

Emerging Topics in Network Security

Syllabus

1. Instructor:

Dr. Yao Liu,
Office: ENB 336
Phone: 813-974-1079
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URL: <http://www.cse.usf.edu/~yliu/>
Office hour: MW 1:45pm – 3:15pm
Class meetings: MW 2:00pm – 3:15pm in CPR 251

2. Teaching Assistant:

Mr. Tao Wang,
Office: ENB 213
Email: taow@mail.usf.edu
Office hour: TBD

3. Course Objectives:

This course covers advanced cryptography and authentication techniques to be applied in modern networked systems, wireless systems, and cyber-physical systems. By the end of this course, students will be able to list the common threats and vulnerabilities of networked systems, describe network security primitives, and understand the authentication protocols. Student will also learn recent research advances towards the security of these systems, including physical layer authentication, anti-jamming techniques, false data injection attacks, etc.

4. Text:

- No textbook is required.
- Handouts (Lecture slides and reading papers)

5. Coursework and evaluations:

- Homework assignments (15%)
- Summaries of assigned papers (30%)
- In-class paper presentation (20%)
- Course project (25%)
- Quiz and attendance (10%)

Homework assignments, paper summaries, and project report must be typed using a text editor.

6. Grading:

The final grades are computed according to the following rules:

- A+: $\geq 99\%$
- A: $\geq 95\%$ and $< 99\%$
- A-: $\geq 90\%$ and $< 95\%$
- B+: $\geq 85\%$ and $< 90\%$
- B: $\geq 80\%$ and $< 85\%$
- B-: $\geq 75\%$ and $< 80\%$
- C+: $\geq 66\%$ and $< 75\%$
- C: $\geq 63\%$ and $< 66\%$
- C-: $\geq 60\%$ and $< 63\%$
- D+: $\geq 56\%$ and $< 60\%$
- D: $\geq 53\%$ and $< 56\%$
- D-: $\geq 50\%$ and $< 53\%$
- F: $< 50\%$.

7. Policies on incomplete grades and late assignments:

Late homework assignments and paper summaries will be accepted until the solution is posted or the paper is discussed in class. A 15% reduction in grade for each day applies.

8. Policies on absences (excused and unexcused) and scheduling makeup work:

There will be no makeups for homework assignments, paper summaries, and course project. Make-up quizzes will not normally be permitted. Exceptions will be made if a student presents a police report or a doctor's note that show some emergency situation.

9. Course prerequisites:

It would be helpful if you have a rudimentary understanding of computer networks and security.

10. Academic integrity:

The university policies against academic dishonesty will be strictly enforced. You may find the University's policies on academic integrity from the following URL.

<http://usfweb2.usf.edu/ethics/ai5/10.html>

The instructor expects a student to complete his/her tests, projects and assignments without violating academic Integrity. For undergraduate students, any cheating or

plagiarizing will result in an F grade for this class. For graduate students, any cheating or plagiarizing will result in an FF grade for this class.

11. USF policy on working with students with disabilities:

Reasonable accommodations will be made for students with verifiable disabilities. In order to take advantage of available accommodations, student must identify himself or herself to Students with Disabilities Services and provide documentation of a disability. For more information on USF's policy on working with students with disabilities, please see

<http://www.sds.usf.edu/index.asp>

**Every part of this syllabus is subject to adjustment as the semester progresses. If you are dissatisfied with the course policies, grading, and assignments, please contact the instructor. Reasonable requests for modifications may be accommodated at the instructor's discretion.*