

ECS 235B Module 1

Administrative Material

Let's Get the Hard Stuff Out of the Way

- Adding the class
 - The department policy controls who gets PTAs; it is available at <https://cs.ucdavis.edu/graduate/policies> (click on “PTA Process and Expectations”)
 - I can only issue PTAs in accordance with those directions (ie, only when *the department* asks me).

General Information

- Who we are
 - Instructor: Matt Bishop, mabishop@ucdavis.edu; office hours: *to be arranged*
 - TA: Muwei Zheng, mzheng@ucdavis.edu; office hours: *to be arranged*
- Goals:
 - Learn about the reference monitor and high assurance systems;
 - 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 and their composition;
 - Learn about the confinement problem and information flow; and
 - Explore other topics of interest.

General Information

- Prerequisites
 - ECS 235A (Computer and Information Security), or knowledge of security commensurate with it
 - Recommended: ECS 150 (Operating Systems); ECS 120 (Theory of Computation)
- Texts:
 - M. Bishop, *Computer Security: Art and Science*, 2nd Edition, Addison-Wesley Professional, Boston, MA (2018). ISBN: 978-0-321-71233-2.
 - *Recommended*: R. Anderson, *Security Engineering: A Guide to Building Dependable Distributed Systems*, 3rd Edition, John Wiley & Sons, Inc., New York, NY (2020). ISBN: 978-1-119-64281-7.

General Information

- Class Web Site
 - It's on Canvas; log in there, and go to ECS 235B
 - If you don't have access and need it, please email me and I will add you
 - This *does not* mean you will be admitted to the course!
 - Backup web site: <http://nob.cs.ucdavis.edu/classes/ecs235b-2025-02>
- Grading
 - Homework is 50% total, and I expect 4 or 5 equally weighted assignments
 - Project is 50%, weighted as described in the handout

General Information

- General UC Davis resources
 - Cover health and wellness, virtual classroom fatigue, etc.
 - You can also come to me and I will either help or suggest where you can get help
 - Web site: <https://ebeler.faculty.ucdavis.edu/resources/faq-student-resources/>
- Academic integrity
 - Paramount!!! And plagiarism is a violation of academic integrity
 - Follow the UC Davis Code of Academic Conduct
 - Available at <https://ossja.ucdavis.edu/code-academic-conduct>
 - I report cheating to the Office of Student support and Judicial affairs; they handle it appropriately

Homework

- Due at 11:55pm on the due date, unless stated otherwise
- Submit it on Canvas
 - We will give you comments and grades on Canvas too
 - None of this will be on the secondary web site; only on Canvas
- Don't be wishy-washy in your answer
- Write it in good English; be clear and concise
 - An example of a good answer is on the web site
- Submit PDF or text files *only*; do *not* submit other formats!
 - Other formats often don't render well across all systems

Homework

- Late policy: I will accept homework up to 9 week days late
 - You will lose 10% per weekday late
 - Example: your homework is due Monday and you turn it in Wednesday; that is 2 days late, so your actual score is 80% of what it would have been had you turned it in on time
 - Extensions granted on request, for good reason
- Extra credit
 - It is *not* added into your homework score
 - It is used only if your grade is on a borderline (for example, right between an A- and an A); it helps determine which one you get

Term Project

- Goal: get you to explore an area of security in depth
- It can be:
 - Detailed survey or research paper
 - Programming project on validating or working with some formalism
 - Implementing a policy model and formally verify your implementation is correct
- Key rule: ***pick something that interests you***
- Team size: no more than 5
 - If for some reason a team wants more than 5 people, talk to me about it
 - The larger the team, the more I will expect from it

Term Project

Due dates:

- *Project selection*: April 16, 2025; 10% of project score
- *Progress report*: May 7, 2025; 20% of project score
- *Final project*: June 6, 2025, by 3:00pm; 70% of project score

Only one team member should submit these

- *Be sure to name all team members in this submission!*
- Other team members should submit a short note saying who turned it in

Class

- Asking questions: speak up!
 - If you have a question, so does at least half the class
 - Remember, the only stupid question is the one you want answered and don't ask