Syllabus

1   Course Information

Main site:	https://cseweb.ucsd.edu/classes/fa17/cse127-b
Piazza:	https://piazza.com/ucsd/fall2017/cse127/home

Lecture:	Tuesdays and Thursdays, 8:00 A.M. to 9:20 A.M., Solís Hall 107.
Discussion:	Fridays, 5:00 P.M., WLH 2005.
Final exam:	Tuesday, December 12, 8:00 A.M. to 11:59 A.M., location TBD.

Instructor:	Kirill Levchenko
Email:	klevchen@cs.ucsd.edu
Office hours:	Tuesdays at 3:00 P.M. in CSE/EBU3b 3234

Teaching Assistant:	Brian Johannesmeyer *and* Guo Li
Email:	cs127f1@ieng6.ucsd.edu
Office hours:	Mondays at 4:00 P.M. in CSE/EBU3b B215 *and*
	Thursdays at 1:00 P.M. in CSE/EBU3b B215

2   Goals and Topics

The goal of this class is to teach you how to analyze systems and problems *adversarially*, as well as to teach you the state of the art in computer security attacks in defenses. We will cover the following topics:

- ❖ Core concepts (3 lectures)
- ❖ Web security (3 lectures)
- ❖ Low-level security (3 lectures)
- ❖ Using cryptography (3 lectures)
- ❖ Network security (3 lectures)
- ❖ Miscellaneous (3 lecture)

3   Prerequisites

There are two prerequisites: CSE 21 (or Math 15B) and CSE 120. Your programming assignments will require knowledge of C, PHP, SQL, and assembly language. We will not teach these in class. *You will be expected to learn them on your own.*

4 Textbook, Readings and Lectures

There is *no* textbook for this class, however, some readings will be assigned from Ross Anderson's *Security Engineering* (Wiley Publishing, 2008), which is available online free of charge:

http://www.cl.cam.ac.uk/~rja14/book.html

Links will be provided on the class Web page to the other readings. Note that some academic papers must be accessed from a UC San Diego IP address. You must complete the assigned readings *before* lecture. Lectures will build on the material covered in the readings.

5 Assignments and Grading

There will be nine homework assignments. All but the first assignment must be submitted electronically. Your final course grade will be based on: **50% homework, 20% midterm exam,** and **30% final exam.**

All homework assignments are due on the date and time indicated on the assignment. Each student has a total of seven twenty-four hour extensions ("late days") for the quarter. Late days can be used in twenty-four hour increments on any homework due date. For programming projects done in pairs, late days will be charged to both students in the pair. *No additional extensions will be given for any reason.* Once all late days have been used up, late assignments will not be accepted.

6 Academic Integrity

Integrity of scholarship is essential for an academic community. The University expects that both faculty and students will honor this principle and in so doing protect the validity of University intellectual work. For students, this means that all academic work will be done by the individual to whom it is assigned, without unauthorized aid of any kind.

All suspicions of academic misconduct will be reported to the Academic Integrity Office according to University policy. Academic misconduct is not just blatant cheating (e.g., copying off another student during an exam), but what you might have thought of as "minor cheating" in high school, for example: copying other students' papers or homework; copying or using old papers/report; working with others on individual assignments; forgetting to cite material you took from an outside resource; turning in work completed in total or part by another. You are expected to adhere to the Policy on Integrity of Scholarship found at:

http://academicintegrity.ucsd.edu

Those students found to have committed academic misconduct will face administrative sanctions imposed by their college Dean of Student Affairs and academic sanctions imposed by me. The standard administrative sanctions include: the creation of a disciplinary record (which will be checked by graduate and professional schools); disciplinary probation; and attendance at an Academic Integrity Seminar (at a cost of $75). Students can also face suspension and dismissal from the University; those sanctions are not at my discretion. Academic sanctions can range from an F on the assignment to an F in the class. The appropriate sanctions are determined by the egregiousness of the Policy violation. Students who assist in or are complicit with cheating could also be in violation of the Policy. Thus, students who become aware of their peers either facilitating academic misconduct or committing it should report their suspicions to me for investigation.