CS530
Security Systems
Bill Cheng

http://merlot.usc.edu/cs530-s10
Today’s Topics

- Placement Exams
  - Replaces the old Diagnostic Exam
  - See web site for details

- Administrative Stuff
  - The instructor cannot give D-clearance
  - If you would like a D-clearance, please use the on-line D-clearance system
  - I will waived CS 402 pre-requisite if class is not full

- Review Course Organization

- Review Topics

- HW1

- Introduction
Class Structure

TuTh 9:30am - 10:50am in OHE 100D

Instructor: Bill Cheng
- Email: bill.cheng@usc.edu (24 hour turn-around)
- Office Hours: M/Tu/Th 2:00pm - 3:00pm or by appointments in SAL 228

TA: Leslie Cheung
- Email: lccheung@usc.edu (24 hour turn-around)
- Office Hours: (TBD)

Grader: (TBD)
- Email: (TBD) (24 hour turn-around)
- Will hold office hours after grade notification
Class Resources

Class web page: http://merlot.usc.edu/cs530-s10
- Lecture notes posted here soon (hopefully) after class
- Homework assignments (programming)
- Reading list
- News section
- You should check this site regularly

Google group
- Student-to-student discussions about programming assignments
- Exchanging ideas are allowed
- Posting code is not allowed (short code segments to illustrate ideas are allowed; short means < 5 lines)
- Instructor & TA will also post answers to questions here
  - if appropriate for whole class
Course Readings

- Textbooks, not required
  - B. Schneier
    - may be out of print
  - Matt Bishop
    "Computer Security: Art and Science"

- Research Papers
  - Available online
  - About 15 papers
    - may add papers as we go along

- Lectures based on textbooks
  - slides
  - lectures should be interactive
Grading

- HW 30% 3 to 4 assignments (some programming)
- Lab 10% 10 assignments (hands-on)
- Paper 10% 5-page extended abstract
- Rowcall 3% starting with 4th week of classes
- Midterm 22% in class, Thu, 3/4/2010 (firm)
- Final 25% 8:00am - 10:00am, Tue, 5/11/2010 (firm)

No extra credit
- Try your best from the beginning

HWs graded by the grader, termpaper proposal approved by the TA, termpaper and exams graded by the instructor
Grading (cont...)

Final grade assigned by the instructor
- On a curve, class average is probably a B+
- C’s will likely be given, F’s if necessary
- Loose guideline depicted below:
Grading (cont...)

Fairness

- Without fairness, grades have little meaning
- The instructor must treat all students equally and cannot give special treatment to any particular student
- Therefore, please do not ask special favors from the instructor because of your circumstances (except for ones that are explicitly allowed by the university)
- This may seem unfair to you because you believe that your circumstances are special (understandably, everyone does)
- But the rule the instructor must follow is that whatever he offers you, he must offer to the entire class
Sign Row Sheet

For *on-campus* students only

- If you are enrolled in the DEN section, you are not required to sign row sheets
- DEN students normally have a slight disadvantage that they can miss stuffs happening in the class
  - this is served as an "equalizer"

Starting from *week 4*, each lecture is worth 1 point

- You should sign the row sheet as soon as you get into class
- If you come in between 9:41am and 10:00am, check *late* box
- If your signature is on the row sheet, you get the 1 point
  - provided that you do not leave before class ends
- If you have to leave before class ends, please e-mail me to have your signature removed or to get only half a point
- If you are sick or have a family emergency, please bring a note from a doctor to receive credit
HW Assignments

- HW
  - Small programming assignments
    - OpenSSL
    - C/C++ only
    - must compile and run on nunki.usc.edu
    - Makefile - make must work as is
    - many requirements, please see specifications
    - Electronic submission - gzipped tar of your source and documentation files
  - Must be done individually
  - You need to learn to be very precise
    - know every bit that you are reading and writing
    - know exactly what each function is doing and the meaning of all its return codes
HW Assignments (Cont...)

Grading of HW assignments will be *harsh*
- *Grading guidelines* will be posted one week before assignment due date
  - you do not get credit for simply coding, you get credit for making sure your code works according to spec
- We can only grade from our *grading account on nunki*
  - test your code from someone else’s account
  - you are expected to check the running of your code against the grading guidelines
  - you should score *perfectly* since you know exactly how we will grade
- *Do* expect "double jeopardy"
Termpaper

- E-mail proposal by deadline
  - to get your 3 references approved
  - strict requirements, please see the spec
  - to get some feedback from the TA
  - will lose 20% of termpaper grade if miss deadline
- 5 page extended abstract
  - references may flow onto page 6
- You are welcome to start now
- Acceptable formats are PDF and HTML
  - proprietary formats such as MS-Word or human-unreadable formats such as LaTeX source will be rejected
- Must be done individually
Lab

Lab lectures: Fri 4:00pm - 4:50pm in RTH 105
  → make sure you attend the first lecture for administrative information

Lab TA: David Morgan
  → Email: davidmor@usc.edu

Lab Grader: Ranjeet Sangle <sangle@usc.edu>

There will be 10 lab assignments
  → each lab is worth 1 point (pass/fail)
  → you must complete 8 out of 10 labs
  → the only possible total scores for the lab are 0, 8, 9, and 10

Lab web page is at: http://www-scf.usc.edu/~csci530l/
Assignment Submissions

Use `bsubmit` and the *Bistro* system (see web page for details)

- Very important: *read output of bsubmit*
- Very important: *verify your submissions*
  - see the bottom of the Electronic Submission Guidelines web page for details
  - if you forget a file, you are not allowed to resubmit it after the deadline
- Please do not delete or alter anything in your `~/.bistro` directory. If you must delete your `~/.bistro` directory, you must tar then gzip the content of your `~/.bistro` directory and e-mail the resulting tgz file to the instructor:

  ```sh
cd; tar cvzf $(USER)-bistro.tgz .bistro
  ```

Delete the directory only after you get an confirmation e-mail from the instructor (or at your own risk)
Late Policy

Electronically Submitted Assignments

- You can submit multiple times, only the last on-time submission will be graded (unless you send us e-mail)
- 15 minutes grace period
- 75% of your score if within one day late beyond grace period
- Although in the first 50 minutes of this period, you will only lose 1% of your grade every 2 minutes
- 0 otherwise
- Time is based on Bistro server timestamp

Extension *only possible* if you have a *note from a doctor* or other form of official proof of family emergencies
- e.g., scheduling conflict with *work* will not be excused
After the submission deadline has past

- You are allowed up to 3 lines of free changes, submitted via e-mail to the instructor, within 24 hour of the project submission deadline
  - clearly, this is not meant for major changes
  - you may want to anticipate that your submission may not be exactly what you thought you had submitted
- One line (128 characters max) of change is defined as one of the following:
  - **add** 1 line before (or after) line x
  - **delete** line x
  - **replace** line x by 1 line
- Additional modifications at 3 points per line (same deadline)
- (cont...)
Modifications After Deadline (cont...)

After the submission deadline has past (cont...)

- Afterwards, additional modifications cost **12 points per line** for the next 6 days
- Afterwards, it costs **30 points per line**
- Applies to source code, Makefile, and README files
  - do not forget to submit a file, **verify** your submission
- Try things out before your first submission deadline to get familiar with the **Bistro** system
- **Retest** your code after you have submitted
Regrade Policy

- Grades will be sent to individuals via e-mail
  - You must register for the class mailing list

- Regrade requests in writing
  - Submit within 1 week of initial grade notification
    - must follow instruction in grade notification e-mail
  - Regrade can be done after the 1-week deadline, but you must initiate a regrade request within 1 week
  - We reserve the right to regrade the whole thing
Scheduling Conflicts

- **Midterm Exam**
  - scheduling conflict with midterm exam must be resolved with the instructor at least one week before the exam

- **Final Exam**
  - scheduling conflict with final exam means
    1) you have another exam that overlaps in time with our final exam
    2) you have two or more other final exams on the same day
  - if you only have another final exam on the same day is *not* considered a scheduling conflict
  - scheduling conflict with *work* is *not* considered a scheduling conflict
  - Documented illness will get an incomplete grade
Academic Integrity Policy

- The USC Student Conduct Code prohibits plagiarism
- All work submitted for the class is to be done individually
- Code fragments obtained from public sources (or code derived or adapted from them) must be explicitly cited to give credits
- Code fragments obtained from private sources (or previous semesters) are not allowed
- Code fragments done by yourself for other classes must be cited explicitly
- For more details, please see the Academic Integrity Policy section on the Course Description web page
Academic Integrity Policy (Cont...)

- You are encouraged to work with other students
  - "work with" does not mean "copy each other’s work"
  - "work with" means discussing and solving problems together
    - this should happen at a high level
  - but be very careful when it’s time to write code
    - must write code completely on your own
    - do not write code together

- If you cannot work together at a high level
  - you are advised not work together with other students
Program Checker

Do not submit someone else’s code

How do we catch cheaters?

- We use MOSS to analyze your submissions
- Analyzes code structure intelligently
- We also have *all* projects from several previous semesters
Student Commitments

- Keep up with your reading
  - Complete relevant reading before class
  - Browse lecture slides before class
    - lecture slides will be available on-line before class

- Do your own work

- Turn in assignments on time

- Ensure gradable assignments
  - Programs must work on nunki.usc.edu

- You are encouraged to study with other students and **discuss** (no sharing) programming assignments

- You are encouraged to ask questions, pretty much about anything related to programming
Student Commitments (Cont...)

If you feel that you are falling behind
- Talk to the instructor as soon as possible

When you get stuck with programming
- Ask the TA or the instructor for help
- Don’t wait too long

Please do not ask these questions in e-mails:
- Here is my understanding of X. Am I right? Is this correct?
  - find a different way to ask
- I don’t understand X. Could you explain X to me?
  - if you attended lectures, you can ask this during office hours
- Here is what I am thinking of or doing... is it acceptable (or is this okay)?
  - can you ask this during exams?
Study for Exams

- Exams mostly are based on lectures
  - Although I reserve the right to ask anything from required reading

- Exam questions are often of the form "in N words or less, please give the best answer for the following question"
  - you must choose your answer and put it at the beginning of your answer
  - generic answer usually gets you very little partial credit
  - better answer may get you more points

- Do not review all lectures only right before the exams
  - otherwise, you may only be able to give generic answers because everything is a blur
  - you need to show that you know the difference between answers of different quality
Things to Do *Today*

- Read class web page: [http://merlot.usc.edu/cs530-s10](http://merlot.usc.edu/cs530-s10)
  - Check course description and reading list
- Register yourself from the class home page to get on the *class mailing list*
- Check HW1 spec and *start coding*

**Course Content Credit**

- Slides and course content from:
  - Dr. Clifford Neuman
  - Dr. Brian Tung