

Essential Manufacturing Skills: Principles and Usage of Isolators

Skills and Training Laboratories Training Course
Sycamore House
Cell and Gene Therapy Catapult

Essential Manufacturing Skills: Principles and Usage of Isolators

This two-day, hands-on laboratory course trains delegates to maintain aseptic conditions and ensure safe, compliant operation of isolators in biopharmaceutical manufacturing. Participants gain practical skills and theoretical knowledge to support isolator-based processes while meeting regulatory requirements.

Learning objectives:

- To understand and follow Health and Safety protocols for working with isolators, including personal protective equipment (PPE), decontamination, and emergency procedures.
- To familiarise learners with the design, positioning, and components of Isolators, including air handling systems, glove ports, pass-through chambers, and the isolator's physical layout.
- To apply aseptic techniques for working within the isolator to prevent contamination of sensitive products or materials.
- To understand decontamination methods, including hydrogen peroxide vapor (HPV) decontamination, how to effectively decontaminate and clean the isolator between processes.
- To explain the use of control systems for adjusting environmental conditions within the isolator, such as temperature, humidity, and pressure differentials and learn correct procedures for transferring materials and components in and out of the isolator while maintaining sterility.
- To apply GxP regulatory and quality assurance principles, investigate industry best practices, emerging technologies, trends, and standards for maintaining sterile environments and evaluate the importance of continuous improvement in aseptic techniques.



Essential Manufacturing Skills: Principles and Usage of Isolators

Course title	Essential Manufacturing Skills; Principles and Usage of Isolators
Course level	Intermediate
Course fee (per delegate)	£1,350 plus VAT
Course dates	Available upon request
Venue	Skills and Training Laboratories, Sycamore House, CGTC

Who should attend

Ideal for newcomers to biopharmaceutical or advanced therapies labs, and professionals in regulated environments seeking isolator expertise. Suitable for manufacturing operators, technicians, QA/QC specialists, production managers, biotechnologists, scientists, and regulatory personnel.

Pre-course expectations and recommendations:

- Delegates will benefit if they have a basic understanding of bioprocessing, for delegates without this understanding we recommend attendance on the [*Introduction to Biomanufacturing and Advanced Therapies*](#) course and other [*Essential Laboratory Skills*](#) courses.
- Participants would benefit from basic familiarity with bioprocessing workflows (such as batch-manufacturing records and standard operating procedures).
- If you are unsure if this course is suitable for you, please contact our Skills team via skillstraininglabs@ct.catapult.org.uk we will be happy to advise.
- Before starting this course, participants will be required to complete and sign the course-specific registration form.

Assessment

Delegates will be encouraged to participate in discussion and reflect on activities at all times. There will be an Isolator Material transfer Assessment Practical. You will be asked to complete a post course questionnaire at the end of the course.

Agenda

Day 1 - Time	Introduction to Isolators
9.00 - 10.00	Welcome, Introductions & STL Induction <ul style="list-style-type: none"> GMP and cleanroom design and MSC grading Review of regulatory requirements and clean room behaviour in aseptic processing and aseptic processing using Isolation Systems
10.00 - 11.15	Health and Safety Training for Isolator Use. Design and Siting of Isolators.
11.15 - 11.30	Break
11.30 - 13.00	Hand Washing Exercising and Use of PPE in STL <ul style="list-style-type: none"> Hand washing and gowning techniques demonstration Demonstration of Operation of Isolator
13.00 - 13.45	Lunch
13.45 - 17.00	Transfer System including: <ul style="list-style-type: none"> Surface sanitization processes and material transfer
15h30	Break
17.00 - 17.30	Day Review, feedback, and closure
Day 2 - Time	Using the Isolator
9.00 - 10.00	Welcome and Review of Day 2
10.00 - 11.15	Microbiological Contamination Risk including: <ul style="list-style-type: none"> - Transfer Risks and Microbial Contamination. - Review of relevant SOPs. - The importance of Environmental Monitoring (EM).
11.15 - 11.30	Break
11.30 - 12.00	Decontamination - Validation of cleaning and disinfection procedures with appropriate agents.
12.00 - 13.00	Isolator Material Transfer Assessment Practical 1-4 PART 1: Basic Setup and Operation PART 2: Glove Port Manipulation PART 3: Containment Verification PART 4: Emergency Procedures
13.00 - 13.45	Lunch
13.45- 17.00	Isolator Material Transfer Assessment Practical 5 - 8 PART 5: Aseptic Techniques PART 6: Mock Production Runs PART 7: Material Transfer PART 8: Changeover Procedures Isolator Cleaning Practical Assessment Practical 9-10 PART 9: Quality Assurance and Documentation PART 10: Cleaning and Decontamination
17.00 - 17.30	Course Review and Evaluation

Address:

Sycamore
House
Leyden Road
Stevenage
SG1 2BP

How to find us

Driving – to park in our carpark use the vehicle security gate on Leyden Road

What3words ///slip.cakes.owners

By taxi or on foot - use the pedestrian security gate on Gunnells Wood Road

What3words ///parent.risk.lines

Once on site proceed to the main reception located on the south-west side of the building

No smoking

Please be aware that Stevenage Science Park is a no smoking site.

Contact us

We want you to enjoy this training course, but if you have any concerns, please do not hesitate to contact us at skillstraininglabs@ct.catapult.org.uk.

Sycamore House is located just outside Stevenage town centre.

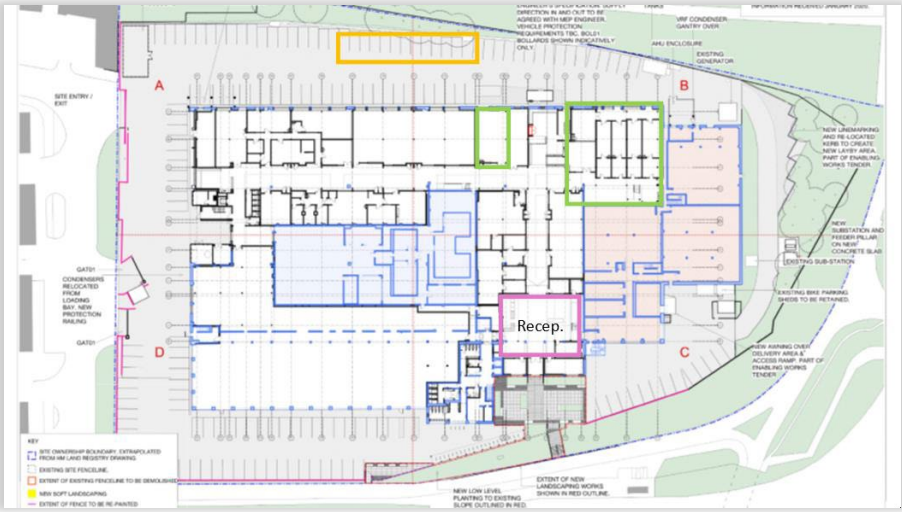
Sycamore House is close to the A1(M) via junction 7, the connectivity of the campus by car is considered good. Stevenage is well connected to major hubs. Cambridge is only 40 kilometres away and reachable within 40 minutes by train, and it takes only a 21 - minute train journey to reach King's Cross in London. In addition, Luton and Stansted international airports are reachable within 40 minutes and Heathrow within 1 hour.

Parking

There are designated car parking spaces available to CGT Catapult staff and visitors to Sycamore House including one electric charging parking space. Car parking is available on a first-come, first-served basis. Our parking spots are marked with the Catapult logo/sign. There are additional parking spots for visitors that is shared among the other tenants in the building. These spots can be booked via building reception in advance.

Additional parking at Stevenage Football Club is available for nine cars for Catapult employees and visitors – see map below.

Directions



Area marked in orange is car parking allocated to CGT Catapult employees on a first-come, first-served basis.

The building entrance / reception is marked with purple, and the CGTC ground floor areas, including our Skills and Training Laboratories are marked in Green.

Walking and cycling

Although the walk from the town centre and station takes approximately 25 minutes, there are continuous footpaths and cycleways, and safe crossings all the way to our entrance.

There are 33 cycle spaces for general use. There is a bike store located at the front of the building entrance accessed via Gunnells Wood Road. The spaces for the bikes are available on a first-come, first-served basis.



Car Parking at Stevenage Football Ground

Map showing the additional parking available at the East and West areas of Stevenage football ground.

