



Compliance & Validation Services  
Presents a 3-Day Online Training Course on:

## Aseptic Manufacturing of Pharmaceutical Products

7, 8 & 9 February 2023  
Online Training Course



February 2023						
Su	Mo	Tu	We	Th	Fr	Sa
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5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28				

Click on the calendar to go to the web page for this course

### Aseptic Manufacturing:

- Unique challenges of aseptic manufacture and the potential consequences of inadequate contamination control and poor practice
- Product sterility testing and the probability of detecting failure units
- Understanding and controlling contamination from cleanroom personnel
- Effective aseptic practices and cleanroom behaviours
- Risk management of microbial contamination
- Cleaning and disinfection for contamination control
- Preparation of product, components and equipment for aseptic manufacture
- Overview of sterilisation processes and requirements for effective microbial control
- Key regulatory authority documents and international standards

### Facility Design and Support Systems:

- HVAC systems and facility (cleanroom) design principles
- Facility qualification and ongoing monitoring and management
- Fundamental principles of unidirectional and turbulent airflow for effective airborne contamination control
- RABS and Isolators
  - Risk spectrum for advanced aseptic manufacture
  - Comparison of RABS and Isolators and system options for aseptic manufacture
- Cleanroom clothing systems and assessment of garment life
- Aseptic Process Simulation (ASP) [Media fills]

## Course Summary: Aseptic Manufacturing of Pharmaceutical Products - 7, 8 & 9 February 2023 - Online Training Course

The course covers one of the most challenging and high risk activities undertaken by the pharmaceutical and biopharmaceutical industry. To operate effectively in the field of aseptic manufacturing, it is essential to understand the sources/basic mechanisms of contamination in conjunction with the associated systems and procedures required to effectively control such contamination. This course provides delegates with an in-depth appreciation of contamination sources and mechanisms, together with effective controlling and monitoring mechanisms such as: good cleanroom operation; effective facility/HVAC design, operation and maintenance; good aseptic behaviours/disciplines; effective personnel clothing systems, sterilisation processes, process simulation trials, risk management initiatives and environmental monitoring.

Our very experienced presenters will provide current industry best practice, up-to-date regulatory authority information and will enhance the learning using real life examples.

### Presenters



**Mike James, Training Director, Compliance & Validation Services Limited.:** Mike has nearly 30 years experience in the pharmaceutical industry, working in a variety of compliance and validation roles. His experience includes preparation and delivery of national/client-based validation training courses, hands-on validation work, validation project management and regulatory compliance consultancy. Previously, Mike spent four years as the Site Validation Manager for GlaxoSmithKline (GSK) at Speke, where he was responsible for all site validation activities, including the development and maintenance of the Site Validation Programme. Before moving to the pharmaceutical industry he spent 15 years as an industry chemist.



**Kevin Owen, Director of Aseptic Technologies, IPS:**

A microbiologist by profession (Hospital and Pharmaceutical) who has over 30 years of aseptic operational experience and responsibility for aseptic processing capability within multinational Pharma. He ensured that all Industry and regulatory expectations (current and anticipated) were met across multiple sites by embedding a systemic approach to aseptic manufacturing. He has led draft Annex 1 compliance compliance strategy and set up and developed Aseptic centres of excellence to transform aseptic assurance cultures. Expert fields include Regulatory compliance, positive and negative pressure cleanrooms, toxin handling, ADC, lyophilisation, specials manufacturing, clinical trial to commercial manufacturing, ATMP's and Laboratory design. He has led major aseptic facility improvement projects without interruption to the commercial supply of product to patients. His position as Director of Aseptic Technologies provides great technical leadership and operational depth on Aseptic fill finish projects across the global footprint of IPS. Kevin is always patient centric.



**Industry Expert:** Our industry expert has many years of experience in the field of aseptic manufacturing and is an accomplished presenter.

### Who Should Attend

This interactive course has been designed for personnel from a range of disciplines. These include production, technical, engineering and quality assurance roles. It is aimed at those who are either new to aseptic manufacturing or at those who would like to expand their existing knowledge. On leaving this course delegates will: have a better understanding of the applicable regulatory rules and guidance and other pertinent international standards/guides; have a clear understanding of the fundamental principles and best industry practice of/in aseptic facility/HVAC design, operation, and maintenance; in depth knowledge of key supporting systems; be able to apply and share their new knowledge; improve their individual effectiveness; and look back on an enjoyable experience.

### Online System & Course Fees

We use industry standard online meetings software platforms to run our live online training courses. Once we have received your booking, you will be contacted by email with details on how to join each day of the course. Please note that we do not record our courses.

**Course fees are **£1,750.00 (GBP)** per attendee.**

*(See Page 4 for further details on fees/bookings)*



# Aseptic Manufacturing of Pharmaceutical Products - Live Online Training Course - Programme

Start Time: 08:00 London/Dublin; 09:00 Berlin/Amsterdam - Please join the course at least 5 minutes before the start.

DAY 1 (Tuesday 7 February 2023)	Day 2 (Wednesday 8 February 2023)	Day 3 (Thursday 9 February 2023)
<b>Start: 08:00 London/Dublin; 09:00 Berlin/Amsterdam</b>	<b>Start: 08:00 London/Dublin; 09:00 Berlin/Amsterdam</b>	<b>Start: 08:00 London/Dublin; 09:00 Berlin/Amsterdam</b>
<b>Introduction to Aseptic Manufacture [Industry Expert]:</b> <ul style="list-style-type: none"> <li>• Sterile medicinal products and the concept of sterility (sterility definition)</li> <li>• Unique challenges of aseptic manufacturing</li> <li>• Probability of detecting contaminated units with the product sterility test</li> <li>• Potential consequences of poor aseptic practices</li> <li>• Regulatory authority considerations</li> </ul>	<b>People as a Source of Contamination [Industry Expert]:</b> <ul style="list-style-type: none"> <li>• Contamination from personnel</li> <li>• Personnel movements and contamination dispersal rates</li> <li>• Inert particles and microbe carrying particles</li> <li>• Mechanisms and routes for product contamination</li> <li>• Risk assessment approach for microbial contamination during cleanroom manufacture</li> </ul>	<b>Introduction to Sterilisation [Kevin Owen]:</b> <ul style="list-style-type: none"> <li>• Why do we sterilise (including milestone incidents)?</li> <li>• Wet heat and dry heat sterilisation (processes involved)</li> <li>• Porous load sterilisation</li> <li>• Fluid load sterilisation (types of sterilisers available)</li> <li>• Irradiation sterilisation</li> <li>• Filtration – is it a sterilisation process?</li> <li>• Control of the sterilisation process</li> <li>• Regulatory Inspection issues</li> </ul>
<b>Cleanrooms, RABS and Isolators [Industry Expert]:</b> <ul style="list-style-type: none"> <li>• History of cleanrooms</li> <li>• Classification of controlled environments</li> <li>• Achieving and maintaining cleanliness levels</li> <li>• Cleanrooms for the pharmaceutical industry</li> <li>• Isolators and RABS</li> </ul>	<b>Cleanroom Clothing Systems [Industry Expert]:</b> <ul style="list-style-type: none"> <li>• Garment requirements for effective contamination control and assessment of garment life</li> <li>• Garment management activities</li> <li>• Gowning requirements, practical gowning procedures and initial and ongoing qualification</li> <li>• Undergarments – long or short sleeves?</li> <li>• Goggles – disinfection or sterilisation?</li> </ul>	<b>Aseptic Validation [Kevin Owen]:</b> <ul style="list-style-type: none"> <li>• Process simulation trials (PST)</li> <li>• Frequency and batch/lot sizes required for PST</li> <li>• Design of PST</li> <li>• Inclusion of ‘worst case’ scenarios</li> <li>• PST microbiological media</li> <li>• Interpretation of PST results</li> <li>• Consequences of failure and dealing with non-conforming results</li> </ul>
<b>The Focus on RABS &amp; Isolators [Industry Expert]:</b> <ul style="list-style-type: none"> <li>• The aseptic integrity spectrum</li> <li>• Isolators and RABS</li> <li>• Comparison isolators and RABS</li> <li>• RABS operating principles</li> <li>• RABS types</li> <li>• Interventions and transfers</li> <li>• Gaseous vapour phase decontamination</li> </ul>	<b>Particle Counting [Mike James]:</b> <ul style="list-style-type: none"> <li>• Particle counters and how they work</li> <li>• Approximations and assumptions used in particle counting</li> <li>• Avoiding over and under-sampling large particle (use of Isokinetic sampling probes)</li> <li>• Installation considerations</li> </ul>	<b>Room Classification and Environmental Monitoring [Mike James]:</b> <ul style="list-style-type: none"> <li>• Room Classification - worked example</li> <li>• Environmental Monitoring               <ul style="list-style-type: none"> <li>• What has to be monitored and when?</li> <li>• Routine and periodic monitoring requirements</li> <li>• Differences between Aseptic and Non-Sterile Areas</li> <li>• What equipment is needed?</li> <li>• Where should we monitor?                   <ul style="list-style-type: none"> <li>• Example risk assessments</li> </ul> </li> <li>• What standards should be applied?</li> <li>• Location and frequency examples</li> <li>• Setting alert and action limits and dealing with non-conformances</li> <li>• Effective data management and reacting to data</li> </ul> </li> </ul>
<b>HVAC System Overview [Mike James]:</b> <ul style="list-style-type: none"> <li>• Fundamentals principles of HVAC system, e.g. particle level control by continuous removal of particle laden air</li> <li>• Control of differential pressure, pressure regimes, airflows, temperature and humidity</li> <li>• Design concepts</li> <li>• Overview of system qualification</li> <li>• Maintaining systems for effective control of airborne contamination</li> </ul>	<b>Cleanroom Behaviours and Aseptic Practices [Industry Expert]:</b> <ul style="list-style-type: none"> <li>• Cleanroom change protocols and garments</li> <li>• Gloves and hand disinfection procedures</li> <li>• Personnel movements in cleanrooms</li> <li>• Workstation planning</li> <li>• How to behave and how not to behave</li> <li>• Video demonstration</li> </ul>	
<b>Cleanroom Design Principles [Industry Expert]:</b> <ul style="list-style-type: none"> <li>• Layout, flow, personnel entry, room shape</li> <li>• General surfaces, floors, walls and ceilings</li> <li>• Windows, doors, hatches, communication systems</li> <li>• Conveyor systems, drains, sinks, pipes, conduits, lighting and plant rooms</li> <li>• Fittings and equipment</li> </ul>	<b>Component Preparation and Handling [Industry Expert]:</b> <ul style="list-style-type: none"> <li>• Clarification of terms</li> <li>• Types of components and mechanisms used to wash / sterilise / depyrogenise, e.g. WFI rinsing and wet/dry heat sterilisation / depyrogenation</li> <li>• Qualification of the processes involved, e.g. temperature mapping and endotoxin spiking</li> <li>• Equipment decontamination/preparation and sterilisation</li> </ul>	<b>Contamination Control &amp; Cleaning [Kevin Owen]:</b> <ul style="list-style-type: none"> <li>• Where does it fit?</li> <li>• Sources of contamination</li> <li>• Barriers to contamination, including decontamination</li> <li>• Types of cleaning and disinfection processes</li> <li>• Material transfers</li> <li>• Maintenance intervention and how to manage it</li> </ul>
		<b>Final Questions &amp; Answers &amp; Course Closure</b>

**How to book on this course:**

- The simplest and quickest way is to book online. Please visit/return to our web-site, find the online course you are interested in and follow the simple instructions (link included below), or
- Print out this page, complete the form below by hand and return by fax, email or post.

[CLICK HERE TO BOOK ONLINE](#)

Fax: +44 (0)1625 800833

Tel: +44 (0)1625 500833 or +44 (0)1270 760882

E-mail: [info@candvs.com](mailto:info@candvs.com)

**Alternative Booking Form (‘\*’ indicates required fields) Booking Terms & Conditions**

<b>*Booking Contact Name:</b>		
<b>*Booking Contact E-mail Address:</b>		
<b>*Booking Contact Telephone Number:</b>		
<b>*Company Name &amp; Address:</b>		
<b>*Billing Address</b> <i>(Only complete if different to Company Address)</i>		
<b>*Attendee Information:</b>	<b>Attendee Name(s):</b>	<b>Attendee Email Address:</b>
<b>Company VAT Number (or Sales Tax Number) – *EU Countries Only</b>		
<b>*Method of payment, e.g. card or invoice payment</b>	NOTE: For card payments by telephone, please ensure you have entered your telephone number above and we will contact you. Alternatively, call +44 (0)1625 500833 to make your payment.	
<b>Payment Reference (if available)</b>	NOTE: For invoice payments we will need a valid reference number or purchase order number to fully confirm the booking.	
<b>* Total Fees Due</b> <b>£1,750 [GBP]</b> per attendee	NOTE: If your finance centre or attendees are based in the United Kingdom (UK), or attendees are booking as private individuals (non-company), the course fee will be subject to an additional 20% UK VAT charge ( <b>£2,100</b> per attendee including UK VAT). For EU Countries where finance centres and attendees are NOT based in the UK, VAT will be ZERO RATED under the reverse charge rule. For non-EU countries and non-EU attendees, VAT is not applicable.	

**Booking Confirmation**  
Bookings will only be confirmed upon payment by credit card, or in the case of invoice payment (bank transfer), upon receipt of a valid purchase reference number.

**Cancellation by Attendees**  
Cancellation refunds will depend on how long before the course start date the cancellation is received. The following refund structure will apply:

- More than 7 days will qualify for a refund of the course fee paid after the deduction of actual expenses incurred by CVS in connection with the course that the attendee has registered for and there shall be no future liability on the part of either party.
- No refund will be given for cancellations received with less than 7 days' notice.
- Substitutions for registered attendees from the same company will be accepted without notice, but for administration purposes, we kindly ask you to let us know as soon as you can.

**Cancellation by CVS**  
CVS does not issue refunds for attendees unless:

- We have cancelled a course.
- We have changed the time or date of a course.

If we do cancel or reschedule an event, CVS is not responsible for any costs incurred by attendees. Only the course fee will be refunded. Please be assured that we are not in the habit of cancelling events. We only cancel events in exceptional circumstances.

**Speaker/Presenter Changes**  
We reserve the right to change a speaker without notice.

**Course Fee & VAT Liability**  
For the majority of participating countries, VAT will be ZERO rated. However, for companies whose finance centre is based in the United Kingdom (location where invoices are managed) the indicated course fee will be subject to an additional 20% UK VAT charge. Also, anyone booking as a private individual (not through a company) will be charged UK VAT. CVS has to charge this by law.

All participating EU / EEA based companies (based on the site location), must provide CVS with a valid VAT/Sales Tax reference number, in order for the booking to be completed. CVS is required by law to collect this information.

**Liability**  
CVS reserve the right to cancel or reschedule any course and/or change presenters. CVS will not provide a refund for an online course if an attendee cannot use the online system, because of local IT restrictions/issues.

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