General Information

Instructor Matt Bishop; Office: 3059 Kemper Hall; Phone: 752-8060

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Office Hours: TuW10:00AM—11:00AM, F1:00PM—2:00PM, by appointment, or by chance

Teaching Till Stegers; Email: stegers@cs.ucdavis.edu; Assistant Office Hours: TuTh1:00PM—3:00PM

Lectures MWF 4:10—5:00 PM in 126 Wellman

Discussion Section 001: W 8:00—8:50 AM in 107 Cruess **Sections** Section 002: W 12:10—1:00PM in 106 Olson

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.

Prerequisite

The prerequisite for this course is ECS 150, Operating Systems. Students who have not taken, or are not taking, this course are at a serious disadvantage in this class and will be dropped to make room for those who have had the prerequisites.

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. If you have not done so already, please change your password from the default 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. If you do not have access to MyUCDavis, you can go to the alternate web site at http://nob.cs.ucdavis.edu/classes/ecs153-2006-01. You can download the handouts from that site, but you cannot look at your grades there.

Class Newsgroup Information about this class, homework assignments, and so forth, will be posted to the newsgroup *ucd.class.ecs153*. Read this newsgroup daily! We will 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

All work is due at 11:55PM 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

| Homework | 25% |
|--------------|-----|
| Project | 35% |
| Midterm Exam | 20% |
| Final Exam. | 20% |
| | |

Exams

Midterm: Friday, February 10, in class

Final: Saturday, March 18, 8:00AM—10:00AM

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 *Winter 2006 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. You may discuss your assignments with
 classmates, with instructors, or with teaching assistants or readers 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.