

# Security and Privacy in IT – EMTM 604

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## Texts:

McGraw, Gary Software security, Addison-Wesley, 2006 ISBN: 0-321-35670-5

Cannon, J.C. Privacy: What Developers and IT Professionals Should Know, Addison-Wesley, 2004, ISBN: 0321224094

Schneier, B. Secrets and Lies: Digital security in a networked world, Wiley, 2004, ISBN: 0471453803

Oram, A. and Viega, J. (Eds) Beautiful Security: Leading experts explain how they think, O'Reilly Media, 2009, ISBN: 0596527489

Increasingly corporations are appointing Chief Security and Chief Privacy Officers to oversee security and privacy programs and policies in their organizations. This course provides an overview of the basic concepts, technologies and issues of security and privacy in the Information Technology arena. The goal is to provide managers with the background and pointers to further explore security and privacy topics as needed. During the course of the semester there will be several guest lectures from both academic and corporate security and privacy experts.

- ◆ Session 1 – Saturday, December 1<sup>st</sup>
  - Overview of security and privacy: threats, adversaries, attacks and trust
  - Cryptography Basics
  - DRM
  - SPAM
  - Chief Security and Privacy Officers
  - Readings: McGraw, chapters 1-5; Schneier, chapters 6 through 8; Oram & Viega, chapters 1&2
- ◆ Session 2 – Saturday, December 15<sup>th</sup> (Kormann)
  - Network Security
  - Firewalls
  - IPsec
  - Internet Key Exchange
  - VPNs
  - Security Policy
  - Readings: McGraw, chapters 6-10 Schneier, chapters 10 through 14; Oram & Viega, chapters 3&4
- ◆ Session 3 – Saturday, January 5<sup>th</sup>
  - Privacy Issues for browsers, wireless, databases, application programs
  - Authentication
  - Privacy laws and principles
  - Readings: Cannon, chapters 1 through 8; Schneier, chapters 1 through 5 Oram & Viega TBD
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  - Due: Home Audit

- ◆ Session 4 – Saturday, January 19<sup>th</sup>
  - Privacy self assessments and Privacy Policies
  - Privacy Enhancing Technologies
  - Readings: Cannon, chapters 9 through 15; Schneier, chapters 18 through 25  
Oram & Viega TBD
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- ◆ Session 5 – Saturday, February 2<sup>nd</sup> (McDaniel)
  - Web security
  - Authentication
  - Biometrics
  - SSL
  - Certificates
  - Cookies
  - Java Sandbox
  - Script Kiddies
  - Readings: Schneier, chapters 9 & 15 Oram & Viega TBD
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  - Due: Logbook
- ◆ Session 6 – Saturday, February 16<sup>th</sup> (?)
  - Security and Privacy issues for international corporations
    - a. Establishing your coordinates
    - b. Building the base
    - c. Enabling the businesses and enhancing the processes
    - d. Developing radar
    - e. Constant vigilance
  - The Human Factor
  - Readings: Oram & Viega TBD
  - Due: Team security and privacy policy

### **Grading Policy**

- Each student will be required to keep a logbook that records on a biweekly basis your thoughts on Security and Privacy either from the lectures, readings and exercises or from your experience as a user and corporate experiences. This logbook will be worth 40% of your grade and should have at least 5 entries. The logbooks are due at the fifth session.
- Forty percent of your grade will be based on 4 person team efforts to draft a security and privacy policy for a specified industry segment of your choosing, e.g., on-line gaming, e-commerce, on-line banking, on-line health care/pharmaceuticals, on-line libraries, government agencies – discussed in class.
- A final 20% of your grade will be based on a 3 to 5 page paper that reports a security and privacy analysis/audit of your home computing center.