

Jointly organised by:



# Designing and Operating a BSL-3 Facility

## COURSE OVERVIEW

The course will equip participants with the knowledge and skills to use a Risk-Based approach in designing and operating a BSL-3 facility.

They will learn how to develop operational procedures to manage safety, security and compliance, and put in place a robust safety system for their facility.

## DO YOU KNOW?

Using a Risk-Based approach can save a BSL-3 facility tremendous dollars for Operation, Maintenance and Construction. The costs saved can then be translated to continuous improvement yielding productivity for years to come.

This course is designed to empower participants with such knowledge. In this highly interactive course, participants learn via case studies, demonstrations and practical sessions. Trainers are practitioners in their field and will challenge participants with Risk-Based thinking at every stage of design and operations in their BSL-3 facility.

## LEARNING OBJECTIVES

Attendees will learn how to apply Risk-Based approach to :

- Identify safety and security risks, and compliance requirements for a BSL-3 facility
- Conduct effective risk assessments
- Designing a BSL-3 facility: From Layout to Engineering
- Decontamination system
- Working safely in a BSL-3 facility
- Emergency preparedness
- Plan maintenance for BSL-3 operations

## WHO SHOULD ATTEND

- ✓ BSL-3 facility operators
- ✓ Biosafety professionals
- ✓ Researchers who work in BSL-3 facility
- ✓ Regulators and legislators

## COURSE DATE

**23-26 January 2018**  
**9:00 am to 5:00 pm**

Fee : SGD1,800 (exclude GST)  
Tea-Breaks and Lunch provided

Location: Duke-NUS Medical  
School  
8 College Rd  
Singapore 169857

## COURSE OUTLINE

This course combines both theory and practical sessions for attendees. Lecture sessions conducted allow the attendees to grasp the theory components in terms of biosafety requirement for both research and engineering perspective. Attendees would be able to apply the knowledge for practical know-how in case study scenarios, with hands-on approach to prepare for emergency situations in a BSL-3 facility.



## TRAINERS

### Mr. Theodore Traum

Mr. Theodore Traum has over thirty years of experience in engineering with a focus on containment of BSL-3 and BSL-4 laboratories, biomedical facilities, hospitals and research facilities. He has consulted, validated and certified Bio-containment laboratories, mission critical government institutions, vivarium and world-class medical facilities. He is a highly respected professional engineer in the high and maximum containment field and is sought worldwide for his experience and expertise in design, construction, third-party certification and lectures of such facilities. He has served frequently as a consultant for the National Institutes of Health (NIH) and the U.S. Food and Drug Administration for Design, HVAC and Bio-containment issues.

### Dr Viji Vijayan

Dr Viji Vijayan has worked for 10 years in a biomedical research laboratory before she switched to Research Operations and Laboratory Safety. As an Assistant Dean in the Duke-NUS Medical School, she oversees Safety, Health and Emergency Management; Procurement (goods and services); and Research Operations. She was the President of the Biorisk Association of Singapore from years 2014 to 2017. She has also been involved in several of the EU CBRN Risk Mitigation Centers of Excellence projects. Currently, she works as an International Expert for CBRN Centers of Excellence Project 46. She also serves on the Board of Directors of the International Federation of Biosafety Associations.

### Dr Sumita Anant

Dr Sumita Anant is a safety professional with 14 years of research experience. She has completed her Masters in Microbiology, and PhD in Biotechnology. She gained

Postdoctoral research experience in Neuroscience at the Salk Institute. She moved from research to research operations and safety in 2007 and has been involved in establishing Safety Management Systems, new facilities and operations for research institutes. She is currently in charge of Safety, Health and Emergency Management, and Research Operations at the Duke-NUS Medical School.

### Mr. Benson Ng

Mr. Benson Ng is the manager of Duke-NUS Animal Biosafety Level 3 (ABSL-3) facility and has been working in an animal BSL-3 environment for the past 10 years. He worked as a researcher in the field of Infectious Disease before moving on to manage the small animal BSL-3 facility in the vivarium, and to his present position in Duke-NUS. As a Biosafety Coordinator, he works with the regulators, safety officers and scientists to develop risk and safety management programs for the BSL-3 facility which satisfy both compliance requirements and scientific advancement.

### Mr. Dan Yoong

Mr. Dan Yoong has over 10 years experience in the design and construction of laboratories throughout Asia. He performs laboratory design services, engineering consultation, plan reviews and safety and health inspections for the government, universities and the private sector. He oversees laboratory planning, programming, construction, commissioning, validation and third-party certification activities for significant Biocontainment, Laboratory, Vivarium, and Healthcare projects in Asia for both primary and secondary containment. Mr. Yoong is also the approved Ministry of Health certifier for BSL-3 laboratories.

## Contact Information

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