## Outline for September 22, 2021

**Reading:** text, §1

**Assignments:** Homework 1, due October 6; Project selection, due Oct 8

1. Class overview
2. Basic components
   - (a) Confidentiality
   - (b) Integrity
   - (c) Availability
3. Threats
   - (a) Snooping
   - (b) Modification
   - (c) Masquerading; contrast with delegation
   - (d) Repudiation of origin
   - (e) Denial of receipt
   - (f) Delay
   - (g) Denial of service
4. Role of policy
   - (a) Example of student copying files from another
   - (b) Emphasize: policy defines security
   - (c) Distinguish between policy and mechanism
5. Goals of security
   - (a) Prevention
   - (b) Detection
   - (c) Recovery
6. Trust
   - (a) First problem: security mechanisms correctly implement security policy
   - (b) Second problem: policy does what you want; define secure, precise
7. Operational issues; change over time
   - (a) Cost-benefit analysis
   - (b) Risk analysis (comes into play in cost-benefit too)
   - (c) Laws and customs
8. Human Factors
   - (a) Organizational problems
   - (b) People problems (include social engineering)