San José State University  
Department of Aviation &Technology  
Tech 165 Wireless Communications Technologies, Fall 2017

Course and Contact Information
Instructor: Dr. Pouya Ostovari
Office Location: IS 106
Telephone: (408)-924-3917
Email: pouya.ostovari@sjsu.edu
Office Hours: MW: 14:30 – 15:30
or by an appointment

Class Days/Time: MW: 10:30 – 11:20 Lecture
M: 12:00 – 14:45 Lab
Classroom: Engr 103

Prerequisites: Tech 63 and Tech 65

Course Format
The course relies on lecture and lab materials presented in class and students are strongly encouraged to attend.

Course Description

Course Learning Outcomes (CLO)
Upon successful completion of this course, students will be able to:
1. Describe the limitations, advantages, and disadvantages of each major wireless network architecture.
2. Identify and select appropriate hardware and software for specific WLAN needs.
3. Troubleshoot a basic wireless computer network.
4. Design and setup a simple wireless LAN...
Required Texts/Readings

Textbook

Course Requirements and Assignments
You will answer selected questions for each chapter. Homework and lab assignments will be posted on Canvas. You should submit your work via Canvas by the due date.

Final Examination
The final exam will be comprehensive, covering all material presented in class.

Lab assignments

Real-World Exercises
You will work in groups of 2-3 students to answer and submit the Real-World Exercises reports (located in the textbook) on or before the due date. Only one report per group. Only the indicated students will get the credit. Real-World Exercises contribute to CLO 2, applying the course material in solving proposed scenarios related to wireless computer networks and developing teamwork skills.

Hands-On Projects
You will work in groups of 2-3 classmates to perform Hands-On Projects to install, configure, and optimize basic wireless networks. The Hands-On Projects are in the textbook. It is possible that you might need to rethink your answers to the Hands-On Projects and this is part of the learning process. It is strongly recommended that you work in teams. Hands-On Projects contribute to CLO 2, reinforcing the course material and developing teamwork skills.

Grading Information

Homework 15%
Quizzes 10%
Midterms 1 15%
Midterms 2 15%
Lab 20%
Final Exam 25%
The final grade will be determined according to the following scale:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Minimum Mark</th>
<th>Maximum Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>96</td>
<td>100</td>
</tr>
<tr>
<td>A</td>
<td>93</td>
<td>95</td>
</tr>
<tr>
<td>B+</td>
<td>87</td>
<td>89</td>
</tr>
<tr>
<td>B</td>
<td>83</td>
<td>86</td>
</tr>
<tr>
<td>C+</td>
<td>77</td>
<td>79</td>
</tr>
<tr>
<td>C</td>
<td>73</td>
<td>76</td>
</tr>
<tr>
<td>D+</td>
<td>67</td>
<td>69</td>
</tr>
<tr>
<td>D</td>
<td>63</td>
<td>69</td>
</tr>
<tr>
<td>F</td>
<td>&lt;60</td>
<td></td>
</tr>
<tr>
<td>A-</td>
<td>90</td>
<td>92</td>
</tr>
<tr>
<td>B-</td>
<td>80</td>
<td>82</td>
</tr>
<tr>
<td>C-</td>
<td>79</td>
<td>72</td>
</tr>
<tr>
<td>D-</td>
<td>60</td>
<td>62</td>
</tr>
</tbody>
</table>

1. Check continuously your standing in the class on Canvas (https://sjsu.instructure.com). Notify the instructor immediately if there is an error in any of your grades.

2. All late assignments submitted up to 7 calendar days after the due date and time will have a penalty of 10% per day.

3. Assignments submitted after 7 calendar days of the due date will not be accepted and they will be recorded as 00.

4. There will not be any makeup quiz, but your lowest quiz grade will not be considered.

**Classroom Protocol**

Class participation and attendance are strongly encouraged. Use of cell-phones are not allowed. Laptop computers and tablet are allowed only for taking lecture notes and related work to the lectures.

**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/”

**Students with Special Need**

If you need special accommodation, please contact Accessible Education Center at your earliest convenience. You can find more information at http://www.sjsu.edu/aec/faculty/index.html.
# Tentative Calendar*

<table>
<thead>
<tr>
<th>Week</th>
<th>Topics, Readings, Assignments, Deadlines</th>
</tr>
</thead>
</table>
| 1, Aug 23rd               | • Introduction, Course Organization, Orientation  
• Chapter 1: Introduction to Wireless Communications                                          |
| 2, Aug 28th               | • Continue Chapter 1  
• Chapter 2: Wireless Data Transmission                                                         |
| 3, September 4th          | • Continue Chapter 2                                                                             |
| 4, September 19th         | • Chapter 3: Radio Frequency Communications                                                     |
| 5, September 26th         | • Continue Chapter 3  
• Chapter 4: How Antennas Work                                                                     |
| 6, October 2nd            | • Chapter 5: Wireless Personal Area Networks                                                     |
| 7, October 9th            | • Continue chapter 5  
• Review chapters 1-5  
• Midterm exam 1                                                                                                   |
| 8, October 16th           | • Chapter 6: High-Rate Wireless Personal Area Networks                                           |
| 9, October 23rd           | • Chapter 7: Low-Speed Wireless Local Area Networks  
• Chapter 8: High-Speed WLANs and WLAN Security                                                   |
| 10, October 30th          | • Chapter 9: Wireless Metropolitan Area Networks                                                  |
| 11, November 6th          | • Chapter 10: Wireless Wide Area Networks                                                        |
| 12, November 13th         | • Continue chapter 10  
• Review chapters 6-10  
• Midterm exam 2                                                                                                   |
| 13, November 20th         | • Chapter 11: Radio Frequency Identification and Near-Field Communication                         |
| 14, November 27th         | • Continue chapter 11  
• Chapter 12: Wireless Communications in Business                                                  |
| 15, December 4th          | • Continue Chapter 12                                                                            |
| 16, December 11th         | • Review                                                                                         |
| Friday, December 15       | • Final exam, 9:45-12:00                                                                           |

* Subject to change with fair notice

**Holidays:**  
Monday, September 4 Labor Day - Campus Close  
Friday, November 10 Veteran's Day - campus closed  
Wednesday, November 22 Non-instructional holiday (no classes held)  
Thursday - Friday, November 23 - 24 Thanksgiving Holiday - campus closed

You can find the calendar at [http://info.sjsu.edu/static/policies/calendar-fall.html](http://info.sjsu.edu/static/policies/calendar-fall.html)