

# CS 587: Computer Systems Security

## Syllabus

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**Is this course for you?** Computer security, once an obscure area of computer science, has now become prominent. We'll explore here the common problems in computer security, and the structure of software's effect on software's robustness—the ability of software's ability to withstand attack.

- Text: Computer Systems Security: a manuscript
- Background: you need to have a basic understanding of system software, operating systems, compilers, and tool chains. No particular background in computer security is required.
- Topics
  - What is security? What is computer security?
  - Trust: limiting the dependency on people
  - Authorization: what is allowed
  - Authentication: who is using the system
  - Errant programs: malware and vulnerable programs
  - Systems: how the structure of systems effects security
  - Assurance: how to develop/evaluate system security
  - Covert Channels: how computers leak information
- Grading:
  - Tests 55% (midterm and final)
  - Project 30% (2 person implementation projects)
  - Homework 15%