gas Chromatography (1 day)

Spend the first part of the day learning the theory of gas chromatography and then use this knowledge to create split and splitless methods, perform manual and liquid autosampler injections and change oven temperature programs to optimise the separation of analytes detected with an FID.

Covering the gas supplies, liquid autosampler, hot split and splitless injections, the analytical column and detection by FID and ECD, this course is suitable for all levels of knowledge.

## Hands-on GC Maintenance (1 day)

This one day course combines learning the reasons why maintenance is required, what happens if maintenance isn't performed and the signs of when maintenance is needed along with practicals carrying out maintenance on a gas chromatograph.

Covering maintenance of the liquid autosampler, inlet, column and FID/ECD, this course is suitable for those who have some knowledge of GC and beginners who have attended the “Hands-on” GC course.

## Hands-on Gas Chromatography-Mass Spectrometry (1 day)

Spend the first part of the day learning the theory of mass spectrometry and then use this knowledge to create GC-MS methods, perform injections and change MS parameters to see the effects.

Covering MSD theory and practicals on single quadrupole mass spectrometers, this course is suitable for those with some knowledge of GC.

## Hands-on GC-MS Maintenance (1 day)

This one day course combines learning the reasons why maintenance is required, what happens if maintenance isn't performed and the signs of when maintenance is needed along with practicals carrying out maintenance on mass spectrometers.

Covering maintenance on single quadrupole mass spectrometers including tuning, cleaning and more, this course is suitable for people who have some knowledge of GC-MS and beginners who have attended the “Hands-on” Gas Chromatography-Mass Spectrometry course. Please note: this course will only cover the MSD not the GC, refer to the ‘GC’ courses for training on that part of the instrument.

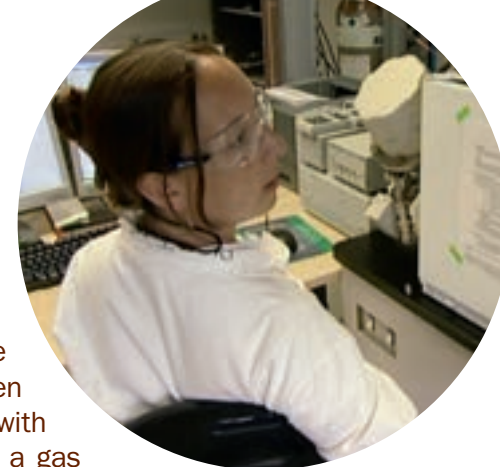
## Hands-on GC & GC-MS Troubleshooting (1 day)

This one day course combines learning how to go about troubleshooting a GC or GC-MS instrument and what problems can occur, with real problem solving on the instruments and data analysis software.

This course will cover troubleshooting the gas supply, autosampler, inlet, column, GC detector and MS including leaks, tune problems, MS method and identifying if the GC or the MSD is the problem. For those new to GC or GC-MS you are advised to attend the Hands-on GC & Maintenance or the Practical Essentials of GC & GC-MS first.

## Hands-on Headspace (1 day)

Spend part of the day learning the theory of static and dynamic headspace and how to modify samples to improve results, then use this knowledge to





create HS methods, analyse samples and experiment with parameters to see the effects.

Covering static and dynamic headspace, this course requires knowledge of GC or GC-MS.

### Hands-on SPME (1 day)

Spend part of the day learning the theory behind Solid-Phase Micro-Extraction and how to modify samples to improve results, then use this knowledge to create SPME methods, analyse samples and experiment with parameters to see the effects.

Covering SPME, this course requires some knowledge of GC or GC-MS.

### Hands-on Thermal Desorption (1 day)

This one day course begins with the theory of thermal desorption, types of samples that can be analysed using this technique, types of tube packing materials and how to collect samples. This knowledge is then used to create TD methods, collect and analyse samples and experiment with parameters to see the effects.

Covering thermal desorption of gas-phase and solid-phase samples, this course requires some knowledge of GC or GC-MS; selection and installation of the column set into the flow modulator; creation of GCxGC methods using Chemstation; optimisation of a diesel sample using the standard column set; and analysis of the data using GCImage software.

### Hands-on Pyrolysis (1 day)

Spend part of the day learning the theory behind the different pyrolysis techniques and then put this knowledge into practice in the laboratory, creating pyrolysis methods, analysing samples and changing parameters to see the effects.

Covering analytical pyrolysis, this course requires some knowledge of GC or GC-MS.

### Hands-on Programmable Temperature Vapourisers (1 day)

This one day course focuses on the added functionalities of PTVs over standard hot inlets as a truly multi-mode inlet. Part of the day will be spent looking at the theory and advantages of cold split and cold splitless injections and the uses for cold-trapping, high final inlet temperatures, large volume injections and additional techniques like thermal desorption and extraction. The remainder of the day will be spent in the laboratory creating, using and optimising cold injection methods to analyse thermally labile and high molecular weight samples and looking at other PTV techniques.

Covering all PTV techniques, this course requires some knowledge of GC or GC-MS. Please note: this course will not cover large volume injections in great detail, please refer to the LVI course for more detail on this technique.

### Hands-on Large Volume Injection (1 day)

This one day course combines the theory and advantages behind the different large volume injection techniques with “hands-on” practicals to create, use and optimise LVI methods in the laboratory.

Covering Large Volume Injection (LVI) methods, this course requires some knowledge of GC or GC-MS. Please note: this course will cover using PTV inlets for large volume injections only, please refer to the PTV course for other PTV techniques.

### Hands-on GCxGC Operator (2 days)

The 2-day Hands-on GCxGC Operator course is designed to introduce the fundamental concepts of GCxGC using thermal or flow modulation with the operation of the Zoex or Leco thermal modulator or the Agilent CFT flow modulator and the Zoex GCImage or Leco ChromaTOF software. It combines a mixture of classroom based presentations with hands-on software and hardware laboratory exercises to give you comprehensive training.

This course includes an introduction to comprehensive two-dimensional gas chromatography; selection and installation of the column set into the flow modulator; creation of GCxGC methods; optimisation of a diesel sample using the standard column set; and analysis of the data.

**“The first 3 days were really informative. Knowledgeable and enthusiastic trainer (good stories, examples, experiences). Small group and thus a lot of personal attention. All very interesting!”**

*Lydia Bossers, University of Glamorgan. April 2012  
Complete course*

**If you would like to improve your knowledge in a particular area and don't want to attend a long course you can choose to attend individual days from the Hands-on Complete GC & GC-MS, Hands-on Sample Preparation and Hands-on Advanced Injection courses.**

# Manufacturer & software specific courses

These courses were specially developed in response to our participant's feedback who wanted to have hands-on experience in the use, maintenance and troubleshooting of specific GC and GC-MS instruments or software, along with the essential theory that we previously offered. It will significantly improve your knowledge and learning through the practicals that we run. These courses vary from 1 to 4 days and cater for those eager to combine theory with practice and mix classroom-based presentations with hands-on hardware and/or software within the laboratory and/or classroom.

For other  
hardware and  
software please  
enquire by email  
[courses@anthias.co.uk](mailto:courses@anthias.co.uk)  
or telephone +44  
1480 831262.

## **Comprehensive GC Training (4 days)**

This course can take place on a range of different manufacturer's instrumentation. Options 1 and 2 use an Agilent 7890 GC for 2 days of hardware training followed by 2 days of software training on OpenLAB Chemstation (option 1) or EZChrom (option 2). Option 3 uses a Shimadzu GC for 2 days of hardware training followed by 2 days of training on GCSolution software. Option 4 uses a Thermo TRACE GC for 2 days of hardware training followed by 2 days of training on Xcalibur software. Option 5 uses a Varian CP-3800 GC for 2 days of hardware training.

Alternatively, for training on specific hardware or software, you can attend separately any of the 2-day hardware or 2-day software training courses.

## **Comprehensive GC Training (SRI GC with PeakSimple) (2 days)**

This course is designed to introduce the fundamental concepts of gas chromatography and provide training on the operation of the SRI Instruments 8610C Gas Chromatographs. It includes the use of the PeakSimple chromatography data system, demonstrating and applying the features of the software so that you have a good understanding of the data system and its capabilities.

It combines a mixture of classroom based presentations with hands-on hardware and software lab exercises, to give you the comprehensive training you need to set up the instrument ready for your application and sample analysis.

## **Comprehensive GC-MS Training (4 days)**

This course can take place on a range of different manufacturer's instrumentation. Options 1 and 2 use an Agilent 5975 MS for 2 days of hardware training followed by 2 days of software training on MSD Chemstation (option 1) or Mass Hunter (option 2). Option 3 focuses on a Shimadzu MSD followed by 2 days of training on GCMSSolution software. Option 4 uses a Varian Saturn 2200 ion trap for 2 days of hardware training followed by 2 days of training on MS Workstation software.

This course includes an introduction to troubleshooting and maintenance focusing on tunes & diagnostics, GC considerations, vacuum system, ion source, quadrupole mass filter and MS detector.

## **Carrier Gas Flow Management (Agilent CFT) (1 day)**

This course mixes classroom and laboratory training and is designed for those who want to enhance their skills in the use of Agilent CFT devices, like the purged and non-purged Agilent splitters, QuickSwap and optimized Tee systems to manage their carrier gas flow through the GC system.

It is aimed at those with good experience of GC or GC-MS system and who want to explore advanced Agilent CFT configurations for routine and non-routine samples.

## **Introduction to Heart-cutting (Agilent Deans Switch) (1 day)**

This course is designed to introduce the fundamental concepts of GC+GC with the operation of the Agilent Deans Switch flow modulator. It combines a mixture of classroom based presentations with hands-on software and hardware lab exercises to give you comprehensive training.

If you have difficult and complex samples and wish to explore improving the resolution of your work through heart-cutting, then you should attend this course.

## **Basics of Deconvolution (AMDIS) (1 day)**

Audience: Analysts new to deconvolution. This course covers the theory of how to use the powerful Automated Mass Spectral Deconvolution and Identification System software to process your GC-MS data. Fundamental knowledge of GC-MS is required to attend this course.

## **Applied Deconvolution (AMDIS) (2 days)**

This practical software course on the powerful Automated Mass Spectral Deconvolution and Identification System software mixes 50% presentations

For full course details please go to: [www.anthias.co.uk](http://www.anthias.co.uk)

# Terms and Conditions

with 50% practical exercises using the software to get a good grasp of its capabilities in performing deconvolution to process your GC-MS data.

If you have complex samples with little chromatographic resolution or you need to check you have no co-elutions in your chromatogram, learn about using your analytical resolution with mass spectral deconvolution to unravel your mixed mass spectra for confirmation or identification of your co-eluting peaks.

## GCxGC Data Handling (Zoex GCImage) (2 days)

Run in conjunction with JSB who provide the software, you will focus on the theory and advantages of comprehensive multi-dimensional gas chromatography using either thermal or flow modulation and then you can experience the power of GCxGC(-MS) by analysing and experimenting with some previously acquired data using GC Image software.

This course will cover GCxGC and Zoex GCImage software. The course will give an overview of GC Image software and will detail its fundamental operation including baseline removal, peak (blob) detection, quantification and chemical identification.

## Basic ACD/Labs (Spectrus Processor and DB) (2 days)

This basic course teaches you how to use the powerful ACD/Labs software focusing on the ACD/Labs Spectrus Processor and Spectrus DB. We will present the two main workflows of the software in performing identification & deconvolution of your GC-MS data. If you have complex samples, learn about using your analytical resolution with mass spectral deconvolution to unravel your mixed mass spectra

Audience: For those who need to understand how to use the ACD/Labs tools for processing and interpretation of analytical data then this is the course for you.

## Advanced ACD/Labs (2 days)

In this advanced course you will learn the advanced tools within the ACD/Labs software. You will be reviewing the ACD/Labs Spectrus Processor and Spectrus DB advanced features, along with the setting up of the software from default settings.

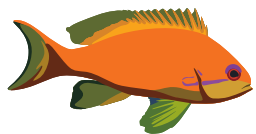
Audience: This course is for someone who would like advanced training on ACD/Labs Spectrus Processor and DB and learn how to use of ChemSketch and MS Fragmenter.

**This is a list of our current manufacturer and software specific scheduled courses. If you don't see the type of instrument or software that you are using listed here, we may still be able to give you more tailored training on it. Please contact us by telephone or email with the details of your instrument or software.**

1. All courses and material will be presented in native English language using high visual content, but the course assumes a reasonable understanding of English on every attendee's part.
2. All course attendees are requested to complete a pre-course questionnaire in order to ascertain their level of knowledge. Contact will be made by the course instructor in case of any concerns prior to the course.
3. All payment for courses must be received in advance of attendance of the course.
4. Anthias Consulting does not accept responsibility for flights or hotel bookings or their cancellation policies. Course attendees therefore book flights and hotels at their own risk.
5. Course cancellation will incur a penalty of a deductible amount per person: -50% up to 8 weeks before the course; -75% up to 4 weeks before the course; -100% up to 2 weeks before the course. Under exceptional circumstances, an alternative course may be offered without incurring any penalty.
6. Depending on the course type, a minimum of 5 attendees will be required for a course to proceed; a maximum of 12 analysts will be accommodated on any course at any one time. Anthias Consulting Ltd. reserves the right to cancel a course with a full refund of course fees, or provision of an acceptable alternative course, due to under subscription or other unforeseeable circumstances without incurring any due penalty. Course attendees will be notified at least 2 weeks in advance by email of any changes to the course schedule for which they have registered. Anthias Consulting Ltd will not be liable for any costs incurred by airlines or hotels as a result of any changes, or any implication of assignments at work for which training is required.
7. Delegates and their companies are responsible for ensuring they have adequate travel permits and visas for course attendance, as well as adequate travel & medical insurance cover. Anthias Consulting cannot assist with any visa applications.
8. Delegates are not permitted to bring samples onto the courses, there most likely will not be an instrument available to analyse such samples. We advise delegates to bring in their existing chromatograms for discussion instead (where appropriate, according to the course), although Anthias Consulting can not promise to answer delegate's problems relating to their individual areas of work.
9. Discounts: Offers cannot be combined.
10. A card processing fee of 2.83% will be added to all payments made by credit card.
11. Payments made from a non-GBP account are subject to a £10 admin fee.
12. All invoices must be paid in full; bank commission charges are not accepted.

Full Terms and Conditions are available on request at [www.anthias.co.uk](http://www.anthias.co.uk)

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## Contacting Us

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For full course details, or to find out about our consultancy services go to:

**[www.anthias.co.uk](http://www.anthias.co.uk)**