Summer 2010

CEG 210-01: PC Networking I

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SYLLABUS

CEG 210 - PC Networking I
Department of Computer Science and Engineering
College of Engineering and Computer Science

Spring 2010

General Course Information

Instructor:	**Karen Meyer**
Office:	**344 Russ Engineering Center**
Office Hours:	**Before Class, 9:00 – 10:00 AM, and by appointment**
Phone:	**937-775-4534**
E-mail:	**chris.fickert@wright.edu**
Web site:	**http://www.wright.edu/~chris.fickert**
Classroom:	**346 Russ Engineering Center**
Class Times:	**Class 10:25 am - 12:05 pm MW**
Prerequisites:	**CS 205 or CS 240**
Credit Hours:	**4 Quarter Hours**

Textbook: Tamara Dean, Network+ Guide to Networks, Fifth Edition, *Course Technology Incorporated, 2010* ISBN-13: 978-1-423-90245-4 or 10: 1-423-90245-9.

Additional Materials
Slides, Reference material found on **WebCT(http://wisdom.wright.edu)**

Course Description
Introduction to networking technologies including infrastructure and architectures, standards, protocols and directory services, administration, security and management. Integrated lecture and lab.

Course Goals

1. To understand the fundamental building blocks of a modern network including hardware, operating systems and protocols.
2. To appreciate the importance of networking standards and models including the OSI Model.
3. To understand data transmission concepts and the characteristics of networking media.
4. To understand modern protocols including TCP/IP.
5. To identify security risks and plan a network that minimizes the risks.
6. To develop a systematic problem solving process to identify and solve problems using software and hardware tools.
7. To understand network management and the importance of developing policies, performance analysis and maintenance.

Course Format

A combination of lecture, demonstration and lab activities will be used during class. Typically, the first part of the class will be dedicated to lecture and the remainder of the class will be used to complete lab-based assignments and cases.

Topic Coverage

This course first introduces the fundamental building blocks that form a modern network, such as protocols, topologies, hardware, and network operating systems. It then provides coverage of important concepts in contemporary networking, such as TCP/IP, Ethernet, wireless transmission, and security. The course will prepare students to select the best network design, hardware, and software for your environment. Students will also learn the skills to build, maintain, upgrade, and troubleshoot a network.

Specific topic coverage includes:

- An Introduction to Networking
- Networking Standards and the OSI Model
- Transmission Basics and Networking Media
- Introduction to TCP/IP Protocols
- Topologies and Ethernet Standards
- Network Hardware
- Wireless Networking
- Network Operating Systems
- Network Security
- Troubleshooting Network Problems
- Network Management

Grading and Evaluation Criteria

Exam 1	30 %
Exam 2	30 %
Labs/Cases/Activities	17 %
Final Project	23 %

The following tentative scale will be used to calculate your grade:

90 – 100 %	A
80 – 89 %	B
70 – 79 %	C
60 – 69 %	D
59 and below	F

Assignment and Exam Policy: 10 % will be deducted for each day an assignment is late. No credit will be given for assignments over 2 days late. Lab assignments/cases/activities done *in class* cannot be made up for credit.

If you know that you will miss an exam, you may take it early, otherwise exams *may* be made up at discretion of the Instructor - if advance notice is given and proper documentation is supplied. Generally, make-up exams are given on the last day of class.

You will have card access to this lab and may use the lab when there is not another class in session.

Link to 346 Class/Lab Schedule: http://www.cs.wright.edu/cse/students/lab-schedules.shtml

Academic Integrity

It is the policy of Wright State University to uphold and support standards of personal honesty and integrity for all students consistent with the goals of a community of scholars and students seeking knowledge and truth. Furthermore, it is the policy of the university to enforce these standards through fair and objective procedures governing instances of alleged dishonesty, cheating, and other academic misconduct. **The following recommendations are made for students:**

1. Be honest at all times.

2. Act fairly toward others. For example, do not disrupt or seek an unfair advantage over others by cheating, by talking, or by looking at other individuals' work during exams.

3. Take group as well as individual responsibility for honorable behavior. Collectively, as well as individually, make every effort to prevent and avoid academic misconduct, and report acts of misconduct that you witness.

4. Do not turn in the same work in more than one class unless permission is received in advance from the professor.

5. Unless permitted by the instructor, do not collaborate with others on graded course work, including in class and take home tests, papers, or homework assignments.

6. Know what plagiarism is and take steps to avoid it. When using the words or ideas of another, even if paraphrased in your own words, cite the source(s).

7. Know the policy-ignorance is no defense. If you have any questions regarding academic misconduct, contact your instructor. Those who violate campus rules are subject to disciplinary action.

This information was obtained form Wright State's Office of Judicial Affairs. Complete information may be referenced at: http://www.wright.edu/students/judicial/integrity.html

Responsible Use of Information Technology

Wright State University provides computing, information, and communications resources for its students to support their learning and research. Access to these information technology resources is a privilege and requires adherence to this Information Technology policy as well as to other University policies, including but not limited to: World Wide Web (Wright Way 2001), Copyrighted Materials (Wright Way 2303), WSU Student Handbook, WSU Student Organization Handbook, and Student Housing Data Network Acceptable Use Policy.

Users of the University's information technology resources are also bound not only by those laws, policies, and regulations that are specific to computing, telecommunications, and networks, but also by all other international, federal, state, and local regulations and statutes that apply.

This policy applies to all use of the University's computing, information, and communications resources, whether administered by Computing and Telecommunications (CATS), by individual University colleges and departments, or by off-campus units that connect remotely to the University's network and operate under the aegis of Wright State University. Privately-owned machines, while attached to the University network, are subject to the same policies as University-owned computer systems.

Responsibility for the use of the University's computing, information, and communications resources by minors (persons under 18 years of age) rests with their parents or legal guardians.

This information was obtained form Wright State's Office of Judicial Affairs. Complete information may be found at: http://www.wright.edu/cwis/policies/itpolicy.html

Student Disabilities

Students with documented disabilities that require physical or academic accommodations must contact their Instructor during the first week of classes. To receive more information or to apply for services, contact the Office of Disability Services.

Link to Spring Academic Calendar for Important Dates (ex. Drop and Withdraw dates)

http://www.wright.edu/registrar/calendars/academic/index.html#spring

Course Outline (Tentative) Adjustments to the schedule will be announced in class

Week	Topics	Chapter Readings	Lab Assignments & Activities (see WebCT)
1 *3-29*	Course Introduction An Introduction to Networking	Chapter 1	Hands-On Projects(HOP) 1-1, HOP 1-2
2 *4-5*	Networking Standards and the OSI Model Transmission Basics and Networking Media	Chapter 2 Chapter 3	HOP 2-3(#1-4), whose NIC is it, WS Lab TBA
3 *4-12*	Introduction to TCP/IP Protocols In-Depth TCP/IP Networking	Chapter 4 Chapter 10	TBA TBA
4 *4-19*	Troubleshooting Network Problems Wrap Up, Review Exam 1, Begin Next Section Topologies and Ethernet Standards	Chapter 13 Chapter 5	TBA TBA
5 *4-26*	**EXAM 1** Topologies and Ethernet Standards	Chapter 5	TBA
6 *5-3*	Network Hardware (NICs, switches, routers) Network Operating Systems NOS, Directory Services	Chapter 6 Chapter 9	TBA TBA
7 *5-10*	Open Lab, In-Class simulations Network Security	Chapter 12	TBA TBA
8 *5-17*	Security, cont. Wireless	Chapter 8	TBA
9 *5-24*	Ensuring Integrity and Availability, Network Management Final Projects	Chapter 14, 15	TBA
10 *5-31* *6-2*	**Memorial Day – No Class** Final Projects		

EXAM 2 is Monday, June 7th at 10:45.