



UNIVERSITY
of
GREENWICH

The Wolfson Centre
for Bulk Solids
Handling Technology

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Short Courses for Industry
Course Calendar for 2016





Welcome to the Wolfson Centre for Bulk Solids Handling Technology

Our mission: to provide cost-effective solutions to industrial problems

The Wolfson Centre is recognised as a leader in the field of powder and bulk solids handling technology and has established

strong links with industry. This enables us to offer a unique range of consultancy, research projects and short courses.

Objectives and content

Our range of short courses is designed to equip delegates with the means to identify and overcome difficulties that arise, saving time and increasing productivity.

Our experts' in-depth knowledge as specialists in powders and bulk solids is complemented by their experience across all industries, including, but not limited to, renewable energy, pharmaceuticals, process and chemical engineering, recycling, food processing and mining.

In order to meet the changing needs of industry, we continually update our range of courses to reflect current trends.

This year we have introduced three new courses; one to look at the problems specifically encountered in the processing of bulk materials, another to look at the handling and storage of municipal waste and recycled products, and a third to look at the network security of industrial control systems.

For more information, or to make a booking, please contact us:

Telephone: 020 8331 8646

E-mail: wolfson-enquiries@gre.ac.uk

Website: www.bulksolids.com

Overview of courses

Powder and Dust Containment in the Process Industry

For process engineers who handle hazardous or toxic materials.

Undesired Deblending and Separation in Processes and Equipment

Learn the techniques that can be applied to minimise the effects of bulk materials segregation.

Measurement of the Properties and Bulk Behaviour of Particulate Materials

An overview of methods of measuring the behavioural properties of powders, including hands-on sessions in our laboratories.

Dust Explosions: How to Demonstrate DSEAR/ATEX Compliance

Learn the simple measures that can be taken to reduce the hazard of a dust explosion and discharge your statutory responsibilities.

“The Measurement of the Properties and Bulk Behaviour of Particulate Materials course gives you a good understanding of the potential pitfalls within bulk material systems, which you can apply on your return to work.”

Stephen Martin
RWE Innogy UK Ltd

“The Biomass Handling course was a great introduction to solid biomass and its characteristics. The information given was excellent, covering almost all aspects and issues of biomass handling, feeding and storage and will be very useful to me in my work.”

Ioannis Dafnimilis
Delft University of Technology

Pneumatic Conveying of Bulk Materials, including optional practical session

An examination of the components of pneumatic conveying systems, system selection and design techniques.

Advanced course: Pneumatic Conveying System Design

An in-depth exploration of detailed calculations and design for pneumatic pipelines and specifying associated plant.

It is aimed at design practitioners already familiar with the basics of pneumatic conveying.

Optional third day: Rotary Valves: Design, Selection and Operational Issues

An exploration of the variety of valves available to fit a chosen system and how to choose and specify the features required for any specific application.

It is also available as a stand-alone 1-day course.





Overview of Particulate Handling Technology, including optional practical session

An introduction to the technology of storing and handling bulk materials, equipment selection and design methodologies for safe and reliable plant.

Storage and Discharge of Powders and Bulk Solids, including optional practical session

An exploration of the basics of hopper and silo operation, design and specification, including storage and flow of materials and the selection of feeders and discharge aids.

Advanced course: Design of Equipment for Storing and Discharging Bulk Materials

Developed with specification writers and equipment designers/suppliers in mind.

It is aimed at practitioners already familiar with the basics of storage and discharge of bulk material.

Introduction to the Processing of Dry Solid Materials

NEW

An overview of core processing methods for powders and granules.

Biomass Handling, Feeding and Storage

Discover how to identify, prevent and resolve common problems when handling various biomass materials.

Network Security of Industrial Control Systems in the Process Industry

NEW

An introduction to securing wireless-controlled technology used in the bulk solids handling industry.

Caking and Lump Formation in Powders and Bulk Solids

An examination of the causes of lump formation and hardening of powders and bulk solids in storage and transport, and the techniques used to predict and solve these problems.

Electrostatics in Powder Handling

A discussion on the causes and effects of electrostatic charge in bulk solids handling and the potential impact on product quality and safety.

Handling and Storage of Waste and Recycled Bulk Materials

NEW

A review of best practice and design methods for reliable storage and reclamation.

Practical sessions

Practical sessions are included throughout many of the courses, where appropriate. These give delegates the opportunity to understand design techniques using the equipment in our laboratories, some of which may not be available to them in the workplace.

Course dates and costs

2–3 Feb	Advanced course: Pneumatic Conveying System Design
4 Feb	Rotary Valves: Design, Selection and Operational Issues
10 Feb	Electrostatics in Powder Handling
24 Feb	Powder and Dust Containment in the Process Industry
9 March	Network Security of Industrial Control Systems in the Process Industry NEW
15–17 March	Storage and Discharge of Powders and Bulk Solids, including optional practical session
6 April	Dust Explosions: How to Demonstrate DSEAR/ATEX Compliance
13 April	Caking and Lump Formation in Powders and Bulk Solids
26–27 April	Advanced course: Design of Equipment for Storing and Discharging Bulk Materials
10–12 May	Pneumatic Conveying of Bulk Materials, including optional practical session
24 May	Undesired Deblending and Separation in Processes and Equipment
7–8 June	Introduction to the Processing of Dry Solid Materials NEW
28–29 June	Measurement of the Properties and Bulk Behaviour of Particulate Materials
5 July	Handling and Storage of Waste and Recycled Bulk Materials NEW
11–13 Oct	Overview of Particulate Handling Technology, including optional practical session
22–24 Nov	Pneumatic Conveying of Bulk Materials, including optional practical session
13–14 Dec	Biomass Handling, Feeding and Storage

Costs per delegate

One-day course: **£490**
 Two-day course: **£765**
 Three-day course: **£1,185**

Delegates attending more than one course within a rolling year will receive a 10% discount on fees from the second course onwards.

Companies sending three or more delegates on the same course receive a group discount of 10%.

Please visit www.bulksolids.com for information on other discounts and cancellation costs, terms and conditions.

Who should attend?

- Engineers
- Plant managers
- Skilled operatives
- Maintenance crew
- Equipment manufacturers

Course attendees have the opportunity to discuss the bulk solids handling problems you have encountered at your workplace with our experts.

Bespoke training

We can deliver any of the non-lab based sections of our courses at your premises. Courses can be modified to highlight areas of specific concern to your company.

This is a popular option for organisations with a number of personnel who would benefit from education in the same subject area. Advantages to running our courses at your premises include:

- **Cost** – it is often more economical to bring the course to you than for you to send several members of staff to us
- **Relevance** – we can tailor the course to suit the operations in your plant, so we focus on course material which is directly relevant to you
- **Convenience** – we can run the course at a time that suits you, over separate days rather than consecutively if you prefer.

The Wolfson Centre is very well equipped for assisting industry to solve problems. The lectures are well presented and staff are friendly and helpful. The courses are structured to allow very useful discussion time, which helps delegates to get to know each other and exchange views.

John Adams
HR Blowers Ltd



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