Computing Security

CS 325
Fall 2006

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Office hours: MWThF 10:30–11:20am. Other times by appointment.

Class: Hoffberger 149
MWF 1:30–2:20pm
`http://phoenix.goucher.edu/~kelliher/f2006/cs325/`

Objectives: Our objective is to survey the landscape of security in the computing domain. Starting with cryptography, we will move along to security in small systems, advancing through various systems of intermediate size, and finishing this segment with network (Internet) security. We will conclude with a consideration of security policies.

Textbook: C. P. Pfleeger and S. L. Pfleeger, "Security in Computing," 3rd ed., Prentice Hall, 2003. Required.

Grading: **Grade Distribution**

A = [92%–100%], A- = [90%–92%), B+ = [88%–90%), B = [82%–88%), B- = [80%–82%), etc. Grades are "one point rounded."

Course Point Distribution

The following is tentative. There are 900 total points for the course.

1. Individual assignments. There will be one programming assignment and two written assignments, 100 points each. 300 points, total.

2. Group semester project. 300 points.

3. Presentation. 10–15 minute PowerPoint presentation on a computing security topic. 100 points.

4. Exams. There will be two semester exams, each worth 100 points. Tentatively, the exams will be Oct. 16 and Nov. 29. 200 points, total.

Current grades (password protected) may be viewed on the class home page.

Course Handouts:

Course handouts will be made available once in class. After that, they may be obtained from the class home page.

Group Work: This course involves a significant amount of group work. Each of you is expected to perform your fair share of the work and document the work you do. Those who shoulder substantially more or less of the group's workload may have their grades adjusted accordingly.

Attendance: Attendance of classes is expected. It is your responsibility to catch up on missed class work.

Electronic Communication:
From time-to-time, I will need to send e-mail messages to the class. These messages will be addressed to your official Goucher e-mail addresses. You are responsible for checking your e-mail on a timely basis.

Distractions: Cell phones must be turned off or set to "silent" during class. If you must enter late, do so as unobtrusively as possible. Likewise if you must leave early. Please use mental telepathy if you must hold a personal conference during class. I have ways of making you not talk!

Integrity: Academic dishonesty will not be tolerated. We are all bound by the Academic Honor Code.

Tentative Outline:

1. Introduction, Ch. 1.
2. Cryptography I, Ss. 2.1–2.4.
3. Cryptography II, Ss. 2.5–2.8.
4. Programs I, Ss. 3.1–3.3.
5. Programs II, Ss. 3.4–3.5.
6. Operating Systems I, Ss. 4.1–4.3.
7. Operating Systems II, Ss. 4.4–4.5. Exam I.
8. Trusted Operating Systems I, Ss. 5.1–5.3.
9. Trusted Operating Systems II, Ss. 5.4–5.6.
10. Databases I, Ss. 6.1–6.4.
11. Databases II, Ss. 6.5–6.7.
12. Networks I, Ss. 7.1–7.3.
13. Networks II, Ss. 7.4–7.6. Exam II.
14. Policy Considerations, Ch. 8.

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