

Sterile compounding trained in VR across hospital sites

The challenge

A pharmacy services provider in Canada needed to train and qualify the cleanroom staff who prepare sterile medication in hospitals. In a cleanroom, a small slip in hand hygiene, gowning or technique can lead to contamination. Practising for real meant setting aside physical cleanrooms, equipment and materials just for training. The provider also needed staff at different hospitals to reach the same standard and stay compliant with industry requirements.

What we built

We designed, built and tested a VR course that recreates a working cleanroom. It follows ISO 14644 cleanroom requirements. Trainees work through the full routine, step by step:

- Hand hygiene, gowning, glove use and keeping the workspace sterile.
- Aseptic technique to mix, transfer and store medication.
- Spotting contamination risks and reacting to simulated breaches with corrective action.

Trainees can make mistakes and learn from them with no risk to patients or product. Each session is assessed in real time, with feedback on compliance, accuracy and technique. Training plans adapt to each person's strengths and weaknesses, and progress is tracked against KPIs. Supervisors receive reports on each trainee's progress.

The course was deployed remotely to hospitals across Canada. Standalone headsets let every site train on the same module.

What changed

Staff now practise sterile compounding in VR before they work in the real cleanroom. The physical cleanroom and its equipment no longer have to be reserved for training. Every hospital site runs the same module and the same assessment, so the standard does not depend on where a person trained. Supervisors can see who is ready and who needs more practice, from tracked performance in each session.

At a glance

Sector	Healthcare, sterile compounding
Delivery	VR cleanroom course, deployed remotely
Hardware	Standalone VR headsets
Where	Hospital sites across Canada

Planning something similar?

Start a project at genesiscreations.co or email info@genesiscreations.co. WhatsApp +971 55 843 3183. Offices in Abu Dhabi and Cairo.