CYB 501 – Foundation of Information Security

Computer Science Department

California State University, Dominguez Hills

Instructor	Dr. Liudong Zuo (Ph.D.)	**Prerequisites**	NA
Email	LZUO@csudh.edu	**Unit**	3
Phone	(310) 243 – 3386	**Lecture Time***	8:30 AM – 12:00 PM on Sa.
Office Location	NSM E109	**Lecture Location**	VIL 130
Office Hours	1:00 PM – 2:30 PM on Tu. and 2:30 PM – 4:00 PM on Th.	**Lecture Delivery Method**	In class / Traditional

Lecture Time*

A unit represents approximately three hours of work per week, including one hour of class time and two hours of additional work outside of class. As this is a 3-unit course, students should anticipate spending an additional six hours per week on the work outside of class, such as reviewing course materials and finishing assignments. If you are unable to commit this amount of time, it may be challenging to succeed in the course.

All course materials will be on Blackboard, and the submissions of all assignments will be through Blackboard.

Course Text

Principles of Information Security (6th Edition) Amazon Free Online Version of the 5th Edition
Author: Michael E. Whitman and Herbert J. Mattord
Publisher: Cengage Learning
ISBN-10: 9781337102063 ISBN-13: 978-1337102063

Course Description

This course presents an overview of information security concepts, and introduces information assurance principles and security systems along with specific issues pertaining to risk assessment and cyber threats. It also examines the laws governing information security including public policy and ethical standards. Coverage will include inspection and protection of information assets, detection of and reaction to threats to information assets, and examination of pre- and post-incident procedures, technical and managerial responses, and an overview of the information security planning and staffing functions.

Course Objectives

- Introduce the foundation of the key issues associated with protecting information assets, determining the levels of protection and response to security incidents, and designing a consistent, reasonable information security system, with appropriate intrusion detection and reporting features.
- Provide students with an overview of the field of information security and assurance.
- Expose students to the spectrum of security activities, methods, methodologies, and procedures.

Student Learning Outcomes

Upon completion of the course the students will be able to

- Construct information security strategies and architectures, and formulate plans to respond to intruders.
- Design and develop the key elements of an information systems security management program.
- Conduct research on the key technological solutions to achieving information systems security.
- Conduct risk-based analysis of systems security including identification of threats, vulnerabilities, and countermeasures.
- Develop a security plan to address the results of the risk assessment.
- Create a disaster recovery plan of information assets after an incident.

Grading and Course Requirements

Component	Weight
Assignments	50%
Midterm Exam	20%
Final Exam	30%

- **Assignments**: Detailed instructions will be given in the specific documents. When calculating the final overall grade at end of the semester, the lowest score of assignments will be dropped.
- **Midterm Exam**: There will be one Midterm Exam. Please refer to Table 1 for the tentative date.
- **Final Exam**: The Final Exam will be cumulative, and will be held from 10:00 AM to 12:00 PM on Sa., May 6, 2023.

Other Policies

- You are required to attend all lecture meetings, and study and review the lecture materials. It is recommended that students create their own course notes instead of relying solely on presentation slides, as this approach is more active and engaging. The most efficient way to understand the course materials is to actively engage with them through reading, practicing, and reviewing over time.
- I strongly recommend not missing any class unless it is absolutely necessary, as making up missed work can be quite time-consuming and challenging.
- Late submission of assignments, projects, etc. and make-up of exams will be allowed only for extraordinary, unforeseen, and unavoidable circumstances that have been discussed with the instructor as soon as they arise and prior to the due date of the deliverable or exam or as soon as reasonably possible. Evidence of these circumstances will be required. Failure to provide evidence or notify the instructor such circumstances in a timely manner forfeits any right to any special accommodations. Students with disabilities should contact the SdRC office before the exams to make arrangements.
- Extra credit opportunities may be provided in the class and will be made available to all students if there is any.
- It is strongly encouraged that you ask questions you may have during or after class. However, before seeking assistance, please make an effort to solve the problem on your own. For instance, if you come to me with a question about an assignment and I see that you have not made a good effort to solve it, I may not be able to offer much help.

- Email is the quickest way to contact me for assistance. When sending an email, please use the subject format "CYB 501" followed by key words. For example, "CYB 501 – Assignment 2 – Question 3" or "CYB 501 – Cryptography". I strongly suggest checking out the following two websites for tips on crafting effective emails to instructors:
  - How to Write an Email to Your Instructor
  - wikiHow: How to Email a Professor

  I will make every effort to respond to emails within one business day. Therefore, if an assignment is due on the weekend, please send your questions by Thursday to ensure a timely response.
- If you consider this class to be important, such as critical for your graduation or financial aid or scholarship, it is recommended to work hard from the first day. I will not provide any options to change your grade at the end of the semester. Seek help from tutors if necessary. For each topic covered in class, there are numerous online resources that can be used to supplement learning. Additionally, taking initiative to conduct independent research and learn on your own can improve your self-learning abilities.
- Classes will take place on the scheduled dates and in the designated room. To minimize distractions and maintain a respectful learning environment, all electronic devices must be turned off or put on silent mode during class. Surfing the internet, food or drinks are not permitted in the classroom.

Grading Scale

Score Range	Grade
≥ 94	A
[90, 94)	A–
[85, 90)	B+
[80, 85)	B

Score Range	Grade
[75, 80)	B–
[70, 75)	C+
[65, 70)	C
[60, 65)	C–

Score Range	Grade
[55, 60)	D+
[50, 55)	D
[0, 50)	F
NA	

Required Computer Software/Hardware Capabilities

- Computer

  You should have access to a reliable computer for this course. If you are on campus and do not have a laptop, you can check out a laptop from the IT User Services Help Desk via Technology Checkout Program. In addition, the Toro Student Computer Lab offers on campus access to workstations with a wide variety of commonly used software.

  Visit the CSUDH Online Courses Technical Requirements page for more information on technology requirements.
- Email

  All email communications from this course will go through your Toromail, the CSUDH student email system.
- Internet and Campus Wireless Network

  If you are on campus, connect your laptop and mobile device to the internet using the eduroam campus wireless network.
- Technical Help and Any Other Questions
  - Login Issues

    For login issues related to Blackboard, Toromail and MyCSUDH, contact the IT Help Desk at 310-243-2500, option

1. You can also create an online service ticket for login support.

The IT Help Desk also offers walk-in support. Visit the first floor of the library (north), C-108, for in-person help.

- Password Resets

  CSUDH offers an easy, self-service password reset service. For additional assistance, contact IT Help Desk.

- Blackboard Issues

  For issues or questions with Blackboard, contact the CSUDH Blackboard Support line at 310-243-2500, option 2. You can also create an online service ticket for Blackboard support.

- Any Other Questions

  If you have any other questions or need technical help, please visit Division of Information Technology page.

Computer Literacy Skills Expectations

It is expected that students will

- Have regular access to computers and internet access for the term of this course.
- Be familiar with using email as a communication tool and check your campus email account at least every other day.
- Be able to access online course materials, and open the materials and finish the required problems using applications, such as Eclipse or other Java IDEs, PowerPoint reader, Word reader and PDF reader.
- Do research on their own to solve problems in the class.

Academic Integrity

Academic integrity is of paramount importance in this course, as well as all other courses offered at CSUDH. We maintain a strict policy of zero tolerance towards any form of academic dishonesty. To ensure that you are fully aware of our policies, please review the document "Academic_Integrity_and_Honesty_Pledge.pdf" on Blackboard thoroughly.

To confirm your understanding and agreement with this policy, you must sign and submit the the above file through Blackboard by the end of this week. Failure to do so will be considered as non-compliance with our academic integrity policy, and will result in being dropped from the course.

Americans with Disabilities Act

Access to publications, instructional material, computer software, hardware and electronic information, as well as access to the campus are critical for the educational and career achievement of all persons. CSUDH adheres to all applicable federal, state, and local laws, regulations, and guidelines with respect to providing reasonable accommodations for students with temporary and permanent disabilities. If you have a disability that may adversely affect your work in this class, I encourage you to register with Student disAbility Resource Center (SdRC) at Welch Hall, Room D-180 and to talk with me about how I can best help you. All disclosures of disabilities will be kept strictly confidential. NOTE: no accommodation can be made until you register with the SdRC. For information, call (310) 243-3660 or Email dss@csudh.edu or go to: `https://www.csudh.edu/sdrc/`

Behavioral Standards and Instructor's Rights

Behavior that persistently or grossly interferes with classroom activities is considered disruptive behavior and may be subject to disciplinary action. Such behavior inhibits other students' ability to learn and an instructor's ability to teach. The instructor may require a student responsible for disruptive behavior to leave class pending discussion and resolution of the problem and may also report a disruptive student to the Student Affairs Office (WH A-410, 310-243-3784) for disciplinary action.

Knowing Your Responsibilities

CSUDH provides the student with a wide variety of academic assistance and support, but it is up to the student to know when they need help and to seek it out. It is their responsibility to keep informed and to obey the rules, regulations and policies which control their academic standing and life as a CSUDH student. Meeting deadlines, completing prerequisites and satisfying the degree and certificates requirements, as found in the curriculum guides in this catalog, are all part of the duties as a student. Consult this catalog, the college and school announcements and the schedule of classes for the information needed. Watch for official announcements.

Tentative Course Outline and Schedule

Please refer Table 1 for the tentative course outline and schedule. Note that the dates in the table are tentative, the actual topics covered on certain dates might be different and will be depending on the class progress.

Table 1: Tentative Course Outline and Schedule

Week	Coverage
1	Chapter 1 – Introduction to Information Security
2	Chapter 2 – The Need for Security
3	Chapter 3 – Legal, Ethical, and Professional Issues in Information Security
4	Chapter 4 – Planning for Security
5	Chapter 5 – Risk Management
6	Chapter 6 – Security Technology: Access Controls, Firewalls, and VPNs
7	Chapter 7 – Security Technology: Intrusion Detection and Prevention Systems and Other Security Tools
8	Midterm Exam Review & Midterm Exam
9 – 10	Chapter 8 – Cryptography
11	Chapter 9 – Physical Security
12	Chapter 10 – Implementing Information Security
13	Chapter 11 – Security and Personnel
14	Chapter 12 – Information Security Maintenance
15	Final Exam Review