Masters in Computer Security
Module Plan 2014

Network Security
mod-net-sec
University of Birmingham
Studying Security at The University of Birmingham

- Computer Security
- Secure Programming
- Network Security
- Cryptography
- Internet Seminar

This module!
Summary

• This is a module for graduate students and advanced undergraduates wanting to develop greater depth and breadth in security.

• It assumes a basic knowledge of the area such as the material covered by Computer Security.
  – Test yourself: CIA guarantees, access control matrices, public key cryptography, SSL protocol, dictionary attack.
Network Security 2014

- Instructor: Dr. Shishir Nagaraja
- Teaching Assistant: Joe Gardiner

- My office hours: Wednesdays 4-5pm #238
- Course web page: http://cs.bham.ac.uk/courses/netsec/netsec.html
- Course format
  - About 60-90 minutes of presentation
  - 5 minute break half-way
  - About 30-60 minutes of learning activities
Assessment

- Continuous assessment 50%
  - 20% programming assignments
  - 30% paper-based assignments
- Final Exam 50%
- Home work every two weeks:
  - 21/01, 04/02, 18/02, 04/03, 18/03
- Due 12 noon on the day, to be submitted to
- 3 late submission days are allowed across the term. Use them wisely!
- Every subsequent day late results in 25% lesser score than what you would have earned.
Tentative Selected Topics

- Common Criteria
- Denial of Service (DoS)
- Botnets
- Security protocols
- Web Services
- Voice over IP (VoIP)
- Personal and Home Area Networking

- SPAM and Phishing
- Audit and Recovery
- Cyber-Physical Security
- Information Flow
- Privacy
- Digital Rights Management (DRM)
- Multi-Party Computation
- Radio Frequency Identification (RFID)
• General textbooks:

• Surveys and specialized texts. Examples:
• References to scientific research papers (secondary materials) on slides and at the end of the slide set. Example:

• References to standards and source data (primary materials). Examples:
Most slides are derived from various sources.

Credits to the folks who created the slides from such sources or originated them appear in the notes for the slides.

Example:
- Based on slides by Nikita Borisov and Carl A. Gunter.
- Based on slides by Lawrie Brown.
Getting into the Groove: Security Reading for Fun