Course and Contact Information

Instructor  
Dennis C. Frezzo, PhD

Office Location  
Meet in E490

Telephone  
Department Phone (408) 924-3192

Email  
dennis.frezzo@sjsu.edu

Office Hours  
Th 5:30-5:55 PM

Class Days/Time  
Lecture Tu/Th 4:30-5:20 PM; Lab Th 6:00-8:45 PM

Classroom  
E490

Prerequisites  
Required: Tech 65. Helpful: CompE 30, some Linux, home networking.

Course Materials

Some course materials including the will be found on the SJSU CANVAS site for the course, and that will be the official system of record. Login instructions can be found at [http://online.sjsu.edu](http://online.sjsu.edu). You must be registered in the course to receive access. Day-to-day, materials will be at [https://www.netacad.com](https://www.netacad.com), the Cisco Networking Academy “Routing and Switching Essentials”/CCNA 2 course, and through the NetLab System. Accounts will be established and verified in class. A laptop with some type of hypervisor software (to allow the installation of virtual machines), Packet Tracer 7.2 (Windows or Linux version), Wireshark, terminal emulation software, and other free software as needed is required. No books are required though I will make suggestions.

Course Description


Course Learning Outcomes

Upon successful completion of this course, students will be able to:

1. Explain how a router will forward traffic based on the contents of a routing table
2. Implement static routing
3. Implement basic dynamic routing with RIP and contrast with EIGRP, OSPF, and BGP.
4. Explain how switching operates in a small to medium-sized network
5. Configure Ethernet switch ports and WiFi
6. Implement VLANs
7. Implement DHCP, NAT, and ACLs
8. Configure monitoring tools available for small to medium-sized networks
9. Use monitoring tools and network management protocols to troubleshoot data networks
10. Explain simple sysadmin, devops, network tech, and network engineer job responsibilities
11. Explain emerging network terminology including virtualization, NFV, automation, network programmability, IoT, Cloud, SDN, and IBN

**Required Text/Readings**

Course reading materials will be provided online by the instructor.

**Course Requirements and Assignments**

All assignments with description, due dates, and submission guidelines will be posted online.

**Laboratory Assignments**

Lab instructions will be provided to the students to perform assignments and for safe laboratory conduct.

**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.

**Grading Information**

Course grade will be based on models, labs, activities, assessments, and a project with the following weight:

- Homework: 20%
- Labs and In-Class Activities: 40%
- Quizzes, Chapter Exams, Performance Exam, and Final: 40%

**Determination of Grades**

There will be no curving of grades. Final grades will be assigned as follows:

- A  93-100
- A-  90-92
- B+  87-89
- B   83-86
- C+  77-79
- C   73-76
- D+  67-69
- D   63-69
- F   < 60

**Classroom Protocol**

Class participation and attendance are expected and recorded each week.

**University Policies**

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/](http://www.sjsu.edu/gup/syllabusinfo/)
# Tech 66 Network Administration

## Fall 2018 Course Schedule / Outline

<table>
<thead>
<tr>
<th>Week</th>
<th>Subject (may change as class needs dictate)</th>
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<tbody>
<tr>
<td>1</td>
<td>08/21: Review of Tech 65 and Cisco Introduction to Networking</td>
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<tr>
<td>2</td>
<td>08/28: Chapter 1 Routing Concepts plus more IPv4 and IPv6. Telnet and SSH; Lab 1 - Orientation</td>
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<td>3</td>
<td>09/04: Chapter 2 Static Routing plus more home networking. No Lecture Tuesday. Lab 2 – Routing.</td>
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<tr>
<td>4</td>
<td>09/11: Chapter 3 Dynamic Routing with RIP plus intro to EIGRP, OSPF, and BGP. Lab 3 – Routing Protocols.</td>
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<td>5</td>
<td>09/18: Chapter 4 Switched Networks plus WiFi design.</td>
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<td>6</td>
<td>09/25: Chapter 5 Switch Configuration plus WiFi configuration. Lab 4 – Build a LAN</td>
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<td>7</td>
<td>10/02: Chapter 6 VLANs plus Multilayer Switching. Lab 5 – Realistic LANs.</td>
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<td>8</td>
<td>10/09: Chapter 7 TCP/IP Review and Access Control Lists plus IPv6 Lists (part 1)</td>
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<tr>
<td>9</td>
<td>10/16: Chapter 7 TCP/IP Review and Access Control Lists plus IPv6 Lists (part 2). Lab 6 - ACLs</td>
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<td>10</td>
<td>10/23: Chapter 8 DHCP plus Overall IP Address Planning</td>
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<td>12</td>
<td>11/06: Chapter 10 Device Discovery, Management, Maintenance plus HTTP, SNMP. Lab 8 – Manage.</td>
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<tr>
<td>13</td>
<td>11/13: The Internet of Things and The Future of Networking</td>
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<td>14</td>
<td>11/20: Thanksgiving Week. Online Lecture Tuesday. No in-person meetings.</td>
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<tr>
<td>17</td>
<td>12/14: Final Exam, Friday, 12/14, 1445-1700</td>
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