General Information

Instructor

Matt Bishop   *Email*: mabishop@ucdavis.edu
Office: 2209 Watershed Science   *Phone*: (530) 752-8060
Office Hours: Tu 1:10pm–2:00pm, WF 2:10pm–3:00pm; or by appointment; or by chance

When you send me email, please *begin* the Subject field with "ECS 235B" 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 fall behind. When that happens, I skim the Subject fields to see which letters are very important. Putting "ECS 235B" at the beginning of the Subject field will tell me it is very important.

Teaching Assistant

Dechen Gao   *Email*: dcgao@ucdavis.edu
Office: by Zoom: *see the first announcement in Canvas for the link*
Office Hours: M 9:10am–11:00am, Th 9:10am–10:00pm

Lecture

Lecture: TuTh 10:30am–11:50am in 107 Cruess

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 or equivalent; ECS 150, Operating Systems, and ECS 120, Theory of Computation, or their equivalents, 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-2023-01, has all the handouts, assignments, and announcements.

Grading

There will be both homework and a project, which *tentatively* will each be weighted 50%. We reserve the right to change this. There will be no final examination.

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". So please be sure you *drop* this class rather than submit no work!

PTA (Permission to Add) Numbers

The department policy on issuing PTAs is available at `https://cs.ucdavis.edu/graduate/policies` and click on "PTA Process and Expectations". If you need a PTA, please read that and follow the instructions there. Note that I cannot issue PTAs; the department will decide if one should be issued, and then they will ask me if they should issue it.

Important Dates

First day of instruction: January 10, 2023
10-day drop deadline: January 23, 2023
Last day to add: January 25, 2023
Last day to opt for P/NP grading: February 13, 2023
Last day of instruction: March 16, 2023

Academic Integrity

The UC Davis Code of Academic Conduct, available at `https://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.

Remember to cite, and give the source for, anything you copy or paraphrase, as is standard academic protocol. Plagiarism is cheating and will be handled as such.

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

Change Log

January 18, 2023

- Changes office hours for instructor and TA from "*to be arranged*" to the current office hours.