

From Idea to Impact:

Designing Medical Devices for the Real World



SCAN TO
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JOIN US APRIL 3rd, 2026 AT THE BME DESIGN GARDEN
NELSON LABS LUNCH & LEARN, 11:30 AM - 1:30 PM

Biomedical engineers don't just design devices—they design systems that must function safely in the real world, from manufacturing through patient use. This Lunch & Learn connects classroom concepts to industry reality, highlighting how sterilization and packaging decisions influence product success, regulatory readiness, and patient safety.

Talk #1

Designing for Sterility: Material Choices That Shape Medical Device Success



Martell Winters

Sterilization is one of the most critical, and often underestimated, constraints in medical device development. This session introduces common sterilization modalities and explores how material selection, device geometry, and intended use affect compatibility, performance, and safety. Attendees will gain insight into how early design decisions can determine whether a device successfully reaches patients.

Martell Winters is a global expert in medical device sterilization with over 20 years of industry experience, working with manufacturers worldwide on sterilization strategy, material compatibility, and patient safety.

Talk #2

Protecting the Design: Packaging Systems from Concept Through Validation



Logan Luke

Medical device packaging is a critical system that protects sterility, usability, and patient safety. This talk provides an overview of packaging design and validation, illustrating how packaging systems are evaluated to withstand manufacturing, shipping, aging, and real world handling, ensuring devices arrive to patients as intended.

Logan Luke is Expert Technical Consultant, Packaging, working globally on medical device packaging design and validation, including support across U.S. and international laboratories and the establishment of Nelson Labs' German packaging lab.

About Nelson Labs

Nelson Labs is a leading third-party testing laboratory serving the world's largest medical device and pharmaceutical manufacturers. With 12 global locations and a portfolio of 900+ validated tests, Nelson Labs is known for deep technical expertise and complex problem solving, evaluating products throughout their lifecycle to support safe, effective, and compliant market release.