

Applied Networks & Security

Class Overview

<http://condor.depaul.edu/~jkristof/it263/>

John Kristoff
jtk@depaul.edu

Applied, Networks, Security

- In the context of computer systems and networks:
 - Applied = practical, current, real issues
 - Networks = communications, resource sharing
 - Security = preventing *bad things* from happening

Geek check

- If you can understand statements like these:
 - I've exhausted my /24, I need more addresses
 - The SSL CERT doesn't match the host name
 - The TX pair in my x-over wasn't crimped properly
 - We null routed the destination, stupid botnets
 - `./nmap -A -P0 192.0.2.0-255`
- then this class may not be for you

Grading for this course

- 20% homework
- 20% lab assignments
- 20% tech essays
- 20% midterm exam (closed book/notes)
- 20% final exam (closed book/notes)

Homework (20%)

- Each will consist of about 6 questions/problems
- Coincides with lectures, readings and labs
- These should not be terribly difficult
- The aim is to reinforce what you should be learning
- We'll have 4 of these

Lab assignments (20%)

- This is you actually doing stuff
- LAN Lab CSTC 659, M-F: 2p-10p, Sa: noon-6p
- There is always a lab assistant there to help you
- These will take some time, don't procrastinate
- You may work in groups of 4 or fewer, but...
- Each person turns in their own lab results
- We'll have 4 of these

Tech essays (20%)

- Two pages of you demonstrating your writing ability
- A chance for you to explore something of interest
- Topic mostly of your discretion, but must:
 - be a practical networks or security topic
 - not be about a vendor-specific product
- Usually this is you summarizing a technology
- Show me you learned something on your own
- We'll have 3 of these

Mid-term exam (20%)

- In-class exam, entire class time allotted that week
- Consists of various question types:
 - Matching
 - Multiple choice
 - Fill-in-the-blank
 - Short answer
 - Short essay

Final exam (20%)

- Comprehensive (covers all course material)
- Otherwise, just like the mid-term exam

Course materials

- <http://condor.depaul.edu/~jkristof/it263/>
- Slides, lectures, demos and in-class discussions
- Guest lectures and videos
- LAN Lab and do-it-yourself exercises
- Assigned readings
- The IT 263 required book
 - SOHO Networking
 - A Guide to Installing a Small-Office/Home-Office Network
 - Pete Moulton, Prentice-Hall, 2003, ISBN: 0-13-047331-6

On the use of prior IT 263 slides

- I will supplement this class with them
- Partly to save me a bunch effort
- Partly to use as fodder for critical analysis
- I think the end result will be rewarding
- If you see conflicts I don't point out, please alert me!
- If I skim over something they highlighted and you want to go into more detail on it, please speak up!

Nightly timetable

- 17:45 / learn
- 19:30 / break
- 19:45 / learn
- 21:00 / good night

Tentative schedule

- Module 1 [2007-01-03]
 - Course overview
 - Introduction to networking and security
- Module 2 [2007-01-10]
 - Homework/lab #1 due
 - Wired Local Area Networks (LANs)
 - Wireless Local Area Networks (LANs)

Tentative schedule (cont.)

- Module 3 [2007-01-17]
 - Homework/lab #2 due
 - The Internet
 - The Internet Protocol (IP)
 - Note: somewhere around here I'll be away
- Module 4 [2007-01-24]
 - Tech report #1 due
 - The Internet protocol suite (TCP/IP)

Tentative schedule (cont.)

- Module 5 [2007-01-31]
 - Homework/lab #3 due
 - IP network operations
- Mid-term Exam [2007-02-07] – guest proctor
 - **NOTE**: I am planning on being away Sun-Wed
 - I'll be responding to email and IM as best I can
- Module 6 [2007-02-14]
 - Note: I am planning on being away Sun-Tue
 - Internet security threats

Tentative schedule (cont.)

- Module 7 [2007-02-21]
 - Tech report #2 due
 - Internet security operations
- Module 8 [2007-02-28]
 - Note, I am planning on being away Sun-Tue
 - Homework/lab assignment #4 due
 - Internet Applications

Tentative schedule (cont.)

- Module 9 [2007-03-07]
 - Tech report #3 due
 - Catch-up
 - Wrap-up
 - If we are ahead, something timely and relevant
- Final Exam [2007-03-14]

What you can expect from me

- Prompt replies to email
- Fair and impartial grading and interaction
- Discussion and participation solicitor
- PowerPoint insubordination
 - Bullet points and slides aren't thy master
- An outside-the-ivory-tower perspective
- Prompt return of graded homework, labs and exams

What I expect from you

- Be present and attentive
- Ask questions and participate in discussions
- Not wait until the last minute to complete homework
- Give feedback when my instruction works or not
- Never cheat nor plagiarize
- Take good notes
- Understand the prior week's topics or seek help
- To have completed reading assignments

Please note

- Put cell phones, PDAs and pagers on vibrate or off
- No SSNs on homework, exams, papers, or in email
- Turning in homework/labs
 - COL probably best (I avoid COL otherwise)
 - Email or hard copy if you insist, redundancy good
 - Due by start of class (or whenever you arrive)
 - If you don't show up, don't bother turning it in late
- Make-up exams for extenuating circumstances only
 - And it will be different than the in-class exam

Contact info

- I prefer email: jtk@depaul.edu
- I use AIM: ultrajtk
- I also have Yahoo! IM: jtkneustar
- I don't use/have a DePaul phone
 - If you don't mind the toll, VoIP: 480-804-8227
 - Last resort please, cell: 312-402-3581
- I seldom check my CTI mailbox, not a good option
 - If you have to, alert me using a method above

A word about my office hours

- Officially they are M/W/F: 3-5p
- Unofficially I'm usually there M/W/F: 10a-6p
- Sometimes I'm there other days or at other times
- On occasion I won't be around M/W/F: 3-5p
 - I have some traveling I'll be doing this quarter
 - I should usually know well in advance though
 - Keep an eye on our course homepage
- If we plan ahead I can be around most anytime

whoami

- I am a part-time instructor for CTI
- Full-time I do computer networking and security
- Last three full-time jobs, current job first:
 - Network architect, Neustar (formerly UltraDNS)
 - Network engineer, Northwestern University
 - Same + R&D/netops mgr at DePaul University
- Still affiliated with NU/DPU and R&E community
- You can net search me and find out plenty more

Finally, tell us a bit about you

- In addition to your name, maybe
 - What is your major, job, expertise or goals
 - Any past experience in these areas?
 - Ever been victim to a computer security incident
 - Anything on your mind or in the news relevant to this course that we should briefly discuss?