San José State University
Department of Computer Science
CS166, Information Security, Section 1, Spring, 2020

Course and Contact Information

Instructor:	Fabio Di Troia
Office Location:	DH217
Telephone:	
Email:	fabio.ditroia@sjsu.edu
Office Hours:	TR, 15:00 – 16:00
Class Days/Time:	TR 16:30
Classroom:	WSQ109
Prerequisites:	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, or Software Engineering Majors only; or instructor consent.

Course Format

Faculty Web Page and MYSJSU Messaging

Course materials such as syllabus, handouts, notes, assignment instructions, etc. can be found on Canvas Leaning Management System course login website at http://sjsu.instructure.com. You are responsible for regularly checking with the messaging system through MySJSU at http://my.sjsu.edu (or other communication system as indicated by the instructor) to learn of any updates.

Course Description

Fundamental security topics including cryptography, protocols, passwords, access control, software security, and network security. Additional topics selected from multilevel security, biometrics, tamper-resistant hardware, information warfare, e-commerce, system evaluation and assurance, and intrusion detection.

Course Learning Outcomes (CLO)

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.

Required Texts/Readings (Required)

Textbook

Information Security: Principles and Practice, Mark Stamp | ISBN-10: 0470626399, ISBN-13: 978-0470626399

Other Readings

None

Other technology requirements / equipment / material

None

Course Requirements and Assignments (Required)

SJSU classes are designed such that in order to be successful, it is expected that students will spend a minimum of forty-five hours for each unit of credit (normally three hours per unit per week), including preparing for class, participating in course activities, completing assignments, and so on. More details about student workload can be found in University Policy S12-3 at http://www.sjsu.edu/senate/docs/S12-3.pdf.

Homework, Midterm and Final exam are expected for this class. Homework is due on Canvas by class starting time on the due date. Each assigned problem requires a solution and an explanation (or work) detailing how you arrived at your solution. Cite any outside sources used to solve a problem. When grading an assignment, I may ask for additional information.

NOTE that University policy F69-24 at http://www.sjsu.edu/senate/docs/F69-24.pdf states that "Students should attend all meetings of their classes, not only because they are responsible for material discussed therein, but because active participation is frequently essential to insure maximum benefit for all members of the class. Attendance per se shall not be used as a criterion for grading."

Final Examination or Evaluation

The final test will be published on Canvas and will be submitted online.

Grading Information

- Homework, 25%
- Midterm 1, 25%
- Midterm 2, 25%
- Final, 25%

Note that "All students have the right, within a reasonable time, to know their academic scores, to review their grade-dependent work, and to be provided with explanations for the determination of their course grades." See University Policy F13-1 at http://www.sjsu.edu/senate/docs/F13-1.pdf for more details.

Determination of Grades

Semester grade will be computed as a weighted average of the scores obtained in each of the three categories listed above.
No make-up tests or quizzes will be given and no late homework (or other work) will be accepted. Also, in-class work must be completed in the section that you are enrolled in.

Nominal Grading Scale:

Percentage	Grade
92 and above	A
90 – 91	A-
88 – 89	B+
82 – 87	B
80 – 81	B-
78 – 79	C+
72 – 77	C
70 – 71	C-
68 – 69	D+
62 – 67	D
60 - 61	D-
59 and below	F

Classroom Protocol

- **Cheating** will not be tolerated.
- Student must be respectful of the instructor and other students. For example, No disruptive or annoying talking.
- Turn off cell phones
- Class begins on time
- Valid picture ID required at all times

University Policies (Required)

Per University Policy S16-9, university-wide policy information relevant to all courses, such as academic integrity, accommodations, etc. will be available on Office of Graduate and Undergraduate Programs' Syllabus Information web page at http://www.sjsu.edu/gup/syllabusinfo/". Make sure to review these policies and resources.

CS166 / Information Security, Spring 2020, Course Schedule

The schedule is subject to change with fair notice communicated via Canvas course page

Course Schedule

Week	Date	Topics, Readings, Assignments, Deadlines
1	01/23	Introduction
2	01/28	Crypto Basic
2	01/30	Symmetric Key Crypto
3	02/4	Symmetric Key Crypto
3	02/6	Public Key Crypto
4	02/11	Public Key Crypto
4	02/13	Hash Functions and Other Topics
5	02/18	Hash Functions and Other Topics
5	02/20	Hash Functions and Other Topics
6	**02/25**	**Midterm 1**
6	02/27	Authorization
7	03/03	Authentication
7	03/05	Authorization
8	03/10	Simple Authentication Protocols
8	03/12	Simple Authentication Protocols
9	03/17	Simple Authentication Protocols
9	03/19	Real-World Security Protocols
10	03/24	Real-World Security Protocols
10	03/26	Real-World Security Protocols
11	03/31	SPRING BREAK
11	04/02	SPRING BREAK
12	**04/07**	**Midterm 2**
12	04/09	Software Flaws and Malware
13	04/14	Software Flaws and Malware
13	04/16	Software Flaws and Malware
14	04/21	Insecurity in Software
14	04/23	Insecurity in Software
15	04/28	Insecurity in Software

Week	Date	Topics, Readings, Assignments, Deadlines
15	04/30	TBD
16	05/05	TBD
16	05/07	Wrap-up
Final Exam	05/13	Time: 14:45-17:00