University of Delaware

Department of Computer and Information Sciences

CISC859 — Advanced Topics in Communications, Distributed Computing Networks: Network & Distributed System Security   Spring 2017

SYLLABUS—GENERAL INFORMATION

Course:	CISC 464/664: Advanced Topics in Communications, Distributed Computing Networks: Network & Distributed System Security (Spring 2017), Section 011, Credits: 3 Meeting time: 11:00AM–12:15PM Tu/Th Meeting Location: Memorial Hall 126
Instructor:	Dr. Rui Zhang Office: Smith Hall 448 Email: `ruizhang@udel.edu` Phone: 302-831-2010 (please do not leave voice messages) Webpage: https://www.eecis.udel.edu/ ruizhang/ Office Hours: 9:30AM-10:30AM Tu/Th or by appointment via email
Syllabus Change:	Except for changes that substantially affect implementation of the evaluation (grading) statement, this syllabus is a guide for the course and is subject to change with advance notice.
Prerequisite:	CISC650, or similar courses. Please discuss with me if you do not meet the requirements.
Textbook:	There is no required textbook for this course. Handouts and reading materials will be distributed via course webpage.
Course Description:	This course focuses on selected advanced topics in networks and distributed systems security and privacy and is intended for master or doctoral students who are interested in security and privacy research. Through this course, students can learn the state of the art and open problems in networks and distributed systems security and privacy, thus enhancing their potential to do research or pursue a career in this emerging area. This course is structured as a research seminar where most recent papers from leading conferences & journals will be presented by the instructor or a student.
Prerequisite:	Students are expected to have a good understanding of computer networks. Prior background in cryptography, security, and privacy is not required. The instructor will cover basic knowledge in cryptography, security, and privacy which is sufficient to understand the course materials.
Textbook:	No textbook is required for this course. Lectures will be mainly based on research papers from leading conferences and journals in the area of networks and distributed systems security and privacy.
Tentative Topics:	❑ Overview of cryptography ❑ Overview of data privacy ❑ Cellular network security/privacy ❑ RFID system security/privacy ❑ Social network security/privacy ❑ Cloud computing security/privacy ❑ Anonymous communications ❑ Location privacy ❑ Cognitive radio network security/privacy ❑ Mobile sensing system security/privacy

❏ Any other topic of interest

Online Material: A significant amount of course-related material will be put on the course webpage. It is the responsibility of the student to be cognizant of this information; thus, the student should visit the course webpage frequently. Additionally, important class announcements will be sent to UD Official Student Email addresses. By university policy, it is the responsibility of the student to configure his or her Official Student Email appropriately (including any desired forwarding to other addresses), and to read email frequently. Moreover, any email correspondence with the instructor should be through UD Official Student Email addresses, and emails from non-UD email addresses may directly go into spam folders and not be seen by the instructor.

SYLLABUS—CLASS POLICY

Expectations: The instructor expects the student to:

❏ **Attend** each class!
❏ **Read** all reading assignments!
❏ **Work** all the homework assignments!
❏ **Participate** in in-class paper discussions!

Conduct Code: The University of Delaware Student Code of Conduct will be upheld, and any violations will be reported to the Student Conduct Administrator immediately. For additional information please visit:
`http://www1.udel.edu/stuguide/16-17/code.html`

Homework: Four research papers will be assigned for each week. Students are required to read all of them and be able to competently discuss the material in class. In addition, each student should submit a one-page summary for one of the assigned papers, which should contain a one-paragraph description of the paper and descriptions of three strong points plus three weak points in the paper. Homework must be emailed to the instructor before noon (12pm) every Tuesday with a scheduled class. No late homework will be accepted *for any reason*.

Exam: There will be a small test for the basic knowledge in cryptography and data privacy the instructors covers in class.

Presentation: Each student is expected to present no more than three assigned papers to the class during the semester. At the end of a lecture, the instructor will grade the presentation, and the average presentation score will be used in the final grading.

Term Paper: Students need to form a group of one or two to complete a survey paper or a research paper on one of the topics discussed in class or others approved by the instructor. Students are encouraged to combine this effort with their current research for a Ph.D. dissertation or Master's thesis. Up to 10 bonus points may be given to high-quality term papers.

Grading: Final course grades will be based 10% on class participation in discussing papers, 10% on the exam, 20% on homework (paper summaries), 20% on paper presentations, and 40% on the term paper. In addition, all students must attend the lectures. Missing one lecture costs 1 point of the final grade in 100 scale. Your final grade g is determined from your overall score s:

$$g = \begin{cases} A+, & s > 100, \\ A, & 90 \leq s \leq 100, \\ B+, & 85 \leq s < 90, \\ B, & 80 \leq s < 85, \\ C+, & 75 \leq s < 80, \\ C, & 70 \leq s < 75, \\ D+, & 65 \leq s < 70, \\ D, & 60 \leq s < 65, \\ F, & s < 60. \end{cases}$$