General Information

Instructor Matt Bishop, 3059 Engineering Unit II; *Phone*: 752-8060;

Email: bishop@cs.ucdavis.edu; Web page: http://seclab.cs.ucdavis.edu/~bishop

Office hours: M 1:30-2:30PM, Th 11:00AM-12:00 noon, by appointment or by chance

Teaching Assistants Jennifer Burton, office hours and location to be arranged

Assistants Em

Email: burton@cs.ucdavis.edu

Lectures

MWF 10:00AM-10:50AM in 184 Young

Discussion Section Section 153-001: W 1:10PM-2:00PM in 107 Cruess

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:

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

Prerequisites

The prerequisites for this course are ECS 150, Operating Systems, and ECS 152A, Computer Networks. Students who have not taken these courses are *strongly* advised to consider taking this course after they have fulfilled those prerequisites. They will be at a serious disadvantage in this 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. Change your password as soon as you can; if it is not changed within a week, your account will be disabled and you will have to see a system programmer to have it reset.

Class Web Site

The class web site is on *MyUCDavis*. To access it, go to http://my.ucdavis.edu and log in using your campus-wide login and password. Then go to ECS 153 in your schedule. Handouts and other documents will be posted there. We will also post announcements there, too.

Class Newsgroup Information about this class, homework assignments, and so forth, will be posted to the newsgroup *ucd.class.ecs153*. Read this newsgroup daily! **You are responsible for everything posted to these newsgroups.** We'll use it to put out important information. Please do not post to this newsgroup. If you want to post things about the class, please use the appropriate discussion newsgroup (*ucd.class.ecs153.d*). Discussing something in that newsgroup is perfectly fair.

Homework

Homework is due at noon on the date stated on the homework, unless otherwise stated. See the handout **All About Homework** for more information.

Extra Credit

Extra credit in this course will be tallied separately from regular scores. If you end up on a borderline between two grades at the end of the course, extra credit will count in your favor. However, failure to do 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!

Grading 30% Homework 25% Midterm exam

20% Term Project 25% Final exam

Exams Midterm — Monday, November 3, during class

Final — Tuesday, December 9, 4:00PM—6:00PM

These are open book/open 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!

Academic Integrity

Please see the *Fall 2003 Class Schedule and Room Directory* for a general discussion of this. In particular, for this course:

- All work submitted for credit must be your own unless explicitly stated otherwise in the assignment. You may discuss your assignments with classmates, with instructors, or with teaching assistants or readers to get ideas or a critique of your ideas, but the ideas and words you submit must be your own. Unless explicitly stated otherwise in the assignment, 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 or teaching assistant for clarification *beforehand* if the above rules are not clear.