Certified Chief Information Security Officer (CCISO)

CODICE	**DT0184**
DURATA	**5 gg**
PREZZO	**3.790,00 €**
EXAM	

DESCRIZIONE

Il Certified Chief Information Security Officer (C|CISO) è un programma incentrato sui dirigenti, progettato appositamente per formare e certificare i leader responsabili dello sviluppo e della guida della strategia di sicurezza informatica di un'organizzazione.

Il programma C|CISO assicura ai partecipanti non solo una profonda comprensione della sicurezza informatica, ma anche le competenze di leadership, finanziarie e di pianificazione strategica necessarie per avere successo in un ruolo dirigenziale. Il C|CISO prepara i leader a integrare l'intelligenza artificiale nella gestione dei rischi di sicurezza informatica, nella conformità, nelle previsioni e nella governance con responsabilità e trasparenza. Il conseguimento della certificazione C|CISO dimostra che sei in grado di allineare le strategie di sicurezza e le strategie di sicurezza dell'intelligenza artificiale agli obiettivi aziendali, gestire efficacemente i rischi aziendali e comunicare con i consigli di amministrazione e la leadership esecutiva.

C|CISO v4 vi fornisce gli strumenti per:

- Allineare la sicurezza informatica agli obiettivi aziendali
- Guidare la governance dell'IA, la conformità e la strategia di rischio
- Comunicare in modo efficace con i consigli di amministrazione e i dirigenti
- Gestire i programmi e i budget di sicurezza a livello aziendale

Ottenere la certificazione C|CISO dimostra che siete pronti per ricoprire ruoli dirigenziali e di leadership in materia di sicurezza. Il programma C|CISO è un corso di formazione e certificazione unico nel suo genere, che mira a formare dirigenti di sicurezza informatica di altissimo livello e con un'etica impeccabile. Il programma di studi C|CISO, sviluppato da da CISO esperti per professionisti in ruolo o aspiranti tali, adotta un punto di vista tipico del management esecutivo che incorpora sia i principi di gestione della sicurezza delle informazioni sia le conoscenze tecniche generali.

TARGET

Questa formazione è rivolta ai manager che desiderano sviluppare le loro competenze imparando ad adattare

le loro conoscenze tecniche alle problematiche generali di impresa.

PREREQUISTI

Nessuno

CONTENUTI

Domini

- Domain 1: Governance; Risk Management; Security, Compliance, and Privacy; and Audit Management
- Domain 2: Organizational Executive Leadership
- Domain 3: Information Security Controls, Security Program Management and Operations
- Domain 4: Information Security Core Competencies
- Domain 5: Strategic Planning, Finance, Procurement and Vendor Management

Domain 1: Governance; Risk Management; Security, Compliance, and Privacy; and Audit Management

Fundamentals of Information Security Governance

- Introduction to Information Security Governance
- Foundation of Information Security Programs
- Understanding Business Organization Structures
- Understanding Business Organization Structures (cont’d)
- Industry Impact on Governance
- CISO’s Impact on Governance
- CMMI Process Model Overview
- Organizational Maturity Models
- Reactive vs. Proactive Organizations
- Aligning IS with Organizational Goals
- Strategic Security Planning
- Organizational Security Architecture
- Security Operating Model Framework
- Governance Structure and Hierarchy
- Governance Structure and Hierarchy Diagram
- Executive vs Non-Executive CISO
- Role of the CISO in Modern Organizations
- C-Suite Attitudes Toward Information Security
- C-Suite Attitudes Toward Information Security – cont.
- Leadership and Management Skills for CISOs
- Ethics in Information Security

- Professional Code of Ethics
- Information Security Documentation Framework

Risk Management Foundations

- Understanding Risk Management Fundamentals
- Understanding Risk Management Fundamentals – cont.
- Defining Organizational Risk
- Risk Management Program Components
- Risk Categories and Classifications
- Risk Ownership and Accountability
- Risk Appetite and Tolerance
- Asset Identification and Valuation
- Asset Identification and Valuation – cont.
- Threat Assessment Methodologies
- ISO/IEC 27005:2022 Annex A Threats
- Vulnerability Analysis Framework
- ISO/IEC 27005:2022 Annex A Vulnerabilities
- Risk Assessment Process
- Quantitative Risk Analysis
- Quantitative Risk Analysis – cont.
- Qualitative Risk Analysis
- Qualitative Risk Analysis – cont.
- Risk Assessment Categories
- Risk Assessment Focus Types
- Risk Calculation Methodologies
- Annualized Loss Expectancy Models
- Risk Management Lifecycle
- Risk Register
- Risk Treatment Options
- Risk Treatment Options – cont.
- Risk Treatment Options – cont. 2
- Risk Treatment Options – cont. 3
- Risk Modification Strategies
- Risk Acceptance Criteria
- Risk Acceptance Criteria – cont.
- Risk Transfer Mechanisms
- Risk Transfer Mechanisms – cont.

Security Controls and Implementation

- Understanding Security Controls
- CIA Triad Implementation
- Control Categories and

Classifications
    - Control Attributes
    - COSO PDC Defense-In-Depth Model
    - Preventive Control Mechanisms
    - Detective Control Systems
    - Corrective Control Measures
    - Deterrent Control Measures
    - Control Lifecycle Management
    - Control Selection Criteria
    - Control Implementation Strategy
    - Control Maturity Assessment
    - Compensating Controls Framework
    - Security Control Documentation
    - Control Monitoring Systems
    - Control Testing Methodologies
    - Security Control Catalog Management
    - Service Catalog Development
    - Risk Management Frameworks
    - Risk Management Frameworks – cont.
    - Risk Management Frameworks – cont. 2
    - Risk Management Frameworks – cont. 3
    - Risk Management Frameworks – cont. 4
    - Change Management in Control Systems and Updates
- CISO Role in the AI Era
    - Evolving Cybersecurity Landscape
    - Role of CISO in AI Era
    - Impact of Digital Transformation and AI Adoption
    - Benefits of AI Integration in Cybersecurity
    - Limitations of AI in Cybersecurity
    - Balancing AI Benefits and Limitations
- Leveraging AI for Governance and Compliance
    - Enhancing Cybersecurity Governance through AI
    - Mapping AI to Cybersecurity Frameworks
    - Mapping AI to NIST Cybersecurity Framework (CSF)
    - Mapping AI to ISO 27001
    - Mapping AI to COBIT
    - AI-Supported Policy Enforcement and Monitoring
    - How AI Supports Policy Enforcement
    - Best Practices for Implementing AI in Policy Enforcement and Monitoring
    - Continuous Controls Monitoring (CCM) with AI

- Best Practices for Implementing AI in CCM
- AI Governance Board or Committee
- Setting up an AI Governance Board or Committee
- Challenges in Setting Up an AI Governance Board
- Best Practices for AI Governance

- Establishing Cybersecurity Governance for AI
  - AI in Risk Management: A CISO's Strategic Advantage
  - AI and Predictive Risk Modeling
  - Risk Scoring and Prioritization with AI
  - Automated Risk Assessments with AI
  - Enhanced Risk Management Decision-Making with AI
  - Key Challenges in Leveraging AI for Risk Management

- Risk Management for AI
  - Critical AI Risks
  - Critical AI Risks (Cont'd)
  - Risk Assessment Templates for AI Projects
  - Key Components of an AI Risk Assessment Template
  - Example Risk Assessment Template for AI Projects
  - Best Practices for Using Risk Assessment Templates in AI Projects
  - AI-Specific Threat Modeling
  - Operational Risk Controls for AI
  - Operational Risk Controls Implementation Checklist
  - Establishing AI Risk Registers and Mitigation Controls
  - Best Practices for AI Risk Management

- Tools and Technologies for AI-Driven GRC
  - AI Risk Management Frameworks and Platforms
  - ENISA Guidelines for AI Systems
  - Model Validation and Testing Tools
  - Performance Drift and Anomaly Monitoring Tools
  - Explainable AI (XAI) Tools
  - Governance and Compliance Automation Tools
  - AI-Powered Enterprise Tools
  - CISO Responsibilities and Considerations for AI Tools

- Compliance and Regulatory Framework
  - Regulatory Compliance Overview
  - Legal Framework for Information Security
  - International Compliance Standards
  - Industry-Specific Regulations
  - GDPR Requirements Implementation

        - EU Cybersecurity Act (EUCSA)
        - ENISA Guidelines
        - Digital Operational Resilience Act (DORA)
    - HIPAA Compliance Framework
        - Japan’s Act on the Protection of Personal Information (APPI)
        - Brazil’s General Data Protection Law (LGPD)
    - HITECH
    - PCI DSS Standards Overview
    - SOX Compliance Requirements
    - FISMA Implementation Guidelines
    - Australian Privacy Act 1988
    - Canadian Personal Information Protection and Electronic Documents Act (PIPEDA)
    - Brazilian General Data Protection Law (LGPD)
    - Singapore Personal Data Protection Act (PDPA)
    - Data Privacy Regulations
    - State-Level Privacy Laws
    - Cross-Border Data Protection
    - Regulatory Reporting Requirements
    - Compliance Documentation Standards
    - Privacy Impact Assessments
    - Regulatory Risk Management
    - Compliance Program Development
    - Privacy Program Implementation
    - Regulatory Change Management
- Security Frameworks, Standards, Laws, Acts and Directives
    - NIST CSF Cybersecurity Framework
    - NIST CSF Cybersecurity Framework – cont.
    - ISO 27001 Implementation
        - Australian Government Information Security Manual (ISM)
        - Australian Privacy Principles (APPs)
        - Canada’s Personal Information Protection and Electronic Documents Act (PIPEDA)
    - COBIT Framework Overview
        - Singapore’s Cybersecurity Code of Practice
        - Indian IT Act 2000 with CERT-In Guidelines
    - ITIL Security Management
    - ITILv4
    - MITRE ATT&CK® & MITRE ATLAS
    - OWASP SAMM & ASVS
    - Zero Trust Architecture
    - Cloud Security Framework
    - ENISA Guidelines on Cloud Security (EU)

- Australian Cyber Security Centre (ACSC) Essential Eight Framework
- CIS Controls (Center for Internet Security – Global)
- BSI IT-Grundschutz (Germany)
- Artificial Intelligence in IS
- Risk Management Frameworks
- NIST SP 800-37 Framework Steps
- NIST Security Control Classes
- NIST SP 800-37: Hierarchy
- NIST SP 800-37: Risk Process
- ISO27005: Risk Process
- Security Control Frameworks
- Risk Management Standards
- NIST Family
- NIST Family – cont.
- ISO27K Family
- ISO27K Family – cont.
- Framework Integration Strategies
- Other Risk Frameworks
- COBIT Risk Framework
- COSO – Enterprise Risk Management Framework
- Information Technology Infrastructure Library (ITIL)
- Factor Analysis of Information Risk (FAIR)
- Operationally Critical Threat, Asset, And Vulnerability Evaluation (OCTAVE)
- Threat Assessment and Remediation Analysis
- ISACA Risk IT Framework
- Security Policy Development
- Security Policy Development - cont.
- Security Policy Challenges
- Security Policy ISO 27001 C5.2
- Types of Policies
- Security Metrics and Measurements
- NIS2 Directive
- EU AI Act
- ePrivacy Directive
- Digital Personal Data Protection Act, 2023 (DPDP Act)
- CERT-In Cybersecurity Directions (2022)
- APPI (Act on Protection of Personal Information)

Audit and Assessment

- Audit Expectations and Outcomes
- Information Security Audit Practice

    - NIST, COBIT AUDIT GUIDANCE
    - INTERNAL Versus EXTERNAL Audits
    - Partnering with Organization
    - Audit Process
    - General Audit Standards
    - Type-Based AUDITS
    - Performing and Evaluating AUDIT Results in an AUDIT
    - Remediating Audit Findings
    - Leveraging GRC SOFTWARE to Support AUDITS
    - Leveraging AI to Enhance Security Audits
    - AI-Driven Security Audit Tools
    - AI for Security Audit: Auditing AI Tools
- Summary
- Questions

Domain 2: Organizational Executive Leadership

Foundation of leadership

- Domain Outline
- Introduction to Leadership's Role and Impact
- Why Leadership Matters: Core Constituents
- Definition of a Leader and Leadership Needs
- Leaders vs Managers: Kotter's Framework
- Key Similarities Between Leaders and Managers
- Transitioning from Manager to Leader
- Building Leadership Confidence
- Transforming from Boss to Leader
- Role of Leadership in Organizational Success
- Why Organizations Exist: Purpose and Goals
- The Organizational Need for Leaders
- Leaders as Organizational Change Agents
- Leadership During Crisis and Failure
- Information Security Leadership Role
- Building Security Maturity Capabilities
- Evolution of Information Security Leadership
- Ancient Leadership: Mesopotamia to Rome
- Power and Authority in Leadership
- Types of Authority in Leadership
- Power and Authority in Leadership
- Persuasion and Influence Techniques
- Traditional Leadership Approaches

- Leadership Types and Their Applications
- Leadership Styles
- Leadership Theories and Models
- Leadership Environments and Contexts

Personal leadership developement

- Developing Executive Presence: Key Components
- Overcoming Challenges to Executive Presence
- Building and Promoting Personal Brand
- Personal Brand Communication Strategies
- Leadership Self-Awareness Development
- Strategies for Cultivating Self-Awareness
- Emotional Intelligence in Leadership
- Social Intelligence Development
- Cultural Intelligence Enhancement
- Key components of Cultural Intelligence
- Applying Social and Cultural Intelligence
- Building Professional Leadership Networks
- Understanding Team Member Personalities
- Myers-Briggs Type Indicator in Leadership
- Leadership Feedback and Self-Assessment
- Developing Leadership Convictions
- Building Resilience in Uncertain Times
- Building Resilience During Uncertain Times
- Leading and Supporting During Uncertainty
- Adaptability and Agility Development
- Persuasive Business Communication
- Time Management and Priority Setting
- Negotiation and Dispute Resolution
- Leadership Problem-Solving Approaches
- Quantitative Decision-Making Methods
- Behavioral Finance in Leadership
- Personal Development Planning
- Leadership Role Readiness

Leading teams and people

- Cultivating Future Leaders: Key Strategies
- Leadership Talent Identification
- Leadership Talent Retention
- Succession Planning Implementation
- Effective Leadership Delegation
- Team Building for Collaboration

- Leading Inclusive Teams
- Virtual Team Management
- Managing Up: Working with Superiors
- Managing Down: Supporting Teams
- Managing Laterally: Cross-Functional Collaboration
- Performance Evaluation Methods
- Managing Difficult Conversations
- Building Team Loyalty and Commitment
- Team Motivation Strategies
- Mentoring and Coaching Practices
- Leading with Empathy
- Ethical Leadership Development

Organization leadership

- Board Relationship Management
- Building Board Trust and Credibility
- Board Communication Strategies
- Securing Funding and Sponsorship
- Organizational Leadership at Scale and Scope
- Organizational Leadership at Scale and Scope - Cont.
- T-Shaped Leadership Approach
- Strategic vs Tactical Leadership
- Organizational Change Leadership
- Strategic Analysis Framework
- Understanding Organizational Internal Context
- Understanding Organizational External Context
- SWOT Analysis Implementation
- Change Planning and Execution
- Change Communication Strategies
- Building Sustainable Competitive Advantage
- Information Security Group Branding
- Security Brand Communication
- Education and Awareness Leadership
- Stakeholder Management Strategies
- Regulatory Compliance Leadership
- Crisis and Disaster Management
- Crisis and Disaster Management – Cont.
- Crisis and Disaster Management – Cont.
- Business Intelligence Applications
- Leading Innovative Projects
- Industry-Specific Leadership Challenges

    - Considerations of Various Industries
- Responsible and Ethical AI Leadership
    - Role of CISO in AI Ethics and Governance Boards
    - Key Responsibilities in AI Ethics Governance
    - Embedding AI Ethical Principles into Cybersecurity
    - Privacy Risks in Large Language Models (LLMs) and Generative AI
    - Why Leadership Matters: Core Constituents
    - Mitigating Privacy Risks in Large Language Models and Generative AI
    - Embedding Fairness, Accountability, and Transparency in AI Development
    - Embedding Fairness, Accountability, and Transparency in AI Development (Cont’d)
    - Ethical Frameworks: OECD AI Principles
    - Ethical Frameworks: UNESCO AI Ethics
- Cross-Functional AI Innovation Leadership
    - Role of CISO in Cross-Functional AI Initiatives
    - Strategic Collaboration Activities in AI Initiatives
    - Cross-Functional AI Governance
    - Responsibilities of the CISO in AI Governance Bodies
    - AI Awareness and Training Across Departments
    - Role of CISO in AI Awareness and Training Across Departments
    - Managing AI Talent Development Within Cybersecurity
- Strategic AI Alignment and Innovation Management
    - Role of CISO in Aligning AI Innovation with Enterprise Strategy
    - Aligning AI Innovation to Business and Security Strategy
    - Balancing AI Experimentation with Compliance and Control
    - Communicating AI Risk Posture to the Board and Executive Leadership
    - Investment Planning for AI Innovation and Risk Management
    - Vendor Evaluation and Third-Party AI Risk Considerations
- Summary
- Practice Questions

Domain 3: Information Security Controls, Security Program Management and Operations

- Introduction and Program Management Fundamentals
    - CISO Evolution: From Tech to Strategy
    - Evolution of CISO’s Role
    - Evolution of CISO’s Role (Cont’d)
    - Leadership Misconception
    - Knowledge Prerequisites for Information Security Management

- Core Security Program Execution Principles
- CISO’s Mind Map
- Business Objective Alignment Strategies
- Information Security Program Definition Process
- Program Development Framework
- Effective Program Management Techniques
- Program Monitoring and Assessment
- Key Accounting Concepts in Security
- Asset Management Fundamentals
- Asset Lifecycle Management
- Cost-Benefit Analysis Methods
- Understanding Security Program Liabilities
- Net Present Value in Security Investments
- NPV vs IRR
- Profit and Loss Statement Analysis
- ROI Calculation in Security Programs
- Strategic Cost Avoidance
- Security Program Revenue Considerations
- Expense Management Framework
- Security Budget Planning
- Financial Resource Allocation

Financial and Resource Management

- Budget Development Strategies
- Understanding CapEx in Security
- Understanding CapEx in Security (Cont’d)
- OpEx Management Principles
- CAPEX vs OPEX
- Budgeting Methodologies Comparison
- Security Program Cash Flow
- Burn Rate Monitoring Techniques
- Strategic Staffing Analysis
- Administrative Resource Planning
- Security Delivery Team Structure
- Technical Competency Requirements
- Operations Staff Development
- Digital Forensics Capabilities
- Cross-Functional Skill Development
- Team Management Excellence
- Professional Development Planning
- Career Advancement Frameworks

- Security Awareness Strategy
- Awareness Program Implementation
- Role-Based Security Education

Program Architecture and Operations

- Security Architecture Principles
- Program Roadmap Development
- Project Management Fundamentals
- Project Initiation Best Practices
- Strategic Project Planning
- Execution Phase Management
- Monitoring Framework Implementation
- Project Closure Procedures
- Operations Management Strategy
- Conflict Resolution Techniques
- Time Management in Disputes
- Cost Impact Analysis
- Quality Assurance in Operations
- Vendor Management Fundamentals
- Strategic Vendor Selection
- Negotiation Best Practices
- Contract Management Principles
- Long-term Vendor Relations
- Vendor Community Building

Stakeholder Management and Project Assessment

- Enhanced Project Management
- Performance Measurement Systems
- Technical Performance Indicators
- Business Alignment Metrics
- Project Success Metrics
- Data Collection Frameworks
- Analysis and Reporting
- Continuous Improvement Process
- Internal Stakeholder Engagement
- External Stakeholder Management
- Communication Strategy Development
- Expectation Management
- Process Enhancement Methods
- Change Management Framework
- Impact Assessment Techniques
- Resource Optimization

- Stakeholder Collaboration
- Testing Strategy Development
- Implementation Planning
- Post-Deployment Review

Security Controls and Risk Management

- Operational Process Evaluation
- Control Design Methodology
- Risk Appetite Framework
- Risk Assessment ISO vs NIST
- Control Testing Protocols
- Control Type Classification
- Control Type Classification (Cont'd)
- Preventive Control Implementation
- Detective Control Strategy
- Corrective Control Framework
- Deterrent Control Design
- Recovery Control Design
- Compensating Control Design
- Resource Requirement Analysis
- Human Capital Planning
- Infrastructure Requirements
- Architectural Considerations
- Risk Mitigation Planning
- Performance Metrics Design
- Control Monitoring Systems
- Documentation Standards
- Testing Program Implementation
- Deficiency Management
- Problem Resolution Framework

Cloud Security and Program Wrap-up

- Cloud Security Fundamentals
- Shared Responsibility Framework
- Cloud Shared Responsibility Model
- IaaS Security Management
- PaaS Security Framework
- SaaS Security Governance
- Program Management Review
- Financial Management Summary
- Operational Excellence Review
- Security Control Overview

    - Future Program Direction
- Secure AI/ML System Architecture
    - AI and ML System Architecture Security
    - Architecture Security for ML Pipelines
    - Ensuring Secure Model Deployment and Access Control
    - Zero Trust Application to ML/AI Models
    - Securing APIs and ML Endpoints
- AI in Cybersecurity Operations
    - AI in Cybersecurity Operations
    - Integrating AI into Cybersecurity Operations
    - Role of AI in SOC Operations
    - AI Integration in SIEM and SOAR with Automated Playbooks
    - Threat Hunting using ML-based Tools
    - AI and the CISO's Role in Secure Operations
- Roadmap for CISOs to Implement AI in Security Programs
    - Roadmap for CISOs to Implement AI in Security Programs
    - Assessing Organizational Readiness
    - Building AI Skillsets in the Security Team
    - Budgeting and Risk Appetite Alignment for AI Adoption
- Summary
- Practice Questions

Domain 4: Information Security Core Competencies

- Identity and Access Management (IAM) Fundamentals
    - Introduction to Information Security Core Competencies
    - Identity and Access Management Overview
    - Authentication, Authorization, and Accounting Framework
    - Identity Management Lifecycle
    - Authentication Mechanisms and Factors
    - Password-Based Authentication
    - Biometric Authentication Methods
    - Certificate-Based and Multi-Factor Authentication
    - Authorization Models and Access Control
    - Role-Based Access Control Implementation
    - Rule-Based and Attribute-Based Access Control
    - Authorization Controls and Mitigation Strategies
    - Access Accounting and Monitoring
    - IAM Plan Development

- Identity Theft Prevention
- Social Engineering Attack Lifecycle
- Business Email Compromise Attacks

Physical Security and Business Continuity

- Physical Security Fundamentals
- Facility Construction and Location Factors
- Data Center Tier Classifications
- Physical Security Risk Assessment
- Physical Security Plans and Design Elements
- Access Control Implementation
- Data Backup Fundamentals
- Backup Technologies and Approaches
- ISO BCM Standards Overview
- ISO 22301 Requirements
- ISO/IEC 27031 Guidelines
- Business Continuity Management Implementation
- Disaster Recovery Planning Basics
- Alternate Recovery Site Options
- BCP Testing Methodologies
- DRP Testing Approaches

Network Security and Infrastructure

- Network Security Fundamentals
- Network Security Technology Planning
- Firewall Implementation Strategies
- Intrusion Detection Systems Architecture
- Intrusion Prevention Systems Design
- Secure Web Gateway Implementation
- Virtual Private Network Solutions
- Network Data Loss Prevention
- Network Access Control Systems
- Network Security Design Elements
- Network Address Translation Implementation
- Virtual Private Cloud Architecture
- Network Segmentation Strategies
- Zero Trust Network Access Framework
- Software-Defined WAN Implementation
- Network Security Management Challenges
- ISO Network Security Standards
- Network Protocols Overview
- OSI Model Layers and Security

- Wireless Network Security Fundamentals
- Wireless Security Controls

Cloud and Endpoint Security

- Cloud Computing Security Overview
- Cloud Service Models
- Cloud Security Alliance Threats
- Data Breach Prevention in Cloud
- Cloud Access Security Management
- Cloud Control Matrix Implementation
- Cloud Control Matrix Implementation (Cont’d)
- Endpoint Security Fundamentals
- Antivirus Technology Implementation
- Endpoint Detection and Response
- Extended Detection and Response
- Endpoint Encryption Strategies
- Endpoint Device Hardening
- Configuration Management Practices
- Patch Management Lifecycle
- Mobile Device Security Framework
- IoT Security Challenges
- Endpoint Threats
- Endpoint Vulnerabilities

Application Security and Development

- Secure SDLC Model Overview
- Secure Code Training Programs
- Security Requirements Gathering
- Planning and Design Security Integration
- Implementation Security Controls
- Testing and Validation Approaches
- Secure Deployment Strategies
- Waterfall Methodology Security
- Agile Security Implementation
- Threat Modeling and STRIDE Framework
- Application Security Testing Tools
- Static Application Security Testing
- Dynamic Application Security Testing
- Interactive Application Security Testing
- Development Environment Separation
- Secure Coding Best Practices
- DevSecOps Implementation

- Database Security Controls
- Database Hardening Strategies

AI System Lifecycle Security

- AI System Lifecycle Security
- Securing the AI System Development Process (AI/ML-SDLC)
- Data Ingestion Pipelines: Securing Training, Validation, and Production Data

Encryption and Incident Response

- Cryptography Fundamentals
- Encryption Algorithms Overview
- Symmetric vs. Asymmetric Encryption
- Blockchain Technology Implementation
- Digital Signatures and Certificates
- Public Key Infrastructure Design
- Encryption Strategy Development
- Determining Critical Data Location and Type
- Deciding What to Encrypt
- Selecting, Integrating, and Managing Encryption
- Vulnerability Management and Penetration Testing
- Vulnerability Assessments
- Risk Assessments
- Patching and Remediation
- Vulnerability Management in Practice
- Penetration Testing
- Security Testing Teams
- Threat Management
- Technological Threats
- Threat Intelligence
- Incident Response Model Framework
- Incident Response Communications
- Incident Analysis Methodology
- Incident Analysis
- Incident Response
- Incident Containment
- Incident Eradication
- Incident Recovery
- Incident Postmortem
- Incident Response Scenarios
- Incident Response Plan Testing
- Digital Forensics Framework

- Evidence Collection Procedures
- Evidence Analysis Techniques
- Investigation Reporting Standards

- AI- Driven Incident and Threat Response Strategies
  - AI-Driven Threat Intelligence
  - Threat Intelligence Key Responsibilities
  - AI-Driven Threat Intelligence
  - AI-Driven Incident Response and Forensic Investigations
  - Logging, Monitoring, and Incident Response for AI Systems
  - Incident Response for AI Systems
  - Incident Response Best Practices for AI Systems
  - AI Threat Response Strategy
  - AI Threat Response Strategy (Cont'd)
- Summary
- Practice Questions

Domain 5: Strategic Planning, Finance, Procurement and Vendor Management

- Introduction
- Key Challenges for CISOs
- Strategic Planning
  - Strategic Planning in Cybersecurity
  - Key Components of a Strategic Security Plan
  - From Vision to Execution
  - Organic Strategic Planning: A Flexible, Adaptive Approach
  - Issues-Based Strategic Planning Approach
  - Risk-Based Strategic Planning
  - Goal-Based Strategic Planning
  - Strategic Planning Assessment Phase
  - Strategic Planning Formulation Phase
  - Strategic Planning Execution Phase
  - Strategic Planning Evaluation Methods
  - Factors Impacting Strategic Planning Success
  - How CISOs Can Engage with Leadership Effectively?
- Understanding the Organization
  - General Corporation
  - Close Corporation: Security & Risk Considerations
  - Subchapter Corporation & Security Considerations
  - Limited Liability Company (LLC) Structure

- Support Pyramid in Security Programs
- Identifying Key Program Sponsors & Their Security Impact
- Understanding Stakeholder Dynamics
- Role of Influencers in Security Programs

Information Security Strategic Planning & Execution

- Information Security Strategy Foundation
- Strategic Plan Component Framework
- Mission Statement Development Guidelines
- Vision Statement Creation Process
- Values Statement Integration
- SWOT Analysis in Security Programs
- AI-powered SWOT Analysis
- AI-powered SWOT Analysis Tools
- Strategic Objectives Development
- Security Program Roadmap Design
- Performance Scorecard Implementation
- Key Performance Indicators Selection
- Key Risk Indicators (KRIs) Framework
- AI-driven KPI and KRI Dashboards
- Financial Accounting in Security Programs
- Strategy Communication Planning
- Communication Goals Development
- Communication Schedule Design
- Media Selection for Strategy Communication
- Message Development Framework
- Security Awareness Communication
- Crisis Communication Planning
- Security Training Program Design
- AI-Powered Personalized Security Awareness Campaigns
- AI-Powered Personalized Security Awareness Campaign Tools
- Security Testing Strategy
- Creating Security Culture Framework
- Influencing Organizational Behavior
- Security Culture Assessment Methods

Enterprise Security Program Management

- Enterprise Security Program Design
- Blueprint Development Methodology
- Security Program Foundation Elements
- Architectural Views Introduction
- Business View Framework

- Functional View Implementation
- Technical View Design
- Implementation View Strategy
- Security Metrics Development
- Performance Measurement Implementation
- Balanced Scorecard Design
- Continuous Monitoring Framework

Enterprise Architecture and Frameworks

- ITIL Continual Service Improvement Model
- Enterprise Architecture Introduction
- Zachman Framework Analysis
- TOGAF Implementation Strategy
- TOGAF Implementation Strategy
- SABSA Framework Components
- SABSA Framework Components (Cont’d)
- FEAF Design Elements
- FEAF Design Elements (Cont’d)
- AI-Driven Traceability and Impact Analysis in TOGAF, FEAF, and SABSA Frameworks

Finance & Budgeting

- Financial Statement Analysis for Security Leaders
- Understanding Organizational Assets & Security Implications
- Business Liabilities
- Shareholder Equity
- Operating Activities Analysis
- Investment Activities Evaluation
- Financing Activities Assessment
- Financial Performance Metrics
- Security Program Funding Fundamentals
- Budget Analysis Methodology
- Security Program Forecasting
- Resource Requirements Planning
- Financial Metrics Framework
- Technology Refresh Strategy
- New Project Funding Approaches
- Contingency Funding Planning
- Cryptocurrency Wallet Management
- Disaster Declaration Funding
- License Management Strategy
- Budget Management Principles
- Financial Resource Allocation

- Budget Monitoring Methods
- Financial Reporting Framework
- Cost Per Seat Analysis
- Service Cost Comparison
- Budget Balancing Techniques
- Financial Resource Optimization
- Economic Principles in Security
- AI-Powered Predictive Budgeting and Forecasting for Cybersecurity
- AI-Driven Dashboards for Real-Time ROI Tracking of Cybersecurity Investments

Procurement & Vendor Management

- Procurement Program Fundamentals
- Statement of Work Development
- Total Cost of Ownership Analysis
- RFP Development Strategy
- Master Service Agreement (MSA) Design
- Service Level Agreement (SLA) Framework
- Terms and Conditions (T&C) Development
- Procurement Requirements Analysis
- Regulatory Compliance in Procurement
- Global Procurement Requirements
- Local Procurement Requirements
- Procurement Risk Management
- Standard Contract Language Design
- Breach Language Requirements
- Vendor Management Framework
- Vendor Procurement Lifecycle
- Contract Negotiation Process
- Performance Management Strategy
- Cost-Benefit Analysis Methods
- Vendor Management Policies
- Contract Administration Framework
- Service Delivery Metrics
- Contract Reporting Requirements
- Change Management Process
- Contract Renewal Strategy
- Contract Closure Procedures
- Contract Closure Procedures - continue
- Delivery Assurance
- Streamlined Procurement Lifecycle Using AI
- Leveraging Natural Language Processing (NLP) Tools to Analyze Legal Agreements

    - NLP Tools to Analyze Legal Agreements
    - AI-driven Vendor Scoring
    - AI-driven Vendor Scoring Tools
    - AI-driven Automated Alerts for SLA Breaches
- Delivery Assurance Framework
    - Delivery Assurance Framework
    - Third-Party Attestation Services
- Summary
- Practice Questions