Network Security

Breno de Medeiros

Florida State University

Course Ref Sheets  p. 1

- [cshome]/~breno/teaching/net_sec.html
- Instructor Pointer:
  - Breno de Medeiros
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  - 850-645-2356
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- Office hours: After class 1:45-3:00pm
  - Tue/Thu, or by appointment

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Policies:
- FSU Academic code strictly enforced.
- No make-up mid-term
- No homework deadline extensions, except with documented illness/impairment
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Textbook:
- Kaufman, Perlman and Speciner.
- Resources:

Evaluation Criteria

• Programming assignments: 25-30% of final grade (15 + 20)
• Midterm, Final Exams: 35% (15 + 20)
• Term paper/project + presentation: 30%
• Class participation: 5%
  – Submitted homework/paper will be tested automatically to detect plagiarism.

Grading Curve

• 90 -100: A
• 75 - 89: B
• 65 - 74: C
• 58 - 64: D
• 0 - 57: F

 +/- Modifiers to the grade will be given under my discretion after all grades are in. These will be applied uniformly, as the letter grades.
Course Overview p. 1

• Introduction to network security
  – Secure network services
  – Attacks
• Secure channels/network layers
  – Introduction to cryptography
  – Authentication
  – Cryptographic Protocols
    • Strong authentication, key exchange

Course Overview p. 2

• Analysis of protocols
• Standards
  – SSL/TLS, SSH, IPSEC
  – Kerberos, S/Key
• Public Key Infrastructures
  – PKI: X.509
  – PGP

Course Overview p. 3

• Packet filtering/Firewalls
• Traffic monitoring and intrusion detection
• Routing protocols
• Distributed Denial of Service attacks
• Network forensics/ vulnerability assessment
Course Overview

- Web security
  - Java, cookies, HTTP/HTTPS
  - Web objects
- DNS security
- Smartcards/Biometrics
- Privacy
- Wireless security