The following schedule provides a summary of the UKAS training courses available. Please see the relevant page for dates and detailed information on each course.

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Courses are delivered at Sunningdale Park, Ascot, Berkshire and at the UKAS offices in Feltham, Middlesex.

Contact Jan Garman of the UKAS training team for further information:

**Email:** jan.garman@ukas.com  **Telephone:** +44 (0)20 8917 8488

In order not to compromise its impartial status, UKAS cannot provide company-specific training towards the development and implementation of systems for accreditation, nor can UKAS give specific advice for the development of an organisation’s operations. UKAS reserves the right to amend content, timing, location and price of its training programmes.
Welcome to UKAS Training

As the UK’s National Accreditation Body, our aim is to enable laboratory, inspection, and certification personnel to meet the increasing need to demonstrate their competence.

UKAS has been a training provider for more than a quarter of a century gaining an outstanding reputation both in the UK and internationally. Our courses are delivered by specialists in their field, which equips you with high value knowledge and skills to make a practical difference in your organisation. Our well-developed and targeted training is highly rated by participants, who recognise the relevance of informed training from active industry practitioners. The UKAS training programmes are delivered in the highest quality residential training centres.

Our training portfolio includes a comprehensive package of resources designed to help both novice and experienced UK and international participants learn more about conformity assessment systems. Our courses are constantly updated to reflect changes in the standards or industry practice.

As well as delivering public training courses UKAS, delivers courses and advisory services overseas.

Training in Country obviously reduces the costs where several delegates require training. Please contact us if you would like a quotation for delivering training in your country.

The feedback we receive about these courses confirms the value they offer both in terms of the course content and the venue facilities and our practical approach using real-world examples, student interaction and hands-on activities provide the most effective learning experience for all participants.

Paul Stennett
Chief Executive

For up-to-date information on our courses phone +44 (0)20 8917 8488 – alternatively, visit our website www.ukas.com
Why choose UKAS

UKAS is the sole body, recognised by Government, for the assessment and verification against international standards of certification, inspection, testing and calibration activities, in both the private and public sectors.

Delegates attending UKAS training courses gain a thorough understanding of the value of accreditation and conformity assessment, which enables them to take their understanding and add value to their organisations.

The majority of UKAS courses are residential with accommodation being provided at Sunningdale Park, Ascot (see page 7). This provides delegates with the opportunity to continue discussions, if they wish, with the tutors and fellow delegates into the evening.

UKAS provides all delegates with comprehensive course materials and issues a certificate of attendance on completion of a training event.
UKAS tutors are drawn from our in-house experts, including Assessment Managers and external Technical Assessors; all of whom have current involvement, and are active practitioners, in assessment techniques and the application of international standards.

**Kevin Belson**
Kevin is the UKAS Technical Manager with responsibility for Technical aspects across all UKAS activities. Kevin joined UKAS in July 2002 as an Assessment Manager in the Certification Section and has been actively involved in the management and delivery of assessments to the accreditation standards ISO 17021, EN 45011, ISO 17024, and ISO 17020, including a high level of experience of assessing to these standards in the Far East. Prior to joining UKAS, Kevin was involved in Compliance and Management Systems implementation within the manufacturing sector for over 20 years, mainly in the Automotive and related industries. Kevin also holds BSc (Hons) Natural Sciences.

**David Compton**
David Compton joined UKAS in March 2011 as an Assessment Manager in the Industrial Chemistry Section, he assesses the management systems of Forensic Laboratories for their compliance to ISO/IEC 17025. David also carries out technical assessments in the Digital Forensics area. He has a degree in Electrical and Electronic Engineering and a PhD in Electrical Engineering.

David previously worked for the Forensic Science Service (FSS) for 13 years, starting in the Research and Development Section managing a European project to develop forensic imaging processing techniques. After the completion of the project he implemented the solutions along with developing other digital forensic techniques into eForensic services, which supported Law Enforcement investigations. Whilst as Service Delivery Manager at the FSS, David obtained and maintained ISO 17025 accreditation for the eforensic service (Video, Audio, Mobile Phone and Computer).

David was also the National Scientific Lead for eForensics and was actively involved in setting the digital standards in the UK and the international community through his involvement in ACOPO, ENFSI and IOCE working groups. More recently David has been involved with the development of the technical appendices for the new Forensic Regulator’s Codes of Practice.

**Ben Courtney**
Ben joined UKAS in 2008 and became the Accreditation Manager for the Clinical Pathology Accreditation (CPA) area of UKAS in 2012. He manages a team of assessors within CPA who assess medical laboratories such as pathology departments in NHS Trusts. Prior to Ben’s move into CPA, he was an Assessment Manager in the Agri-Food & Biosciences section for four years assessing medical laboratories to ISO 15189, proficiency testing providers to ISO 17043 and a wide range of testing laboratories to ISO 17025 including clinical trial, veterinary, poultry and tobacco laboratories. Prior to joining UKAS, Ben worked for almost 10 years in an NHS pathology department specialising in microbiology, serology and Chlamydia PCR testing before taking on management responsibilities. Ben is a member of the Institute of Biomedical Science and has a BSc and MSc in Medical Microbiology.

**Kay Crittenden**
Kay joined NAMAS in August 1989 from NPL Acoustics and is an Assessment Manager within the Construction-Mechanical Section of UKAS, specialising in the accredited laboratories for acoustical calibration and testing. She has a Diploma in Acoustics and Noise Control from the Institute of Acoustics and is a Corporate Member of the IOA. Projects within NPL Acoustics included subjective measurements on hearing protectors, word lists for speech audiometry used in the NHS and evaluating subjective annoyance from impulsive noise. As well as duties as an Assessment Manager Kay also ran the NAMAS Technical Enquiries Desk, later to become the UKAS Information Desk, until October 2004.

Kay is retired from UKAS, but is continuing as a UKAS tutor.

For up-to-date information on our courses phone +44 (0)20 8917 8488 – alternatively, visit our website [www.ukas.com](http://www.ukas.com)
About the people continued

Janet Gascoigne
Janet recently joined the Development Section as a Development Manager, using her wide experience to develop new accreditation schemes. Previously she was a UKAS Assessment Manager, specialising in environmental certification, verification and inspection schemes, including ISO 14001, EMAS, BS 8555 and greenhouse gases. Before joining UKAS in 2004, Janet worked for two certification bodies specialising in environmental schemes. With a background in waste management, recycling and environmental legislation, Janet represents UKAS on the IEA A Accredit Scheme committee, the EMAS Forum for Accreditation and Licensing Bodies, the European Co-operation for Accreditation Certification Committee Environmental Working Group and the EU Emissions Trading Scheme Emissions Trading Group.

Debbie Hudson
Debbie joined UKAS in 2003 as an Assessment Manager in the Chemistry Section. She holds a BSc (Hons) in Applied Chemistry and is a Chartered Chemist and a Member of the Royal Society of Chemistry. Debbie has 20 years’ experience in an analytical laboratory environment and her specialist areas are the analysis of inorganic and organic parameters in waters, effluents, soil, sediment, and biota using techniques such as ICP-MS, ICP-OES, atomic absorption, GC (including GC-MS), and HPLC. Debbie has recently joined the senior management team at UKAS as the Internal Training Manager.

Paul Greenwood
Paul joined UKAS in 2006 as an Assessment Manager in the Environment Section and was promoted to Accreditation Manager of the section 4 years later. In 2012 he was selected for the post of UKAS Divisional Director with specific responsibility for Laboratories. He has a BSc (Hons) in Applied Chemistry with Analytical Chemistry and is a Member of the Royal Society of Chemistry and Chartered Chemist. Paul has 4 years’ experience as applications specialist in the field of atomic spectroscopy (ICP-OES, atomic absorption, CD-OES, spark emission) and has worked in accredited laboratory environments for a further 9 years. His laboratory experience is in a range of analytical sectors – drinking water, contaminated land and radiochemistry – and has involved use of atomic spectroscopy, ICP-MS, ion Chromatography and classic chemical techniques (colorimetry, pH/EC, ISE, titrimetry, gravimetry, BOD, COD) as well as basic microbiology and water sampling.

John Hurll
John is a former UKAS Assessment Manager and Tutor, he retired in September 2013, but will continue as a UKAS Tutor. John specialised in electrical calibration and testing activities. Before joining NAMAS in 1992, he held technical responsibility for the operation of a UKAS-accredited laboratory with a comprehensive measurement capability. John has many years’ experience of working in electromagnetic metrology and his expertise was recognised in 1993 with the award of the Institute of Electrical Engineers’ Measurements Prize for his work in Phase Angle Measurements. He has many years’ experience in training activities covering topics that include management system activities, calibration methodology and uncertainty of measurement. John is the author of the UKAS document MB03, The Expression of Uncertainty and Confidence in Measurement and has published many papers on metrology related topics.

Lal Ilan
Lal is retiring in 2015 but is continuing as a Tutor. Lal was a senior manager at UKAS and he was responsible for developing new areas of accreditation. Lal has over 20 years of experience in assessment and accreditation of conformity assessment bodies and in particular accreditation of inspection bodies. Lal is a Peer Evaluator and team leader and he has been recently appointed as the acting chair of the ILAC Inspection Committee. He has industry experience in the fields of project management of design and manufacture of process plants in offshore, nuclear, petrochemical and chemical industries. Lal holds a BSc (Mechanical Engineering), and is also a Fellow of the Institution of Mechanical Engineers and a Chartered Engineer.
Katherine Monnery
Katherine is an Assessment Manager in the Industrial Chemistry Section where she is primarily involved in the assessment of Forensic Science Laboratories. Prior to joining UKAS in 1996 she had previously worked for a water supply company and the Environment Agency undertaking the analysis of samples to monitor compliance with legal limits using a variety of different analytical techniques.

Katherine represents UKAS on national and international committees relating to the implementation of ISO 17025 and ISO 17020 in the forensic field including the Forensic Science Regulators Quality Standards Group and the ILAC Working Group reviewing ILAC G19. She is also involved in the development of the UKAS accreditation scheme for the assessment of Scene of Crime activities.

Katherine has a BSc (Hons) in Botany and an MSc in Environmental and Ecological Sciences.

Ian Ronksley
Ian joined UKAS in 2000 and is a Development Manager within the Development Section. His principal fields of expertise are Directives and Regulations, Certification and Inspection Body Assessments, Consumer Protection and Legal Metrology. In addition to delivering training, Ian is experienced in designing and developing the training courses across a range of accreditation standards. Before joining UKAS Ian worked in Trading Standards and engineering. He has a Diploma in Trading Standards, a Higher Certificate in Mechanical & Production Engineering and has a Masters in Business Administration.

Phil Shaw
Phil, who has been involved with conformity assessment activities for some twenty-five years, joined UKAS in 1995 and is an Accreditation and Development Manager. He has a comprehensive knowledge of third party certification principles and practices gained through twenty years direct experience and involvement with all aspects of accreditation and certification. Phil worked for BNFL from 1980-1991 and was Head of Quality Systems and Audit at BNFL from 1987. Phil holds a BSc (Hons) Metallurgy, a Chartered Engineer and a Member of the Charted Quality Institute. He represents UKAS as a member of the IAF Technical Committee and is co-opted onto various international groups that develop international conformity assessment standards and IAF guidance. Phil has experience of providing training in the areas of accreditation and certification world-wide.
De Vere venues are proud to work with UKAS to meet the requirements of the UKAS training programme. De Vere venues offer the complete solution for all training needs; providing UKAS and their delegates with everything required for a successful training course, and more.

- A huge range of dedicated, distraction-free spaces designed with the needs of trainers and delegates in mind.
- A complete solution provided under one roof – fantastic training and syndicate rooms supported by comfortable bedrooms, excellent catering, great leisure facilities and loads of space for teambuilding and networking.
- The perfect out of office working environment with all the technological facilities to keep delegates in touch with office and home.

Training centres are of the highest quality and provide an ideal location for delegates to feel comfortable, ensuring that they are given maximum opportunity to perform. The primary training venue for UKAS courses is Northcote House at Sunningdale Park, Ascot. This Grade II listed neo-Georgian mansion, is set in over 70 acres of landscaped gardens, reputedly designed by Capability Brown. Northcote House offers a magnificent setting for any event, from the House itself to the private terrace and the gardens which roll down to the bridge and lake.

The De Vere venues offer the best hospitality to all UKAS delegates including modern, stylish bedrooms, great leisure facilities throughout Sunningdale Park and great dining. WiFi internet access is available and is complimentary to all training delegates. Sunningdale also has its own library and resource centre with PCs and free internet access.

De Vere venues and UKAS welcome you to enjoy your learning experience at Sunningdale Park.

For up-to-date information on our courses phone +44 (0)20 8917 8488 – alternatively, visit our website www.ukas.com
Preparation for Laboratory Accreditation

1 day course

The course is aimed at laboratory management and personnel of non-accredited laboratories, and laboratories with ISO 9001:2008 certification, who are considering or who would like to know more about accreditation to ISO/IEC 17025:2005.

What are the benefits?

This course provides laboratories with an overview of the concept of accreditation to ISO/IEC 17025:2005. The course covers the key aspects associated with the accreditation process and provides laboratory personnel preparing for accreditation and initial assessment with important information regarding ISO/IEC 17025:2005.

Course content

- Welcome and introductions
- Overview of ISO/IEC 17025:2005
- The ISO/IEC 17025:2005 concept of management
- Producing a Quality Manual
- Route to Accreditation
- Open forum and course conclusion

Details

<table>
<thead>
<tr>
<th>Date</th>
<th>Venue</th>
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<tbody>
<tr>
<td>3 February 2015</td>
<td>UKAS, Feltham</td>
<td>£475.00 + VAT</td>
</tr>
<tr>
<td>12 May 2015</td>
<td>UKAS, Feltham</td>
<td>£475.00 + VAT</td>
</tr>
<tr>
<td>3 November 2015</td>
<td>UKAS, Feltham</td>
<td>£475.00 + VAT</td>
</tr>
<tr>
<td>2 February 2016</td>
<td>UKAS, Feltham</td>
<td>£475.00 + VAT</td>
</tr>
</tbody>
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The course fee includes comprehensive course materials, refreshments and lunch.
Laboratory Management – Role of the Quality Manager and Technical Management

3 day course

All laboratories need to have sound business processes to enable them to deliver technically sound calibrations and tests to their clients. When a laboratory is seeking to have its competence recognised through accreditation by the United Kingdom Accreditation Service, these processes must also enable the laboratory to meet the requirements of ISO/IEC 17025:2005.

What are the benefits?

This course is designed to help delegates gain an understanding of how the business processes of their laboratory can be combined effectively with the requirements of ISO/IEC 17025:2005, and the roles of the quality manager and technical management in this framework.

Course content

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<tr>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
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</thead>
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<tr>
<td>&gt; Laboratory structure</td>
<td>&gt; Review of customer requests</td>
<td>&gt; Calibration &amp; test performance</td>
</tr>
<tr>
<td>&gt; Organisation charts</td>
<td>&gt; Subcontracting</td>
<td>&gt; Work sheets</td>
</tr>
<tr>
<td>&gt; QMS framework &amp; role of ISO/IEC 17025:2005</td>
<td>&gt; Test and calibration methods</td>
<td>&gt; Management controls</td>
</tr>
<tr>
<td>&gt; Job descriptions</td>
<td>&gt; Method validation</td>
<td>&gt; Audit programme</td>
</tr>
<tr>
<td>&gt; Laboratory facilities</td>
<td>&gt; Documentation</td>
<td>&gt; Non-conforming work</td>
</tr>
<tr>
<td>&gt; Services &amp; supplies</td>
<td>&gt; Documentation control</td>
<td>&gt; Records</td>
</tr>
<tr>
<td>&gt; Equipment</td>
<td>&gt; Customer samples &amp; items</td>
<td>&gt; Opinions &amp; interpretations</td>
</tr>
<tr>
<td>&gt; Personnel</td>
<td></td>
<td>&gt; Complaints</td>
</tr>
<tr>
<td>&gt; Training and competency records</td>
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<td>&gt; UKAS assessment</td>
</tr>
</tbody>
</table>

Who should attend?

This course is aimed at personnel from accredited or applicant laboratories who have responsibility for the technical or quality management of the tests or calibrations performed.

Details

<table>
<thead>
<tr>
<th>Date</th>
<th>Venue</th>
<th>Fee</th>
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<tbody>
<tr>
<td>27-29 January 2015</td>
<td>Sunningdale Park</td>
<td>£1400.00 + VAT</td>
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<tr>
<td>21-23 April 2015</td>
<td>Sunningdale Park</td>
<td>£1400.00 + VAT</td>
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<tr>
<td>20-22 October 2015</td>
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<tr>
<td>19-21 January 2016</td>
<td>Sunningdale Park</td>
<td>£1400.00 + VAT</td>
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</table>

The residential course fee includes comprehensive course materials, all meals and accommodation for two nights.

For up-to-date information on our courses phone +44 (0)20 8917 8488 – alternatively, visit our website www.ukas.com
All laboratories need to carry out an internal audit of their business processes and performance of tests and calibrations to ensure delivery of a competent service to their clients. An accredited laboratory needs to check not only that laboratory personnel at all levels are implementing the prescribed processes but also that its systems and practices are compatible with the requirements of ISO/IEC 17025:2005.

**What are the benefits?**

The course aims to help delegates gain a sound understanding of the internal audit process and its value to management. This interactive course allows delegates to gain confidence in performing an internal audit through role-play.

**Course content**

**Day 1**
- Internal laboratory audits
- Content of an audit programme
- Witnessing activities
- Audit records
- Audit checklists
- Corrective & preventive action
- Audit forms
- Human aspects of auditing
- Practical audit of a test
- Writing observations and non-conformances

**Day 2**
- Reporting findings to auditees
- Preparing an audit report for management
- Assignment of corrective actions
- Management review

**Who should attend?**

The course is suitable for anyone involved with or interested in the use of internal audits, new quality managers and new laboratory staff.

**Details**

<table>
<thead>
<tr>
<th>Date</th>
<th>Venue</th>
<th>Fee</th>
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<tbody>
<tr>
<td>25-26 March 2015</td>
<td>Sunningdale Park</td>
<td>£1100.00 + VAT</td>
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<tr>
<td>24-25 June 2015</td>
<td>Sunningdale Park</td>
<td>£1100.00 + VAT</td>
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<tr>
<td>29-30 September 2015</td>
<td>Sunningdale Park</td>
<td>£1100.00 + VAT</td>
</tr>
<tr>
<td>1-2 December 2015</td>
<td>Sunningdale Park</td>
<td>£1100.00 + VAT</td>
</tr>
<tr>
<td>15-16 March 2016</td>
<td>Sunningdale Park</td>
<td>£1100.00 + VAT</td>
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</table>

The residential course fee includes comprehensive course materials, all meals and accommodation for one night.
Combined Laboratory Management

4 day course

All laboratories need to have sound business processes to enable them to deliver technically valid calibrations and tests to their clients. When a laboratory is seeking to have its competence recognised through accreditation by the United Kingdom Accreditation Service, these processes should also enable the laboratory to demonstrate that they meet the requirements of ISO/IEC 17025:2005.

This course combines the key elements of the Laboratory Internal Audit and Laboratory Management courses to provide skills for staff responsible for internal audit, quality management or technical management within a laboratory or organisation.

Benefits

To facilitate delegates' understanding of how the business processes of a laboratory can be combined effectively with the requirements of ISO/IEC 17025:2005 and to provide and aid understanding of the internal audit process and its value to management.

By the end of this course you will be able to:

- apply your knowledge and understanding of the principles taught to a wide variety of situations to allow the planning and delivery of internal audits
- have a basis for deciding which tasks fall within the remit of your Quality Manager and Technical Manager
- understand how effective management controls can be implemented, and be able to undertake structured preparation for UKAS assessment.

Course outline

Day 1

- Welcome & introductions
- Laboratory structure and the roles of QM & TM
- Exercise: Organisation chart
- Management system - business processes framework & ISO 17025:2005
- Exercise: Job descriptions of QM and the TM
- Laboratory facilities
- Services and supplies
- Exercise: Fitness for purpose & list of approved suppliers
- Ensuring competence - equipment
- Exercise: Purchasing equipment
- Exercise: Calibration programme

Day 2

- Ensuring competence - personnel
- Exercise: Personnel training
- Tenders, contracts and requests - the review process
- Subcontracting
- Exercise: Subcontractors’ register and assessment of competence
- Ensuring competence - test and calibration methods
- Exercise: Format of a test/calibration method
- Exercise: Aspects of a test method that requires validation
- Documentation and documentation control processes
- Exercise: Documentation control and administrative procedure headings
- Handling samples and test/calibration items
- Exercise: Sample/item handling processes and booking in of samples/items
Day 3

- Ensuring competence – management controls
- Exercise: Audit programme
- Ensuring competence – performance of calibrations and tests
- Exercise: Worksheets production
- Audit Records
- Exercise: Development of an audit checklist
- Witnessing tests and calibrations
- Exercise: Development of an audit checklist for use during a witnessed audit
- Nonconforming work
- Exercise: Corrective/preventive action form
- Human aspects
- Exercise: Preventive/Improvement actions

Day 4

- Exercise: Witnessing an activity and corrective actions
- Exercise: Reporting back to the auditees
- Exercise: Reporting back to management
- Records
- Reporting, opinions and interpretations
- Complaints process
- Exercise: Complaints process flowchart
- Open forum, review and course close

Who should attend

Personnel from accredited or applicant laboratories who have responsibility for the internal audits, technical or quality management of the testing or calibration performed. It is especially beneficial to those members of staff who are new to the roles.

Details

<table>
<thead>
<tr>
<th>Date</th>
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<th>Fee</th>
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<tbody>
<tr>
<td>10-13 February 2015</td>
<td>Sunningdale Park</td>
<td>£1750.00 + VAT</td>
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<td>19-22 May 2015</td>
<td>Sunningdale Park</td>
<td>£1750.00 + VAT</td>
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<td>17-20 November 2015</td>
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<tr>
<td>9-12 February 2016</td>
<td>Sunningdale Park</td>
<td>£1750.00 + VAT</td>
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</tbody>
</table>

The residential course fee includes comprehensive course materials, all meals and accommodation for three nights.
Forensic Laboratory Internal Audit

2 day course

All laboratories undertaking forensic work will need to carry out internal audits of their business processes and the performance of the testing activities to ensure they are delivering a competent service. An accredited laboratory needs to check not only that laboratory personnel at all levels are implementing the prescribed processes but also that its systems and practices are compatible with the requirements of ISO/IEC 17025:2005.

What are the benefits?

This course is tailored to help personnel from forensic organisations gain a sound understanding of the internal audit process and its value to management. This interactive course uses examples relevant to a forensic laboratory, including the use of a fingerprint enhancement technique as part of the method witnessing exercise. It includes role play exercises relating to undertaking audits and giving the subsequent feedback. The course allows delegates to gain confidence and helps to stimulate ideas that the delegates can put into practice in their own organisations.

Course content

Day 1
- Internal laboratory audits
- Development of an Audit programme
- Audit records
- Development of a Management System audit checklist
- Witnessing tests
- Production of a checklist for use during a witnessed test
- Corrective and preventive action
- Development of corrective/preventive action form
- Human aspects of auditing

Day 2
- Preventive actions
- Witnessing tests and raising corrective actions
- Reporting back after audit
- Reporting findings of audit to auditee
- Reporting to management
- Management review

Who should attend?

This course is suitable for anyone involved with or interested in the use of internal audits in a forensic laboratory context; in particular new Quality Managers and new Internal Auditors.

This course will run on a demand basis only, when we have 5 delegates registering an interest.

For the latest update on dates, please visit our website: www.ukas.com/services.training

The residential course fee £1100.00 + VAT includes comprehensive course materials, all meals and accommodation for one night

Email: Training@ukas.com
Forensic Laboratory Management

3 day course

In an ever more competitive market place and with forensic science undergoing unprecedented levels of scrutiny it is increasingly important for organisations to be able to demonstrate their technical competence and the validity of the processes they use. In addition The Forensic Science Regulator has chosen UKAS accreditation as part of his Standards Framework and has made it a firm requirement that providers of forensic science to the CJS gain ISO/IEC 17025:2005 accreditation.

What are the benefits?

This course aims to facilitate delegates’ understanding of the requirements of ISO/IEC 17025:2005, within a forensic science context, and to provide an understanding of the roles of the Quality Manager and Technical Manager.

Course content

Day 1
Introductions and course briefing
> Background to accreditation, UKAS and the international scene
> Accreditation standards including an overview of the Forensic Science Regulators Codes of Practice
> UKAS approach to assessment
> Overview of the process of accreditation
> Exercise: Feedback on pre-course exercise
> Organisational structure to ensure integrity and competence
> Exercise: Organisational Chart
> Quality Management System Documentation
> Exercise: Quality Documentation

Day 2
Internal Audit and Management Review
> Identifying Potential and actual Non-conforming Work Exercise
> Internal Audit
> Tenders, Contracts and Requests – the review process
> Sample Handling and Continuity
> Exercise: Sample receipt and case assessment
> Technical Method Documentation
> Method Validation
> Exercise: Witnessing Tests
> Accommodation and Environment
> Services and Supplies
> Sub-contracting

Day 3
Ensuring Competence
> Exercise: Ensuring Competence
> Equipment, Calibration and Traceability
> Exercise: Forms and Records
> Records
> Reporting
> Customer Feedback
> UKAS Process
> Open Forum
> Course Close

Who should attend?

The course is suitable for anyone who is responsible for the technical or quality management for organisations who provide forensic science services into the criminal justice system.

This course will run on a demand basis only, when we have 5 delegates registering an interest.

For the latest update on dates, please visit our website: www.ukas.com/services.training

The residential course fee £1100.00 + VAT includes comprehensive course materials, all meals and accommodation for one night
Email: Training@ukas.com
ISO/IEC 17020:2012: Scene of Crime

3 day course
UKAS is now offering accreditation to ISO/IEC 17020:2012 in the area of Scene of Crime Examination. This course will review the key aspects of ISO/IEC 17020 and contextualise them in relation to this specialised area. The course will also include reference to key documents including EA/5-03, RG 201 and ILAC G19.

What are the benefits?
The course is tailored to organisations undertaking Scene of Crime Examination and consequently includes examples of how the requirements of the standard relate to the operations of a CSI Unit. The exercises undertaken during the course relate specifically to activities that would be familiar to Crime Scene Examiners. This course allows delegates to gain confidence in the standard and helps to stimulate ideas that the delegates can put into practice in their own organisations.

Course outline
Day 1
> Introductions and course briefing
> Background to Accreditation, UKAS and the International Scene
> Accreditation Standards
> ISO/IEC 17020:2012, ILAC G19 and EA 5/03 and overview
> Exercise: Organisational Structure
> Overview of the process of accreditation
> Exercise: Preparation for accreditation
> Contracts and Work Orders – including case assessment
> Handling Inspection Items and Samples

Day 2
> Exercise: Sample Receipt and Case Assessment
> Inspection Methods and Document Control
> Exercise: Inspection Methods and Document Control
> Validity of Inspection Methods
> Exercise: Validity of Inspection Methods
> QA Procedures and Proficiency Testing
> Equipment, Calibration and Measurement Traceability
> Exercise: Witnessed Inspection

Day 3
> Internal Audits, Non-conforming work and Corrective Actions
> Ensuring Competence
> Records
> Reporting Inspection Results
> Exercise: Case File Audit
> Equipment and Facilities
> Subcontracting, Services and Supplies
> Open Forum
> Course Close

Who should attend?
The course is suitable for anyone who is responsible for setting up, or maintaining systems within a Crime Scene Investigation Unit. In particular it would be beneficial for those who are looking to gain accreditation to ISO/IEC 17020:2012.

This course will run on a demand basis only, when we have 5 delegates registering an interest.

For the latest update on dates, please visit our website: www.ukas.com/services.training

The residential course fee £1400.00 + VAT includes comprehensive course materials, all meals and accommodation for two nights.
Email: Training@ukas.com
3 day course

Any laboratory wishing to achieve accreditation to ISO/IEC 17025:2005 is required to have, and to apply, policies and procedures for the estimation, use and reporting of uncertainties of measurement for any tests or calibrations covered by their scope of accreditation.

What are the benefits?

Drawing on experience of training skills of estimating uncertainty of measurement to more than two thousand testing and calibration practitioners over the years, this course aims to provide delegates with an appreciation of the concept of uncertainty of measurement in both a testing and calibration environment, and uses a combination of lectures and interactive exercises and demonstrations to take delegates through the process of calculating uncertainties.

Course outline

Day 1

> Introductions and briefing
> I think we may have dropped one! – A live witnessed test
> Appreciation of Uncertainty: Individual Exercise in Open Session
> History and Background
> Traceability, calibration, corrections and SI units
> Definition of Metrological Terms
> Classifications of Uncertainty – Type A & Type B
> Discovering Distributions
> Symbols and Equations Part 1
> Combination of Uncertainties
> Pre-course Work – De-briefing
> Calculation of Uncertainty for a Measurement

Day 2

> Ensuring understanding of material covered in Day One
> Calculation of Uncertainty for a Measurement
> Example of a test with influence quantities
> Sources of Uncertainty
> Exercise – Uncertain about methods?
> Correlated Contributions
> Human Factors
> Exercise – Measurement of Body Mass Index with uncertainty estimate
> Exercise: Calculation of uncertainty for the calibration of a weighing machine.

Day 3

> Ensuring understanding of material covered in Day Two
> Pooled Standard Deviations
> Approaches to Evaluating sources of uncertainty
> Exercise – Sources of Uncertainty and Report Back
> Normal or not? – situations where a normal distribution cannot be assumed for the combined uncertainty
> Symbols and Equations Part 2
> Exercise – Effective Degrees of Freedom
> How Many Measurements?
> Stochastic modelling of uncertainty in quantitative measurements
> Sampling, Destructive Testing, Non-numeric Results
> Statements of Uncertainty and Compliance
> Stochastic modelling.

Who should attend?

Any person who is, or will be, involved in the estimation, use and reporting of uncertainties of measurement for testing and/or calibration.

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<td>26-28 January 2016</td>
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The residential course fee includes comprehensive course materials, all meals and accommodation for two nights.
Proficiency Testing ISO/IEC 17043:2010

2 day course

This course aims to provide an understanding of ISO/IEC 17043:2010 (Guidelines for the requirements for the competence of providers of proficiency testing schemes). It focuses on understanding and applying the standard in an assessment context.

What are the benefits?

The course will enable delegates to gain a knowledge of ISO/IEC 17043:2010 and how the standard is used in assessing the competence of proficiency testing providers.

Course content

Day 1
- Outline of standards used
- Visit management and assessment team
- Schedule of accreditation
- Review of steps in accreditation
- Organisation and management
- Internal audit and management review
- Management system requirements

Day 2
- Contract review
- Scheme logistics
- Advisory group
- Personnel
- Collaborators
- Sample preparation/homogeneity/stability
- Statistical design and data handling
- Communication and Collusion
- Use of ISO/IEC 17025:2005

A pre-course exercise must be completed prior to attending.

Who should attend?

The course is aimed at those assessing proficiency test providers or those who subscribe to proficiency testing schemes within their laboratories and want a greater understanding with respect to those schemes.

This course will run on a demand basis only, when we have 5 delegates registering an interest.

For the latest update on dates, please visit our website: www.ukas.com/services.training

The residential course fee £1100.00 + VAT includes comprehensive course materials, all meals and accommodation for one night.

Email: Training@ukas.com
Assessor Training – Laboratories ISO/IEC 17025:2005

This course aims to provide an understanding of ISO/IEC 17025:2005 and how the business processes of individual laboratories may be informed and enhanced in meeting its requirements. It focuses on understanding and applying the standard in an assessment context and on associated procedures and methodology.

What are the benefits?
The course will enable delegates to gain a knowledge of ISO/IEC 17025:2005 and its function as a framework for demonstrating competence and to gain an understanding of the UKAS assessment methodology – all of which is achieved through a combination of lectures, exercises and role play.

Course content

Day 1
- Accreditation background
- Holistic approach to assessment and accreditation
- ISO/IEC 17025:2005 – review of pre-course exercise
- Exploring organisation processes
- You the Assessor 1: An approach to assessing
- Overview of the accreditation process
- Laboratory case studies
- Opinions and interpretations
- Flexible Scopes
- You the Assessor 2: The Tasks
- Accreditation Standards

Day 2
- Management System documentation and appraisal
- Pre-assessment activities
- Reviewing a test method
- Introductory Meeting
- You the Assessor 3: Person to Person
- Improvement opportunities and recording 1
- Preventive & corrective action
- Witnessing tests

Day 3
- Improvement opportunities and recording 2
- Calibration & Traceability
- Internal audit & Management System review
- Private meeting of assessors and final meeting
- Final meeting role play
- Post assessment activities

A pre-course exercise must be completed prior to attending this course. There will be some evening work on this course.

Who should attend?
The course is aimed at senior laboratory staff responsible for their laboratory accreditation, those responsible for carrying out internal assessments and potential UKAS Assessors.

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<td>30 November – 2 December 2015</td>
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The residential course fee includes comprehensive course materials, all meals and accommodation for two or four nights.

For those delegates wishing to also attend the Lead Assessor Training course, the combined fee for both courses will be £2240.00 + VAT.
Lead Assessors are required to manage their team and the time and resources available to them and to be cost effective without compromising the assessment process. They therefore require excellent interpersonal skills. This course includes an introduction to the relevant soft skills, and time is allocated for role-play to help build confidence.

What are the benefits?

This course enables experienced assessors to extend their skills such that they can take on the role of lead assessor and effectively manage an assessment team.

Course content

**Day 1**
- Contract review
- Planning assessments
- Extensions to scope
- Documentation review
- Giving feedback
- Listening skills
- Team leadership and management
- Note taking
- Time management
- Assessment of internal audit & management review
- Questioning techniques

**Day 2**
- Improvement opportunity reporting & agreed actions
- Managing meetings and discussions
- Final meeting with management
- Open forum

Who should attend?

The course utilises examples from ISO:IEC 17025:2005 but an emphasis on soft skills means that anyone with a responsibility for leading audit teams or assessments will find this course helpful.

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The residential course fee includes comprehensive course materials, all meals and accommodation for one or four nights.

For those delegates wishing to also attend the Lead Assessor Training course, the combined fee for both courses will be £2240.00 + VAT.
1 day course

This course aims to provide an understanding of ISO 15189:2012 and training in the assessment of its application for the accreditation of medical laboratories.

What are the benefits?

The course will enable delegates to build on their existing expertise in assessing laboratories using the principles of ISO/IEC 17025:2005 to include the particular requirements for quality and competence for medical laboratories, as defined in ISO 15189:2012.

Course content

- Introduction and briefing
- Open feedback and discussions on pre-course work
- Interpretations and Clinical Advice
- Flexible Scopes
- Assessment exercise, to include laboratory documentation against the requirements of the standard with report back
- Quality management system review
- Discussion and feedback
- Open forum and close course

A pre-course exercise must be completed prior to attending.

Who should attend?

Lead Assessors are required to manage their team, the time and resources available to them, and to be cost effective without compromising the assessment process. The training is designed to meet the needs of the assessment staff of a National Accreditation Body, but the course is also likely to be of benefit to senior laboratory staff experienced in general laboratory competence criteria such as ISO/IEC 17025:2005 who now need to convert that experience to the adoption of ISO 15189:2012.

This course will not run during 2015.
Assessor Training – Medical Laboratories
ISO 15189:2012

3 day course

This course aims to provide an understanding of ISO 15189:2012 and training in the assessment of its application for the accreditation of medical laboratories.

What are the benefits?

The course will enable delegates to gain knowledge of the particular requirements for quality and competence for medical laboratories, as defined in ISO 15189:2012 and used as the criteria for accreditation, and to gain a practical understanding of the assessment methodology used by a National Accreditation Body through lectures, exercises and role play.

Course content

Day 1
> Introduction and briefing
> Background to accreditation, UKAS and the international scene
> Holistic Approach to assessment and accreditation
> Open Feedback and discussions on pre-course work
> Overview of the process of accreditation
> Case Studies – identification of possible non conforming situations with report back
> Interpretations and Clinical Advice
> Flexible Scopes
> Accreditation standards

Day 2
> Quality Management system documentation and review
> Exercise: Initial documentation review against the standard
> Reporting findings from pre-assessment activities
> Exercise: Detailed documentation review of a test procedure
> Purpose of the introductory meeting
> Observing the organisation at work – management of an assessment visit
> Recording findings
> Preventive and corrective action
> Witnessing a test for an assessment, recording associated findings

Day 3
> Report back on recording findings exercise
> Calibration and traceability
> Calibration exercise – review of information included on a certificate, followed by report back
> Internal audit and management system review – assessing an organisation’s internal audit system and the management review – benefits to the assessment
> Private meeting of assessors and final meeting – format, structure and purpose
> Exercise: Preparation for final meeting
> Exercise: Final meeting role-play
> Discussion and feedback
> Post assessment activities
> Open forum and close course

A pre-course exercise must be completed prior to attending.

Who should attend?

The course is for those without previous laboratory assessment experience who expect to become involved in the assessment of medical laboratories using ISO 15189:2012 as a basis for accreditation. The training is designed to meet the needs of the assessment staff of a National Accreditation body and senior laboratory staff.

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<td>24-26 November 2015</td>
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The residential course fee includes comprehensive course materials, all meals and accommodation for two nights.
UKAS runs courses on Certification and Inspection body standards.

ISO 17065:2013 General requirements for bodies operating product certification systems

ISO/IEC 17024:2003 Conformity assessment – general requirements for bodies operating certification of persons

What are the benefits?

Each course will help delegates to understand and apply the relevant standard and the procedures involved. It will also help delegates understand the assessment methodology. A pre-course exercise must be completed prior to the course and feedback is provided during the course.

A pre-course exercise must be completed prior to attending these courses.

Who should attend?

These courses are suitable for those who already have an understanding of one or more of the accreditation standards, including ISO/IEC 17025:2005, and who wish to extend their knowledge and understanding of the standards applicable to inspection and certification bodies, and their application.

Details

ISO 17065:2013

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ISO/IEC 17024:2012

This course will run on a demand basis only, when we have 5 delegates registering an interest.

For the latest update on dates, please visit our website: www.ukas.com/services.training

The residential course fee includes comprehensive course materials, all meals and accommodation for one night.
ISO/IEC 17021:2011 Awareness

2 day course

This course aims to provide an ‘in-depth’ appreciation of the principles and requirements of the standard. It focuses on the output requirements for certification bodies.

What are the benefits?

The course will enable delegates to gain knowledge of the standard especially the requirements for:

- Impartiality
- Competence processes
- Auditing to meet the objectives
- Reporting requirements
- Certification and ongoing monitoring

Course content

Day 1

- Certification of management systems
- Principles
- General Requirements
- Management of impartiality
- Structural Requirements
- Resource Requirements
- Certification Schemes Development

Day 2

- Process Requirements
  - Planning
  - Initial Audit
  - Reporting
  - Certification
  - Surveillance
  - Re-certification
  - Management Systems

A pre-course exercise must be completed prior to attending.

Who should attend?

The course is aimed at those responsible in both certification and accreditation bodies for ensuring conformity with ISO/IEC 17021:2011.

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The residential course fee includes comprehensive course materials, all meals and accommodation for one night.
ISO/IEC 17020:2012 Awareness

2 day course

This course aims to provide delegates with an appreciation of the requirements of ISO/IEC 17020:2012 and related international guidance, and its application to the accreditation of various types of inspection, including an introduction to the UKAS assessment and accreditation process.

What are the benefits?

The course aims to help delegates increase their awareness of the standard and its application in differing inspection body environments with reference to UKAS processes used for assessment and reporting purposes. Key differences between ISO/IEC 17020:2012 and other accreditation standards will be highlighted.

Course content

During this interactive course, the requirements of the standard will be broken down into the six ‘key’ elements common across all accreditation standards.

Day 1

> Introduction
> Evaluation Outcomes
> Inspection Process
> The role and structure of the United Kingdom Accreditation Service
> UKAS Accreditation for Inspection
> Key Elements – Organisation, Independence etc
> Exercise: Liability & Financial Arrangements
> Group Exercise – Independence
> Group Exercise – (Independence) and feedback
> Review

Day 2

> Key Elements – Scope, Management & Technical Competence
> Key Elements – Evaluation Processes
> Witnessing Inspections
> Case Studies – Witnessing Inspection (Engineering/Asbestos) and Report back
> Questions, Review (including Pre-course exercise)

A pre-course exercise must be completed prior to attending.

Who should attend?

This course is suitable for anyone needing an understanding of the requirements of ISO/IEC 17020:2012 for use in accredited inspection, and would be appropriate for managers needing to structure or maintain a suitable quality management system for an inspection body.

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The residential course fee includes comprehensive course materials, all meals and accommodation for one night.
Imaging Services Accreditation Scheme (ISAS) is a new scheme managed and delivered by UKAS, aimed at imaging services across the UK. ISAS is a patient focussed imaging service accreditation scheme that is assessed against a quality enhancing standard based on clinical and patient reported performance measures. ISAS gives confidence to patients, purchasers, staff, and managers about safety, effectiveness and sustainability.

UKAS are running a number of half-day ISAS Preparatory Workshops around the UK, for imaging services. The workshop is designed to give attendees an insight into the accreditation processes, fees, how to prepare, and how to apply for accreditation.

What are benefits of attending?

This half-day workshop will help delegates to understand ISAS, the steps for accreditation against the standard, and the chance to ask questions throughout the day. Delegates will also have the opportunity to familiarise themselves with the web-based tool, an integral part of accreditation process which only customers can access.

Who should attend?

The workshop is suitable for imaging services personnel that would like to learn more about ISAS, or that may have the intention to formally apply for accreditation.

Please check the ISAS website for dates www.isas-uk.org

Registering for the course

All applicants for the workshop must complete and submit a registration form to UKAS prior to attending. A registration form can be downloaded from the ISAS website on: www.isas-uk.org under the preparatory workshop page. General information about ISAS is also available on this website. Please note places are subject to availability and will only be allocated on receipt of completed forms.
UKAS’ wide range of technical expertise enables us to offer training in many areas of accreditation. UKAS has been involved in the support of programmes to assist overseas accreditation bodies in the development of accreditation, EMAS and EMS systems, assisted in the development of training programmes and train-the-trainer courses and provided resources to industry events and seminars.

If your organisation has any training requirements please contact Jan Garman on +44 (0)20 8917 8488 or email jan.garman@ukas.com to discuss your requirements.

UKAS take the opportunity to update, where relevant, courses to reflect changes to, and introduction of, standards. For details of changes and updates throughout the year please check the UKAS website www.ukas.com

Collaboration with LGC

In order to make maximum use of their respective expertise and provide an even greater range of training, UKAS and LGC Limited have agreed a programme of training collaboration. This involves co-operation in the publication of each other’s training and knowledge transfer events and activities. Several LGC training events are detailed in the next few pages and these can be booked through UKAS. However, each company will continue to provide their own distinct training programmes.
Statistics for Analytical Scientists

1 day course

The quality of analytical data is a vital aspect of the work of an analytical scientist. The application of statistics is central to the assessment of data quality and an understanding of statistics is essential to the interpretation of analytical results. The application of statistics is required for method validation and measurement uncertainty calculations, and is thus essential for meeting ISO/IEC 17025:2005 accreditation requirements. This computer-based course provides an introduction to the basic statistical tools that analytical scientists need for their work. The course starts from looking at data and then explains the most common statistical parameters and how to calculate them.

What are the benefits?

This course is designed to help delegates to understand some of the most important statistical concepts used by analytical scientists, calculate the most common statistics, apply significance testing and use linear regression in calibration.

Course content

The course will cover:
> Introduction to statistics
> Significance testing, t- and F-tests
> Analysis of variance
> Control charts
> Linear regression

Who should attend?

This course is aimed at analytical scientists who need to use statistics and require a better understanding of the fundamental concepts. It is suitable for analysts with limited or no experience of statistics.

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All LGC’s courses are held at the company’s modern laboratory and office facility in Teddington, South West London.

To book this event visit the UKAS website or contact Jan Garman:
Tel: +44 (0)20 8917 8488  Fax: +44 (0)20 8917 8499  Email: jan.garman@ukas.com
Method validation is the process that provides evidence that a given analytical method, when correctly applied, produces results that are fit for purpose. No matter how well a method performs elsewhere, analysts need to confirm that the method is valid when applied in their laboratory. There is now much greater emphasis on method validation in the ISO/IEC 17025:2005 accreditation standard. During the course there is ample opportunity to practice the principles learned through laptop-based workshops using Excel.

What are the benefits?
This course will help delegates understand method validation and its requirements; select and apply the statistics required during method validation; select and use the appropriate types of method validation studies and appreciate and understand the links with measurement uncertainty.

Course content

Day 1
Essential statistics
- Introduction to statistics for method validation
- Significance testing t-tests and the F-test
- Analysis of variance (ANOVA)
- Linear regression

Day 2
Providing the tools
- Introduction to the concepts of method validation
- Building a validation protocol
- Performance parameters; precision, bias and ruggedness

Day 3
Further tools
- Performance parameters; selectivity, LoD, LoQ, linearity and working range
- Using validation data to estimate measurement uncertainty

Who should attend?
This course is designed for analytical scientists and potential or existing laboratory managers who are involved in method development and method validation.

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All LGC’s courses are held at the company’s modern laboratory and office facility in Teddington, South West London.

To book this event visit the UKAS website or contact Jan Garman:
Tel: + 44 (0)20 8917 8488  Fax: + 44 (0)20 8917 8499  Email: jan.garman@ukas.com
Booking Details

How to Book

Book online at:
www.ukas.com — following the links to Services/Training

or download the Booking Form
e-mail: training@ukas.com

Post to:
Jan Garman
Training Coordinator
UKAS
21-47 High Street
Feltham
Middlesex
TW13 4UN

Discounts
The fees shown in each of the individual programmes are subject to the following discounts for multiple bookings as follows:

> Second delegate – 5%
> Third delegate – 8%
> Fourth and subsequent delegates – 10%

If you have a large amount of staff requiring training further discounts may be available, please contact the training team to discuss.

Discounts can only be applied for bookings made at the same time.

UKAS does not accept cheques for payment of Training Course fees.
# Booking Form

Download a booking form and e-mail to training@ukas.com

## Personal Details

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<tr>
<th>Title (Mr, Ms, Dr etc)</th>
<th>Surname</th>
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<table>
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<tr>
<th>Discipline</th>
<th>Email Address</th>
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<table>
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<th>Fax</th>
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## Other Delegates

<table>
<thead>
<tr>
<th>Name</th>
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<table>
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<th>Discipline</th>
<th>Email Address</th>
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## Course Details

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<th>Non-residential</th>
<th>No of Delegates</th>
<th>Course Fee</th>
<th>Total Fee</th>
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## Payment Details

- **Invoice:**
  - Purchase Order No.

- **BACS:**
  - Use Reference **20-00-00 Barclays Bank Account 03304264**

- **Credit/Debit:**
  - We accept **Delta, MasterCard, Switch, Visa** (not AMEX or Diners)
    - Card Number
    - Issue No.

- Signature

For up-to-date information on our courses phone +44 (0)20 8917 8488 – alternatively, visit our website [www.ukas.com](http://www.ukas.com)
Terms and Conditions

**Fees**
Payment for course bookings is due within 30 calendar days of the invoice date or 15 calendar days prior to the provision of the services, *whichever is the earlier*. Bookings made within the 15 calendar day period must be paid for immediately.

If payment is not received delegates will not be allowed to attend the course.

Payment can be made by BACS or by credit/debit card.

The course fee includes an extensive delegate pack, refreshments, accommodation and meals as described in the course programme.

The invoice for the training course fee is raised on the day of submission of the booking form. Please ensure the information on your booking form is correct. Especially account’s Information. If incorrect information is provided on the booking form, or purchase order numbers are not provided at the time of booking, causing a delay in payment and subsequently a re-issue of the invoice, there will be a charge of £50.00 for the new invoice to be issued.

**Cancellations**
A full refund will be provided for cancellations received more than thirty working days before the commencement of the training course.

A refund of 50% will be provided for cancellations received between fifteen and thirty working days before the commencement of the training course.

No refunds will be given for cancellations received less than fifteen working days before the commencement of the training course.

**Substitutions**
Substitutions will be accepted up to two working days before the course date. Details of the substitution must be given to and acknowledged by UKAS.

**Transfers**
Registered delegates who wish to transfer to a different date for the same event (subject to availability) can do so free of charge providing that:

> The original invoice for course fees has been paid in full.

> Notice is received and acknowledged by training department over 30 days before the commencement of the course.

Transfers requested within 30 days of the course commencement will be subject to a £50.00 administrative fee +VAT and any additional charges for any accommodation reserved.

Subsequent transfers of the same delegate will be charged a £50.00 +VAT administrative fee.

UKAS constantly seeks to improve its training and reserves the right to amend its published courses and course dates.

UKAS reserves the right to cancel a training course. In this event registered delegates will be informed, and where applicable their course fee refunded.

UKAS does not sell its customer details to third parties. We may send you information about other products and services available from UKAS. If you prefer not to receive such information, please email jan.garman@ukas.com

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