Critical Infrastructure Protection Training Course

Professional Development Training Course Outline

Category	Criminology	**Duration**	5 Days
Base Fee	$1,500 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

In today’s digital age, Critical Infrastructure Protection (CIP) is a national priority that spans across cybersecurity, physical security, and emergency preparedness. From energy grids to financial systems, transport networks to water facilities, the protection of these vital assets ensures economic stability, public health, and national security. Training Course on Critical Infrastructure Protection is designed to equip professionals with strategic, operational, and technical skills to mitigate risks and strengthen infrastructure resilience.

With the rising threats from cyberattacks, climate change, terrorism, and geopolitical tensions, CIP demands a holistic and coordinated approach. This training integrates best practices, regulatory standards, and global case studies to offer actionable insights and real-world application. By completing this course, learners will gain the knowledge and tools to develop robust infrastructure protection plans that align with international compliance mandates.

Programme Curriculum

Critical Infrastructure Protection Training Course

Introduction

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Course Objectives

1. Understand the scope and significance of critical infrastructure sectors.
2. Analyze emerging cybersecurity threats to infrastructure.
3. Learn key components of risk assessment and threat modeling.
4. Develop resilience strategies for infrastructure continuity.
5. Examine the role of government policy and regulatory frameworks.
6. Assess supply chain security vulnerabilities.
7. Explore public-private partnership models in infrastructure defense.
8. Implement incident response planning for infrastructure attacks.
9. Leverage AI and emerging technologies for infrastructure monitoring.
10. Study global disaster recovery and resilience case studies.
11. Understand insider threat detection and prevention.
12. Master inter-agency coordination and emergency communication.
13. Design a comprehensive infrastructure protection plan using best practices.

Target Audiences

1. Government Security Agencies
2. Infrastructure & Utility Operators
3. Cybersecurity Professionals
4. Homeland Security Personnel
5. Emergency Response Planners
6. IT & Network Administrators in Critical Sectors
7. Security Consultants & Analysts
8. Public Policy and Regulatory Experts

Course Duration: 5 days

Course Modules

Module 1: Introduction to Critical Infrastructure Protection

- Definition and classification of critical infrastructure
- National and global infrastructure interdependencies
- Understanding sector-specific vulnerabilities
- Importance of asset prioritization and risk ranking
- Overview of regulatory mandates (NIST, ISO 22301, etc.)
- **Case Study**: 2003 North American Blackout and its implications

Module 2: Risk Assessment and Threat Modeling

- Introduction to risk assessment methodologies
- Tools and frameworks for threat modeling (e.g., STRIDE, PASTA)
- Identifying threats: cyber, physical, hybrid
- Impact analysis and prioritization strategies
- Conducting vulnerability assessments
- **Case Study**: Risk modeling in NYC’s water supply system

Module 3: Cybersecurity in Critical Infrastructure

- ICS/SCADA systems and cyber vulnerabilities
- Malware and ransomware targeting infrastructure
- Security Information and Event Management (SIEM)
- Zero Trust Architecture and endpoint protection
- Regulatory compliance: NERC CIP, FISMA, GDPR

- **Case Study**: Stuxnet attack on Iran’s nuclear program

Module 4: Physical Security and Access Control

- Perimeter security and surveillance technologies
- Intrusion detection and response systems
- Personnel screening and credentialing protocols
- Integration of physical and cyber security operations
- Incident reporting and chain of custody
- **Case Study**: Physical breach at Gatwick Airport in 2018

Module 5: Business Continuity and Disaster Recovery

- Developing Business Continuity Plans (BCP)
- Recovery Time Objectives (RTO) & Recovery Point Objectives (RPO)
- Backup and redundancy solutions for infrastructure
- Crisis management and stakeholder coordination
- Continuity testing and drills
- **Case Study**: Hurricane Katrina’s impact on energy infrastructure

Module 6: Public-Private Partnerships (PPP) in Infrastructure Protection

- Role of private entities in national security
- Frameworks for PPP collaboration (e.g., NIPP)
- Funding and resource-sharing models
- Joint training and intelligence sharing
- Challenges in data ownership and trust
- **Case Study**: Information Sharing and Analysis Centers (ISACs)

Module 7: Emerging Technologies and Infrastructure Security

- AI and machine learning for threat detection
- Drones and IoT devices in surveillance
- Blockchain for secure data sharing
- Smart grid vulnerabilities and security protocols
- 5G infrastructure risks and mitigation
- **Case Study**: AI-driven infrastructure security in Singapore

Module 8: Developing and Implementing a Protection Plan

- Strategic infrastructure protection planning
- Setting KPIs and performance metrics
- Legal, ethical, and compliance considerations
- Training and awareness programs
- Monitoring, evaluation, and continuous improvement
- **Case Study**: DHS’s Critical Infrastructure Security Framework

Training Methodology

- Interactive expert-led workshops and lectures
- Real-world simulations and threat scenario modeling
- Group-based problem-solving and brainstorming sessions
- Hands-on exercises using threat detection tools
- Assessment quizzes and certification exam
- Peer-to-peer learning through case study discussions

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
21 Sep 2026	25 Sep 2026	Online	$1,000
21 Sep 2026	25 Sep 2026	Physical	$1,500
21 Sep 2026	25 Sep 2026	Physical	$0
21 Sep 2026	25 Sep 2026	Physical	$0
21 Sep 2026	25 Sep 2026	Physical	$0
21 Sep 2026	25 Sep 2026	Physical	$0
21 Sep 2026	25 Sep 2026	Physical	$0
21 Sep 2026	25 Sep 2026	Physical	$0
21 Sep 2026	25 Sep 2026	Physical	$0

Ready to enroll or request a customized program? Book online or contact us:

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