



Developing an Online Biosecurity Training Course for Clinical Laboratories

Drew Fayram, M.S.
Safety Officer

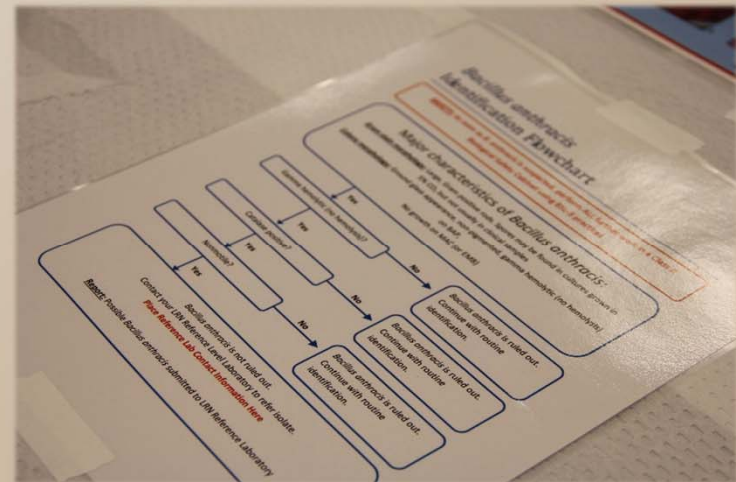
June 28, 2017

Iowa's Environmental & Public Health Laboratory



Identifying a need

- Sentinel Lab Rule Out of Potential Agents of Bioterrorism: Wet Workshops
 - Packed agenda
 - Emphasis on ASM Rule-out Guidelines
 - Only briefly cover biosafety and biosecurity





Limited biosecurity resources for clinical labs

- ELC Cooperative Agreement
 - Emphasis on biosafety and biosecurity
- Current CDC Train Courses

TRAIN
HOME COURSE CATALOG YOUR LEARNING CALENDAR HELP

Biosecurity and Biosafety

[← Back](#) [→ Launch](#) [Save For Later](#)

Web-based Training - Self-study ID 1056335 Skill level: Intermediate
★★★★☆ 4.46 (26 Ratings)

Overview

In this module we investigate the standards and procedures in place for *biosafety*—that is, reducing the risk that a disease-causing agent infects a laboratory worker or escapes the laboratory and infects the community outside the lab and *biosecurity*—that is, defense against the deliberate release of infectious agents from the confines of the laboratory for malicious purposes. We will look carefully at the application of special equipment, physical protection, best practices, and techniques for achieving a safe and secure laboratory environment.

Lesson 4-1: Biosafety and Biosecurity
Lesson 4-2: Acquiring Bio-Weapon Capability
Lesson 4-3: Terrorist Biosecurity Violations
Lesson 4-4: Preventing Biosecurity Breaches

TRAIN
HOME COURSE CATALOG YOUR LEARNING CALENDAR HELP

Introduction to Biosecurity & Agroterrorism

[← Back](#) [+ Register](#) [Save For Later](#)

Web-based Training - Self-study ID 1018537 Skill level: Introductory
★★★★☆ 4.50 (6 Ratings)

The online course "Introduction to Biosecurity & Agroterrorism" gives a brief overview of the various types of biosecurity and agroterrorist threats, and their effects. Epidemiological clues leading to early detection of a biosecurity breach are also discussed.

The course is approximately 17 minutes long.

The learning objectives for this course are that participants will be able to:

1. Define biosecurity and agroterrorism; and
2. Identify at least three targets vulnerable to biosecurity breaches; and
3. Identify at least three potential epidemiological clues to an agroterrorist attack.

Resources

- Development team
 - **Grant PI**
 - Wanda Reiter Kintz, PhD, SHL
Director of Preparedness
 - **Web content designer**
 - Bill Wyckoff, SHL Web
Administrator
 - **External reviewer →
Content developer/SME**
 - Mike Pentella, PhD, UI CPH
Clinical Professor
- Other resources
 - E-Learning Software

Biosecurity: Protecting Assets



Biosecurity Risk Assessment

What are the primary steps?

Identify all hazardous assets

Identify possible threats

Assess current vulnerability





Online Training at SHL

- Developed by SHL staff and collaborators
- Host sites
 - SHL homepage
<http://www.shl.uiowa.edu/>
 - Prepare Iowa LMS
<https://prepareiowa.training-source.org>



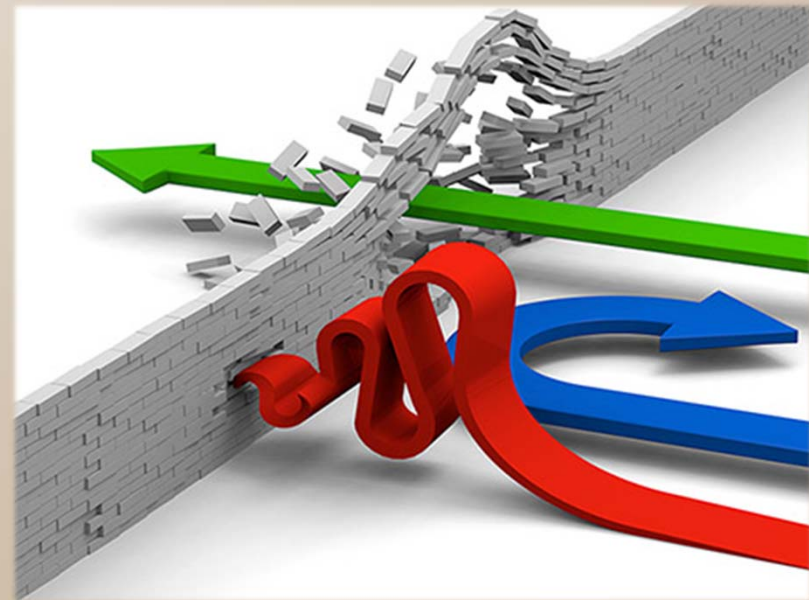
The screenshot shows the State Hygienic Laboratory website with a navigation menu on the left and a main content area. The main content area is titled "COURSES" and lists several training modules:

- CLIA Compliance**
 - Tools for Proficiency Testing
 - Mission Possible: Understanding Training and Competency Assessment
- General Training**
 - Anatomy of a Foodborne Outbreak
 - Chain of Custody
 - Influenza Surveillance
 - Introduction to the Public Health Laboratory
 - Using the CDS Courier Service
 - PDF- CDC specimen collection protocol
- Bioterrorism Rule-Out Series**
 - BT 1.1 Bacillus anthracis
 - BT 1.2 Brucella species
 - BT 1.3 Francisella tularensis
 - BT 1.4 Burkholderia pseudomallei
 - BT 1.5 Yersinia pestis
- Mini-Training**
 - ID- 10 common organisms
 - Quadrant Streaking
 - Organophosphates
- Prepare Iowa**
 - The Role of Sentinel Labs in Emergency Response
 - Lab biosafety: avoiding Laboratory Acquired Infections (LAI)
 - Electronic RT workshop for sentinel labs

At the bottom of the page, there are social media sharing options (Facebook, Twitter, Pinterest, Email) and contact information for three locations: Coralville, Ankeny, and Lakeside.

Commonly encountered obstacles

- Vision
 - What do you want your product to look like?
 - Do visions align?
 - Objectives
 - Content
 - Depth
 - Presentation style
 - Length



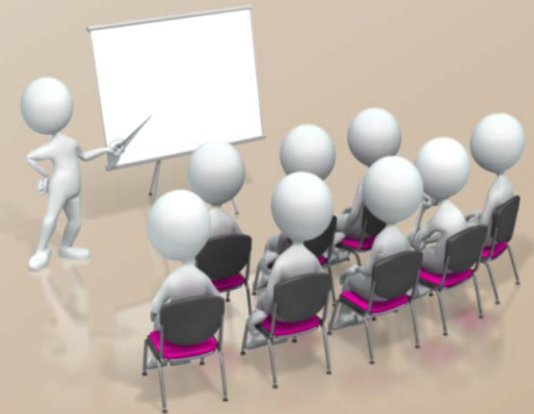
Commonly encountered obstacles

- Developing adult learning can be tricky
 - Presume background knowledge but not competency
 - Typically time-limited
 - Short attention span if too boring
 - Internet access during working hours?



Commonly encountered obstacles

- Live presentation vs. scripted course
 - Live presentation is more familiar to most of us
 - Use slides as speaking cues
 - React to audience expressions
 - Respond to questions in real time
 - Scripting is an art
 - Script should complement slide content
 - Anticipate questions






Look for our course!

Biosecurity for
Clinical Laboratories


The Infamous Examples




Dr. Arthur Waite, dentist
Intentional poisoning

Agent: Diphtheria, anthrax, tuberculosis, influenza, arsenic

Victims: 2



1916

A horizontal timeline arrow pointing to the right, with a vertical line connecting the year 1916 to the portrait of Dr. Arthur Waite.

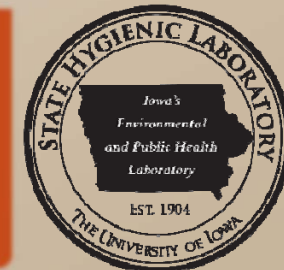
- Completion later this summer
- Access through:



<https://www.train.org>



<http://www.shl.uiowa.edu/>





Thank you!

Drew Fayram, MS, Safety Officer
State Hygienic Laboratory at the University of Iowa
drew-fayram@uiowa.edu

Mission: The State Hygienic Laboratory at the University of Iowa protects and improves quality of life by providing reliable environmental and public health information through the collective knowledge and capabilities of our organization.