

**CS 491 / 591: Introduction to Computer Security
Fall 2020**

Instructor: Professor Karen L. Karavanic

**Public website for the course: www.cs.pdx.edu/~karavan/IntroSec
Google Shared Drive for the course: IntroSec (registered students only)**

Course Description

In this course we will survey the major areas of computer security, serving as an introduction and framework to move forward with more focused study of security, or work in any area of Computer Science and Software Engineering.

The ten week quarter will be divided into three main units: 1. Secure Data (Cryptography and Authentication) 2. Secure Code (Software Security) and 3. Secure Systems (rootkits and intrusion detection).

Accounts:

You will need an account to log in to the Linux Lab systems (linuxlab.cs.pdx.edu) provided by the college. If you don't already have an account, go to <http://www.cat.pdx.edu/students.html> for instructions. The Linux labs are located in FAB 88-10, but you can access them remotely during the pandemic closures.

Mailing List:

All students will be added to the class google group. I will use this for general questions, information, updates, hints on the homeworks, schedule changes. Your pdx.edu address is used, so be sure you are getting your pdx.edu email. If you have not received a google group welcome email by the start of the first class, let the instructor know.

Required Textbook

- Computer Security and the Internet: Tools and Jewels
- Author: Paul C Van Oorschot
- 2020, Springer International Publishing
- Hardcover ISBN 978-3-030-33648-6
- This book is as a hardcover (\$75-\$90), as an ebook (\$60) and amazon has kindle (\$72) and kindle rental for about \$25 through the quarter. It is relatively new so used copies may be harder to come by.

Additional required readings will be from freely available notes, papers and articles.

Workload:

Reading assignments, videos, practice exercises, homeworks. Homeworks include hands on programming in a Linux environment.

Assessment:

6 Homeworks (12 pts each; best 5 counted in grade -> 60 pts total)

Exam1, Exam2, Exam3 (20 pts each; best 2 counted in grade -> 40 pts total)

** note that 591 homeworks will differ from 491 homeworks. Be sure you do the right homework :) **

Policies

- This is a remote class. We will conduct zoom sessions at the scheduled times (Tues/Thurs 1640) that include lectures, group work, and announcements. Students are responsible for anything that transpires during a class.
- If an extraordinary situation (for example severe illness) prevents you from working for a period of time, contact the instructor as soon as possible to discuss your situation and arrange a special schedule or incomplete.
- Requests for regrading must be submitted to the instructor in writing within one week of the time the graded assignment was made available for pickup. You must be specific in saying why you feel the grading is incorrect. A request for regrade will result in a re-evaluation of the entire assignment and your total grade may increase or decrease as a result.
- Makeup exams will not be given except in cases of severe medical or family emergencies. Please note that travel (even work-related travel) is not considered an emergency. If an emergency arises and you miss the exam, contact the instructor *before the exam date and time* to arrange for a special circumstance.
- Mastery of Material: In order to pass this course, a score of 35% or higher must be earned on EVERY assignment. If this condition is not met, you will be given a grade of F for the course.

Academic Honesty

Students are prohibited from handing in work as their own which they did not create. This includes handing in assignments in which a substantial amount of the material was done by someone else. Students need to be especially careful that in the process of discussing problems with other students they do not inadvertently end up using someone else's work. Similarly, failing to cite a source that contributed substantially to the solution of a problem is also considered to be cheating. It is not necessary to cite the textbook for the course on your homeworks, other than for direct quotes. All other sources should be referenced precisely.

In the event a case of cheating is discovered, the student will automatically receive a score of zero (0) for that assignment or exam. Additional penalties may be applied by the Department, College, or University.

FEEDBACK

I value student's opinions regarding the course and I will take them into consideration to make this course as exciting and engaging as possible. Thus, through the semester I will ask students formal and informal feedback. Formal feedback includes short surveys on preferred teaching methods and pace of the class. Informal feedback will be in the form of polls or in-class questions regarding learning preferences. You can also leave anonymous feedback in the form of a note in my departmental mail box. Remember that it is in the best interest of the class if you bring up to my attention if something is not working properly (e.g. the pace of the class is too slow, the projects are boring, my teaching style is not effective) so that I can make the corrective steps.

Zoom, slack, and email ENVIRONMENT

I would like to create a learning environment for my students that supports a diversity of thoughts, perspectives and experiences, and honors your identities (including race, gender, class, sexuality, religion, ability, etc.) To help accomplish this:

If you have a preferred name and/or set of pronouns that differ from those that appear in your official PSU records, please let me know.

If you feel like your performance in the class is being impacted by your experiences outside of class, please don't hesitate to talk with me.

If something was said in class (by anyone) that made you feel uncomfortable, please let me know.

As a participant in course discussions, you should strive to honor the diversity of your classmates, and to treat everyone in the [zoom] room with respect.

We will use technology for virtual meetings and recordings in this course. Our use of such technology is governed by FERPA, the Acceptable Use Policy and PSU's Student Code of Conduct. Your instructor will not share recordings of your class activities outside of course participants, which include your fellow students, TAs/GAs/Mentors, and any guest faculty or community based learning partners that we may engage with. You may not share recordings outside of this course. Doing so may result in disciplinary action.

OUR HEALTH

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities. Portland State University is committed to advancing the mental health and well-being of its students. If you or someone you know is feeling overwhelmed, depressed, and/or in need of support, services are available. You can learn more about the broad range of confidential mental health services available on campus via <https://www.pdx.edu/health-counseling/>

SHAC also has resources for physical health, including flu shots. You can check out their COVID-19 resources page here: <https://www.pdx.edu/health-counseling/covid-19-resources> (including testing)

Access and Inclusion for Students with Disabilities

PSU values diversity and inclusion; we are committed to fostering mutual respect and full participation for all students. My goal is to create a learning environment that is equitable, useable, inclusive, and welcoming. If any aspects of instruction or course design result in barriers to your inclusion or learning, please notify me.

The Disability Resource Center (DRC) provides reasonable accommodations for students who encounter barriers in the learning environment.

If you have, or think you may have, a disability that may affect your work in this class and feel you need accommodations, contact the Disability Resource Center to schedule an appointment and initiate a conversation about reasonable accommodations. The DRC is located in 116 Smith Memorial Student Union, 503-725-4150, drc@pdx.edu, <https://www.pdx.edu/drc>.

- If you already have accommodations, please contact me to make sure that I have received a faculty notification letter and we can discuss your accommodations.