

General Information

Instructor

Matt Bishop

Office: 2209 Watershed Sciences

Office Hours: MWF 2:00pm–3:00pm

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When you send me email, please begin the subject with “ECS 153” so I see that the letter has to do with the class. I receive lots of email and, while I look at it all, I *sometimes* miss things, or skim the subjects to see which letters are very important. Putting “ECS 153” in the subject field will tell me it is important.

Teaching Assistant

- Ishan Jain (ishjain@ucdavis.edu);

Office Hours: Mon 2:00pm–3:00pm; Wed 2:00pm–4:00pm in Room 47 Kemper

Lectures

MWF 9:00am–9:50am in 212 Wellman

Discussion Sections

Section	Times	Room	TA
A01	Th 5:10pm–6:00pm	1128 Hart	Ishan Jain
A02	M 1:10pm–2:00pm	105 Wellman	Ishan Jain

Course Outline

Introduce principles, mechanisms, and implementations of computer security; learn how attacks work, how to defend against them, and how to design systems to withstand them

Course Goals

Some goals we hope you achieve:

- learn about security in the UNIX/Linux system and other programming environments;
- learn how to attack a system, and to defend it by analyzing the system for vulnerabilities and ameliorating those problems;
- understand the strengths, and weaknesses of cryptography as a tool of security;
- learn how access to systems, resources, and data can be controlled;
- learn the basics of writing security-related programs; and
- learn about security in networks.

Prerequisite

The prerequisites for this course are ECS 150, Operating Systems, and ECS 152A, Computer Networks. Students who have not taken these courses are at a serious disadvantage in this class, and will be dropped unless the instructor approves them taking the class. To make your case, please fill out the missing prerequisite request.¹ Explain what experience you have in the subject of the prerequisite you are missing.

Text

- Matt Bishop, *Computer Security: Art and Science*, second edition, Addison-Wesley Professional, Boston, MA, USA. ISBN 978-0-321-71233-2.

Class Web Site

The class web site is on Canvas. To access it, go to <http://canvas.ucdavis.edu> and log in using your campus login and password. Then go to ECS 153 in your schedule. Announcements, assignments, handouts, and grades will

¹It's on <https://photorosters.ucdavis.edu/prerequisites/>.

be posted there, and you *must* submit any assignments there. The alternate web site, <http://nob.cs.ucdavis.edu/classes/ecs153-2019-01> has everything except grades, and you cannot submit work there.

PTA Numbers

The department policy on issuing PTAs is available at <http://www.cs.ucdavis.edu/blog/pta-policy/>. If you need a PTA, please read that page, and follow the instructions there.

Exams

Midterm: Friday, November 1, *in class*

Final: Wednesday, December 11 at 10:30am–12:30pm

These will be closed book and closed notes exams. No early or late exam will be given; if you miss an exam for medical reasons (you *must* document this; no other excuses are acceptable), you may be allowed or required to take a make-up exam, or the other parts of the course will be counted proportionally more (the choice is the instructor's). In particular, forgetting the time or place of an exam is not an excuse for missing it!

Important Dates

First day of instruction: September 25, 2019

10-day drop deadline: October 8, 2019

Last day to add: October 10, 2019

Midterm exam: November 1, 2019

Last day to opt for P/NP grading: October 29, 2019

Last day of instruction: December 6, 2019

Final exam: December 11, 2019 from 10:30am–12:30pm

Grading

In this course, grades are assigned based on your overall score, which is out of 100 points. The letter grades, and the scores they are assigned to, are:

grade	%	grade	%	grade	%	grade	%	grade	%
		B+	87–89.99	C+	77–79.99	D+	65–69.99		
A	95–100	B	83–86.99	C	73–76.99	D	60–64.99	F	0–54.99
A–	90–94.99	B–	80–82.99	C–	70–72.99	D–	55–59.99		

Curve. The score of each assignment and exam will be curved. Enough points will be added to the highest score to set it to 100%, and the same number of points will be added to all submitted assignments. The final scores will *not* be curved.

Extra Credit. Extra credit is tallied separately and does not figure into the scores for assignments. At the end of the term, I will multiply the percent of the extra credit by 5 and add it into the overall score. So, for example, if you get 80% of the extra credit points, at the end of the quarter, your final score will be your overall score plus 4 ($= 80\% \times 5$).

Weighting. The weights of the assignments and exams are:

Homework assignments	30%
Lab assignments	20%
Midterm exam	20%
Final exam	30%

Academic Integrity

The UC Davis Code of Academic Conduct, available at <http://sja.ucdavis.edu/files/cac.pdf>, applies to this class. For this course, all submitted work must be your own. You may discuss your assignments with classmates or the instructor to get ideas or a critique of your ideas, but the ideas, words, and programs you submit must be your own. Unless *explicitly* stated otherwise, collaboration is considered cheating. Also, remember to cite, and give the source for, anything you copy or paraphrase, as is standard academic protocol. Plagiarism, even (especially) copying code from a book or the web without crediting it, is cheating.

The single exception to the rule against collaboration is debugging. *Once you have written your program*, if you need help debugging it, you are free to ask a classmate for help *providing that classmate has also written the program*.

(This should avoid any unintentional copying.) Sometimes having someone else look over a program that is not quite working right will lead you to the best way to fix it, and you both will gain valuable experience in looking at programs and figuring out what is going on. But you must not collaborate on writing the program.

Any cheating will be reported to the Office of Student Support and Judicial Affairs.