

This course will cover the basics of computer security through five modules (one per weekend).

We expect that students coming in will be proficient in C programming and are comfortable with Linux.

The modules are:

0) Basics. Threat models and Attack Examples. Encryption and signatures.

1) Software security vulnerabilities: e.g., memory errors that are the most common cause of attacks on programs.

2) Operating system security: defenses included in Linux-like operating systems to protect programs and user data.

3) Hardware/architecture security: vulnerabilities and defenses present in computer architecture.

4) Network security: protocols and vulnerabilities.

Each module will have an associated assignment/lab + papers that you will read and review before each class.

There will be no mid-terms, but possibly a final.