

Arab Academy for Science, Technology, and Maritime Transport

College of Computing and Information Technology

CS421 Computer System Security

IS421 Information Systems Security

CC518 Data Security

**Spring 2014
3 Credit Hours**

Instructor: Dr. Ayman Abdel-Hamid

Office: College of Computing and Information Technology, room 310

E-mail: hamid AT aast DOT edu

Course home page: <http://webmail.aast.edu/~hamid/css>

Office hours: To be arranged

Text

William Stallings, *[Cryptography and Network Security](#)*, 6th Ed, Prentice Hall, 2014.

Course Objective

The course is an introduction to computer and network security. The course encompasses the study of security policies, models, and mechanisms for secrecy, integrity, and availability. Topics include basic cryptography and its applications, security in computer networks and distributed systems and control and prevention of viruses and other rogue programs, and operating system models. In addition, hands-on experience will be provided where appropriate.

Course Workload

Course material will be introduced in lectures. Exams, which test your acquired knowledge, will be scheduled during lecture time unless otherwise stated. Furthermore, exercises/questions will be assigned as homework in tutorial sessions. Some programming assignments are planned as part of the practical aspect of the course.

Topics

Tentatively, the topics that will be covered include:

- Security services, mechanisms, and attacks
- Symmetric Encryption and key distribution
- Public-key Encryption and key distribution
- Cryptographic Data Integrity
 - Message Authentication codes
 - Hash Algorithms
- System Security
 - Firewalls

Grading

Exam 1 +tutorial work	30
Programming Assignments +quizzes	20
Tutorial Work (attendance +homework)	10
Comprehensive Final Exam	40

The instructor reserves the right to change the grading scheme or add assignments/projects/exams.

Policies

- Homework/Assignments are due at the beginning of the class on the due date.
- Late submission will be penalized by 20% off for each late day.
- Attendance is crucial to your success in this course. You have the responsibility to cover any missed material.

Academic Honesty

The honor code applies to all homework/assignments and examinations. The instructor's academic honesty policy is very strict; instances of academic dishonesty will be penalized, ordinarily by failure of the course (in addition to any University penalties). *All work submitted must be the student's own work!*

It is unprofessional and dishonest to submit someone else's work as your own.