



Class Syllabus

CIS 221 Packets and Protocols

Spring 2008

John Kowalski

Tuesday, 6:15 – 10:00 p.m., AJT 206

Instructor:

John Kowalski

Office:

Room 206 A. J. Theisen Building

Phone:

To be given in class

Email:

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Contact Hours:

Tuesday/Thursday 5:25 p.m. – 6:15 p.m. Other Times by Prior Arrangement

Text:

Wireshark & Ethereal ISBN 978-1-59749-073-3

Description:

In this course we will examine the network analysis tool, Wireshark. With Wireshark we will be able to answer questions like: How do you know your network is running at it's peak? How do you know that it's not being attacked right now? Do you have a baseline for your network? We will examine the bit level operation of the most common protocols on IP networks today and learn how to detect and repair them when things go wrong.

Prerequisite: CIS 120 4 credit hrs 4 contact

Course objectives

- Recognize OSI model layers, components, and functions of each layer.
- Learn who uses network sniffers and why.
- Learn basic networking components, their uses and where they are located in the network
- Dissect the top 4 network protocols in use on an IP network
- Learn the history and background of the Wireshark tool
- Determine the best location and circumstances for deploying Wireshark
- Install Wireshark
- Create a myriad of filters for data collection and display
- Provide in depth coverage of Wireless networking
- Examine real-world packet captures

Classroom Policies:

All students are expected to conform to the College's Acceptable Use Policy which is posted on the college website [HERE](#). The instructor will review this policy during the first class period, and

then periodically throughout the semester. Students found to be in violation of this policy will receive disciplinary action, and possibly receive a zero for affected assignments and/or tests.

Please note that the use of chat software such as Instant Messenger and Microsoft Messenger is NOT allowed at any time. Students are NOT allowed to download and/or install software on lab PC's unless authorized by the instructor. Cell phones are permitted, but they are to be used outside of the classroom. iPods and other music or MP3 players are not allowed in the class during discussions.

Students are expected to be responsible adults. They are expected to be respectful to their fellow students. Students who are being disruptive or disrespectful will be warned. If the behavior continues they will be ejected from the class.

Equipment:

During the course of this class the student will need a storage media device such as a USB drive. Please note that the lab computers do not have recordable CD drives. Please ensure that all disks are clearly marked with your own name & contact information. It will be each student's responsibility to bring their disks to class. Please be aware that floppy disks, particularly if used or stored improperly, can fail, and that backup disks are always a good idea. In the event that disks are lost or damaged, it will be the student's responsibility to secure suitable replacements. Students will also be required to provide paper, pens, binders, and notebooks for class presentation/projects.

Attendance:

Students are required to attend all classes. Attendance will have a direct impact on final grades. Roll may be taken at any point during the class period. In order to count as having attended class students must be present when roll is taken. It will be each student's responsibility to obtain copies of lecture notes and to complete all missed assignments without assistance from the instructor. In general, there will be an in-class assignment every day, which will be due before the student leaves. Students who are not present will receive a zero for the in-class assignment. Although it is occasionally necessary for a student to miss a test, students are advised to make all efforts to take all tests and examinations on the scheduled date. There will be no make up unit tests under any circumstances. Students who know in advance that they will miss multiple unit tests are encouraged to drop and take the class again at a later date. Mid term exams, final exams and college break schedules can be viewed on the college website [HERE](#). The grade of "I" or incomplete is rarely given. It will be up to the student to demonstrate extreme circumstances, which prevented them from completing the course. In order to qualify for an incomplete a student must have already completed 80% or more of the course work. The instructor will determine if the student qualifies.

Grading:

Some assignments will be graded based on participation. If, in the opinion of the instructor, the student has made an honest effort and has participated in the project or activity, the grade of "100" will be assigned. If student does not participate they will receive a "0". All grading standards will follow the scale at the end of this document. Grades can be appealed according to the posted process found [HERE](#).

Assignments are to be completed within 1 week. Late work will be accepted with a 25% penalty in scoring. Students who find it impossible to complete their work in a timely fashion should consider re-taking the course at a later date.

In general, there will be an assignment every class period. Assignments will be made during class, and will reflect material covered by the day's reading and lecture.

Tests may consist of a combination of true/false, multiple choice; fill in the blank, matching and short essay. Some tests may also include a timed production component.

Please note that there will **not** be a curve for this class. There may, however, be opportunities for extra credit at the discretion of the instructor.

In general, there will be an assignment every class period. Assignments will be made during class, and will reflect material covered by the day's reading and lecture.

Tests will consist of a combination of true/false, multiple choice; fill in the blank, matching and short essay. Some tests may also include a timed production component. There will also be a number of lab exercises, as well as real-world packet capture labs that will be required work for the student to better understand the Wireshark program and it's usage.

There will also be an essay attached to this class this is due on the 15th week of class and must be submitted in an electronic format. The topic of the essay will be an article review of any one of the articles found at <http://www.packet-level.com/whyProtect.htm> or an article of the students choosing that pertains to the class (must be instructor approved). The article must be a minimum of three pages and be in proper APA format.

Final Grades:

Students will be evaluated based on their individual assignments, labs, and exams. Point values for assignments, class participation, exams, and the term paper are as follows:

Class	Item	Quiz/Test Points	Lab Points	Percentage
1				
2				
3				
4	Quiz/Lab1	100	90	10%
5				
6	Lab 2		90	5%
7				
8	Mid-Term/Lab 3	300	90	20%
9				
10	Lab 4		90	5%
11	Book Labs		360	18%
12	Quiz/Lab 5	100	90	10%
13				
14	Lab 6		90	5%
15				
16	Final	300		15%
	Term Paper	300		15%
	Quizzes/Tests	800		40%
	Misc Labs	900		45%
	Total	2000		100%

Grading Scale:

A	93-100
A-	90-92
B+	87-89
B	83-86
B-	80-82
C+	77-79
C	73-76
C-	70-72
D+	69-67
D	63-66
D -	60-62
F	00-59