Course Description
This course examines the intersection between computer design and information security. While performance and efficiency in digital systems have improved markedly in recent decades, computer security has worsened overall in this time frame. To understand why, we will explore the role that design choices play in the security characteristics of modern computer and network systems. Students will use and write software to illustrate mastery of the material. Projects will include identifying security vulnerabilities, exploiting vulnerabilities, and detecting and defending against exploits.

Prerequisites
CSE 361S or instructor approval

Times and Locations
Days: Mondays and Wednesdays  Time: 1 – 2:30 PM  Location: Urbauer 218

Instructor Info
Jonathan Shidal  Office: Jolley 214  Email: shidalj@wustl.edu

Office hours: Monday 4-5 PM, as well as anytime my door is open or by appointment

Calendar
You can find a general outline of topics covered here. Please refer to Piazza for lecture notes and assignment details.
Piazza
We will be primarily using Piazza and Google Docs in this course. Please sign up for the course Piazza page here. Throughout the semester you will find lecture notes and assignments on Piazza. Please also use Piazza for discussion.

Resources
Primary Textbook:


Other texts, videos and software will be drawn from web sources.

Exams
There will be no exams in this course

Assignments
Most classes are accompanied by a reading assignment. The discussion board will be used to discuss the reading assignments. Piazza

There will also be in class exercises as well as 4 homework assignments throughout the semester.

Grading
This course will follow a traditional grading scale (90 – 100 is an A, 80 – 89 is a B, …) with + and – qualifiers as needed near the boundaries.

For students taking the course pass/fail, a D or better in the course is required for a passing grade.
Assignments will be worth 80% of your grade, participation will make up the remaining 20%. The exact grading breakdown is below:

HW 1: 10%

HW 2: 10%

HW 3: 20%

HW 4: 40%

In class exercises and participation: 20%

Cheating

(From Undergraduate Programs catalog, p. 16) You are expected to maintain the highest standards of academic integrity and refrain from the forms of misconduct spelled out in the University Academic Integrity Policy, which is published in full in Bearings and elsewhere. Violations will lead to disciplinary action and may result in suspension or expulsion from the University.

Students and faculty have an obligation to uphold the highest standards of scholarship. Plagiarism or other forms of cheating are not tolerated. When a student has violated the standards of the academic community, an instructor may recommend that the student be brought before a disciplinary committee. These are the most frequent areas of violation:

- failure to use adequate means of documentation in written reports or essays, resulting in plagiarism
- unpermitted use of either prepared notes or the work of other students while taking a test
- alteration of test materials that are submitted for regrading
- collaboration with other students in preparing assignments, when not approved by the instructor.

Findings of academic misconduct may result in a written reprimand, failure of an assignment or course, disciplinary probation, withdrawal of merit-based scholarship support, or other sanctions. Severe or repeat offenses may be referred to the University Judicial Board for consideration of suspension or expulsion.
Disability Resources

Students with disabilities or suspected disabilities are strongly encouraged to both bring any additional considerations to the attention of the instructor and make full use of the University’s Disability Resource Center (http://disability.wustl.edu).