

**Competition Clause:** We ask you for your understanding that participants of competing companies cannot take part in the training course.

**Tuesday, 18 September 2018**

**8:30 – 17:00**

- 8:30 Welcome and Theory 1** Sebastian Teitz  
Andrew Bailey
- Introduction into eukaryotic DS manufacturing process
  - Virus Filters in biopharmaceutical manufacturing
  - Sources of virus load
  - Reason/necessity for virus removal from DS
  - Brief overview of guidelines
  - Methods for virus removal

**10:00 Coffee Break**

- 10:30 Hands-on 1: Set-up and Handling of Filters** Sebastian Teitz
- Set-up in lab-scale: hands-on
  - Display of production scale filters
  - Integrity tests: hands-on
  - Demonstration of integrity test automation

**12:30 Lunch Break**

- 13:30 Theory 2: Case Study** Franz Nothelfer
- Up- & Downscaling of a virus filtration step

**15:00 Coffee Break**

- 15:30 Interactive Session:** Sebastian Teitz  
**Designing a virus filtration process – assumption and points to consider**
- How to design a process
  - Calculating production costs

**17:00 End of Day 1**

**18:00 Networking Dinner**

**Wednesday, 19 September 2018**

**8:30 – 15:30**

**8:30**      **Wrap-up Day 1**      Sebastian Teitz

**9:00**      **Theory 4:**      Sebastian Teitz

- Mechanistic principles of (Parvo-) Virus retention
- Virus filters as bioprocess subject – current hot topics (ATMPS, facility segregation, etc.)
- Challenges of implementing virus filtration into continuous manufacturing

**10:30**      **Coffee Break**

**11:00**      **Theory 5:**      Michael Lasse

- How to organize a virus clearance study
- Challenges in VC studies
- Historical data
- Case studies for VC studies

**12:30**      **Lunch Break**

**13:30**      **Interactive session:**      Sebastian Teitz

**Pitfalls in the development of a virus filtration process**

- Bring your own case/topic/question/problem/challenge for discussion!

Participants have the opportunity to address real-life challenges during the implementation of a virus filtration process – from bench-top development through to commercial scale-up.

**15:00**      **Wrap-up, Q&A**      Sebastian Teitz

**15:30**      **End of Course**