Network Security

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Syllabus and Contact Info

- **Instructor Pointer:**
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- **Office hours:** Wed./Fri. 9:00--11:00am, or by appointment
Policies

• FSU Academic code strictly enforced.
• No make-up mid-term.
• No homework deadline extensions, except with documented illness/impairment.

Books

• Textbook:
• Recommended book:
  – Stevens. TCP/IP Illustrated, vol. 1, the protocols.
Evaluation Criteria

- Programming assignments: 40% of final grade (15 + 20)
- Midterm, Final Exams: 30% (15 + 15)
- Term paper/project + presentation: 30%

Grading Curve

- 91 -100: A
- 89, 90: A-
- 75 - 88: B
- 65 - 74: C
- 58 - 64: D
- 0 - 57: F

• +/- Modifiers to grades B, C 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 p. 4

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