

# Information Security Section 02

## CS 166

Fall 2024 3 Unit(s) 08/21/2024 to 12/09/2024 Modified 08/21/2024

### & Course Information

Class time	T/Th 16:30 - 17:45
Classroom *	MacQuarrie Hall 225
Instructor	Yan Chen ( <a href="mailto:yan.chen01@sjsu.edu">yan.chen01@sjsu.edu</a> )
Office Hour	T/Th 13:50 - 14:50 on Zoom <a href="https://sjsu.zoom.us/j/84577599747">https://sjsu.zoom.us/j/84577599747</a> <a href="https://sjsu.zoom.us/j/84577599747">https://sjsu.zoom.us/j/84577599747</a> ) Or <a href="https://calendly.com/yan-chen-sjsu/15min">Make Appointment (https://calendly.com/yan-chen-sjsu/15min)</a> .
Grader	Tam Ly < <a href="mailto:tam.ly@sjsu.edu">tam.ly@sjsu.edu</a> ( <a href="mailto:tam.ly@sjsu.edu">mailto:tam.ly@sjsu.edu</a> )>

\*The class is in-person. The lecture part will be recorded but the quality is not guaranteed. Some in-class demos and exercises may not be recorded.

## Course Description and Requisites

Fundamental security topics including cryptography, authentication, access control, network security, security protocols, and software security. Networking basics are covered. Additional security topics selected from multilevel security, biometrics, blockchain, machine learning, information warfare, e-commerce, intrusion detection, system evaluation and assurance.

Prerequisite(s): CS 146 (with a grade of "C-" or better) and either CS 47 or CMPE 102 or CMPE 120 (with a grade of "C-" or better); Computer Science, Applied and Computational Math, Forensic Science: Digital Evidence, or Software Engineering Majors only; or instructor consent.

Letter Graded

### j Classroom Protocols

- Do NOT share any course material publicly (on Canvas, GitHub, etc.) without permission, including but not limited to lecture notes, lecture videos, passwords, homework/exam solutions, and class links.
- No late homework questions (within 24 hours before the due, excluding follow-ups) via email.
- Instances of academic dishonesty will not be tolerated. Your own commitment to learning, as evidenced by your enrollment at San José State University and the University's Academic Integrity Policy (<https://www.sjsu.edu/senate/docs/F15-7.pdf>), requires you to be honest in all your academic coursework. Cheating or plagiarism (presenting the work of another as your own, the use of another person's ideas without giving proper credit, or using AI) will result in a reduction in the final course grade (you will get a warning if it's the first time except for midterm 2 and final; 1 letter grade off every time after) and administrative sanctions by the University.

## ↳ Program Information

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Diversity Statement - At SJSU, it is important to create a safe learning environment where we can explore, learn, and grow together. We strive to build a diverse, equitable, inclusive culture that values, encourages, and supports students from all backgrounds and experiences.

## # Course Learning Outcomes (CLOs)

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After completing this course, you should be knowledgeable of the major technical security challenges in each of the following four areas: cryptography, access control, protocols, and software.

## 7 Course Materials

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There is no required text for this course other than all the materials (lecture notes, homework, etc.) on Canvas (<https://sjsu.instructure.com/courses/1595868>). You are responsible for regularly checking the Canvas course page for any updates, including its messaging system.

### Further Readings (optional)

- Mark Stamp, "Information Security: Principles and Practice," 3rd edition
- Michael Sikorski and Andrew Honig, "Practical Malware Analysis: The Hands-On Guide to Dissecting Malicious Software." An excellent book for information on reverse engineering that includes many hands-on exercises.
- Software Reverse Engineering (<http://reversingproject.info/>). This website, which was created by a former master's student, includes lots of good information and detailed exercises with solutions.
- The references at the end of each lecture note.

There will be 5 biweekly assignments (optional), 2 programming assignments (optional), 2 midterms (optional), and a final (mandatory). All activities are individual assignments unless specified. Copying from others' work (from other students, the Internet, or AI) will be considered cheating. And no late submission will be accepted.

Although assignments and quizzes are optional, they are highly recommended to practice what you learned in class and to enhance your score. University Policy S16-9 (<http://www.sjsu.edu/senate/docs/S16-9.pdf>) (<http://www.sjsu.edu/senate/docs/S16-9.pdf>) states that:

*“Success in this course is based on the expectation that students will spend, for each unit of credit, a minimum of 45 hours over the length of the course (normally three hours per unit per week) for instruction, preparation/studying, or course-related activities, in*

*"Faculty members are required to have a culminating activity for their courses, which can include a final examination, a final research paper or project, a final creative work or performance, a final portfolio of work, or other appropriate assignments."*

## Grading Information

### Criteria

Note that the "weight" is not percentage - they are "points". There will be at least 130 points available, including extra credits from optional exercises/activities. More details will be given in class.

Type	Weight	Topic	Notes
Final Exam	100	Cumulative	Can be substituted with the sum of midterm scores
(Optional) Assignments	15	Biweekly	5 assignments total, 3 pts each
(Optional) Programs	6	Cumulative	2 program assignments total, 3 pts each
(Optional) Midterms	6	Cumulative	2 midterms, 3 pts each if grade over 50% (all-or-nothing)
(Optional) Others	3+	Others	Other class activities, such as reading assignments, discussions, etc.

### Breakdown

The range also refers to "points", not percentages.

- A+ will be given to the top 1% of students.
- Grades near the borderlines will be rounded up depending on your level and quality of class participation (in class and in the Discussions on Canvas).




# Lecture Schedule

Posted on Canvas: <https://sjsu.instructure.com/courses/1595868/pages/course-materials>  
(<https://sjsu.instructure.com/courses/1595868/pages/course-materials>) (to be posted)