



Faculty of Engineering

UNIVERSITY OF LEEDS

# Industrial Powder Mixing

Tuesday 12 – Wednesday 13 November 2019

Early Bird  
Registration  
until 4 October

# Industrial Powder Mixing

Tuesday 12 – Wednesday 13 November 2019

## Background to the course

This practical powder mixing course has been a resounding success with participants since its launch in 2004. Now an established feature in the annual programme of CPD short courses, we are pleased to offer the course again in November 2019.

## Who should attend?

The course is relevant to those concerned with quality assurance and improvement of existing processes and to those developing new product formulations and processes. It is of particular interest to practitioners in the food, pharmaceutical, pigments, detergents, cosmetics, nuclear, plastics and general chemical industries.

## Course outline

Emphasis throughout is on the industrial application of basic principles. Extensive interactive notes will be provided to participants and demonstrations, case studies and theory will be introduced wherever relevant. Powder flow and its significance in selecting the most appropriate mixers will be discussed.

Quality assurance, powder sampling techniques, a practical discussion of the statistics of mixing and the value of statistics at the formulation stage will be covered. The handling, packaging and marketing of powder products will also be discussed.

## Course Director

Norman Harnby is a member of the School of Engineering at the University of Bradford and a Visiting Professor at both the University of Leeds and Iowa State University.

He has been active in powder mixing research for over forty years and in that time has been an active industrial consultant throughout Europe, China, South Africa and the Americas.

As well as offering the opportunity to discuss specific problems during the course, the afternoon of day 2 will include a group or individual powder mixing clinic.

## What our 2018 delegates say

- “Thorough, detailed, enjoyable course with a good amount of real life experiences included.”  
TasteTech Ltd
- “Knowing nothing about powder blending before this course, having worked previously in liquid blending only, I feel I have a good understanding of the theory and practice of powder blending following this 2 day course.”  
Flexible Medical Packaging Ltd
- “Very informative and interesting. Norman Harnby teaches with great enthusiasm and knowledge. Highly recommend.”  
Colorcon Ltd

The full course details and online booking are now available from the course web page:

<https://engineering.leeds.ac.uk/short-course/27>

## Programme

### Tuesday 12 November 2019

- 09:00 Registration, coffee and welcome  
**09:30 The mixing process and powder flow**  
11:15 Coffee  
**11:30 The selection of a mixer**  
12:45 Lunch  
**13:45 The characterisation of powder mixers**  
15:15 Tea  
**15:30 Cohesive mixtures**  
16:45 End of day one  
19:00 Course dinner

### Wednesday 13 November 2019

- 09:00 Coffee and welcome  
**09:05 Testing of mixers and sampling**  
11:00 Coffee  
**11:15 The handling of powder mixtures**  
13:15 Lunch  
**14:15 Group or individual powder mixing clinic**  
15:15 Tea  
**15:30 Mixer scale-up**  
16:15 End of day two and course

Register by Friday 4 October 2019 to save **£50** off the course fee

## Learning Objectives

On completion of the course delegates will have an understanding of:

- The relevance of powder flow to the mixing process
- The concepts of free-flowing, cohesive, segregating, structured and coated powder systems
- How to practically and theoretically assess the quality of a powder mixture
- How to specify equipment fit for purpose.

## Other relevant courses

**Crystallisation Science and Engineering**  
Wednesday 22 – Friday 24 January 2020

**Spray Drying and Atomisation of Formulations**  
Tuesday 31 March – Thursday 2 April 2020

**Fluid Bed Processing**  
Tuesday 19 – Thursday 21 May 2020

**Microencapsulation**  
2020 dates TBC (3 day course)

**Powder Characterisation**  
2020 dates TBC (3 day course)

# Further details

## Venue

The venue for the course will be the Faculty of Engineering at The University of Leeds.

## Course fees

The following course fees are VAT exempt and include the cost of tuition, course materials, lunches, light refreshments and the course dinner:

On or before 4 October 2019 **£875**

4 October 2019 **£925**

## Accommodation

Delegates are responsible for their own accommodation, if required. A list of hotels close to the University will be sent out with the delegate joining instructions.

## Course dinner

The course dinner will take place at a Leeds city centre restaurant on Tuesday evening and is included in the course fee. The dress code is smart casual.



## How to book

Booking for this course should be completed through our secure online store using debit or credit card. To complete your booking please follow the instructions below:

## Online booking

1. Log on to our online store at <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.

Our privacy notice tells you what to expect us to do with your personal information when you make contact with us or use one of our services:

<https://tinyurl.com/CPD-Privacy-Notice>

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

**Katie Warner**

CPD Course Co-ordinator

CPD, Conference & Events Unit

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**W:** [www.engineering.leeds.ac.uk/short-courses/](http://www.engineering.leeds.ac.uk/short-courses/)

 [@LeedsUniCPD](https://twitter.com/LeedsUniCPD)

 CPD, Conference and Events Unit,  
University of Leeds

## 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 take 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 [cpd@engineering.leeds.ac.uk](mailto:cpd@engineering.leeds.ac.uk) and your details will be removed from our database.