

General Information

Instructor

Matt Bishop
Office: 2209 Watershed Science
Office Hours: MWF 11:00am–11:50am; or by appointment; or by chance

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Teaching Assistant

Yeh-Cheng Chen
Office: *to be arranged*
Office Hours: Tu 4:00pm–5:00pm; W 3:00pm–5:00pm in 3106 Kemper

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Lectures and Discussion Section

Lecture: MWF 12:10pm–1:00am in 1062 Bainer
Discussion section: *to be arranged as needed*

Course Outline

Theoretical foundations of methods used to protect data in computer and communication systems. Access control matrix and undecidability of security; policies; Bell-LaPadula, Biba, Chinese Wall models; non-interference and non-deducibility; information flow and the confinement problem.

Course Goals

- Learn about the access control matrix model and its variants, and how it is used to analyze the security of classes of systems;
- Learn about the mathematics underlying security policies;
- Understand the composition of policies;
- Learn about the confinement problem and information flow; and
- Explore other topics of interest.

Prerequisite

ECS 235A, Computer and Information Security. ECS 150, Operating Systems, and ECS 120, Theory of Computation, are strongly recommended

Text

M. Bishop, *Computer Security: Art and Science*, 2nd Edition, Addison-Wesley Professional, Boston, MA (2018). ISBN 978-0-321-71233-2.

Class Web Site

To access the class web site, go to Canvas (<http://canvas.ucdavis.edu>) and log in with your campus login and password. Then go to ECS 235B in your schedule. I will post announcements, assignments, handouts, and grades there, and you *must* submit assignments there. The alternate web site, <http://nob.cs.ucdavis.edu/classes/ecs235b-2019-01>, has all the handouts, assignments, and announcements.

Grading

Homework is 50% of your grade and the project is 50% of your grade.

Important. The grade E-NWS (sometimes called NWS or NS), which stands for “No Work Submitted”, is *no longer a valid grade*. In cases where it would have been assigned in the past, we will give a grade of “F”. Please be sure you *drop* this class rather than submit no work!

Important Dates

First day of instruction: January 7, 2019
Last day to add: January 23, 2019
20-day drop deadline: February 4, 2019
Last day to opt for P/NP grading: February 11, 2019

Last day of instruction: March 15, 2019

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.

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 and words 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 is cheating.

Any cheating will be reported to the Office of Student Support and Judicial Affairs. They will deal with it appropriately.