

Module	Learning Objectives
Aseptic Behavior	<ul style="list-style-type: none"> • Review key cleanroom behaviors utilized to prevent contamination • Discuss the importance of proper health and hygiene practices for personnel who work in cleanrooms • Review similarities and differences of open vs. closed systems / aseptic processing vs. terminal sterilization • Convey acceptable and unacceptable cleanroom behaviors
Aseptic cGMP Workshop	<ul style="list-style-type: none"> • Review the origin and importance of cGMPs (and define the “c”) • Overview of cGDocP and data integrity • Learn about contamination control • Review aseptic behavior and techniques
Aseptic Gowning / Gloving Principles: Overview and Demonstration	<ul style="list-style-type: none"> • Review industry / site gowning expectations • Demonstrate proper gowning / gloving technique • Trainees practice proper gowning / gloving technique with trainer support
Aseptic Gowning / Gloving: Practice and Verification / Qualification	<ul style="list-style-type: none"> • Practice aseptic gowning / gloving techniques following the checklist of required steps, prior to qualification testing • Move to the cleanroom to gown / glove aseptically without critical technique failures (up to 3 times) • Samples will be collected in an ISO 5 environment • Successful gowning results will meet the expected microbial contamination limits
Aseptic Techniques	<ul style="list-style-type: none"> • Define aseptic technique • Review key aseptic concepts and techniques • Discuss proper use of aseptic processing systems (rooms, equipment) • Review best material transfer / personnel and material flow / intervention practices • Describe cleanroom operations in relation to manufacturing parenteral products utilizing Aseptic techniques (general processes, interventions, spills, etc.)
Classified Space Cleaning and EM Workshop	<ul style="list-style-type: none"> • Develop a cleaning program & review cleaning best practices • Environmental monitoring (EM) overview • Identifying & troubleshooting cleanroom contamination
Cleaning: Best Practices	<ul style="list-style-type: none"> • Review the proper flow of cleaning (cleanest to dirtiest) • Discuss the importance of wiping surfaces with uni-directional strokes or other approved technique • Discuss industry standard / site materials used for cleaning (IPA, non-shedding wipes, wall mops, etc.)
Cleaning: Developing a Program	<ul style="list-style-type: none"> • Discuss critical considerations when designing a cleaning regimen for a facility, room, or equipment • Discuss the importance of having an approved, effective cleaning regimen combined with an EM program • Describe surfactants, disinfectants, sanitizers, and sporicidal agents and when / where they should be used • Discuss why it is recommended to rotate disinfectants each full clean
Contamination Control	<ul style="list-style-type: none"> • Explain what contamination is and potential impacts • Review different types of contamination • Describe the methods to minimize the risk of contamination through engineering, procedural, and behavioral controls • Discuss why understanding contamination control principles is important

Module	Learning Objectives
Data Integrity (DI) Overview	<ul style="list-style-type: none"> • Review 21 CFR 11 requirements and their impact on electronic signatures and record keeping requirements • Review and discuss meaning and importance of ALCOA+ • Recognize regulatory expectations for data handling and data integrity assurance • Review potential consequences of poor data integrity practices • Review DI violations and US FDA 483's / Warning Letters pertaining to lack of good handling of data
Environmental Monitoring (EM): Program Development	<ul style="list-style-type: none"> • Review room classifications and allowable concentration limits for particulates and microbial contaminants • Define regulatory expectations of an EM program • Discuss the necessary components for an effective EM program for controlled environments • Define and discuss HEPA filters and the importance / frequency for HEPA certifications • Use risk analysis to develop a sampling plan to determine the quantity and type of samples required based on room size and room classification
Environmental Monitoring (EM): Sampling and Trending	<ul style="list-style-type: none"> • Define the different methods of sampling (particulate readers, air samplers, contact/settle plates) • Review requirements for regular trending of EM data • Define what high traffic areas and touchpoints are (i.e. worst case locations) • Demonstrate and practice proper sampling techniques • Review FDA 483's related to insufficient EM programs
Good Documentation Practices (cGDocP)	<ul style="list-style-type: none"> • Describe the importance and principles of cGDocP • Define and distinguish types of documents found in a cGMP environment • Detail requirements for document creation, control, maintenance, archival, and retention • Identify requirements for record keeping, including entering and correcting data • Review cGDocP violations and US FDA 483's / warning letters pertaining to lack of good practices
Good Manufacturing Practices (cGMP)	<ul style="list-style-type: none"> • Review the origin of cGMPs (and define the "c") • Understand how cGMPs support the production of safe and efficacious products • Discuss quality systems and how they align with cGMP regulations / requirements • Describe the Code of Federal Regulations (CFR) and its importance • Discuss the benefits of good, and consequences of poor, quality • Review cGMP violations and US FDA 483's / warning letters pertaining to lack of good systems
Investigations: Best Practices for Collecting Information	<ul style="list-style-type: none"> • Define and examine the critical parts of an investigation with interactive exercises, including but not limited to: <ul style="list-style-type: none"> -Consistency when developing titles -Aspects of a detailed description -Documentation of immediate actions -Performing historical reviews • Items to review and pathways to explore during data collection • Provide the complete story

Module

Learning Objectives

Investigations: CAPA (Corrective / Preventative Actions) and Effectiveness Checks

- When you should initiate a CAPA
- Tying repeated issues to an on-going CAPA
- Provide guidance on when to implement a CAPA
- Review of elements that make up an effective CAPA
- Discuss effectiveness checks and their importance

Investigations: Overview

- Review the importance of conducting thorough investigations
- Discuss the different activities that investigations support
- Review the key components required for a complete investigation
- Discuss effective investigation programs

Investigations: Regulatory Requirements

- Identify the regulations governing investigations
- Review consequences of performing inadequate investigations
- Review examples of FDA citations (483's / warning letters) pertaining to lack of or inadequate investigations

Investigations: Root Cause Analysis (RCA) Overview

- Define root cause
- Identify and review common RCA tools
- Root cause vs. contributing cause
- How to tell that you've found true root cause
- Determining "repeat" events

Investigation Writing Workshop

- Why we investigate & regulatory requirements for investigations
- Conducting an investigation
- Goals and principles of RCA, choosing the correct RCA tool, & RCA activity
- Title, detailed description, immediate actions, & historical review activity
- Data collection activity
- Investigation activity
- Root cause analysis activity
- Deviation conclusion activity

Isolators: Cleaning and Disinfecting

- Discuss methodologies for cleaning and disinfecting the interiors of isolators
- Discuss current decontamination options and proper decontamination techniques
- Describe what configurations need to be set on the isolator when performing a decontamination process
- Discuss considerations when working with products sensitive to oxidation by H²O²

Isolators: Design Principles

- Discuss isolator design to minimize contamination risk
- Discuss pressure differential and what it should be between the isolator interior and the surrounding area
- Design and maintenance considerations for gloves and glove ports
- Review cleaning/sanitization options
- Discuss ergonomic considerations
- Review glove ports

Isolators: Maintenance and Integrity Testing of Isolators and Gloves

- Describe an effective maintenance plan for gloves
- Review common issues with gloves, glove ports, and isolators
- Discuss methods that should be used for integrity testing of isolators and gloves
- Discuss how to handle a glove integrity failure

Module	Learning Objectives
Isolators: Proper Aseptic Behaviors	<ul style="list-style-type: none"> • Discuss proper gowning requirements for working with an isolator and the surrounding room • Discuss the importance of disinfecting gloves prior to entering the isolator gloves • Discuss proper aseptic techniques utilized when working with isolators • Discuss proper techniques for performing media fills inside the isolator • Describe material transfer methodology related to isolators • Review tips and tricks based on years of experience
New Employee Orientation	<ul style="list-style-type: none"> • Company and site overview (specific) • Company history • Mission and values • Safety procedures • Site security / IT • Emergency procedures
Regulations and Regulatory Authorities	<ul style="list-style-type: none"> • Understanding the Code of Federal Regulations (CFR) • Review the history and scope of regulatory bodies • Explain the function of regulatory authorities • Overview of the different regulatory agencies • Describe the impact of noncompliance with regulations
Quality Systems Introduction	<ul style="list-style-type: none"> • Describe the role of the quality system and its importance in the industry • Discuss entities and associated guidances that provide expectations for quality systems • Review the different aspects that comprise the quality system • Describe the importance of continuous improvement • Review quality system violations and US FDA 483's / warning letters / consent decrees pertaining to lack of a quality system
Train the Trainer: Adult Learning Styles	<ul style="list-style-type: none"> • Review main learning styles - auditory, visual, and kinesthetic • Look at how adults learn and retain knowledge • Discuss approaches to increasing knowledge retention • How much repetition is necessary for adults
Train the Trainer: Coaching and Mentoring Real Time	<ul style="list-style-type: none"> • Discuss the difference between coaching and mentoring • Real time strategies to highlight and lock in desired behaviors • Provide immediate feedback whenever possible • Review conflict management strategies
Train the Trainer: How to Effectively Train Adults	<ul style="list-style-type: none"> • Recognizing the learning styles of your team • Utilizing more than one style at a time to improve knowledge retention in the class • Respect what adult students bring to the class (prior experience) • Learning goes both ways

Courses in Development

- 1) Technical Writing
- 2) Quality Risk Management / Performing Risk Assessments
- 3) Validation Principles
- 4) Complaint Management

- 5) Strategies for Continuous Improvement
- 6) Leadership Principles
- 7) Auditing (Internal and External)