

# Lec1\_Overview

## Security vs. correctness

**system correctness:** system satisfies specification

**system security:** system properties preserved in face of attack. for unreasonable input, output will be disastrous.

## cyber security

security risk management

▼ **confidentiality:** Protecting data against unintentional, unlawful, or unauthorized access

- encryption
- access control
- physical security
- secure disposal

▼ **integrity:** protect data against improper maintenance, modification, alteration

- access control
- logging/auditing
- backups
- validation(hashing)

▼ **availability:** protecting accessibility and continuity of access to information

- backups
- redundant systems
- monitoring
- secure disposal

▼ system security

