Information Security

Lecture 0

PHBS 2024 M2

Syllabus

- Class:
  - Lectures: Monday & Thursday 13:30 – 15:20 PM
  - Location: 313
- Instructor: Haiyang Zheng
  - Email: hyzheng@phbs.pku.edu.cn
  - Phone: 2603-4026
  - Office: PHBS Building, Room 649
  - Office Hour: Tuesday and Friday 8:30-9:30 and Wednesday 3-5pm
- Teaching Assistant: Lei Cheng
- PKUSZ 2rd year FinTech Major

Course Overview

- This course is an introductory course in information security. It teaches the basic concepts, principles, and fundamental approaches to secure computers and networks.

- The main topics include basics of security, security management and risk assessment, software security, operating systems security, database security, cryptography algorithms and protocols, network authentication and secure network applications, malware, network threats and defenses, web security, mobile security, legal and ethical issues, and privacy.

References

- No official textbook

- We follow the lecture notes from https://cs161.org/
- This is the textbook for CS 161: Computer Security at UC Berkeley: https://textbook.cs161.org/

- Optional: Introduction to Computer Security, Goodrich & Tamassia (G&T)
- Optional: The Craft of System Security, Smith & Marchesini (CRAFT)
- Optional: Computer Security: Principle and Practice, Stallings and Brown (P&P)

Tentative Schedule

number	date	New dates	topics	homework
1	11/14/2023		overview and philosophy	
2	11/18/2023		security principles	
3	11/21/2023		buffer overflow	
4	11/25/2023		buffer overflow	#1 homework out
5	11/28/2023	11/27/2024	memory safety	
6	12/2/2023		memory safety	#1 homework due
7	12/5/2023		memory safety mitigation	#2 homework out
8	12/9/2023		cryptography symmetric	
9	12/12/2023		cryptography symmetric	#2 homework due
10	12/16/2023	12/18/2024	cryptography symmetric	
11	12/19/2023		Asymmetric Cryptography	
12	12/23/2023		Asymmetric Cryptography	
13	12/26/2023		Asymmetric Cryptography	**project group formation an**
14	12/30/2023		***Midterm***	
15	1/3/2024		web security: Certificates and passwords	
16	1/6/2024		web security: cookies and CSRF	
17	1/8/2024		network security: sql injections	
18	1/13/2024		***project presentation***	

Grading

- Attendance: 5% (final project presentation is mandatory)
- Homework: 20%
- Midterm: 35% (tentative on 2023/12/30)
- Project: 40%
- Grade in letters (e.g., A+, A-, ... ,D+, D, F).
  - No more than 30% can receive A+, A, and A-;
  - No more than 90% can receive B and above.
- Academic Honesty and Plagiarism
- No extra credits or makeup exams

Guidelines for Submission and Emails

- Submit your homework via email with title
  - 2024.M2.InformationSecurity YourName Homework_0
  - Homework file with the same name
- For project submission
  - 2024.M2.InformationSecurity YourName ProjectGroup_#
  - Project ZIP file with the same name
- For email questions, please make the title
  - 2024.M2.InformationSecurity YourName Question Title

- Please send to both TA and teacher