100% of 2018 respondents said the course met their aims and that they would recommend the course to colleagues.
Industrial Air Pollution Monitoring

Monday 25 – Wednesday 27 February 2019

Background

Industrial air pollution monitoring is a complex and challenging topic for all those who are involved, in whatever capacity:

- A technically difficult measurement process with many pitfalls for the unwary.
- A steady flow of new directives from Europe.
- An evolving management and legislative context.
- A continually expanding range of documentation from different sources.

Course aims

This three day short course will provide a broad overview of the whole subject and is suitable for those needing an introduction to the field and for those wishing to update their knowledge. The course will also provide an opportunity to meet providers of equipment and services.

For stack testers requiring personal certification under the Environment Agency’s MCERTS scheme the sessions on day one are particularly relevant to MCERTS level 2 (team leaders) and day two is particularly relevant to MCERTS Technical Endorsements 1 (particles), 2 (trace species) and 3 (manual methods for gases). Sessions on day three are particularly relevant to MCERTS Technical Endorsement 4 (instrumental methods for gases).

Course content and structure

Day one focuses on general management issues, including legislation, compliance with authorisation conditions, quality assurance and control. It will also provide perspectives from all sides – regulators, industrial emitters and contract source testing organisations.

Days two and three focus on measurement and analytical techniques. Gaseous and particulate emissions will be covered and both extractive sampling and in situ methods will be discussed. The course ends with a workshop on calculation methods which is relevant to everyone involved in emissions monitoring.

Presentations will include coverage of:

- The MCERTS scheme for instruments and for personnel
- Quality assurance and instrument performance
- Operator and test house monitoring
- The latest on important EN standards
- Principles of the common instrumental techniques
- Gas sampling and sample conditioning
- Calibration
- Particle sampling – manual and instrumental
- Methods for volatile organics
- Methods for trace species such as dioxins and heavy metals
- Uncertainty estimation

Intended audience:

This course is available for all those with an interest in industrial air pollution monitoring and will be particularly useful for:

- Environmental managers
- Environmental consultants
- Environment Agency and SEPA officers
- Control and instrumentation specialists
- Contract testing engineers
- Works chemists or engineers with responsibility for emissions
- Operators of plant subject to EPR authorisation

What our 2018 delegates said:

“Very good overview of industrial emissions monitoring techniques, regulation and equipment”

Environment Agency

“A great overview of the requirements for emission monitoring of air pollutants to meet the legal obligations set out in the permit”

Drax Power Ltd

“I attended this course knowing the importance of CEMS but having had the advantage of having other people “take care” of it. Suddenly I found I was responsible and needed to get up to speed. This course went a long way to help me achieve this!”

Viridor

“Excellent introduction to industrial air pollution monitoring, good balance of regulatory and technical requirements”

Natural Resources Wales
Monday 25 February 2019

Management of Emissions Monitoring

09.00 Registration and coffee
09.30 Welcome and introduction

The Regulatory Framework

09.45 Measurement of particulate emissions by extractive sampling
Richard Taylor, Natural Resources Wales

10.30 Management of contract emissions testing
Simon Medhurst, Smedstack Environmental

11.15 The Environment Agency’s monitoring certification scheme
Simon Medhurst, Smedstack Environmental

12.00 Lunch

Safety Management

13.00 Safety management for emission monitoring – the importance of risk assessment
Simon Medhurst, Smedstack Environmental

Operator Monitoring

13.45 The monitoring of emissions at power stations
David Graham/Dan Jones, Uniper Technologies

14.45 End of day one

19.00 Course dinner

Tuesday 26 February 2019

Manual and Instrumental Methods for Particles and Gases

08.45 Registration and coffee

Manual sampling for particles and gases

09.00 Measurement of particulate emissions by extractive sampling
Simon Medhurst, Smedstack Environmental

09.45 Sampling particulate emissions – a practical overview
Dan Jones, Uniper Technologies Ltd

10.45 Coffee

11.00 Sampling and analysis of trace species
Mark Elliott, Exova Catalyst, part of Exova (UK) Ltd

11.45 Manual sampling methods for gases
Simon Medhurst, Smedstack Environmental

12.30 Lunch

13.30 Gas analysis – organics
Mark Elliott, Exova Catalyst, part of Exova (UK) Ltd

Tuesday 26 February 2019 continued

Instrument Performance

14.15 Understanding instrument performance standards
Rod Robinson/Richard Harvey, National Physical Laboratory (NPL)

15.00 Tea

Instrumental Methods of Particle and Gas Analysis (I)

Particulate Monitoring

15.15 Continuous particulate monitoring technologies
Steve Werrell, PCME

16.00 Calculations of uncertainties in stack monitoring
Rod Robinson/Richard Harvey, National Physical Laboratory (NPL)

16.45 End of day two

Wednesday 27 February 2019

Instrumental Methods of Particle and Gas Analysis (II)

08.45 Registration and coffee

Calibration and Data Acquisition

09.00 Calibration of gaseous emission measuring systems
Dr Brian Moyle, Servomex Group Ltd

10.30 Coffee

10.45 Optical analysers for extractive gas analysis systems
Dr Hu Li, School of Chemical and Process Engineering, University of Leeds

11.30 Data acquisition and reporting – principles and practice
Speaker to be confirmed

12.15 Design and application of FTIR to monitoring pollutants
Andy Dixon, Quantitech

13.15 Lunch

14.15 Selection of analytical techniques – a case study
Paul Morgan, SICK

15.00 Converting emissions to reference conditions
Dr Hu Li, School of Chemical and Process Engineering, University of Leeds

15.45 End of day three and course

A full course programme including detailed lecture descriptions can be viewed on the course webpage at: www.engineering.leeds.ac.uk/short-courses
**Further information**

**Venue**
The venue for the course will be Weetwood Hall Conference Centre and Hotel which offers first-class hotel facilities, a business centre and ample parking facilities.

Weetwood Hall Hotel is ideally situated 15 minutes north of the centre of Leeds in wooded grounds at the junction of the Otley Road and the outer ring road. It is just 15 minutes from Leeds Bradford International Airport and a short distance from the A1, M1, M606, M621 and M62 motorways.

Further details can be found at [www.weetwood.co.uk](http://www.weetwood.co.uk)

**Course fees**
The following course fees include the cost of tuition, course materials, lunches and light refreshments for the days of attendance.

- **Full three days** £925
- **Any two days** £710
- **Any one day** £405

Delegates are responsible for their own evening meals except on Monday 25 February when the course dinner is included.

**Accommodation**
Bed and breakfast accommodation is available at the course venue, Weetwood Hall Conference Centre and Hotel.

We have negotiated the following special rates per night:
- **Sunday evening, bed and breakfast** £82
- **Monday – Tuesday, evening, bed and breakfast** £86

To take advantage of these special rates, please book by contacting the hotel direct on 0113 230 6000 (Stevie Standerline or Emma Barker), E: reservations@weetwood.co.uk. Please quote “University of Leeds CPD Unit” and the course name when contacting Weetwood Hall to book accommodation.

Please note that accommodation bookings must be made two weeks before the course commences at the latest to qualify for the special rates. A list of alternative hotels is available on request. Delegates are responsible for their own evening meals except on Monday 25 February when the course dinner is included.

**How to book**
Booking for this course should be completed through our secure Online Store. To complete your booking please follow the instructions below:

1. Log on to our Online Store at: [https://store.leeds.ac.uk](https://store.leeds.ac.uk)
2. Select Conferences and Events in the left-hand navigation bar.
3. Select CPD Faculty of Engineering.
4. Select the course or event for which you wish to register and click on ‘Book’.
5. If you are a new user, please follow the instructions to register. If you already have an account log in as instructed.
6. Complete the application process as directed by the booking system. You will receive an automatic confirmation email within 24 hours of your booking.

**Course dinner**
The course dinner will be held at a Leeds city centre restaurant and is included in the course fee. This will take place on Monday evening and transport from and to Weetwood Hall Hotel is provided. The dress code is smart casual. If you would like to attend please indicate when booking.

**Accessibility**
Potential delegates who have any special requirements should contact the course coordinator as soon as possible.

For online booking queries and for all other enquiries please contact:

CPD, Conference & Events Coordinator
CPD, Conference & Events Unit
Faculty of Engineering
School of Chemical and Process Engineering
Room 3.11
University of Leeds
Leeds, LS2 9JT, UK
T: +44 (0) 113 343 2494/8104
E: cdp@engineering.leeds.ac.uk
W: [www.engineering.leeds.ac.uk/short-courses](http://www.engineering.leeds.ac.uk/short-courses)

@LeedsUniCPD

**Terms and conditions for booking**
Payment in full should accompany your booking. The course fee is exempt from VAT. Fees must be paid in full no later than 15 working days before the course commences. Failure to pay may result in attendance being refused. Registrations are accepted on the understanding that the printed programme is given in good faith but may have to be re-scheduled or the speakers changed for reasons outside our control. The University of Leeds reserves the right to cancel or postpone the course, in which case fees will be refunded in full. In the event of cancellation, the University will not be held liable for delegates travel or accommodation expenses. Delegates will receive a full refund for cancellations made within 7 days of online booking, except where the booking has been made for an event commencing within the next 7 days. Where a delegate wishes to cancel a registration after this 7 day period, written cancellations received up to 15 working days before the course will be subject to an administrative charge of 20% of the total remittance. After this date the full fee is chargeable and no refunds will be made, this also applies for non-attendance but copies of the course documents will be sent. Substitutions may be made at any time. If you are unable to complete your registration using the online booking system please contact the CPD, Conference & Events Unit to discuss alternative arrangements. The CPD Unit takes your privacy seriously and we will only use your details to provide information on our CPD courses and relevant engineering events. We will not pass your details to any other organisations. You can unsubscribe at any time by emailing us at cdp@engineering.leeds.ac.uk and your details will be removed from our database.