

EECE 657 Network Security

Syllabus Spring 2011

Course Description

This is a graduate level research oriented class. The primary goal of the class is to expose students to cutting edge research and prepare them for conducting research independently. By reading and analyzing research papers recently published in prestigious international conferences and academic journals, the students are expected to construct a big picture of the focuses and trends in the network security area, and master skills of learning through literatures.

Prerequisites:

EECE 553 Computer Network Architectures or EECE 359 Computer Networks; EECE 405 Cryptography and Information Security; or approved by instructor.

Instructor:

Dr. Yu Chen

Office: EB-P12, Phone: (607) 777 - 6133, Email: ychen@binghamton.edu

Office Hour: 3:00 ~ 4:00pm, Tuesday & Thursday, or by appointment.

Course Materials:

No required textbook, readings will be papers from prestige conferences and journals.

Grading:

✓ Paper Reading Assignments	60%
○ Paper Discussion Presentations	(10% x 2)
○ Paper Reading Reports (5 ~ 6 pages)	(10% x 4)
✓ Research Project	40%
○ Topic Selection Statement (2 ~ 4 pages)	(5%)
○ Intermediate Project Report (2 ~ 4 pages)	(5%)
○ Project Presentation	(10%)
○ Final Project Report (10 ~ 12 pages)	(20%)

Topics (tentative):

1. Sources of Network Vulnerabilities
2. Overview of Network Security Problems
3. Standard Internet Security Solutions
4. Internet Infrastructure Protection
5. Security in Wireless Sensor Networks (WSNs)
6. Security in Cloud/Grid Computing
7. Security in Mobile Ad Hoc Networks (MANETs)
8. Trust, Security and Privacy in P2P/Pervasive Computing Environments
9. Anonymous Networks
10. Reconfigurable Hardware Implementation of Security Solutions

Policies:

The university academic integrity code is listed in the University Bulletin (<http://bulletin.binghamton.edu/integrity.htm>). Category I violations will result in a grade of **ZERO** for the work plus a one letter course grade reduction. Category II violation will result in a failing grade of the course.

This course is also offered under the articulation agreement between Binghamton University and SUNYIT. It is available to qualified students at Binghamton University via the distance learning system Enginet.