

**San Jose State University  
Department of Aviation and Technology**

**TECH 171 – 01**

**Network Security & Prevention Management**

**Fall 2018**

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**Course Information, Instructor**

**Instructor:** Dr. Balaji Venkatraman

Department: **Department of Aviation and Technology**

[www.engr.sjsu.edu/avtech](http://www.engr.sjsu.edu/avtech)

**Class Location & Hours:**

<b>TECH 171 - 01– 50979</b>			
<b>Days &amp; Times</b>	<b>Room</b>	<b>Instructor</b>	<b>Meeting Dates</b>
MoWe 6:00PM - 7:15PM	Engineering Building 490	Balaji Venkatraman	08/21/2018 - 12/10/2018

**Preferred Contact:** During Office Hours

Monday, Wednesday: 7.15-730 PM; 845-9.15 PM or by Appointment

Email: balaji (dot) Venkatraman (at) sjsu (dot) edu

**Course Information**

- **Course Code:** TECH 171, **Section:** 01 (50979)
- **Course Title:** Network Security & Prevention Management, 3 credit hours

**Course Description:** Approaches to IT system security including physical, application, operating system, cyber-, and network security. Using switches, routers, adaptive security appliance, firewalls, and intrusion protection systems to implement comprehensive security policies. IPv4 and IPv6 security, VPN technology. Lec 2 hours

- **Prerequisites:** Tech 171 or UG Equivalent
- **Text-Book:**
  - Network Security Essentials: Applications and Standards  
by William Stallings, Edition: 6th  
Publisher: Pearson  
Print ISBN: 9780134527338, 013452733X  
eText ISBN: 9780134527598, 0134527593

- **Other References:**

- Principles of Information Security, Whitman and Mattord, 4th Edition, Mc-Graw-Hill  
ISBN-13: 978-1337102063  
ISBN-10: 1337102067 (4<sup>th</sup> edition or later)
- Rainbow Series Reports, Cyber Security

- **Lecture Notes:** All lecture notes will be posted on Canvass

**Course Requirements and Assignments**

- All assignments with description, due dates, and submission guidelines will be posted on Canvas.
- No late submissions will be accepted, unless special arrangements are made with the instructor before the posted due date.

**Grading Information**

Course grade will be based on assignments, exams, final exam, and project with the following weight:

Homework	20%
Test 1	20%
Test 2	20%
Lab Assignments/Paper	20%
Final	20%

**Final Examination or Evaluation**

- The final exam will be comprehensive, covering all material presented in class. There will be no make-ups for missed exams, except for medical or other reasons outside the student's control, and such must be documented by written notice.
- **Exams will be administered online using Canvas. Students should ensure that they have a laptop capable of installing and running the requisite software to take online quizzes and tests.**
- **Pop up quizzes may be administered in class.**

**Final Exam will be conducted in class on Wednesday, December 12 1715-1930**

**Determination of Grades:**

Final grades will be assigned as follows:

A 93-100	A- 90-92	B+ 87-89
B- 80-82	B 83-86	C+ 77-79
C- 70-72	C 73-76	D+ 67-69
D- 60-62	D 62-67	F < 60

Project will be assigned on an individual basis with consultation of the course instructor and lab assistant. Project would be a culminating effort of the subject materials covered in the course. Lab Success in this course is based on the expectation that students will spend, for each unit of credit, a minimum of 9 hours per week hours over the length of the semester.

- **Problem Solving Sessions:** Homework and quizzes can be reviewed and discussed with the ISA/TA or in class
- **Attendance:** Please be aware that there will be a number of random attendance checks throughout the semester

### Tentative Course Schedule

This course will be presented in two parts.

1. In the first part, we will use **Principles of Information Security, Whitman and Mattord**, to review the basis of cyber security and establish a general frame work for information security

Topics	Chapter Readings	Exams
Introduction to Information Security	Chapter 1	
The Need for Security	Chapter 2	
Legal, Ethical, and Professional Issues in Information Security	Chapter 3	
Planning for Security	Chapter 4	
Risk Management	Chapter 5	Mid-term Exam

2. In the second part, we will use **Network Security Essentials: Applications and Standards** by **William Stallings**, to dive into topics specifically related to network security

Topics	Chapter Readings	Exams
Computer Security Concepts	Chapter 1	
Cryptography: Symmetric Encryption and Message Confidentiality	Chapter 2	
Cryptography: Public-Key Cryptography and Message Authentication	Chapter 3	
Network Security Applications: Key Distribution and User Authentication	Chapter 4	
Network Security Applications: Network Access Control and Cloud Security	Chapter 5	Final Exam

### **Policy Information**

#### **University Academic Integrity:**

Students should know that the University's Academic Integrity Policy is available at <http://www.sjsu.edu/senate/docs/S04-12.pdf>. Your own commitment to learning, as evidenced by your enrollment at San Jose State University and the University's integrity policy, require you to be honest in all your academic course work. Faculty members are required to report all infractions to the office of Student Conduct and Ethical Development. The website for Student Conduct and Ethical Development is available at [http://www.sa.sjsu.edu/judicial\\_affairs/index.html](http://www.sa.sjsu.edu/judicial_affairs/index.html).

Instances of academic dishonesty will not be tolerated. Cheating on exams or plagiarism (presenting the work of another as your own, or the use of another person's ideas without giving proper credit) will result in a failing grade and sanctions by the University. For this class, all assignments are to be completed by the individual student unless otherwise specified. If you would like to include in your assignment any material you have submitted, or plan to submit for another class, please note that SJSU's Academic Policy F06-1 requires approval of instructors.

## **Campus Policy in Compliance with the American Disabilities Act:**

If you need course adaptations or accommodations because of a disability, or if you need to make special arrangements in case the building must be evacuated, please make an appointment with me as soon as possible, or see me during office hours. Presidential Directive 97-03 requires that students with disabilities requesting accommodations must register with the DRC (Disability Resource Center) to establish a record of their disability.

## **Dropping and Adding:**

Students are responsible for understanding the policies and procedures about add/drops, academic renewal, etc. Information on add/drops are available at <http://info.sjsu.edu/web-dbgen/narr/soc-Spring/rec-298.html>. Information about late drop is available at <http://www.sjsu.edu/sac/advising/latedrops/policy/>. Students should be aware of the current deadlines and penalties for adding and dropping classes.

## **Classroom Protocol:**

\* **Exams:** All exams including the final exam will be closed book and closed notes. Except for extraordinary, documented situations, make-up exams will not be allowed. Therefore, at the beginning of the semester, make sure that you have no exam or work conflicts with the schedule of this course.

**Exams will be administered online using Canvas. Students should ensure that they have a laptop capable of installing and running the requisite software to take online quizzes and tests.**

**Pop up quizzes may be administered in class.**

\* **Cell Phones:** Students will turn their cell phones off or put them on vibrate mode while in class. Students should not answer their phones in class. Students whose phones disrupt the course and do not stop when requested by the instructor will be referred to the Judicial Affairs Officer of the University.

\* **Computer Use:** In the classroom, students are allowed to use computers only for class-related activities. These include activities such as taking notes on the lecture underway, following the lecture on Web-based PowerPoint slides that the instructor has posted, and finding Web sites to which the instructor directs students at the time of the lecture. Students who use their computers for other activities or who abuse the equipment in any way, at a minimum, will be asked to leave the class, and, at a maximum, will be referred to the Judicial Affairs Officer of the University for disrupting the course. (Such referral can lead to suspension from the University.) Students are urged to report to their instructors computer use that they regard as inappropriate (i.e., used for activities that are not class related).