

CSC 682—Advanced Computer Security

Fall 2008
W 6:15-9:00pm

Instructor Information

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Summary

Description : Advanced topics in computer security including selections from the following areas: access control, cryptology of modern ciphers, critical infrastructure protection, information warfare, intrusion detection, language-based security, security protocols, software security, steganography, and usable security. This semester the course will focus on web-based security issues.

Prerequisites : CSC 582. Students need to have sufficient background in security to understand recent papers in computer security. Students lacking this background will need to supplement the readings with additional background material.

Textbooks : Readings will be taken from research papers and a variety of online sources. There is no textbook.

Course Goals

A successful student should be able to

1. List key research problems in computer security.
2. Identify important techniques for solving computer security problems.
3. Evaluate proposed solutions to computer security problems.
4. Discuss and present analyses of computer security papers.

Grading

Your grade in the course will be calculated as follows:

class participation	10%	A	→	90	–	100
paper responses	20%	B	→	80	–	89
discussion leadership	20%	C	→	70	–	79
assignments	20%	D	→	60	–	69
term paper	30%	F	→	0	–	59

Class participation is essential in a seminar class. To help you prepare for class, you will submit a 1-2 paragraph response for each paper at the beginning of class. The response should answer the following questions:

1. What problem does this work attempt to solve?
2. What are the most important novel contributions described in the paper?
3. Are the conclusions supported by the evidence?
4. What other explanations exist for the conclusions?
5. What modification would most significantly improve the research?

The instructor may add additional questions specific to individual papers when certain features of the papers need emphasis. You may miss one class period without receiving any penalty to your class participation grade.

There will be a discussion leader assigned for each paper. The discussion leader will need additional preparation beyond what is needed for class discussion, which will include additional reading that will typically include but not be limited to the references cited in the paper. The discussion leader will give a short presentation at the beginning of the discussion, which must be submitted to the instructor the day before the class session in which the presentation will be given. Each student will have the opportunity to be the discussion leader for multiple papers over the course of the semester.

Assignments will typically focus on evaluating and improving the security of systems. The term paper is the largest component of the grade for the course. Topics must be approved by the instructor. Papers will be presented to the class during the last two weeks of the semester.

Students with Disabilities

Students with disabilities who require accommodations (Academic adjustments, auxiliary aids or services) for this course must register with the Disability Services Office. Please contact the Disability Service Office immediately in the University Center, Suite 320 or call 859-572-6373 for more information. Verification of your disability is required in the Disability Services Office for you to receive reasonable academic accommodations. Visit our website at <http://www.nku.edu/~disability/>.

Academic Dishonesty

The work that you submit in this course is subject to Northern Kentucky University's Student Honor Code (see <http://www.nku.edu/~deanstudents/documents/StudentHonorCode-Fall2007.pdf>.) Issues involving academic dishonesty are taken very seriously by this instructor and are dealt with according to College and Department policy. Academic dishonesty includes but is not limited to:

1. Improper access to evaluation material or records.

2. Submission of material which is not the student's own work.
3. Conduct which interferes with the work or evaluation of other students.

Some specific examples of dishonesty include:

1. Copying from another person, book, magazine, or other electronic or printed media.
2. Obtaining another person's exam answer or answers.
3. Assisting another student in submitting work that is not the student's own.

It is unacceptable to share program code. It is unacceptable to share homework solutions. It is acceptable and often a good idea to talk about program algorithms and homework solution strategies, but it is not acceptable to use the same code or code segments, or to share actual solutions to homework problems. Any act of academic dishonesty will result in a grade of zero (0) for that item for the first occurrence. An automatic F in the course will result for the second offense. This policy holds for homework assignments and programs, as well as for tests. In order to be fair, penalties will be applied to all parties involved regardless of culpability or fault.

Course Calendar and Class Structure

See the course web site, <http://faculty.cs.nku.edu/~waldenj/classes/2008/fall/csc682/> for a current course schedule.

The instructor reserves the right to alter this syllabus if he deems it to be necessary.