General Information

Instructor

Matt Bishop   *Email*: mabishop@ucdavis.edu
Office: 2209 Watershed Sciences   *Phone*: (530) 752-8060
Office Hours: MW 2:00pm–3:00pm, F1:00pm–2:00pm

Teaching Assistant

Brian Perry   *Email*: ecs153spring15@gmail.com
Office: 55 Kemper Hall
Office Hours: M3:10pm–4:00pm, W4:10pm–5:00pm, F2:10–3:00pm

Lectures

MWF 12:10pm–1:00pm in 6 Olson

Discussion Section

M 4:10pm–5:00pm in 1309 Surge III

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 system and 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.

Text

M. Bishop, *Computer Security: Art and Science*, Addison-Wesley, Boston, MA (2003). ISBN 0-201-44099-7.

Computers

All registered students have been given an account on the computer science instructional machines in the basement (the Computer Science Instructional Facility, CSIF).

Class Web Site

The class web site is on SmartSite. To access it, go to http://smartsite.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 be posted there, and you *must* submit assignments there. The alternate web site, http://nob.cs.ucdavis.edu/classes/ecs153-2015-02 has everything except grades, and you cannot submit work there.

Homework

All homework is due at 11:55pm on the date stated on the homework, unless otherwise specified. The handout **All About Homework** discusses homework.

Extra Credit

Extra credit is tallied separately from regular scores. It counts in your favor if you end up on a borderline between two grades at the end of the course. But, not doing extra credit will never be counted against you, because grades are assigned on the basis of regular scores. You should do extra credit if you find it interesting and think that it might teach you something. Remember, though, it is not wise to skimp on the regular assignment in order to do extra credit!

Exams

Midterm: Wednesday, April 29 *in class*
Final:Wednesday, June 10 at 6:00pm–8:00pm
These will be open book/open notes exams (but no computers are allowed). 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!

Grading

Homework 25%		Midterm Exam 25%	
Programs 25%		Final Exam 25%	

Academic Integrity

The UC Davis Code of Academic Conduct, available at `http://sja.ucdavis.edu/cac.html`, applies to this class. In particular, for this course:

- All work submitted for credit must be your own. You may discuss your assignments with classmates, with the instructor, or with the teaching assistant in the course 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 and will be dealt with accordingly.
- For written homework, you must write up your own solutions and may neither read nor copy another student's solutions.
- For programs, you must create and type in your own code and document it yourself. Note that you are free to seek help while debugging a program once it is written.

A good analogy between appropriate discussion and inappropriate collaboration is the following: you and a fellow student work for competing software companies developing different products to meet a given specification. You and your competitor might choose to discuss product specifications and general techniques employed in your products, but you certainly would not discuss or exchange proprietary information revealing details of your products. Ask the instructor for clarification beforehand if the above rules are not clear.