

## CS 315: Computer Security

Instructor: Fengwei Zhang



## Course Content and Grading

#### **Term Project Track**

| Topics   | Grade |  |  |  |
|--|-------|--|--|--|
| Class Participation                                      |       |  |  |  |
| Lab 1: Packet Sniffing and Wireshark                     |       |  |  |  |
| Lab 2: Secure Coding and Buffer Overflows                |       |  |  |  |
| Lab 3: Secure Coding and Format-String Vulnerability     |       |  |  |  |
| Lab 4: Scanning, Reconnaissance, and Penetration Testing |       |  |  |  |
| Lab 5: Reverse Engineering and Obfuscation               |       |  |  |  |
| Lab 6: IoT Security and Wireless Exploitation            |       |  |  |  |
| Lab 7: Nailgun Attack                                    |       |  |  |  |
| Lab 8: Nailgun Defense                                   |       |  |  |  |
| Lab 9: Dirty COW Attack                                  |       |  |  |  |
| Lab 10: RSA Public-Key Encryption and Signature          |       |  |  |  |
| Lab 11: Web Security                                     |       |  |  |  |
| Lab 12: Return-to-libc & Return Oriented Programming     |       |  |  |  |
| Term Project Proposal                                    |       |  |  |  |
| Term Project Progress Meetings                           |       |  |  |  |
| Term Project Presentation                                |       |  |  |  |
| Term Project Report                                      |       |  |  |  |
| Total  | 1000  |  |  |  |



## Course Content and Grading

#### **CTF Track**

| Topics   | Grade |  |  |  |
|--|-------|--|--|--|
| Class Participation                                      |       |  |  |  |
| Lab 1: Packet Sniffing and Wireshark                     |       |  |  |  |
| Lab 2: Secure Coding and Buffer Overflows                | 60+10 |  |  |  |
| Lab 3: Secure Coding and Format-String Vulnerability     | 60+10 |  |  |  |
| Lab 4: Scanning, Reconnaissance, and Penetration Testing | 60+10 |  |  |  |
| Lab 5: Reverse Engineering and Obfuscation               | 60+10 |  |  |  |
| Lab 6: IoT Security and Wireless Exploitation            |       |  |  |  |
| Lab 7: Nailgun Attack                                    |       |  |  |  |
| Lab 8: Nailgun Defense                                   |       |  |  |  |
| Lab 9: Dirty COW Attack                                  |       |  |  |  |
| Lab 10: RSA Public-Key Encryption and Signature          |       |  |  |  |
| Lab 11: Web Security                                     | 60+10 |  |  |  |
| Lab 12: Return-to-libc & Return Oriented Programming     | 60+10 |  |  |  |
| Attack-Defense CTF                                       |       |  |  |  |
| Total  | 1000  |  |  |  |



## **Grading Scale**

The grades for the course will be based upon the percentages given below

| <b>A</b> + | 97 - 100% | C+ | 77 - 79% |
|------------|-----------|----|----------|
| Α          | 93 - 96%  | С  | 73 - 76% |
| Α-         | 90 - 92%  | C- | 70 - 72% |
| B+         | 87 - 89%  | D+ | 67 - 69% |
| В          | 83 - 86%  | D  | 63 - 66% |
| B-         | 80 - 82%  | D- | 60 - 62% |
| F          | 0 - 59%   |    |          |



# Invited lunch/dinner if your final

## score is 96% or more



### Academic Integrity

 Students need to sign the Assignment Declaration Form in your first lecture.

 Our department can refuse students to choose the CSE Major if they do not sign the declaration form.



### More Information on Course Website

https://fengweiz.github.io/22fa-cs315/index.html

Email: zhangfw@sustech.edu.cn



## 谢谢大家!

校园里面碰到,不要装着不认识