Bio-security and Dual-Use Research of Concern (DURC) Governance Training Course

Professional Development Training Course Outline

Category	Defense and Security	**Duration**	10 Days
Base Fee	$3,000 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

Bio-security and the governance of Dual-Use Research of Concern (DURC) are critical in safeguarding public health, national security, and global research integrity. With the rapid advancement of biotechnology, synthetic biology, and high-containment laboratories, the potential for dual-use research to be misapplied or accidentally released has increased. Bio-security and Dual-Use Research of Concern (DURC) Governance Training Course equips participants with comprehensive knowledge on biosecurity frameworks, risk assessment methodologies, and DURC oversight mechanisms. Participants will explore practical strategies for laboratory governance, policy development, and risk mitigation while ensuring compliance with international and national regulations. The course emphasizes the integration of bioethical considerations, risk communication, and sustainable research practices to minimize threats while promoting responsible scientific innovation.

The course also addresses the institutional, national, and international dimensions of DURC oversight, including guidelines, regulatory compliance, incident response, and monitoring mechanisms. Participants will learn how to implement effective governance structures, conduct risk-benefit analyses, and ensure staff and stakeholder awareness of biosecurity principles. Through case studies, interactive sessions, and scenario-based exercises, learners will gain practical experience in applying DURC governance frameworks, mitigating potential hazards, and promoting a culture of safety and responsibility in life sciences research.

Programme Curriculum

Bio-security and Dual-Use Research of Concern (DURC) Governance Training Course

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Course Objectives

1. Understand the principles of biosecurity and biosafety in research environments.
2. Identify and assess Dual-Use Research of Concern (DURC) activities and risks.
3. Interpret international and national DURC governance frameworks.
4. Apply risk assessment methodologies for laboratory research and projects.
5. Develop policies and standard operating procedures for DURC oversight.
6. Implement monitoring and reporting mechanisms for biosecurity compliance.
7. Ensure ethical decision-making and responsible conduct in research.
8. Strengthen institutional capacity for DURC governance and risk management.
9. Integrate incident response protocols and crisis management strategies.
10. Facilitate training and awareness programs for laboratory personnel.
11. Promote transparency and stakeholder engagement in DURC oversight.
12. Incorporate data management and dual-use information security measures.
13. Evaluate research projects using a risk-benefit analysis for DURC relevance.

Organizational Benefits

- Improved institutional biosecurity and DURC oversight
- Strengthened compliance with national and international regulations
- Reduced risk of accidental release or misuse of research materials
- Enhanced staff competence and awareness in biosecurity practices
- Standardized policies and procedures for DURC management
- Effective incident response and crisis management capabilities
- Increased stakeholder trust and research transparency
- Improved ethical standards and responsible research culture
- Enhanced laboratory and facility safety measures
- Increased global collaboration through compliance with DURC frameworks

Target Audiences

- Laboratory managers and principal investigators
- Biosafety and biosecurity officers

- Research ethics and compliance professionals
- Policy makers in life sciences and biotechnology
- Risk management specialists
- Academic and industry researchers in high-risk areas
- Government regulators and oversight authorities
- Training and capacity-building officers in research institutions

Course Duration: 10 days

Course Modules

Module 1: Introduction to Biosecurity and DURC

- Overview of biosecurity concepts and principles
- Understanding Dual-Use Research of Concern (DURC)
- Key drivers and emerging risks in biotechnology
- Global and national regulatory landscape
- Institutional responsibility and ethical considerations
- Case Study: DURC incident and lessons learned in a university laboratory

Module 2: International and National Regulatory Frameworks

- Overview of WHO, NIH, and other global guidelines
- National DURC regulations and compliance requirements
- Alignment with biosafety and biosecurity standards
- Enforcement and monitoring mechanisms
- Reporting obligations and documentation requirements
- Case Study: Implementation of international DURC policy in a research institute

Module 3: Risk Assessment and Management for DURC

- Principles of risk assessment in high-containment labs
- Identification of hazardous agents and dual-use experiments
- Quantitative and qualitative risk evaluation methods
- Developing risk mitigation strategies
- Prioritization of risk control measures
- Case Study: Risk assessment of a synthetic biology research project

Module 4: Laboratory Biosafety and Biosecurity

- Biosafety levels (BSL 1-4) and containment measures
- Access control and personnel reliability
- Decontamination and waste management procedures
- Laboratory security audits and inspections
- Emergency preparedness and contingency planning
- Case Study: Biosecurity breach scenario and institutional response

Module 5: DURC Oversight Committees and Governance

- Establishing institutional DURC review committees
- Roles and responsibilities of oversight bodies
- Policy development for DURC governance

- Communication between committees, researchers, and management
- Documentation and record-keeping for compliance
- Case Study: Successful DURC governance implementation in an academic center

Module 6: Ethical Considerations in DURC

- Principles of ethical research conduct
- Balancing scientific freedom and public safety
- Stakeholder engagement and informed consent
- Ethical review processes and decision-making frameworks
- Addressing moral dilemmas in high-risk research
- Case Study: Ethical decision-making in controversial DURC experiments

Module 7: Data Management and Information Security

- Protecting sensitive research data and dual-use information
- Secure storage, transfer, and sharing protocols
- Cybersecurity measures in research environments
- Policies for handling digital and physical information
- Monitoring and auditing data access
- Case Study: Data breach prevention in a high-containment laboratory

Module 8: Incident Response and Crisis Management

- Developing incident response plans for DURC-related events
- Roles and responsibilities during a biosecurity incident
- Communication strategies with internal and external stakeholders
- Documentation and post-incident review
- Continuous improvement of emergency protocols
- Case Study: Laboratory accident response and mitigation outcomes

Module 9: Training and Capacity Building

- Designing staff training programs for biosecurity awareness
- Simulations and tabletop exercises for DURC scenarios
- Continuous professional development for researchers and technicians
- Evaluating training effectiveness and knowledge retention
- Building a culture of responsibility and vigilance
- Case Study: Training program reducing DURC non-compliance incidents

Module 10: Monitoring and Auditing Compliance

- Internal audits for DURC governance and biosecurity practices
- Key performance indicators and reporting metrics
- Corrective actions and continuous improvement
- External audits and regulator interactions
- Maintaining compliance records and documentation
- Case Study: Audit findings driving policy improvements in an MFI lab

Module 11: Communication and Reporting Strategies

- Effective communication during routine and emergency situations

- Reporting protocols for incidents and non-compliance
- Engagement with stakeholders, regulators, and the public
- Transparency and information sharing best practices
- Media and public relations considerations
- Case Study: Public communication during a DURC incident

Module 12: High-Risk Research Evaluation

- Criteria for identifying high-risk dual-use projects
- Risk-benefit analysis for proposed research activities
- Decision-making frameworks for project approval
- Periodic review and monitoring of ongoing research
- Documentation and institutional accountability
- Case Study: High-risk pathogen research approval and oversight

Module 13: Technology and Innovation in Biosecurity

- Emerging technologies and their biosecurity implications
- Synthetic biology, gene editing, and dual-use considerations
- Automation, monitoring, and containment solutions
- Integrating technology into compliance and oversight systems
- Innovation with responsible risk management
- Case Study: Application of AI in laboratory biosecurity monitoring

Module 14: International Collaboration and Governance

- Collaborative research across borders and institutions
- Harmonization of biosecurity standards and policies
- Sharing best practices and lessons learned
- Challenges of multi-national compliance and oversight
- Coordinating with global regulatory bodies and networks
- Case Study: International DURC research collaboration and compliance strategy

Module 15: Continuous Improvement and Institutionalization

- Embedding DURC governance into institutional culture
- Policy review, update cycles, and adaptation to new threats
- Sustainability of biosecurity and compliance programs
- Leadership roles and accountability structures
- Lessons learned from past incidents and best practices
- Case Study: Long-term DURC governance program scaling across multiple labs

Training Methodology

- Instructor-led lectures and expert presentations
- Hands-on exercises and scenario-based workshops
- Case study analyses and group discussions
- Role-playing and tabletop exercises for crisis management
- Practical templates, checklists, and governance frameworks
- Action planning and implementation strategy development

Register as a group from 3 participants for a Discount

Send us an email: info@fineskilltrainingcenter.org or call *+254769199797*

Certification

Upon successful completion of this training, participants will be issued with a globally- recognized certificate.

Tailor-Made Course

We also offer tailor-made courses based on your needs.

Key Notes

a. The participant must be conversant with English.

b. Upon completion of training the participant will be issued with an Authorized Training Certificate

c. Course duration is flexible and the contents can be modified to fit any number of days.

d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

e. One-year post-training support Consultation and Coaching provided after the course.

f. Payment should be done at least a week before commence of the training, to Fineskill Training Center account, as indicated in the invoice so as to enable us prepare better for you.

Upcoming Scheduled Sessions

Start Date	End Date	Location	Price
23 Nov 2026	04 Dec 2026	Online	$2,000
23 Nov 2026	04 Dec 2026	Physical	$3,000
23 Nov 2026	04 Dec 2026	Physical	$6,000
23 Nov 2026	04 Dec 2026	Physical	$6,000
23 Nov 2026	04 Dec 2026	Physical	$12,000
23 Nov 2026	04 Dec 2026	Physical	$9,000
23 Nov 2026	04 Dec 2026	Physical	$12,000
23 Nov 2026	04 Dec 2026	Physical	$12,000

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