

California State University Dominguez Hills  
Computer Science Department  
Course Syllabus  
CSC 459/ ITC 459/ CSC 555 Security Engineering, 3 units, Spring 2023

### General Information

Class Time: Tuesday and Thursday, 7:00 PM-8:15 PM

Class Location: WH C155

Professor: Dr. Sanaz Rahimi Moosavi

Email: srahimimoosavi@csudh.edu

Office: NSM A-137

Office Phone: (310) 243-3770

Office Hours: Tuesdays 5:00 PM-6:30 PM

All office hours are held through Zoom by "APPOINTMENT ONLY" through email.

### Required Textbook

Security Engineering: A Guide to Building Dependable Distributed Systems, 3rd Edition. ISBN: 978-1-119-64278-7 December 2020

Prerequisites: CSC 123

Course goals: The course aims to introduce the design, implementation, and management of systems that remain dependable in the face of malice, error or mischance. Topics include the tools, processes, and methods needed to design, implement, and test complete systems, and to adapt existing systems as their environment evolves. Specifically, it includes cryptography, privacy, hardware tamper-resistance, firewalls, intrusion detection and prevention, biometrics, phone, and security policies.

### Student Learning Outcomes:

Upon completion of the course, students will demonstrate the ability to:

1. identify company's security threats.
2. design security policy and its enforcement.
3. protect network and data communication.
4. design a secure system.
5. understand the fundamental principles of authentication of access control models and techniques.
6. understand different cryptographic protocols and techniques and be able to apply them in communications.
7. identify and mitigate security vulnerabilities in existing systems.
8. understand how to design security policy and enforce them

### Attendance, Preparation, and Participation

Arriving promptly to class, coming fully prepared, participating actively in the discussions and activities are important components of this part of your grade for the course. Absences must be discussed with the instructor.

Americans With Disabilities Act: 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 Disabled Student Services (DSS) 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 DSS. For information call (310) 243-3660 or to use the Telecommunications Device for the Deaf, call (310) 243-2028 or go to: <http://www4.csudh.edu/dss/>

### Computer Information Literacy Expectations

It is expected that students will:

1. Use Microsoft Word for word processing unless otherwise approved by the instructor,
2. Be familiar with using email as a communication tool and check your official campus email account at least every other day;
3. Be able to access websites and online course materials (Blackboard) which may require Flash and other plug-ins;
4. Use the library databases to find articles, journals, books, databases and other materials;
5. Be able to create an effective PowerPoint presentation;
6. Be able to record audio (ideally video) to share with the instructor via the web; and
7. Have regular access to a computer and internet access for the term of this course.

## Technology Requirements

- **Computer:** You must 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 [CSUDH Toro Lab](#) offers on campus access to workstations with a wide variety of commonly used software. Visit the [CSUDH Academic Technology Online Courses Technical Requirements](#) page for more information on technology requirements.
- **Internet and Campus Wireless Network:** You must have Internet access to participate in this course. If you are on campus, connect your laptop and mobile device to the internet using the [eduroam](#) campus wireless network.
- **Email:** All email communications from this course will go through your [Toromail](#). Toromail is the CSUDH student email system.
- **Internet and Campus Wireless Network:** You must have Internet access to participate in this course. If you are on campus, connect your laptop and mobile device to the internet using the eduroam campus wireless network.
- **Office 365:** Course work will require you to submit work in Word format (.docx files). Active CSUDH students have access to Office 365 (Word, Excel, PowerPoint) for personal desktop and laptop computers at no cost.
- **Blackboard:** We will be using the Blackboard management system for this course. Everyone must make sure they have access from <http://toro.csudh.edu>. This will be the primary website for the course. *All assignments, schedules, and due dates will be posted there.* Some material may be turned in using it. Blackboard will also be the way you can view your current grades so far this semester.
- **Lecture Delivery & Software:** I will be posting video lectures (with separate PDF slides) for the scheduled lectures.

## Academic Integrity

Academic integrity is of central importance in this and every other course at CSUDH. You are obliged to consult the appropriate sections of the University Catalog and obey all rules and regulations imposed by the University relevant to its lawful missions, processes, and functions. All work turned in by a student for a grade must be the students' own work. *Plagiarism* and *cheating* (e.g. stealing or copying the work of others and turning it in as your own) will not be tolerated and will be dealt with according to University policy. The consequences for being caught plagiarizing or cheating range from a minimum of a zero grade for the work you plagiarized or cheated on, to being dropped from the course.

Students are reminded of the university policy regarding the scholastic honesty. In this course, submission for credit of any assignment, program, test, or examination that is not the student's original work or contains portions of someone else's work (friend/tutor) without being clearly and specifically identified as such, as well as cheating on tests or examination, are violations that will automatically result in a F grade in the course and university disciplinary action.

1. Do not show another student a copy of your homework or projects before the submission deadline.
2. Do not email your project to another student, even if they promise they will not copy it.
3. The penalties for permitting your work to be copied are the same as the penalties for copying someone else's work.
4. If you choose to do your work on your computer, make sure that your computer account is properly protected. Use a good password, and do not give your friends access to your account or your computer system.
5. Do not leave printouts, or thumb drives around a laboratory where others might access them.

**Electronics Device Usage:** During exams/quizzes using any kind of unapproved electronic devices will result in automatic failure for the course (this includes checking messages on the phone from your friend); if there is an emergency inform the instructor. CSUDH Academic Integrity policies are listed in the Catalog. Students are supposed to know what they are, including definitions of cheating, plagiarism, and dishonesty. The following link can be referred for additional information: <http://www4.csudh.edu/student-rights/academic-integrity/>.

**Student Academic Appeal Process:** Authority and responsibility for assigning grades to students rest with the faculty. A grade appeal is permitted when a student can show clear evidence that a grade was contrary to procedures as specified in the course syllabus, was based on prejudice, was capricious, or was the result of computational or clerical error. The presumption is that the grades assigned are correct until there is a clear demonstration otherwise. The burden of proof is heavy, and it rests with the student who is appealing.

## Netiquette

Just as respectful conversational techniques are expected in an on-campus classroom, proper netiquette is important when taking an online class. Please remember that using the written word as we do in an online class can be difficult since we don't have facial expressions or body language to aid us in understanding what you are saying. Good online resources for you to check out are: <http://www.albion.com/netiquette/>

## CSUDH Standards of Student Conduct

All students must conform to the [Standards of Student Conduct](#), which have been established by students and college staff and have been approved by the Board of Trustees. The Standards of Student Conduct are listed in the Academic Policies section of the university Catalog.

## Knowing Your Responsibilities

CSUDH provides you with a wide variety of academic assistance and personal support, but it is up to you to know when you need help and to seek it out. It is your responsibility to keep informed and to obey the rules, regulations and policies which control your academic standing and your 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 your duties as a student. Consult this catalog, the college and school announcements and the schedule of classes for the information you need. Watch for official announcements.

## Academic Honesty

Lack of honesty in the classroom is considered a very serious offense. Any form of cheating on tests, turning in work which is not one's own (plagiarism), talking during tests, furnishing false information to instructors or knowingly misrepresenting one-self to the college is grounds for disciplinary action. The consequences of cheating are severe and may include the possibility of expulsion. Visit the [CSUDH Academic Integrity page](#) for more information.

## Instructor's Rights

An instructor has the right to remove a student from class at any time he/she considers a student's actions to be interfering with a proper collegiate environment. The instructor may also refer the incident to the Director of Student Discipline & Student Life for disciplinary action as warranted.

**Incompletes:** The grade of I is intended for the rare circumstance when a student who has been successful in a class has an unexpected event occur shortly before the end of the class. I will not consider giving a student a grade of I unless the following three conditions have been met.

1. It is within two weeks of the end of the semester.
2. The student has a grade of C or better in the class.
3. The reason that the student cannot complete the class is properly documented and compelling.

**Behavioral Standards:** Disruptions of class will not be permitted. 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.

Examples of disruptive behavior include:

- Allowing a cell phone or pager to repeatedly beep audibly
- Playing music or computer games during class in such a way that they are visible or audible to other class members
- Exhibiting erratic or irrational behavior
- Behavior that distracts the class from the subject matter or discussion
- Making physical or verbal threats to a faculty member, teaching assistant, or class member
- Refusal to comply with faculty direction
- Performing a distracting repetitive act such as talking to others
- Email harassment
- Sleeping or reading a newspaper and/or magazine

The contents of course material provided by the instructor, the links contained therein directly and indirectly, and the contents of the said links, are copyrighted. They are provided exclusively for non-profit educational use by the students currently enrolled in this course and for the duration of this semester. No other use or any use by others is allowed without authorization of the instructor in this course and copyright holder(s). No videotaping or recording without instructors' prior permission is allowed in class.

Import Dates:

<https://www.csudh.edu/academic-affairs/academic-calendar/>

**Attendance Policy:** Students are encouraged to attend lecture, but attendance will not be taken for regular lectures. Students must attend exams, and attendance will be taken to ensure students are present for exams. The instructor considers university students to be adults, and it is their choice to attend regular lectures. If you miss an exam due to circumstances beyond your control, accommodations can be made at the discretion of the instructor. This is done on a case-by-case basis.

## Study Advice

- Practice, practice, and practice. Since programming/coding is a skill, like all other kinds of skills such as swimming, skating, skiing, practice is the most important approach to improve and enhance the mastery of skills. Learning by doing also means practice.
- Team learning helps students learn from each other. Peer or peer led discussions clarify your understanding about the basic concepts and problem-solving approaches.
- Be prepared when you come to the classroom or lab room. Preview and post-review the materials the instructor provides.

- Complete all assignments: reading and programming, homework and projects. Check your work with sample solutions posted by the instructor to find out your strength and weakness.
- Don't be shy. Communicate with the instructor in a timely manner. Keep in mind that the instructor is always ready to help you.

**Required Computer Software/Hardware Capabilities:** A computer with various software installed, such as Chrome, Java environment, Eclipse or other Java IDEs, PowerPoint reader, Word reader and PDF reader, will be required. Students could use the computers in the lecture room or other computer labs on campus, and all required software has been successfully installed. Students could also choose to use their own computers and install required software. If students have any problem with installing software, please contact university IT department (<https://www.csudh.edu/it/>).

**Computer Literacy Skills Expectations:** It is expected that students will

- Use Microsoft Word for word processing unless otherwise approved by the instructor,
- Be familiar with using email as a communication tool and check your official campus emails at least every other day;
- Be able to access websites and online course materials which may require Flash and other plug-ins;
- Use the library databases to find articles, journals, books, databases and other materials;
- Have regular access to a computer and internet access for the term of this course.
- Know how to program using the Java programming language and associated development environments.

**Resources for Students in Need:** If you are struggling financially, can't afford healthy, nutritious food, or need stable housing, take advantage of these resources on campus. <https://www.csudh.edu/student-services/food-shelter-resources/food-resources/>

- DH Eats App – Look for it in the Apple App Store
- CalFresh – Financial aid for food to help stretch your grocery budget. Email [calfresh@csudh.edu](mailto:calfresh@csudh.edu) with your eligibility questions. Or make an appointment: <https://dh-calfresh.appointlet.com>.
- Housing Referrals – Contact the Basic Needs Coordinator to go over temporary housing solutions. [mkirk@csudh.edu](mailto:mkirk@csudh.edu)
- Basic Needs Food Distribution Events – The basic needs program is providing (4) meals and fresh produce to students every other Thursday. Event registration link will be sent out via toromail and iToros app.
- Farmers' Market – SUSPENDED DUE TO COVID Turn 10 CalFresh dollars into \$20 worth of fresh produce through the DH Farmers' Market's "Market Match" program: Tues 10-2 in the Sculpture Garden.
- Toro Food Pantry – SUSPENDED DUE TO COVID Another nutrition assistance program available to any CSUDH student. They also stock toiletries and menstrual products.

## Zoom

This course will use Zoom web conferencing software for online meetings/office hours/online lectures. Go to the [Zoom download page](#) to download and install the Zoom Client for Meetings on your desktop or laptop. Zoom is also available for mobile and tablet devices on the [App Store](#) (iOS) and [Google Play](#) (Android). Visit the [CSUDH Academic Technology Tutorials page](#) for information on using Zoom.

### Lecture Zoom Invitation

*Topic: CSC 459/ CSC 555/ ITC 459 Lecture*

Join from PC, Mac, Linux, iOS or Android: <https://csudh.zoom.us/j/86226520183?pwd=YmZqS0hpbjBpSUhiNFdZaFF0QjY4dz09>

Password: 082013

Or iPhone one-tap: 16699006833,86226520183# or 16694449171,86226520183#

Or Telephone (not recommended as toll charges apply):

Dial: +1 669 900 6833 (US Toll) or +1 669 444 9171 (US Toll)

Meeting ID: 862 2652 0183

International numbers available: <https://csudh.zoom.us/j/kcKm74l3rC>

Or a H.323/SIP room system:

H.323: 162.255.37.11 (US West) or 162.255.36.11 (US East)

Meeting ID: 862 2652 0183

Password: 082013

SIP: 86226520183@zoomcrc.com

Password: 082013

### Office Hour Zoom Invitation

*Topic: CSC 459/ CSC 555/ ITC 459 Office Hours*

Join from PC, Mac, Linux, iOS or Android: <https://csudh.zoom.us/j/81468300163?pwd=Z3BRRVIYS3VVSTR5MVAyaWpGRnZaQT09>

Password: 694031

Or iPhone one-tap: 16699006833,81468300163# or 16694449171,81468300163#

Or Telephone (not recommended as toll charges apply):

Dial: +1 669 900 6833 (US Toll) or +1 669 444 9171 (US Toll)

Meeting ID: 814 6830 0163

International numbers available: <https://csudh.zoom.us/u/kdpX6zYNE9>

Or a H.323/SIP room system:

H.323: 162.255.37.11 (US West) or 162.255.36.11 (US East)

Meeting ID: 814 6830 0163

Password: 694031

SIP: 81468300163@zoomcrc.com

Password: 694031 Attendance/Late Work

You are expected to submit assignments by the deadlines. Late work will not be accepted unless you experience a documentable and unforeseeable emergency. You are also expected to log into the course websites to submit assignments on a weekly basis.

***\*\*NOTE: If you are no longer participating in the class it is your responsibility to drop or withdraw yourself from the course. It is not the instructor's responsibility to drop students who are no longer participating in the class***

## Important Dates

Date	Description
February 20	President's Day Holiday (No Classes, Campus Open)
March 26-April 1	Spring Recess (includes César Chávez Holiday)
May 12	Last Day of Scheduled Classes
May 13-19	Final Exams

For more information on campus holidays, visit the [CSUDH Academic Calendar page](#).

## Blackboard Learn

You may access the course through Blackboard Learn <https://toro.csudh.edu>. You have the flexibility in an online course to study and participate according to your work and personal schedule within each week of study. However, you must still complete assignments by their required due dates.

Your challenge is to dedicate the required time for study within your personal schedule. This syllabus, including the schedule and due dates, should support you in managing time effectively. Marking your study and your online discussion time in your personal calendar also will help.

As part of your personal schedule, make sure you check the Announcements and my Online Office several times a week so that you can see if I have posted any new information about the course.

## Need Help with Using Blackboard?

If you are new to Blackboard or unfamiliar with a specific feature of Blackboard, [CSUDH Academic Technology](#) offers a series of PDF and video-based tutorials. Visit the [CSUDH Academic Technology Tutorials page](#) for more information.

## Student / Instructor Communication

Here are some important email communication tips:

- I will generally respond to messages sent to me within 24 hours.
- Please use the discussion board forum (Available in Blackboard), within this course, to post questions regarding coursework and if you have happened to have the answer, feel free to provide it to your fellow students. While I will post responses as well, this forum is primarily for student-to-student communications.

## Assignments, Quizzes, and Final Project

We are planning on having Weekly Assignments, Quizzes, and a final project.

The following rules apply:

- All assignments, quizzes, mid-term exam, and final exam are to be done on the Blackboard site. No exceptions. To use the site with a Windows PC, you must be on a Windows 7 or higher computer running Google Chrome or Mozilla Firefox.
- Deadlines: All assignments for the course are to be completed and submitted on time in order to receive consideration for full credit. No late submission will be accepted after the last day of the course.

- Make-up Work: Late work is not permitted for any assignment in this course. No make-ups are available for any assignment, lab session, or examination in this course.
- Quizzes (4 quizzes in total): Each quiz takes 10 – 15 minutes to finish and is supposed to take place at the end of the second class of the week.
- Final Project: There will be a group project for students to practice the professional skills that are discussed in the course. At the end of the semester, each group has to present their project and submit a report. You will write a report and create a presentation on this project. Your team (2-3 members) can choose any topic in information security. The detail of the project will be announced later.

### Course Policies

- Deliverables (Assignments and Final Project) submitted late are not accepted without obtaining instructors permission prior to due date.
- Any exceptional, non-academic circumstances need to be discussed with the instructor as soon as they arise, prior to the due date of the deliverable. At the time of the discussion, NO make-up work will be assigned.
- The instructor reserves the right not to award credit for deliverables that are incomplete. Partial credit is awarded at the instructor’s discretion, and only for work that merits such an award.
- Assignments that are incomplete or incongruous with the specifications may be returned to the student.
- Students shall not make any recording (audio or video) of a classroom lecture without having obtained the prior written permission from the instructor.
- Students not allowed to take photo from the paper exams during the exam results review in classroom or in the office.
- Extra Credit: The instructor may assign extra credit assignments at any point during the semester.

### Examinations

There will be two exams. The first exams will be given during the 8<sup>th</sup> week, the final exam will be given on the date posted in the final examination schedule printed in the campus Class Schedule. The exams will be closed book/notes and include material from the book and lectures. Students are responsible for all materials that will be presented in lecture and textbook. No makeup or early exams will be administered; unless there are serious, unforeseen, and unavoidable circumstances and the student notifies the instructor as soon as possible.

### Grading:

The weighting of the coursework is listed below:

Assignment: 15% (4 Assignments in total, 3.75% for each)

Quizzes: 15% (4 Quizzes in total, 3.75% for each)

Final Project: 15%

Mid-term exam: 25%

Final Exam: 30%

Grade Scale: The following grading scale will be used:

Percent	Grade
96% - 100%	A
90% - 95%	A-
87% - 89%	B+
83% - 86%	B
80% - 82%	B-
77% - 79%	C+
73% - 76%	C
70% - 72%	C-
67% - 69%	D+
63% - 66%	D
0%-60%	F

### Course letter grades:

For all assignments, their numerical grading equivalent, and course grade, the grading criteria is described as follows:

**A – Outstanding Work:** In addition to the criteria for a “B”, superior knowledge regarding details, assumptions, implications, history; superior thinking with information relevant to application, critique, and relationship to other information. An outstanding mastery of the subject with excellence evident in preparation for and attendance in class sessions, curious and retentive mind, unusual ability to analyze and synthesize material, with a positive attitude making productive contributions to the learning community in the classroom.

**B – Above Average Work:** In addition to the criteria for a “C”, more than adequate knowledge regarding technical terms, distinctions, and possesses an ability to use information. Above average student in terms of attendance, preparation, time management, mostly consistent in test taking, and attitude.

C – Average Work: Basic knowledge needed to function and carry on learning regarding major principles, central terms, major figures, also possesses an awareness of field or discipline. Average or typical student in terms of attendance, preparation, time management, inconsistent test taking, and attitude.

D – Below Average Work: Serious gaps in knowledge, confusion of concepts and categories, inability to recall basic information. Below average or atypical student in terms of attendance, preparation, time management, inconsistent test taking, and attitude--minimally passing in performance.

F – Not Acceptable Work: Absence of knowledge, incapable of carrying on a conversation about the subject, misunderstands most concepts, confuses all categories-- Inadequate/insufficient performance. Repeat course.

Incompletes will not be given for this course without extenuating circumstances and convincing reasons demonstrated by the student to the instructor's satisfaction.

\* Planed Topics and tentative schedule

Week	Topic	Activity
1	Jan. 24, 26	Introduction to Security Engineering and Definitions
2	Jan. 31, Feb. 2	Password and Protocol Assignment #1
3	Feb. 7, 9	Password and Protocol & Cryptography Quiz #1
4	Feb. 14, 16	Cryptography
5	Feb. 21, 23	Cryptography Assignment #2
6	Feb. 28, Mar. 2	Access Control Quiz #2
7	Mar. 7, 9	Access Control, Banking and Bookkeeping
8	Mar. 14, 16	Banking and Bookkeeping, Mid-term Exam (25%) Mid-term Exam
9	Mar. 21, 23	Biometrics Assignment #3
10	Mar. 28, 30	"Spring Break"
11	Apr. 4, 6	Biometrics Quiz #3
12	Apr. 11, 13	Network attack and defense Assignment #4
13	Apr. 18, 20	Advanced cryptography
14	Apr. 25, 27	Phone Quiz #4
15	May. 2, 4	Final Projects Presentation
16	May. 9, 11	Final Projects Presentation, Review
17		Final exam (30%) Good Luck! 😊

NOTE-\* Planed topics will be conducted according the above table. However, the schedule of the topics or timetable may be varied).