IT 4500: Information Security

Fall 2020 Syllabus

This course is an upper-level course in computer related security. Students will review general security concepts and principles such as access control, cryptography, and intrusion detection. At the end of the course, students will be prepared to take the CompTIA Security+ exam.

Prerequisites: IT3100

Course fee: $20, used to assist in maintaining CIT infrastructure.

One section:
- IT4500-01 MWF 9:00am-9:50am Smith Computer Ctr 107 - Final exam TBA
- Covid-19 Related Restrictions will be in place for this class. See below for further information on how the classroom attendance will be spaced and allocated.

Instructor:
- Jay Sneddon
  - Office: Burns 235
  - Office hours: MWF 10am-10:50am, TR 11am-11:50am

Objectives

At the end of the course, students will be able to:
- Pursue CompTIA Security+ certification (SY0-501)
- Understand the fundamentals of Information Security
- Identify security vulnerabilities in networks, operating systems, and other computer-related environments.
- Explain the legal and ethical aspects of computer security.
- Respond to active and passive security attacks.

Resources

REQUIRED

The readings will come from the course textbook, CompTIA Security+, Get Certified Get Ahead SYO-501 Study Guide by Darril Gibson, ISBN 978-1-939136-05-3. Some supplemental online resources may be used.

Computer Resources

You may use the computers in the Smith Computer Center. 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 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.

Assignments and Exams

Reading

The student is responsible for reading the material in the textbook. A reading schedule is provided with the class schedule on the course website. The student is expected to read the material before the class in which it is discussed. The book also includes material beyond what we will discuss in lecture, which you are encouraged to study on your own. Feel free to bring questions from the reading to lectures or to office hours.

Assignments
Assignments will be graded based on completeness.
(See the Late Work policy for more information)

All assignments for the week are due Sunday night at 11:59pm, unless otherwise noted on Canvas.

Exams

This course will have approximately four exams and one comprehensive final exam, along with weekly quizzes. Students that pass the CompTIA Security+ exam before the final exam date will automatically receive 100% for the final. A valid certificate must be shown the instructor.

Security+ Certification

Security+ Certification is a significant resume enhancer, and is often required for employment at government, government contractors and other agencies where high security is enforced.

Security+ certification is required for this class. Certification is achieved by passing the CompTIA SYO-501 Security+ exam, which may be taken at the DSU Testing Center. CompTIA offers a significant testing discount for students at http://academic.comptiastore.com/

Students that pass the CompTIA Security+ exam before the final exam date will automatically receive 100% for the final.

Testing Out of the Class

Students may test out of the class with an A grade if they are able to become Security+ Certified before the third week of the semester. By becoming Security+ Certified you have proven that you have mastered this course material. If you are already Security+ Certified, the certification must be active (meaning passed within the last three years) and I must see a copy of your certificate.

Contact me if you have any questions about this.

Grading

Assignments, quizzes and exams each contribute to your point total.

Assignments/Labs = 30%

Quizzes = 10%

Exams = 30%

Comprehensive Final Exam = 20%

CompTIA Security+ Certification Exam (SYO-501) = 10%

Here is the grading scale: >= 94 = A >= 90 = A- >= 87 = B+ >= 84 = B >= 80 = B- >= 77 = C+ >= 74 = C >= 70 = C- >= 67 = D+ >= 64 = D < 64 = F

Course Policies

Covid-19 Seating and Attendance Requirements

This class will be taught synchronously and in class. Students have the choice of attending in person or online through Zoom or both. You are allowed to attend solely online if you choose. Attending in person will only be possible if space is available.

Attendance will be taken each day, for those attending in person or through Zoom. Lectures will NOT be recorded for later playback.

There is enough room in SCC 107 for all students in IT4500 to attend in-person every week if you wish. If you are planning to attend via live-stream (Zoom), please let me know (if you haven’t already) so I can make sure everything is working for you.

In-class:

- Assigned seating is required for COVID-19 contact tracing
- Cloth face coverings are required for in-person attendance (face shields will not be allowed as a substitute for a cloth face covering)
- You are encouraged to bring your own laptop (especially if you want to use that laptop to complete work from home).

**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 assignments will be accepted but penalized 30%. No work will be accepted after the final exam.

**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.

**Policy for Absences Related to College Functions**

Students may periodically may miss classes for various college-related functions or military functions; these include athletics, club events, or to fulfill the requirements of a course or a program. Military functions may include: Reserve and Guard activation, activation, special assignments or other approved events or activities. These absences may often conflict with the instruction, assignments, and tests in this course.

Please provide an advanced written notification from your activity supervisor that explains the nature of the activity, and the anticipated time missed.

**Disruptive Behavior Policy/Classroom Expectations**

The classroom needs an atmosphere of learning and sharing. Class members need to feel safe and able to concentrate. Disruptive behavior that seriously detracts from this environment or inhibits the instructor’s ability to conduct proper instruction will not be allowed. Disruptive behavior includes:

- Physical violence, verbal abuse, or harassment
- Intoxication or illegal drug use
- Use of profanity
- Failing to respect others when expressing their own viewpoints
- Talking while the instructor or another student is talking
- Constant questions or interruptions that interfere with classroom presentation
Disruptive class members will be warned. Continued misbehavior may lead to dismissal from class or the course. If necessary, Campus Police may be called.

**College Policies**

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