Hacking and Information Security (CSE4104, 해킹및정보보안) Course Orientation

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Today: Brief Orientation

- **Teaching staff**
- **General course information**
- **Grading components**
- **Course policies**
- **Prerequisite**
- **In our next lecture, we will have an overview of the course topics**
  - Because more students can still register to this course

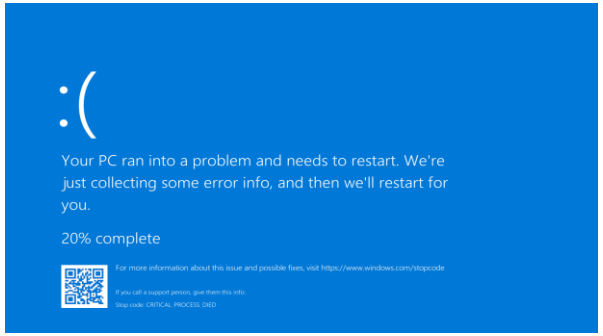
Teaching Staff

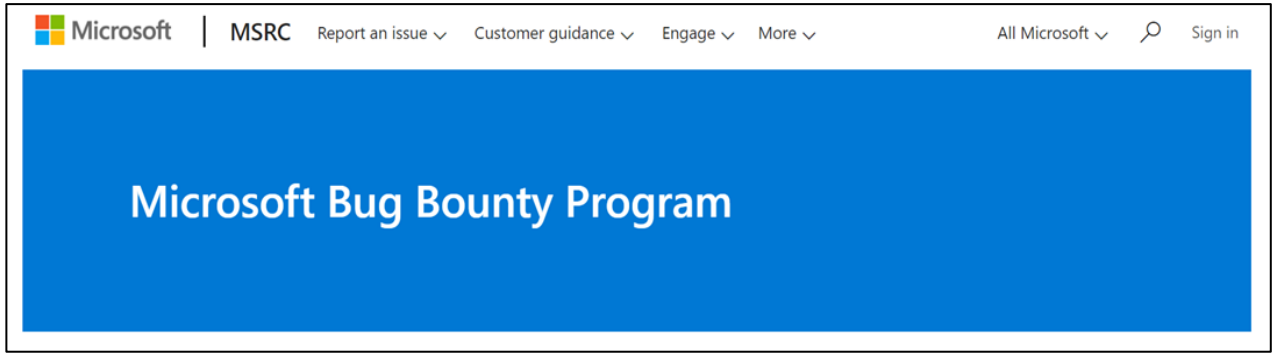
- **Instructor: Jaeseung Choi (최재승)**
  - Contact: **jschoi22@sogang.ac.kr / jschoi.2022@gmail.com**
  - Office: AS 711
  - **For most of the issues and questions, you will have to contact me**

- **Teaching Assistant: 최라원**
  - Contact: **rawin129@sogang.ac.kr**
  - I will let you know when you have to send an email to TA

About me

- **Research area: software security**
- **Used to be a CTF (hacking competition) player**
  - 8th place in *DEFCON* Final in 2013
- **Found and reported many real-world vulnerabilities**
  - Domestic applications, Linux packages, **Windows kernel**





Course Information

- **Schedule**
  - **Lecture: Tuesday / Thursday 12:00-13:15**
  - Office hour: Monday 13:00-15:00 (by appointment)

- **We will use *Cyber Campus* (cyber.sogang.ac.kr) for announcements**
  - **Please check our course page as often as possible**

- **Our primary course material is lecture note**
  - Slides will be uploaded on *Cyber Campus*
  - No textbook for this course

Q&A

- **Feel free to ask questions about the lecture or assignment**
  - During or after the lecture
  - On the Q&A bulletin in *Cyber Campus*
  - Through an email

- **This is Korean course, but you can ask questions in English as well**

Grading Components (Tentative)

- **Exam: 60%**
  - Midterm exam 35% + Final exam 25%
- **Lab assignments: 40%**
  - Lab assignment 25% + **Lab exam 15%**
  - You will analyze programs, find security bugs, and exploit (attack) them
- **Attendance will not be reflected in your score**
  - Just make sure that you **don’t get FA** (failure due to absence)

Lab Exam (★)

- **We will have an off-line exam in Dasan Hall (D104, D105)**
  - **Date and time: 11/21 Thursday 18:00 - 21:30**
  - Between the midterm and final exam

- **In the lab exam, you will solve problems similar to *lab assignments***
  - I will give slight variation on the styles and difficulties of the problems

- **Why do we have a lab exam?**
  - To mitigate the impact of cheating (solution copy) in lab assignments
  - It was a serious issue in the previous year

Grading Distribution (Tentative)

- **The exact cut-off lines will be determined during the semester**
- **Usually, about top 20-30% students are given *A***
- **And the next 30-40% students are given *B***
- **I will give you *C* as long as you get more than 20% of the total points**
  - Otherwise, you will be given ***D***
- **Note: Students who are retaking this course (재수강) will get some deduction in the lab assignments**

Important Dates

- **The announcement is also posted in *Cyber Campus***
- **There will be four official no-class days (휴강) this semester**
  - **9/12** (Mass, 개강미사), **9/17** (Chuseok), **10/1** & **10/3** (National holiday)
  - No make-up class (보강), since we already have a three-hour lab exam
- **Exam schedules**
  - **Midterm exam: 10/22 Tuesday**
  - **Lab exam: 11/21 Thursday (18:00 - 21:30)**
  - **Final exam: 12/10 Tuesday (one week before the actual exam period)**
  - Note that we will have our last lecture in **12/12** (exam solution & course review)

Class Policy

- **Things allowed**
  - Using laptops or tablets for the lecture notes
  - Dozing for a while (but please try not to)
  - Checking your cell phone for a short moment

- **Things *NOT allowed:* disturbing the class**
  - Chatting with your friend loudly
  - Wandering around
  - Playing games or watching videos with electronic devices
  - Using earphones during the lecture

Attendance Policy (1)

- **For attendance, we will follow the rules of Sogang University**
  - https://www.sogang.ac.kr/bachelor/haksa/abs01.html
  - You will be considered **late** if you arrive **after the start of the class**
  - You will be considered **absent** if you are **late for more than 15 minutes**
  - 3 late = 1 absence
- **In the next class, our TA will fix your seat map**
  - That seat will be used throughout the semester

Attendance Policy (2)

- **5 or more absences result in FA**
- **Also, check the rules for officially excused absence (유고결석)**
- **I will also accept some more excuses for absence (evidence required)**
  - Serious illness or emergency, such as fracture (골절)
    - But I will **NOT** accept cold (감기, 몸살) as an excuse
  - Attending academic conference, job interview, etc.
    - But you must always **ask me in advance**

Cheating Policy

- **Cheating will give you a serious penalty**
  - Cheating in exam will immediately result in **F**
  - Cheating in assignment will lower your final grade (e.g., **B+** to **C+**)
- **Scope of cheating**
  - Copying the solution of others
  - Sharing your solution with others
  - Discussing with others how to solve the problem
  - What about **ChatGPT**? I will explain in the next page

For fair evaluation, any form of cheating is strictly forbidden

ChatGPT (LLM) Policy

- **In this course, I will allow the use of ChatGPT in assignments**
  - Because I know that you will use anyway it even if I disallow it
  - But note that I am **not** *encouraging* you to use it
  - It is important to practice thinking on your own (in fact, ChatGPT may not help much in this course)
- **Rules for using ChatGPT**
  - In the report, clearly indicate how you used ChatGPT
  - If you used ChatGPT, write down the exact **prompt you entered** to ChatGPT and its **response** (and how you modified the code generated by ChatGPT)
  - This is important for deciding whether you copied the solutions of others

Request for Cooperation

- **Please do NOT publicly upload lab solutions in GitHub or share the exam problems (족보 공유) with your friends, even after the course**
  - Ex) Do not buy/sell the exam problems in online communities
- **First, I want everyone to start from the same and fair starting line**
- **Also, if you do these things, this makes it hard to properly evaluate the students in the future**
  - Ex) I will have to change the whole problem set every year, and I may end up with using weird or too difficult problems for the evaluation

Need your cooperation to manage the course successfully

Prerequisite

- **Experience in C and Python programming**
  - You will analyze C programs and write exploit (attack) scripts in Python
- **Familiarity with Linux**
  - We will use the Linux environment (CSPRO) for the lab assignments
- **Knowledge in low-level internals of computer systems**
  - *Ex)* ***CSE3030 Introduction to Computer Systems (almost mandatory)***
    - You will have to analyze lots of **Intel x86-64 assembly code**
  - *Ex)* ***CSE4100 System Programming (recommended)***
    - **Key topics**: process, kernel, system call, thread, memory allocator

We will have a course overview in our next lecture
(It's important, don't miss it!)

Welcome to the course and enjoy!