CSS316 Security Planning for IT Systems and Fintech

Level: 3

Credit Units: 5 Credit Units

Language: ENGLISH

Presentation Pattern: EVERY JULY

Synopsis:

CSS316 Security Planning for IT Systems and Fintech covers elements of basic technical knowledge about computer architectures but will focus on creating awareness of security vulnerabilities in computer hardware/firmware, network systems as well as protection mechanisms as part of the overall IT system and network security planning. More importantly, it will cover the rapidly emerging security industry behind Fintech. In particular, unique Fintech security requirements in areas such as blockchain system security, new Fintech regulatory technologies, AI for fraud detection, and cloud security.

Topics:

- Introduction to Physical IT Infrastructures and Fintech systems
- Digital System Design: Basics and Vulnerabilities
- Designing Intellectual Property Protection
- Counterfeit hardware
- Steganography
- Physical Attacks and Modular Exponentiation
- Side Channel Attacks and Countermeasures
- Detecting security vulnerabilities in Physical IT Infrastructures
- Detecting security vulnerabilities in Fintech applications
- Security systems for physical IT infrastructures
- Fintech security systems, regulations and policies
- Planning physical IT Infrastructure and Fintech security for an organisation

Learning Outcome:

- Discuss what type of hardware/firmware security vulnerabilities manifest when creating a networked IT or Fintech system for an organisation (B2)
- Distinguish where single point of failures (SPOF) exist in an organisation’s networked IT or Fintech systems (B4)
- Compare different protective mechanisms and safeguards used for securing IT and Fintech systems (B4)
- Analyse new strategies being proposed for securing IT and Fintech systems (B4)
- Apply hardware/firmware security as part of IT and Fintech system implementation plans (B3)
- Design a hardware/firmware security plan for IT and Fintech systems in an organisation (B5)

Assessment Strategies - Regular Semester (Evening Class):

Components	Description	Weightage Allocation (%)
Overall Continuous Assessment	PRE-CLASS QUIZ 1	5

Overall Continuous Assessment	TUTOR-MARKED ASSIGNMENT 1	15
	GROUP BASED ASSIGNMENT 1	30
Overall Examinable Components	Written Exam	50
Total		**100**

*The information listed is subject to review and change.