

CIS 4385 -INTRODUCTION TO INFORMATION SECURITY SYSTEMS

CIS 4385 – Spring 2022 (CRN = 24161)

Course Instructor: Godwin Udo, Ph.D., CFPIM

Office Number: Room 246, College of Business

Phone Number: (915) 747-8180

E-MAIL: gudo@utep.edu URL: <https://academics.utep.edu/Default.aspx?tabid=70104&ID=gudo>

Office Hours: Mon & Wed 10:30 Am– 12:00 PM; or by appointment.

Course Description:

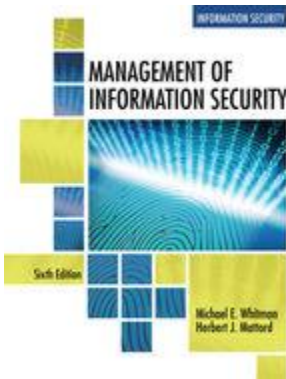
Information systems must be protected from hackers and crackers trying to break into the systems and immobilize e-businesses and other sites using, for example, denial of service attacks. Electronic business transactions and other forms of online communications impose the need for security, integrity, and privacy of business data and communication resources. Increasingly, both internal and external computer and network threats motivate the need for implementing cost-effective security apparatuses to protect our information and information systems assets. The course introduces students to the theory and practice of security, aspects of information systems security such as access control, hacks and attacks, systems and program intrusion detection, cryptography, networks and distributed systems security, worms and viruses, and internal secure applications. Students explore key security threats, solutions and legal issues, and implement network security tools in hands-on lab exercises. Upon completion, the student will have a better understanding of computer and network security issues.

Text/Materials:

Text: Management of Information Security, 6th Edition, 2017, by Michael E. Whitman and Herbert J. Mattord; Cengage Learning, 2019.

ISBN-10: 1-337-40571-X

ISBN-13: 978-1-337-40571-3



Security Pro Labsim [Online simulation] Lab (NPLL), ISBN # 978-1-935080-44-2

<https://w3.testout.com/courses/security-pro>

Teaching Methods:

1. Lectures: Important material from the text and outside sources will be covered in class. Students should plan to take careful notes as not all material can be found in the texts or readings. Discussion is encouraged as is student-procured outside material relevant to topics being covered.
2. Security Pro Labsim [Online simulation] Lab (NPLL),

3. Discussion board topics and responding to posted discussion
4. Assignments: End of chapter activities and online activities will be assigned weekly to reinforce material in the text. These assignments may require the application of various software packages.
5. TestOut Quizzes:
6. Exams: Three learning assessments will be given based on the textbook material.

Course Objectives:

In this course, student will systematically study the fundamental principles of computer system security, including authentication, access control, capability, security policies, sandbox, software vulnerabilities, and web security. The course emphasizes "learning by doing", and requires students to conduct a series of lab exercises. Through these labs, students can enhance their understanding of the principles, and be able to apply those principles to solve real problems. After completion of the course, students should be able to possess the following skills:

- be able to explain security principles,
- be able to explain how various security mechanisms work, and correlate these security mechanisms with security principles,
- be able to formulate security policies,
- be able to apply security principles to solve security problems,
- be able to analyze and evaluate software systems for its security properties,
- be able to evaluate risks facing information systems assets,
- be able to create different contingency plans against security breaches and attacks,
- be able to demonstrate hands-on skills based on TestOut Security Pro Labs

Attendance:

Participation: Student participation will be graded by the level of class participation and attendance. *You are expected to attend classes regularly (except on the lab days) and on time. You take full responsibility when you miss class or come to class late.* If you miss class, it is your responsibility to find out about new assignments/exercises and pick up missed handouts.

COURSE RESOURCES:

Blackboard

You must have access to BLACKBOARD for this course. You can login to BLACKBOARD at <http://my.UTEP.edu>. Our 'virtual classroom' in BLACKBOARD will include items such as:

- The course syllabus, schedule, and assignments
- Announcements
- Grades
- -ALL- Communication, such as Instant Messenger, Video Lectures, Virtual Office hours, and Course Messages.

We will spend some time during the first class session reviewing the organization and content of our course on-line.

Computer

A computer with access to Internet and a printer is required. Exams are taken on-line via Blackboard, and all assignments must be uploaded and/or completed in Blackboard in order to receive credit. This course is Blackboard-assisted, and many activities, such as file distribution, emails, assignment submission, and announcements between classes, are taking place exclusively through Blackboard. Therefore, students are

expected to have access to computer, Internet, and Microsoft Office this course. If you do not have your own, computers are available to all UTEP students in the labs across the campus.

ACADEMIC DISHONESTY

I expect all students to conduct themselves with the highest level of integrity. You have the opportunity throughout your business career to demonstrate your own level of integrity. Similarly, in this class you will have an opportunity to demonstrate academic integrity. The two are inextricably linked. I encourage you to think about the standard you set for business integrity in your career, and to implement that standard with respect to your academic integrity in this class.

Academic dishonesty in any form will not be tolerated. For a definition of academic dishonesty and its consequences, see your student handbook.

For the purposes of this course, academic dishonesty includes, but is not limited to,

- Copying another student’s solution or allowing another student to copy your solution
- Removing or copying pages or problems from exams or quizzes, including those posted on the World Wide Web
- Any other activity that jeopardizes the integrity of this course.

Course Evaluation:

All assignments are individual assignments. Outsourcing of assignments is not permitted. Submit on-time. There are no make-ups. ** Late work is not accepted. Don’t even ask. Period. ** Computer issues (Server/Blackboard/Brower, etc...) are not a valid excuse to miss an assignment. These are minimum course requirements.

Grades are not given; they are **EARNED**. You must work for it. Your grade will be based on results rather than on effort—your performance is an indicator of your ability to master the topic. Decide to work **NOW** for the grade you want. Students who keep up with the materials, do all of the assignments, and participate in the learning experiences typically do well. Your grade will be based on the total number of points that you earn for each assignment group. The weight associated with each of the graded areas, and the total points required to earn the various grades, are shown below.

Assignment Group	Weight
TestOut Lab Exercises	25%
Learning Assessments (15 * 3 assessments)	45%
TestOut Section Quizzes	10%
Discussion Board (2.5 * 4 DBs)	10%
Case Study & Presentation	10%
Total	100%

You will be able to check the status of your grade at any point during the semester by accessing ‘My Grades’ section of the BLACKBOARD classroom.

Your grade will be calculated using the following scale:

Grade	Level of Work	Percentage Range
A	Excellent, distinguished	90 – 100%
B	Very good, above average	80 – 89%
C	Average, Normal	70 – 79%
D	Below Average	60 - 69%
F	Failing	<60%

A grade of "I" (**Incomplete**) will be assigned only in circumstances in agreement with the current UTEP Undergraduate Catalog.

Security Pro LabSim Lab (SPLL) Exercises (25%) of the total grade: Models 2 to 14 have varying numbers of simulation labs which students are expected to do all. For example, Model #2 has only two labs whereas Model # 6 has 22 labs. These labs are expected to be done outside of class time though some class time will be allotted for labs depending on time availability.

Exams (45%) of the total grade: Each exam will consist of a combination of multiple choice, short answer, matching, and/or True/False questions which may involve the concepts discussed in your text book, materials covered in your assigned projects and labs, and operation procedures and rules of the Network being studied. Each exam will contain questions from the material covered since the last exam. If you miss exam 1 or 2, and have an approved excuse, a make-up exam may be held within one week from the original exam date. There will be no make-up for the third exam. Three exams will be given during the course. The third exam is the final exam. It will not be cumulative and is scheduled during the final exam period. A student who is unable to take an exam due to an emergency must inform me of that fact on or earlier than the day of the exam and arrange for a make-up exam Any student requiring a make-up will have to document his/her excuse (e.g., a letter from a physician written on the physician's letterhead).

TestOut Section Quizzes (10%): Each of the 14 Models have Section Quiz that must be completed by each student.

Discussion Board on BB (10%): The class will be assigned two or three current and emerging cybersecurity topics to discuss and post on the Blackboard for other students to comment on.

Case Study & Presentation (10%): This is a team/group work. Each group of students will be assigned a full case study to analyze, solve and present in class as a capstone project for the course. Detailed guidelines will be provided on how to solve a case study and write the analysis.

SPLL Subscription Details Student - LabSim Order process

Students can also order directly from the vendor using the following directions:

- 1 - Visit www.TestOut.com
 - 2 - Click the shopping cart icon at the top right of the page
 - 3 - Enter **Price Code 14-232-TA** then click Continue
 - 4 - Select items to purchase at your special discounted rate
 - 5 - Follow shopping cart directions to place your order and activate your courseware
- Please use Student - Getting Started Tutorials for the rest of the process.

TestOut Tech Support - available Monday – Friday 6:00 am to 6:00 pm MT (Closed on U.S. federal holidays)
1-800-877-4889 option 2

Live chat - The "Chat" feature is at the bottom right of every TestOut webpage.

School Name: **University of Texas at El Paso**

Teacher Name: *(enter first and last name of any instructor) Godwin Udo*

TestOut is already set up in the **Follett Bookstore** system for distribution as the cashier online. The student should be able to go to the cashier and provide this information: **TestOut Security Pro – ISBN 978-1-935080-44-2** for your CIS4385 course. The printed receipt will include the activation code to unlock their access. They will then access the content by going to [TestOut](#) and selecting "Sign up" and creating a LabSim account. This is only when first accessing the content for the purchased title.

Students should never purchase LabSim course from another student or off a website like eBay.com or Amazon.com as once the activation code is used then it cannot be used for another student. The LabSim license cannot be resold by an individual.

Where to Start in SPLL

In Security Pro LabSim Lab (SPLL) go through **Chapter/ Module 1 - Introduction first** to get you familiar with the LabSim simulations and the overall course. We recommend going from Module 1 thru Module 14 and then onto the practice exams, however you can explore any area at any time. Hands-on training will take place when you do Chapter/Module exercises.

Security Pro Certification Exam – How to take this exam

To use the FREE exam voucher for TestOut Security Pro Certification exam, please contact the Support department to be scheduled to take this exam since this exam will not be required as part of your current class for Spring 2022 semester.

Course Drop Policy:

The last day to drop the course with an automatic "W" is **April 1, 2022**. After this deadline, students will be dropped from a course with a grade of "F".

A grade of "W" can be assigned after the deadline only under exceptional circumstances, and only with the approval of the instructor and the academic dean. In such a case, the student must petition for the "W" in writing and provide the necessary supporting documentation.

Special Accommodations:

Should you have a documented disability and require any auxiliary aids, services, or accommodations, please see me after class or call me in order to discuss your specific needs. If you feel you may have a disability but do not have appropriate documentation, contact the Disabled Student Services Office at 747-5148, go to Room 106E Union, or e-mail: dss@utep.edu.

COVID-19 PRECAUTIONS

If you have tested positive for COVID-19, you are encouraged to report your results to covidaction@utep.edu, so that the Dean of Students Office can provide you with support and help with communication with your professors. It is important to follow all instructions that you receive as part of the diagnosis, including isolation and staying at home until a negative test is produced.

If you experience COVID-19 symptoms, please follow the isolation protocol by staying at home and getting tested as soon as possible. If the test is negative but you are still seeking accommodations, please contact the Dean of Students Office for guidance in a timely manner. Your instructor will work with the Dean of Students Office to determine the extent of any such accommodations.

We strongly encourage you to think and act proactively in all matters related to COVID-19 and your academic endeavors. The Center for Disease Control and Prevention recommends that people in areas of substantial or high COVID-19 transmission wear face masks when indoors in groups of people. The best way that Miners can take care of miners is to get the vaccine. If you still need the vaccine, it is widely available in the El Paso area, and will be available at no charge on campus during the first week of classes. For more information about the current rates, testing, and vaccinations, please visit epstrong.org.

Course Resources: Where you can go for assistance

UTEP provides a variety of student services and support:

Technology Resources

- [Help Desk](#): Students experiencing technological challenges (email, Blackboard, software, etc.) can submit a ticket to the UTEP Helpdesk for assistance. Contact the Helpdesk via phone, email, chat, website, or in person if on campus.

Academic Resources

- [UTEP Library](#): Access a wide range of resources including online, full-text access to thousands of journals and eBooks plus reference service and librarian assistance for enrolled students.
- [University Writing Center \(UWC\)](#): Submit papers here for assistance with writing style and formatting, ask a tutor for help and explore other writing resources.
- [Math Tutoring Center \(MaRCS\)](#): Ask a tutor for help and explore other available math resources.
- [History Tutoring Center \(HTC\)](#): Receive assistance with writing history papers, get help from a tutor and explore other history resources.

- [RefWorks](#): A bibliographic citation tool; check out the RefWorks tutorial and Fact Sheet and Quick-Start Guide.

Individual Resources

- [Military Student Success Center](#): Assists personnel in any branch of service to reach their educational goals.
- [Center for Accommodations and Support Services](#): Assists students with ADA-related accommodations for coursework, housing, and internships.
- [Counseling and Psychological Services](#): Provides a variety of counseling services including individual, couples, and group sessions as well as career and disability assessments.

CLASS SCHEDULE:

The course calendar with a week-by-week description of the course activities can be found in BLACKBOARD. It includes the topics to be covered that week, assignments, and all due dates. It is impossible to predict the precise flow of the course and these dates may have to be adjusted slightly from time to time. Modifications to the schedule and changes in course requirements will be announced in class and/or through BLACKBOARD. As stated earlier, BLACKBOARD is a critical component of this course.

I reserve the right to change any assignment if circumstances dictate. Students will be notified of such changes through an announcement in class AND/OR via BLACKBOARD. It is the student's responsibility to be aware of such change.

Modules	Learning Unit	Work/Task Due
Module #1: Introduction, Laws, Ethics, Planning (01/18 – 02/19)	Chapter 1: Introduction to Information Security Chapter 2: Compliance: Law and Ethics Chapter 3: Governance and Strategic Planning for Security Labs (SPLL) Models 1 - 5	Syllabus Quiz DB #1 Team Formation Exam #1 (02/16) Section Quizzes (1 - 5)
Module #2: Policy, Risk Management (02/20 – 03/19)	Chapter 4: Information Security Policy Chapter 6: Risk Management: Assessing Risk Chapter 7: Risk Management: Treating Risk Labs (SPLL) Models 6 - 7	DB # 2 Exam #2 (03/16) Section Quizzes (6 - 7)
Module #3: Security Management, Protection Mechanisms (03/20 – 04/16)	Chapter 10: Planning for Contingences Chapter 11: Security Maintenance Chapter 12: Protection Mechanisms Labs (SPLL) Models 8 - 11	DB# 3 Exam #3 (04/13) Section Quizzes (8 - 11)
Model #4: Capstone and Wrap Up (04/17 – 05/04)	Case Study Analysis & Design Labs (SPLL) Models 12 - 14	Case Study Presentations Case Study Report (Due: 05/04) Section Quizzes (12 - 14)