

## Lecture 5: April 8, 2026

**Reading:** *text*, §2, 4.1–4.4

**Due:** Homework 1, due April 10, 2026

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1. Greetings and felicitations!
2. Access Control Matrix
  - (a) Commands and conditions: create•file, various flavors of grant•right to show conditions and nested commands
  - (b) Copy flag, own rights
  - (c) Principle of attenuation of privilege
3. Decidability of security
  - (a) Notion of leakage in terms of ACM
  - (b) Determining security of a generic system with generic rights and mono-operational commands is decidable
  - (c) Determining security of a generic system with generic rights is undecidable (HRU result)
  - (d) Meaning: can't derive a generic algorithm; must look at (sets of) individual case
4. Policy
  - (a) Sets of authorized, unauthorized states
  - (b) Secure systems in terms of states
  - (c) Mechanism vs. policy
5. Types of Policies
  - (a) Military/government vs. confidentiality
  - (b) Commercial vs. integrity
6. Trust