

Topics for Final, Spring 2020

Software Security

- Stack Overflows
- Heap Overflows
- Integer Overflows
- Format Strings Attacks
- Stack Canaries
- Stack Protection Mechanisms
- NX Bit and W xor X
- ASLR
- Heap Protection Mechanisms

Network Security

- TCP/IP Protocol Suite
- Network Eavesdropping (including reading packet traces)
- Countermeasures Against Eavesdropping
- Port Scanning Strategies
- OS Fingerprinting
- DNS Security
- Covert Channels
- Denial of Service Attacks
- Firewalls
- Intrusion Detection Systems (especially Snort)