# **DF 138 Introduction to Digital Forensics and Information Assurance**

Fall 2007, MW 3:00 p.m. – 4:20 p.m., White Hall 114

### Instructor

Lei Chen, Ph.D.

Assistant Professor, Department of Computer Science Office: AB1-212E Office hours: MTW: 9 – 10 a.m.

Email: lxc008@shsu.edu (preferred way for communication) Phone: 294-4785 TA: Mr. Rhitwik Narayan Patowary Email: shsu.chen@gmail.com

## **Course Description**

This course introduces students to the fundamentals of digital forensics technology. Emphasis is placed on identifying threats to, and vulnerabilities of, computer systems and how to minimize them. The content covered in this course goes as the course line below.

## **Course Outline**

- Network basics OSI model, the functionality of network devices, e.g. hubs, switches and routers (Exam 1)
- Network addresses MAC and IP and the mapping between them (Exam 1)
- Network protocols, packet format and analysis, and ways of intercepting data communications (Exam 2, lab)
- Cryptography and secure communications (Exam 3, lab)
- Hacker behaviors how to identify, enumerate and penetrate vulnerable systems on networks (Comprehensive Final Exam)

### **Textbooks**

Title	Author(s)	ISBN	Edition	Publisher	Cover
Hacking Exposed: Network Security Secrets and Solutions	McClure, Scambray and Kurtz	0072260815	5 <sup>th</sup> (Apr. 05)	McGraw-Hill Osborne Media	HARMING
Cryptography Decrypted	Mel, Baker and Burnett	0201616475	1 <sup>st</sup> (Dec. 00)	Addison-Wesley Professional	Cryptography Decrypted /

## Grading

Your grades will be determined according to the following:

Labs	150
Homework	250
Quizzes/Class Attendance	150
Exam 1	100
Exam 2	100
Exam 3	100
Final Exam	200

Under normal circumstances, if your score is	Letter grade
>= 895	A
>= 795	В
>= 695	С
>= 595	D
< 595	F

## **Quizzes/Class Attendance**

There will be pop quizzes in some classes. These short quizzes designed to ensure that you understand the concepts and issues discussed in prior and current classes. When a quiz is missed, it cannot be retaken unless official documents are presented and verified. While no quiz is assigned, students may be asked to sign on a class roll.

## Homework

- There will be multiple homework assignments, due one week after assigned.
- Homework assignments must be typed and will be collected at the beginning of class on the due date.

## **Programming Projects**

• Students can work in multiple-person groups on programming projects. The maximum number of members in a group will be announced in class.

- All team members will receive the same score on the project unless there is obvious disparity in the responsibilities of the team members. If disparity does exist, all members of the team must sign a letter that states the percentage of the project assigned to each member and the percentage that was actually done by each member.
- If you wish to form your own project group, send an email to the instructor addressing all the members of your group by the end of the 2<sup>nd</sup> week of class. Otherwise, the instructor will assign team member(s) for you.

#### Collaboration

- All homework assignments must be completed by each student individually.
- Each team project must be developed and programmed by the members of the team only.
- If you have questions concerning the difference between working with other students and unacceptable collaboration, please bring them to the instruction's attention.
- Any copying of someone else's work, or misrepresentation of other work as your own, will be grounds for failing the
  course.

# **Late Policy**

Penalty for late work is 20% of the project's worth per calendar day late, unless an extension (for a valid reason) has been granted in advance.

## **Online Course Resources**

Online course resources can be obtained at (TBA)

## **Academic Dishonesty**

All students are expected to engage in all academic pursuits in a manner that is above reproach. Students are expected to maintain complete honesty and integrity in the academic experiences both in and out of the classroom. Any student found guilty of dishonesty in any phase of academic work will be subject to disciplinary action. The University and its official representatives may initiate disciplinary proceedings against a student accused of any form of academic dishonesty including, but not limited to, cheating on an examination or other academic work which is to be submitted, plagiarism, collusion and the abuse of resource materials.

Students should be aware, specifically, that the instructor reviews all programming assignments and exercises for evidence of collaborative work. While it is sometimes appropriate and encouraged for students to discuss concepts and ideas, it is never permissible to collaboratively work on coded examples, to share or swap completed or partially completed programming assignments. In addition it is not permitted for students to use code examples provided by the instructor without appropriate documentation/ citation of the use of that code.

## **Classroom Conduct**

Students will refrain from behavior in the classroom that intentionally or unintentionally disrupts the learning process and, thus, impedes the mission of the university. Cellular telephones and pagers must be turned off before class begins. Students are prohibited from eating in class, using tobacco products, making offensive remarks, reading newspapers, sleeping, talking at inappropriate times, wearing inappropriate clothing, or engaging in any other form of distraction. Inappropriate behavior in the classroom shall result in a directive to leave class. Students who are especially disruptive also may be reported to the Dean of Students for disciplinary action in accordance with university policy.

### Visitors in the Classroom

Unannounced visitors to class must present a current, official SHSU identification card to be permitted in the classroom. They must not present a disruption to the class by their attendance. If the visitor is not a registered student, it is at the instructor's discretion whether or not the visitor will be allowed to remain in the classroom.

# **Americans with Disabilities Act**

Students with disabilities covered by the Americans with Disabilities Act should go to the Counseling Center and Services for Students with Disabilities (SSD) in a timely manner to obtain the documentation required. Students are responsible for initiating the process of documenting the need for an accommodation under the ADA act.

### **Religious Observance**

University policy allows for student to observe religious holy days, including travel time associated with visiting a holy site, without penalty. If you intend to miss class as a result of the observance of a religious holy day or as a result of the necessary traveling time required for religious observance, such an absence will not be penalized so long as you have notified the instructor in writing of the dates and times of class sessions that are missed. The deadline for notification is the 12 class day. Students absent from class as a result of religious observance are required to submit any due assignments immediately on their return to the classroom. Makeup tests and quizzes will also be provided on return to the class.