CprE 431 Basics of Information System Security
Department of Electrical and Computer Engineering
Spring 2015

Catalog Listing: Introduction to and application of basic mechanisms for protecting information systems from accidental and intentional threats. Basic cryptography use and practice. Computer security issues including authentication, access control, and malicious code. Network security mechanisms such as intrusion detection, firewalls, IPSEC, and related protocols. Ethics and legal issues in information security. Other selected topics. Programming and system configuration assignments. Nonmajor graduate credit. (3-0) Cr. 3

Prerequisites: credit or enrollment in CPR E 489 or COM S 454

After taking the course students will be able to:
- Explain fundamental security concepts
- Understand and utilize encryption and the corresponding algorithms
- Design secure systems and identify system threats
- Apply security knowledge to legal and ethical issues

List of Topics:
- Security Concepts
- Encryption
- User Authentication
- Access Control
- Policy Models
- Secure Systems Engineering
- Computer System Threats
- Network Security
- Legal and Ethical Issues

Lecture: Coover 1012
9:30-10:50 a.m. TTh

Instructor: Julie Rursch, Department of Electrical and Computer Engineering
207 Nuclear Engineering (NucE)
Iowa State University
Phone: 515/294-2803
Email: jrursch@iastate.edu **** Best way to communicate with me
Office Hours: Dr. Rursch  1-2 TTh in NucE 207 (let me know ahead of time)  
other times by email appointment


You may either purchase the physical textbook from the bookstore or you may rent the eTextbook from Pearson. If you opt for the online version, you get 180 days of use for about $50.

Website: In addition to the textbook given above, Blackboard will be used (http://bb.its.iastate.edu).

Grading: Your grade for the course is based upon two exams (a mid-term and a final), a number of labs/homeworks, and a current security issue problem/solution paper/presentation. The grade is determined as follows

40% exams
30% homeworks/labs
30% current security issue paper/presentation

The letter grades will be assigned based on the ranges below:
A  93 to 100%
A- 90 to less than 93%
B+ 87 to less than 90%
B  83 to less than 87%
B- 80 and less than 83%
C+ 77 and less than 80%
C  73 and less than 77%
C- 70 and less than 73%
D+ 67 and less than 70%
D  63 and less than 67%
D- 60 and less than 63%
F  0 and less than 60%

Homework: Homework and labs are due on the date stated when assigned. Homework received late will not be accepted unless an agreement is made prior to the due date.

Homework must be either typewritten or very neatly handwritten. Illegible homework will not be graded.

Homework will be turned in electronically unless otherwise specified. The format to be uploaded to Blackboard will be explained in the homework. The type of homework or lab will dictate what electronic format I will ask for. I may ask for source code, a pdf of a paper and pencil assignment, or screen shots in a pdf. I will make sure the lab specifies what you need to upload.
Final Exam: Our final exam will be as listed at the Registrar’s final exam schedule.
http://www.registrar.iastate.edu/students/exams/springexams

Paper: Additional information will be provided when the paper topics are selected.

Academic Dishonesty: The class will follow Iowa State University’s policy on academic dishonesty. Anyone suspected of academic dishonesty will be reported to the Dean of Students Office. www.dso.iastate.edu/ja/academic/misconduct.html

Disability Accommodation: Iowa State University is committed to assuring that all educational activities are free from discrimination and harassment based on disability status. All students requesting accommodations are required to meet with staff in Student Disability Resources (SDR) to establish eligibility. A Student Academic Accommodation Request (SAAR) form will be provided to eligible students. The provision of reasonable accommodations in this course will be arranged after timely delivery of the SAAR form to the instructor. Students are encouraged to deliver completed SAAR forms as early in the semester as possible. SDR, a unit in the Dean of Students Office, is located in room 1076, Student Services Building or online at www.dso.iastate.edu/dr/. Contact SDR by e-mail at disabilityresources@iastate.edu or by phone at 515-294-7220 for additional information.

Dead Week: This class follows the Iowa State University Dead Week policy as noted in section 10.6.4 of the Faculty Handbook http://www.provost.iastate.edu/resources/faculty-handbook.

Harassment and Discrimination: Iowa State University strives to maintain our campus as a place of work and study for faculty, staff, and students that is free of all forms of prohibited discrimination and harassment based upon race, ethnicity, sex (including sexual assault), pregnancy, color, religion, national origin, physical or mental disability, age, marital status, sexual orientation, gender identity, genetic information, or status as a U.S. veteran. Any student who has concerns about such behavior should contact his/her instructor, Student Assistance at 515-294-1020 or email dso-sas@iastate.edu, or the Office of Equal Opportunity and Compliance at 515-294-7612.

Religious Accommodation: If an academic or work requirement conflicts with your religious practices and/or observances, you may request reasonable accommodations. Your request must be in writing, and your instructor or supervisor will review the request. You or your instructor may also seek assistance from the Dean of Students Office or the Office of Equal Opportunity and Compliance.

Contact Information: If you feel that any of your rights as a student have been violated, email academicissues@iastate.edu
# Tentative Schedule

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