



# Tzomet Cyber Security Course

Preparation for International CEH (Certified Ethical Hacking) Certification

## Course Overview

In recent years, cyber security threats and attacks have gained growing attention of the media and have become a significant threat to the orderly conducting of business for both large and small companies as well as for governments, organizations and individuals. The impact of all types of cybercrime is projected to continue to grow, and so the field of cyber security, which offers risk assessment, protection, and mitigation against cybercrime offers growing employment opportunities for qualified individuals. In addition, international regulation has responded to the global threat of cybercrime, by obligating business and all parties who hold personal data on clients, to meet certain standards of data security, which further drives the demand for cyber security workers. In fact, there is a worldwide shortage of qualified cyber security professionals, whereby industry experts foresee a shortfall of man power reaching two million jobs in 2021.

This unique course has been created in correspondence with the demands of the international employment market to allow students with no previous computer programming background to acquire the necessary skills and know-how to join the work force as cyber security professionals.

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The course will include an introduction to the spheres of IT Information Technology, networking, and cyber security, and will include practical tools, methodologies, and techniques to allow those who complete the course to integrate into the cyber security industry. These positions demand a high degree of integrity as well as professionalism and technical skill due to their sensitive nature in every enterprise.

### **Career Paths**

The course introduces students to a broad range of disciplines within the field of cyber security and graduates have completed the course and entered the international employment market as SOC Analysts, Penetration Testers, Cyber Threat Analysts, Risk & Compliance Specialists, Cyber Sales Engineers, Incidence Response Specialists, et al.

### **Course Segments**

The course is divided in to three segments. The first is an introduction to IT (Information Technology) networking and includes preparation for professional certification in that field. The second part focuses on information security and gives students a general background in the field of cyber security. The third part of the course prepares students to work in the field of PT (penetration testing) to serve as an ethical hacker, an attractive niche in the world of cyber security. The course includes frontal lectures which will be given in an online interactive simulcast as well as hands-on workshops and homework tasks which replicate actual cyber security situations and environments.

### **Internships**

Following the classroom segment of the course, students will have the opportunity to participate in an unpaid internship program of up to four hundred hours practical hands-on experience for companies in the industry. Tzomet's partners which provide internship programs for students include:

Mosse Cyber Security <https://platform.mosse-institute.com/#/partnerships>

See Secure, <https://www.see-secure.com/>

CyberSafe <https://cybersafe.co.il/>

Centraleyes <https://www.centraleyes.com/>

## Certifications

Upon completion of the requirements of the course, students will receive certification from Tzomet, and in addition, the course provides students with the basis to prepare for international certification tests in IT and ethical hacking, such as the CompTIA Security+ test and the EC Council CEH Certified Ethical Hacker certification exam.

## Pre-requisites

- Familiarity with interacting with computers
- Passing a critical thinking and personality test
- There is no pre-requisite for prior knowledge of cyber security.
- Candidates should be technically inclined & possess above average analytical & creative thinking skills.

## Course Syllabus

- Introduction to computer networks, data and cyber security technologies
- LAN Switching Fundamental
- Infrastructure Services
- Introduction to Virtual Environment
- Introduction to Microsoft Windows Server
- Introduction to Active Directory
- Microsoft AD Permission & Rights
- Familiarity with Linux operating system

- Familiarity with digital communication concepts & protocols
- Familiarity with encryption technologies and concepts
- Network communication equipment and network security tools
- Familiarity with the architecture of information systems
- Familiarity with “the Cloud” and relevant data security issues
- Familiarity with writing scripts in Powershell & Python
- Familiarity with ransomware, viruses, bots & Trojan horses
- Infosec, Information Security, Defense Technologies
- Familiarity with the Darknet
- Securing of servers and services
- Entering the mind of hackers, Red Team
- Familiarity with industry compliance standards:
  - Familiarity with national and international regulatory standards
  - Common cyber security work methodologies
  - Introduction to Ethical Hacking
  - Developing the Tool-box of a Pen Tester
  - Foot printing and Reconnaissance
  - Scanning Networks
  - Vulnerability Analysis
  - Malware Threats
  - Sniffing
  - Social Engineering
  - Denial-of-Service
  - Cryptography
  - Session Hijacking
  - Evading IDS, Firewalls, and Honeypots
  - Hacking Web Servers & Web Applications
  - SQL Injection
  - Hacking Wireless Networks/Hacking Mobile Platforms
  - IoT Hacking
  - Writing cyber security assessment reports
  - Familiarity with various automated cyber security vendor tools

- Final Project

### **Course Structure**

- 190 classroom hours
- 400 Lab hours
- Final Project
- Up to 400 hours Internship (Optional)

### **Course Requirements**

- Online Classroom Attendance of >70%
- Completion of labs, homework assignments
- Passing Grade on Unit Tests
- Final Project

### **Faculty**

The course will be taught by IT professionals and Cyber Security experts drawn from Israeli/international leading cyber security companies, IDF and government agencies.

### **Academic Year**

Starting Date: August, 2021

Ending Date: June, 2022

### **Tuition**

Tuition for the course is 15,000 NIS, payable in installments. There is a Non-refundable Registration fee of 1,000 NIS.