

# ECE 1155: Information Security

## Spring 2026 Course Syllabus

**Lectures:** Thursday 13:50–16:25 at S506

**Instructor:** Guanqiang “Tim” Zhou <guanqiang.zhou@scupi.cn>

**Office Hours:** Wednesday 11:30–13:30, Thursday 11:30–13:30 at N512 (or by appointment)

**Teaching Assistant:** Dengwen Wang <wdw\_nevergiveup@163.com>

### Textbooks:

- *Cryptography and Network Security*, 8th edition, by William Stallings
- *Introduction to Cryptography and Network Security*, 1st edition, by Behrouz A. Forouzan

## Course Description

This course provides an introduction to the fundamental principles of information security. Topics covered include cryptography, network security, software security, and the ethical and legal aspects of cybersecurity. The course emphasizes understanding key security concepts, potential threats, and mitigation techniques in both theoretical and practical applications. Students will gain hands-on experience with security tools and methodologies commonly used in the field.

## Course Objectives and Learning Outcomes

In this course, you will be expected to:

- Understand the foundational principles of information security.
- Explore various security threats, vulnerabilities, and attack techniques.
- Learn cryptographic methods and their applications in securing data.
- Study network security principles and mechanisms.
- Understand system and application security concepts, including authentication and access control.
- Examine ethical, legal, and privacy issues in cybersecurity.
- Gain hands-on experience with security tools and techniques.

## **Covered Topics** (subject to change)

- Security Foundations
- Classical Cryptography
- Symmetric-Key Cryptography
- Public-Key Cryptography
- Cryptographic Hash Functions
- Message Authentication and Integrity
- Key Management and Distribution
- User Authentication
- Network Security Protocols
- Wireless Network Security

## **Grading Policy**

- In-class Quiz: 10%
- Homework: 15%
- Course Project: 15%
- Midterm Exam: 30%
- Final Exam: 30%

## **Code of Academic Conduct**

Maintaining academic integrity is essential in this course. All work submitted must be your own, whether individual or group assignments. Plagiarism, cheating, or any form of dishonesty will not be tolerated and will result in disciplinary action as per the institution's policies. You are encouraged to collaborate with classmates on understanding concepts, but all submitted work must reflect your independent effort. Properly cite any sources or assistance received and uphold the highest standards of academic honesty in all your work.