Training Course on Forensic Data Analysis and Privacy Investigations

Professional Development Training Course Outline

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

Course Introduction

In today’s hyper-connected digital world, Forensic Data Analysis and Privacy Investigations have become essential tools in detecting cybercrime, safeguarding sensitive information, and ensuring compliance with data protection laws. Organizations across sectors face an increasing risk of data breaches, insider threats, financial fraud, and policy violations. As a result, professionals must be equipped with cutting-edge techniques in digital forensics, data privacy compliance, cybercrime investigation, and regulatory response to maintain operational integrity.

Training Course on Forensic Data Analysis and Privacy Investigations provides a robust understanding of advanced forensic techniques, data governance, privacy legislation, and risk mitigation strategies. Designed by experts in cybersecurity, compliance, and law enforcement, the program prepares participants to analyze complex data trails, uncover fraudulent behavior, and respond effectively to privacy violations. Whether you're handling corporate investigations or digital audits, this training equips you with the skills to stay ahead in the evolving landscape of digital evidence and privacy protection.

Programme Curriculum

Training Course on Forensic Data Analysis and Privacy Investigations

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Training Objectives

By the end of the course, participants will be able to:

1. Understand the fundamentals of forensic data analysis and privacy frameworks.
2. Conduct digital evidence collection in accordance with GDPR and HIPAA.
3. Utilize data mining and analytics tools in forensic investigations.
4. Identify and mitigate cybersecurity breaches and data exfiltration incidents.
5. Apply risk-based investigation models in privacy violations.
6. Perform chain of custody documentation for court-admissible evidence.
7. Analyze logs, metadata, and system artifacts for forensic evidence.
8. Develop privacy compliance reports using modern auditing techniques.
9. Integrate machine learning tools for predictive threat detection.
10. Interpret digital footprints in financial fraud investigations.
11. Investigate cloud-based data breaches and storage vulnerabilities.
12. Align forensic practices with ISO/IEC 27001 standards.
13. Respond to data breach incidents using incident response protocols.

Target Audience

1. Cybersecurity professionals
2. IT auditors and data analysts
3. Compliance and privacy officers
4. Digital forensic investigators
5. Risk management professionals
6. Law enforcement agents
7. Legal and regulatory advisors
8. Corporate fraud examiners

Course Duration: 10 days

Course Modules

Module 1: Introduction to Forensic Data Analysis

- Overview of forensic data analysis
- Key terminology and investigation framework
- Understanding types of digital evidence
- Tools and technologies used
- Legal and ethical considerations
- **Case Study**: Analyzing insider fraud in a corporate setting

Module 2: Fundamentals of Data Privacy and Protection

- Introduction to global privacy laws (GDPR, CCPA)
- Principles of data minimization and purpose limitation

- Privacy-by-design methodology
- Consent management and user rights
- Data lifecycle and retention policies
- **Case Study**: GDPR compliance audit in a healthcare firm

Module 3: Cybersecurity and Incident Response

- Cybersecurity threats and vulnerabilities
- Threat modeling and detection
- Digital incident response plan (IRP)
- Logging and network monitoring
- Data breach containment strategies
- **Case Study**: Ransomware attack on a financial services company

Module 4: Evidence Handling and Chain of Custody

- Collection, preservation, and documentation
- Rules of admissibility in court
- Imaging and forensic duplication
- Metadata analysis
- Storage best practices
- **Case Study**: Legal defense using well-preserved digital evidence

Module 5: Data Mining and Pattern Recognition

- Introduction to forensic data mining
- Outlier detection techniques
- Temporal pattern analysis
- Network graph mapping
- Clustering and classification
- **Case Study**: Identifying fraud in bank transaction records

Module 6: Privacy Risk Assessment

- Privacy Impact Assessment (PIA) framework
- Risk identification and scoring
- Vulnerability scans
- Data flow analysis
- Regulatory reporting
- **Case Study**: Conducting a PIA for a fintech startup

Module 7: Social Media and Open Source Intelligence (OSINT)

- Techniques in gathering digital intel
- Analyzing user behavior online
- Geo-location and IP tracking
- Fake profile and disinformation detection
- Dark web investigations
- **Case Study**: Social media-based threat to a public figure

Module 8: Email Forensics and Communication Analysis

- Header and body analysis
- Tracing spoofed or phishing emails
- Attachments and embedded links investigation
- Email archiving and indexing

- Chain analysis and timeline reconstruction
- **Case Study**: Uncovering corporate espionage via email leaks

Module 9: Network and Log Forensics

- Packet analysis and intrusion detection
- Log correlation techniques
- Port scanning and anomaly tracking
- Security Information and Event Management (SIEM)
- Network mapping tools
- **Case Study**: Tracing unauthorized access via VPN logs

Module 10: Cloud Forensics

- Challenges in cloud data retrieval
- Multi-tenant architecture concerns
- API security and access logs
- Cloud vendor cooperation and subpoenas
- Encryption and data recovery
- **Case Study**: Investigating data leaks from a cloud SaaS platform

Module 11: Mobile Device Forensics

- Mobile OS and file systems
- Data extraction tools
- App usage patterns and chat logs
- GPS and call log analysis
- Secure wiping and backup recovery
- **Case Study**: Evidence collection in a cyberstalking case

Module 12: Financial Fraud Detection

- Financial transaction red flags
- Cross-account behavior patterns
- AML compliance forensics
- Shell companies and money laundering schemes
- Cryptocurrency tracing techniques
- **Case Study**: Uncovering a Ponzi scheme via forensic accounting

Module 13: Machine Learning in Forensic Analysis

- Predictive modeling for fraud detection
- Supervised vs unsupervised learning
- Model training and validation
- Anomaly detection algorithms
- Ethics in AI forensics
- **Case Study**: Using ML to detect employee data theft

Module 14: Legal Frameworks and Compliance

- Data protection laws and digital rights
- Cross-border investigation regulations
- Subpoenas, warrants, and digital due process
- Internal compliance audits
- Litigation support documentation
- **Case Study**: Multinational privacy breach under GDPR

Module 15: Capstone Project and Simulation

- Simulated investigation from start to finish
- Evidence collection and report writing
- Risk assessment and mitigation planning
- Compliance documentation
- Presentation to a mock regulatory board
- **Case Study**: End-to-end forensic analysis of a cyberattack scenario

Training Methodology

- Hands-on labs with forensic tools (e.g., Autopsy, FTK, EnCase)
- Real-world case studies and simulations
- Interactive lectures and group discussions
- Role-playing legal and privacy audit scenarios
- Step-by-step walkthroughs of investigative procedures
- Assignments, quizzes, and final project presentations

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

Start Date	End Date	Location	Price
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

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

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