

## Course Title

## Course Code

**Cybersecurity Essential with Palo Alto Networks Exam & Certificate**

**ITL-CE-PCCSA**

## Background

HKSAR government promotes the innovation and information technology for secondary school. As it's high demands on how our society encourages Hong Kong teenagers to be the new force group in participation in the Information security industry sector. Security is critical to the success of businesses and Information technology and information security Industry adoption. The resilience of production processes strongly depends on the companies' awareness of the current threat landscape and the employed security framework for protecting against attacks. In Hong Kong, STEM education is



promoted through Science, Technology and Mathematics Education. Hence, Technology is one of the important subjects for teenager to understand more about Cybersecurity. The introduction and fundamental knowledge of Cybersecurity definitively belongs to one of most important area that allow students and parent with additional considerations for the student's life planning within the study life of secondary school.

## Intensive demand on IT professional

Due to international demand for information security professionals across educational institutes, NGO, Enterprises are high. How about if we can enable our Hong Kong teenager starting to look into one of the high demanding industries as one of the shortcuts to allow them to have earlier exposure on Information security. It can also validate the knowledge required for entry-level network security positions.



Source: Data Security Challenges 2021

According to the current report of (ISC)<sup>2</sup> ([www.isc2.org](http://www.isc2.org)) Cybersecurity Workforce Study 2020, the global Cybersecurity workforce is now in a shortage of 3.12 million professional.

Except for the mentioned APAC Countries, the United Kingdom is one of the countries in the world that focus on the development of teenagers' education in cyber security perspective. There is a scheme (CyberFirst) especially targeting age group 11-19 young peoples in order to develop the UK's next generation of cyber professionals through the student bursaries.



## Education & skills

11 - 19 year olds (CyberFirst)

[Young peoples in CyberFirst<sup>\[2\]</sup>](#)

## IT Innovation Lab



In Hong Kong, we do have a similar supporting scheme brought to us from the Hong Kong Government. The OGCIO of the Hong Kong government invites the majority of secondary schools to participate in the “[IT Innovation Lab in Secondary Schools](#)” <sup>[4]</sup> Programme. This schema aims to thereby promoting local popular science education and expanding the supply of innovation and technology talent and meet the needs of a technology-driven society.

## Training courses providing

Our training course is teaching the teenagers understand what cybersecurity is. Though those cybersecurity related training courses, the students may raise their interest in cybersecurity related subjects in their tertiary education. By attending this course, secondary school could be much easier to promoting the aspects related to the cybersecurity. In order to allow more teenagers starting to understand what’s cybersecurity about. It helps secondary school to enhance their students to participant worldwide cybersecurity competition and also increases their reputation so forth. Students may have chance to visit VTC (Cyber Range Security Lab) & HKIT (Cyber Security degree and diploma courses) or education seminar as well.

We are providing four courses that includes Introduction to CTF, Cybersecurity Essential, IoT security, IoT Lab (ONWARD).

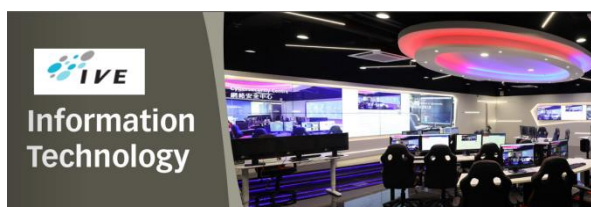
## Courses Supporting Companies / Organizations



This course datasheet is about “**Cybersecurity essential**”, for other courses please refer to correspondence course material.

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After attending the course, students are ready to take assessment and being certified with honour. As the PCCSA certified individuals have detailed knowledge of the latest trends in networks based Cyberattacks and of cutting-edge technologies available to prevent them. The knowledge body of the Palo Alto Networks’ PCCSA covers a wide range of Cybersecurity topics. It is a high demanding industries on information security professionals in the worldwide market. How can we enable the secondary student to interest in information security, is to introduce them with full spectrum of cyber security, such as we will introduce the legal use of computers and internet. Students may have chance to visit VTC IVE Chaiwan Cyber Range Security Lab and HKIT for CyberSecurity Degree seminar as well.



<https://cwintra.vtc.edu.hk/infoday/en/it.html>



[https://www.hkit.edu.hk/en/degree\\_uw1.php?pgm=uw1cs](https://www.hkit.edu.hk/en/degree_uw1.php?pgm=uw1cs)

## Assessment based certificate

Secondary school will be able to ready their students that have deeper understanding on Cybersecurity. Their students will be awarded with certificates after they complete assessments. All of these activities could help students to be available for wider career opportunities, such as selecting the Information security as their job fields.



Secondary school could make use of this base as one of the themes upon school open day to demonstrate their investment on introducing their students with Cybersecurity topics. What else do the parents will be more attention when selecting the secondary school when they knew that their teenager with lucky to study at the school that will put priority on investing in their student's future career.

To obtain the PAN assessment certificates by taking assessments within duration around 30mins that provided by Palo Alto Networks.



What we would like to promote is the Hong Kong young peoples' interest in Information technology especially in the aspect of Cyber security during their secondary schooling. Our teaching team is backed by multiple CTF international organizations such as Cyber Range training centre<sup>[6]</sup> trainer, Shenzhen E-link (深圳易聆科), well-known industry in IT security service provider, Palo Alto Network<sup>[7]</sup>. Cyber Range training centre is the 1<sup>st</sup> education institute to introduce cybersecurity course by make use of blue team approach with defense technique. E-link is the experienced training institute that provides accredited training related to Information Security certificate of Mainland China Certified Information Security Professional (CISP).



[Cyber Range Training Centre<sup>\[6\]</sup>](#)



[Palo Alto Networks<sup>\[7\]</sup>](#)

There is an Information Technology vendor named: Palo Alto Network that is occupied a huge amount of market share in the network security equipment in the world. Peoples are too easy to find this company providing network security the companies that's on the list of FORTUNE 500. It will allow peoples recognized that Palo Alto Network with undoubtable market position. After taken and passed four simple exams, student will be able to obtain international vendor endorsement and even easier to link up further learning path, may be higher chance to enroll VTC, University degree level course.

## Course Objectives

In order to introduce what is cyber security about, we will make use of this entry-level Cybersecurity training course that helps you understand what Cybersecurity looks like, during the Cybersecurity training, secondary school students will be able to understand a wide range of knowledge related to cybersecurity such as cyber-attack life cycle. This course is designed for students that are interested in validating comprehensive knowledge on current cybersecurity tenets. The PCCET is a knowledge-based certification on the fundamentals of cybersecurity that will stand as the entry point in accessing the entire Palo Alto Networks credentialing portfolio. The certification will assess the individual's knowledge of firewalls as well as the cloud and automation functionalities of security appliance.

## What Can Be Learned

- What is Cybersecurity?
- Technique and Types of Cybersecurity
- Fundamental of Network security
- What is Cloud security?
- How to turn it into a Career path?
- Fundamental of security operation

## Lab Class with equipment



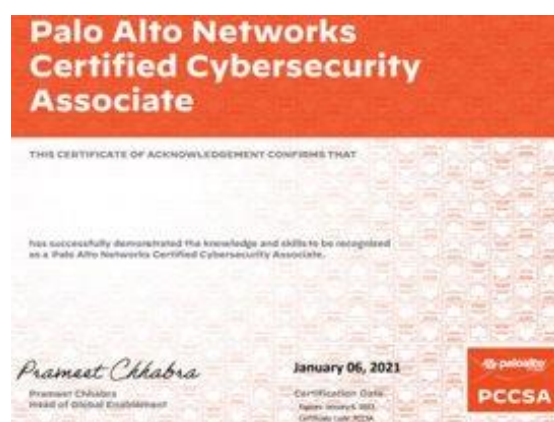
Upon this course, students will be able to demonstrate basic cybersecurity knowledge related to cyber security techniques in the manner of how to resolve technical problems with the Palo Alto Networks Next-Generation Firewall (NGFW) hardware in Lab exercises. Students will learn the working mechanism on how the PAN-OS work in NGFW.

## Further Study Path



After completing this course, students will have basic cybersecurity knowledge and techniques to resolve technical problems in Lab exercises.

Top TWO students who achieve highest score in dedicated assessments in 1<sup>st</sup> attempt will be awarded with FREE Palo Alto Networks Certificated Cybersecurity Associate (PCCSA) exam vouchers (USD\$ 100 will be ad). Students who attended this course, will be able to capable to participate further study on advance security topics, may be able to have higher chance to enroll VTC, University degree level courses.



## Target Audience

- All young peoples that study in secondary school (recommended for F.3 to F.6 students)

## Prerequisites

- Using Internet / email service experience
- A mobile smartphone with WIFI / internet connection, Notebook/Laptop for Lab lesson

## Course Content Highlight

- Cybersecurity Foundation
  - Introduction to Information security concept (CIA)
  - Cybersecurity Landscape
  - Cyberthreats
  - Endpoint security basics
  - Cyber-attack Techniques and Types
  - Wi-Fi and Advanced Persistent Threats
- Cybersecurity Gateway
  - The Connected Globe
  - Physical, Logical, and Virtual Addressing
  - Packet Encapsulation and Lifecycle
  - Network Security Models
  - Cloud and Data Center Security
  - Network Security Technologies

- Endpoint security
- Cloud, Virtualization, and Storage Security
- Networking Concepts
- Cybersecurity Essentials
  - Security Operating Platform
  - Network Security
  - Endpoint Protection
  - Cloud Security
  - Application Framework and Logging Service
- Fundamental of Security Operation
  - Elements of Security operations
  - Security Operations processes
  - Security Operations Infrastructure
  - Secure the future

## Trainers

### Frankie Leung

- CISSP, CISA, CISM, CRISC Certification holder
- Over 30 years' experience in IT, Security and Application Development

### Paul Chow

- CISSP, CEH, OSWP Certification holder
- Over 30 years' experience in IT, Security and Application Development

### Eric Moy

- CISSP, CEH, CISA, PRINCE2, ITIL and ISO20000 Certification holder
- Over 30 years' experience in IT, Security and Service Management

### Michael Chow

- CISA, CISM, CRISC, PRINCE2 and ITIL Certification holder
- Over 20 years' experience in the Information technology and services industry.

<b>Medium of Instruction</b>
Cantonese (complemented with English terms) <i>(English terms will be used where appropriate)</i>

## Course format:

- To deliver thru online Instructor-Led deliver thru Zoom video conferencing platform.
- Online (Every 2 Weekends 2 hours, total 10 lessons, minimum 10 students per class)
  - Cybersecurity Foundation - 2 lessons
  - Cybersecurity Gateway - 2 lessons
  - Cybersecurity Essentials - 2 lessons
  - Lab session – 1 lesson (2 hours)
  - Exam review session – 0.5 lesson (at each lesson)
- Every 45mins lecture course, will have 2-3 review question as knowledge check. Q & A session will be around 15 mins at the last section of each lesson.
- Mock exam provided after course completion with certificates.
- Top TWO students who achieve highest score in dedicated assessments in 1<sup>st</sup> attempt will be awarded with FREE Palo Alto Networks Certificated Cybersecurity Associate (PCCSA) exam vouchers (USD\$ 100 will be ad). Extra lesson will be arranged for these two students for exam preparation with exam technique.
- Training Package (required for lab exercises):
  - A. Min 10 students per school with PAN 820 NG FW with 3 Years Maintenance
  - B. Min 10 students per school with PAN 820 NG FW with 1 Year Maintenance
  - C. Min 10 students per school

## Course Duration:

	(8 lecture lessons, 1.5 lesson of Lab (using PA 820 NG Firewall) and 0.5 lesson for exam Tips.
<b>Total</b>	20 hours (included online and remote lab classes in [8 + 2])

## Key takeaway

- Completion certificate after passed dedicated assessments by Microware.
- Four Palo Alto Networks Beacon Examination certificates.
- One merit certificate/letter from Microware for TOP two students.
- Chance to entitle exam voucher for FREE (Applicable for the minimum size of 10 persons class)

## Class Size

10 persons per class

## Award of Certificate

Candidates will be awarded four assessment certificates after they completed assessments.

## Enquiries

Please call sales enquiry at (852) 2565-3030 or email to [enquiry@microware.com.hk](mailto:enquiry@microware.com.hk)  
 Website: <https://www.microware.com.hk/>