WELCOME

To

Wireless Telephony Systems

EECT-2337.XP7
CRN: 26900
Mon-Wed 6PM-10PM Rm H-241

Instructor: Pete Brierley
pgbrierley@collin.edu
jws.collin.edu/pbrierley/P-Wireless
972-377-1686

Office Hrs and Open Lab: H-241 Mon-Thu 1:30-4:30 PM
**Course Number:** EECT-2337

**Course Title:** Wireless Telephony Systems

**Course Description:**
Principles of wireless/cellular telephony systems to include call processing, hand-off, site analysis, antenna radiation patterns, commonly used test/maintenance equipment and access protocol.

**Course Credit Hours:** 3
  - Lecture Hours: 3
  - Lab Hours: 1
  - Clinical/Recitation Hours: N/A

**Placement Assessment(s):** N/A

**Prerequisite:** N/A

**Prerequisite/Concurrent Enrollment:** N/A

**Co-requisite:** N/A

**Student Learning Outcomes:**
Install, test, maintain, and troubleshoot wireless system equipment; explain the wireless protocols; perform site surveys; and practice safety procedures.

**Withdrawal Policy:**
“See the current Collin Registration Guide for the last day to withdraw.”

**Collin College Academic Policies:**
“See the current Collin Student Handbook”

**Americans with Disabilities Act:**
Collin College will adhere to all applicable federal, state and local laws, regulations and guidelines with respect to providing reasonable accommodations as required to afford equal opportunity. It is the student’s responsibility to contact the ACCESS office, SCC-G200 or 972-881-5898 (V/TTD: 972-881-5950) to arrange for appropriate accommodation. See the current Collin Student Handbook for additional information.
Instructor’s Name: Pete Brierley
Office Number: H-230e or H-241
Office Hours: Monday-Thursday 13:30 - 16:30
Phone Number: 972-377-1686
Email: pgbrierley@collin.edu, brierley.peter@gmail.com
Subject: “CWNA… “

Class Information:
Section: EECT-2337.XP7
Meeting Times: 18:00-22:00
Meeting Location: H-241

Course Resources: “CWNA” – See last page of this Syllabus for book recommendations

Supplies: 1 memory stick (thumb drive)
1 notebook (Configuration Journal)

Attendance Policy: End of class “Reflections Summary” passed in and graded confirms attendance

Additional Student Learning Outcomes:

• Radio Frequency Fundamentals for Wireless LANs
• Spread Spectrum
• The IEEE 802.11 Standards
  o Industry Organizations
  o Overview of the Standards
  o Protocol Architecture
  o The Physical and Data-Link Layers
• Network Implementation
  o Infrastructure Devices (including PoE)
  o Client Devices
  o Site Surveying
  o Network Architecture and Design
  o Implementation
  o Management
  o Troubleshooting
• Security
  o IEEE 802.11 Security Architecture
  o Security Policy
  o Security Analysis and Troubleshooting
Overview of WLAN Network Attacks and Threat Assessment
- Monitoring and Management of a WLAN
- Design a Secure WLAN Infrastructure
- Key Management and Roaming
- Emerging Technologies

Method of Evaluation:

<table>
<thead>
<tr>
<th>Grading Components</th>
<th>Percent of Total Score</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter tests</td>
<td>15</td>
<td>Late penalty to be imposed to discourage procrastination</td>
</tr>
<tr>
<td>Configuration Journal and Reflections</td>
<td>15</td>
<td>Journal and Reflections must be hand written</td>
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<td>Reflections used to log attendance</td>
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<tr>
<td>Labs</td>
<td>35</td>
<td></td>
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<tr>
<td>Written Exam</td>
<td>35</td>
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Course Calendar: Class begins year 2012 week 12 (March 19, 2012)

WK 1 - Ch 1. Overview of Wireless Standards, Organizations, and Fundamentals
WK 1 - Ch 2. Radio Frequency Fundamentals
WK 1 - Ch 3. Radio Frequency Components, Measurements, and Mathematics
  Lab 01: - Oscilloscope (PC app)

WK 2 - Ch 4. Radio Frequency Signal and Antenna Concepts
WK 2 - Ch 5. IEEE 802.11 Standards
WK 2 - Ch 6. Wireless Networks and Spread Spectrum Technologies
  Lab 02: - Configure an infrastructure network

WK 3 - Ch 7. Wireless LAN Topologies
WK 3 - Ch 8. 802.11 Medium Access
WK 3 - Ch 9. 802.11 MAC Architecture
  Lab03: - Install and run wireshark

Wk 4  Review for Midterm
Wk 4  Midterm Exam

WK 5 - Ch 10. Wireless Devices
WK 5 - Ch 11. WLAN Deployment and Vertical Markets
WK 5 - Ch 12. WLAN Troubleshooting
  Lab 05: - Troubleshooting a wireless network

WK 6 - Ch 13. Network Security Architecture
WK 6 - Ch 14. Wireless Attacks, Intrusion Monitoring, and Policy
WK 6 - Ch 15. Radio Frequency Site Survey Fundamentals
  Lab 06: - Configure access restrictions & Internet security on an infrastructure network

WK 7 - Ch 16. Site Survey Systems and Devices
WK 7 - Ch 17. Power over Ethernet (PoE)
WK 7 - Ch 18. High Throughput (HT) and 802.11n
  Lab 07: Study the effect of adjacent channel interference on a wireless network

Wk 8  Review for Final Exam
Wk 8  Final Exam

This schedule is subject to change.
Recommended Books:

Primary TEXT:

**CWNA®: Certified Wireless Network Administrator Official Study Guide**
- By: David D. Coleman; David A. Westcott
- Publisher: Sybex
- Pub. Date: April 06, 2009
- Print ISBN: 978-0-470-43890-9
- Pages in Print Edition: 765

Secondary Resource:

**CCNA® Wireless Study Guide**
- By: Todd Lammle
- Publisher: John Wiley & Sons
- Pub. Date: July 26, 2010
- Print ISBN: 978-0-470-52765-8
- Pages in Print Edition: 552