

## **COURSE SYLLABUS**

**Course Number: COMP6370/6376**

**Course Title: COMPUTER AND NETWORK SECURITY**

**Credit Hours: 3**

**Prerequisites: COMP3270**

**Corequisite: none**

### **I. Course Content/Objectives:**

1. Objectives: At the conclusion of this course the student will have an understanding of the algorithms involved in computer security, their practical implementation, and the techniques for assuring security as a system administrator.

2. Tentative Schedule and Outline of Course Content.

Necessary Number Theory (3 classes)

Encryption/Cryptography secret key, public key, digital signatures (5 classes)

Authentication and identification schemes (3 classes)

Trojan Horses, Viruses, worms (3 classes)

Intrusion detection and monitoring, Firewalls (3 classes)

Computer security models (3 classes)

Security practice: techniques and tools

    programming (8 classes)

    sysadmin (7 classes)

        Securing operating systems

        Securing software and system services

        Securing a network and the TNI (red book)

            wired

            wireless

        Security Incident Response Management

Electronic commerce (2 classes)

Risk assessment (2 classes)

Legal and Social Issues of Computer Security (2 classes)

Security Incident Response Management (2 classes)

Tests (2 classes)

### 3. Textbooks and supporting materials

Kaufman, Perlman and Speciner, “*Network Security: Private Communication in a Public World*”, Prentice Hall, 1995.

Cheswick and Bellovin, “*Firewalls and Internet Security*”, Addison-Wesley, 1994.

Skoudis, “*Counter Hack: A step by step guide to computer attacks and effect*” Prentice Hall, 2001.

### II. Grading and Evaluation Procedures:

Test 1	15%
Test 2	15%
Homework	25%
Final exam	25%
Programming projects	20%

#### Grading scale:

90-100	A
80-89	B
70-79	C
60-69	D
59 and lower	F

### III. Statement related to policies on unannounced quizzes and class attendance and participation.

There will be no unannounced quizzes and attendance will not affect the grade.

**Accommodation Statement:** Students who need special accommodations should make an appointment to discuss the Accommodation Memo during my office hours as soon as possible. If scheduled office hours conflict with classes, please arrange an alternate appointment time. If you do not have an Accommodation Memo, but need special accommodations, contact the Program for Students with Disabilities in 1244 Haley Center (844-2096 V/TTY).

**Justification for Graduate Credit:** This course requires knowledge of data networks, which are not covered until the senior year of undergraduate studies in the required course COMP4320 or ELEC6220.

