### Background

**NC State** is a leader for security research and education:
- NSA Center of Academic Excellence
- NSA Science of Security Lablet
- Security faculty have >60 years of cumulative experience

**Course Materials** “field-tested” and represent material from existing courses taught at NC State

### Materials

- Lecture slides
- References to security community resources & online resources
- Active learning exercises & activities
- Guided lab activities
- Sample assignments & projects

### Logistics

- In-person, online, or blended environments
- 15-week courses (customizable)
- Target audience: undergraduate (junior, senior) & graduate students

### Courses

#### Introduction to Computer Security
*for Undergraduate Students*
- Cross-section of important security topics; OS security; forensics; firewalls; cybercrime; web security; privacy; social engineering

#### Introduction to Network Security
*for Undergraduate Students*
- Basic cryptography; identification & authentication; network attacks & defenses; malware & defense mechanisms

#### Computer & Network Security
*for Graduate Students*
- Basic cryptography; identification & authentication protocols; key management; access control & OS security; common network vulnerabilities & defense mechanisms

#### Cryptography
*for Undergraduate & Graduate Students*
- Theoretical foundations; formal definitions of security goals; formal proofs of security; proper use of cryptographic tools; advanced protocols

#### Privacy
*for Undergraduate & Graduate Students*
- Exposure to inference attacks & defenses; online tracking, advertising, & web privacy; measurement challenges & applications

#### Software Security
*for Undergraduate & Graduate Students*
- Designing, developing, and testing secure and dependable software-based systems