IT 4500 Information Security

Spring 2016 Syllabus

This course is an upper-level course in computer related security. Students will review general security concepts and principles such as access control, database security, and intrusion detection. Students will also learn of the major types of exploits and attacks such as denial of service and how to protect against. Data security and recovery principles such as cryptography, steganography, and computer forensics will also be covered. This course will look at tools to mitigate security risks as well and disaster recovery principles.

**Prerequisites:** IT3100, CS1400

**Course fee:** $25, used to assist in maintaining CIT infrastructure.

**Course Time:** MWF 1pm-1:50pm HAZY 120

**Final Exam:** Fri April 29 12pm-2pm

**Instructor:**
- [Jay Sneddon](mailto:)
- Office: Burns 234
- Office hours: 9am-9:50am M-F

**Objectives**

The student will be able to:

- identify security vulnerabilities in networks, operating systems, and other computer-related environments.
- generally explain the principles of cryptography.
- explain the legal and ethical aspects of computer security.
- respond to active and passive security attacks.
- recover data

**Resources**

**Texts**

REQUIRED [TestOut Company Website](http://)

You will be required to purchase access to the TestOut company website instead of a textbook. The product is Testout Security Pro: SYO-401

**Computer Resources**

You may use the computers in Udvar-Hazy 151. There will also be lab assistants to help you. These computers require a valid CIT username and password. If you do not already have a CIT login, visit [https://cit.dixie.edu/facilities/passwd/passwd.php](https://cit.dixie.edu/facilities/passwd/passwd.php) to create one, or ask a lab assistant to help you sign up for one.

**Course Information**

You are responsible for being informed regarding announcements, the schedule, and other resources posted on this website. Grading and assignments are managed at [https://dixie.instructure.com](https://dixie.instructure.com).

**Assignments and Exams**

**Reading**
There will be various readings provided, including the website, PDF files, web pages, and lectures. These will provide the materials to study from for quizzes and will assist you in completing your assignments.

**Assignments**

Assignments will be graded based on completeness.

(See the Late Work policy for more information)

Assignments are due on the date listed in the schedule, and must be completed within TestOut. This means that you must reserve time to pass it off at a suitable time before the end of the day it is due.

**Exams**

There will be three exams given throughout the semester. Exams may not be made up without prior approval of the instructor.

**Grading**

Projects, exams, and participation each contribute to your point total. The breakdown for the above items is as follows:

- Test out website = 25%
  - You are required to watch all the videos and complete all the other tasks given in the website
  - You can take and retake the quizzes as many times as you want
  - However, if things are completed late, you will receive NO credit

- Tests = 40%
  - The security pro certification exam given at the end of the semester

- Participation = 15%
  - You will need to come to class prepared each day, having watched/reviewed the required materials to engage in class discussions.
  - We will have several guest speakers, you will either do a summary or project or get points for participating

- Class Projects = 20%
  - We will also have in-class projects (well, we will start them in class, but you might have to finish them on your own)

**Grading**

Assignments, quizzes and exams each contribute to your point total. Assignments, Quizzes and the final are worth \( \frac{1}{3} \) of your grade.

Here is the grading scale: 

\[ \begin{align*} 
&\geq 94 = A \\
&\geq 90 = A- \\
&\geq 87 = B+ \\
&\geq 84 = B \\
&\geq 80 = B- \\
&\geq 77 = C+ \\
&\geq 74 = C \\
&\geq 70 = C- \\
&\geq 67 = D+ \\
&\geq 64 = D \\
&< 64 = F 
\end{align*} \]

**Course Policies**

**Absences**

Students are responsible for material covered and announcements made in class. School-related absences may be made up only if prior arrangements are made. The class schedule on Canvas presented is approximate. The instructor reserves the right to modify the schedule according to class needs. Changes will be announced in class and posted to the website. Exams and quizzes cannot be made up unless arrangements are made prior to the scheduled time.

**Time**

Courses should require about 2 hours of outside work per lecture hour of class. This class will require about 6 hours of work per week on the part of the student to achieve a passing or higher grade. Be sure to evaluate
your schedule before committing to this course.

**Late work**

Assignments are due on the date specified in the schedule. Late work will not be accepted.

**Cheating and Collaboration**

Limited collaboration with other students in the course is permitted and encouraged. Students may seek help learning concepts and developing programming skills from whatever sources they have available, and are encouraged to do so. Collaboration on assignments, however, must be confined to course instructors, lab assistants, and other students in the course. See the section on cheating.

Cheating will not be tolerated, and will result in a failing grade for the students involved as well as possible disciplinary action from the college. Cheating includes, but is not limited to, turning in homework assignments that are not the student’s own work. It is okay to seek help from others and from reference materials, but only if you learn the material. As a general rule, if you cannot delete your assignment, start over, and re-create it successfully without further help, then your homework is not considered your own work.

You are encouraged to work in groups while studying for tests, discussing class lectures, and helping each other identify errors in your homework solutions. If you are unsure if collaboration is appropriate, contact the instructor. Also, note exactly what you did. If your actions are determined to be inappropriate, the response will be much more favorable if you are honest and complete in your disclosure.

Where collaboration is permitted, each student must still create and type in his/her own solution. Any kind of copying and pasting is not okay. If you need help understanding concepts, get it from the instructor or fellow classmates, but never copy another’s written work, either electronically or visually. It is a good idea to wait at least 30 minutes after any discussion to start your independent write-up. This will help you commit what you have learned to long-term memory as well as help to avoid crossing the line to cheating.

**College Policies**

Additional college policies, calendars, and statements are available online at [http://new.dixie.edu/reg/syllabus/](http://new.dixie.edu/reg/syllabus/).