Advanced Information Assurance and Security

Module 1 - Physical Security
- Course Introduction
- Site Considerations and Threats
- Access Controls
- Environmental Controls
- Personal Access Controls
- Bypassing Physical Security

Module 2 - Cryptography
- History of Cryptography and Overview
- Secret Key Encryption
- Public Key Algorithms
- Public Key Infrastructure
- Hashing
- Cryptographic Attacks

Module 3 - Access Control
- Identify, Authenticate and Authorize - Part I
- Identify, Authenticate and Authorize - Part II
- Access Control Models
- Access Control Administration
- Intrusion Detection and Prevention Systems
- Access Control Types and Categories

Module 4 - Security Architecture and Design
- Computer Hardware and Architecture
- System Architecture
- Security Models
- Security Evaluation Methods

Module 5 - Telecommunications and Network Security
- Basic Networking and the OSI Model
- OS Fingerprinting
- Basic Networking and the TCP/IP Model
- Networking Equipment – Part I
- Networking Equipment – Part II
- LAN and WAN Protocols
- Address Resolution Protocol
- Remote Access
- VoIP, PBX, Fax and Wireless
- RAID, MAID, JBOD and Backups

Module 6 - Business Continuity and Disaster Recovery Planning
- Business Continuity Planning
- Disaster Recovery Planning
- Business Continuity Planning Importance
- Tests, Drills and Emergency Response

Module 7 - Legalities and Ethics
- Ethics and Ethical Standards
- Hackers and Well-Known Computer Crimes
- The Ethics of Teaching Hacking
- Legal Systems, Laws and Privacy Concerns
- Network Forensics
- I'm Not A Lawyer

Module 8 - Application Security
- Database Management
- Systems Development
- Application Development Methodology
- Application-Layer Attacks

Module 9 - Operations Security
- The Role of Operational Security
- Principles and Practices of Good Security
- Resource Protection
- Attacks and Prevention Methods
- Organizational Security Models

Module 10 - Information Security and Risk Management
- Risk Management
- Handling Risk
- Security Policy Development
- Identification of Information Assets
- Examining Risk Management – Part I
- Examining Risk Management – Part II