**Cyber Security**

# Instructor Information

**Instructor: Ali Daniyal**

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**Description**

The broad spectrum of topics included in the CISSP Common Body of Knowledge (CBK) ensure its relevancy across all disciplines in the field of information security.

* Security and Risk Management
* Asset Security
* Security Architecture and Engineering
* Communication and Network Security
* Identity and Access Management (IAM)
* Security Assessment and Testing
* Security Operations
* Software Development Security

**Expectations and Goals**

Student will be able to learn all Cyber Security aspects as per security industry requirements. Successful candidates are competent in the above mention 8 domains.

# Course Materials

**Required Materials**

Book - Certified Information Systems Security Professional Official Study Guide 8th Edition **Optional Materials**

Book - CompTIA Security+ Guide to Network Security Fundamentals by Mark Ciampa.

# Course Schedule

**Week Topic Reading**

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| **Week 1-2** | * **–** | **Security Goals (Confidentiality, Integrity, Availability)**  **Security Governance Principles**  **Risk Management**  **Threat Modeling**  **Business Continuity Plan Fundamentals** | Book |
| **Week 3-4** | * **–** | **Asset Classification**  **Data Security Controls**  **Secure Data Handling**  **Security in the Engineering Lifecycle**  **Security Models** | Book |
| **Week 5-6** | * **–** | **Controls and Countermeasures in Enterprise Security**  **Design and Architecture Vulnerability Mitigation**  **Cryptography Techniques**  **Site and Facility Design for Physical Security**  **Physical Security Implementation in Sites and Facilities** | Book |
| **Week 7-8** | * **–** | **Network Protocol Security**  **Network Components Security**  **Communication Channel Security**  **Network Attack Mitigation** | Book |
|  | | **Mid Term Exams** |  |
| **Week 9 -10** | * **–** | **Physical and Logical Access Control**  **Identification, Authentication, and Authorization**  **Identity as a Service**  **Authorization Mechanisms**  **Access Control Attack Mitigation** | Book |
| **Week 11-12** |  | **System Security Control Testing**  **Software Security Control Testing**  **Security Process Data Collection**  **Audits** | Book |
| **Week 13-14** | * **–** | **Resource Provisioning and Protection**  **Patch and Vulnerability Management**  **Change Management**  **Incident Response**  **Investigations** | Book |

**Week Topic Reading**

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| **Week 15-16** |  | **Security Principles in the System Lifecycle**  **Security Principles in the Software Development Lifecycle**  **Database Security in Software Development**  **Security Controls in the Development Environment**  **Software Security Effectiveness Assessment** | Book |
|  |  | **Final Exams** |  |

# Exam and Class activity Detail

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| **Quizzes** | **There will be at least one quiz fortnightly (Paper/Online)** |
| **Midterm Exam** | **A single 75/90-minutes midterm from the material covered during the first 8 weeks (Objective/Subjective) Total 30 Marks** |
| **Final Exam** | Will cover the whole course and will be of 2 hours duration (Objective /Subjective) Total 50 Marks |
| **Grading Policy** | 1. Quizzes 5% 4.Group work & Behavior 5% 2. Assignments 5% 5.Midterms 30% 3. Attendance 5% 6.Final: 50% |