

# Applied Networks & Security

## Class Overview

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

John Kristoff  
[jtk@depaul.edu](mailto: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 5-10 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 about 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 about 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 about 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
  - The Internet Book
  - Everything you need to know about the Internet...
  - Douglas Comer, Prentice-Hall, 2007, ISBN: 0-13-233553-0

# 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
  - common myths/misconceptions
  - explore disagreements in design and engineering
- If you see conflicts I don't point out, please alert me!

# Nightly timetable

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

# Tentative schedule

- 1: Monday, 2007-04-02 (today)
  - Course overview
  - Introduction to networking and security
- 2: Monday, 2007-04-09
  - Wired Local Area Networks (LANs)
  - Wireless Local Area Networks (LANs)
  - Homework/lab #1 due

# Tentative schedule (cont.)

- 3: Monday, 2007-04-16
  - The Internet
  - The Internet Protocol (IP)
  - Homework/lab #2 due
- 4: Monday, 2007-04-23
  - The Internet protocol suite (TCP/IP)
  - Tech report #1 due

# Tentative schedule (cont.)

- 5: Monday, 2007-04-30
  - IP network operations
  - Homework/lab #3 due
- 6: Monday, 2007-05-07
  - Mid-term exam only
- 7: Monday, 2007-05-14
  - Internet security threats

# Tentative schedule (cont.)

- 8: Monday, 2007-05-21
  - Internet security operations
  - Tech report #2 due
- 9: Monday, 2007-05-28
  - Internet Applications
  - Homework/lab assignment #4 due

# Tentative schedule (cont.)

- 10: Monday, 2007-06-04
  - Catch-up and wrap-up
  - If we are ahead, something timely and relevant
  - Tech report #3 due
- 11: Monday, 2007-06-11
  - Final exam only

# 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 recommended
  - 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](mailto: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: 3-5p, F: 3-4p
- 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
  - Major
  - Other network/security courses this quarter?
  - Job, full-time student?