

# Tech Incubator at Queens College

## Class Outline

**Title:** Introduction to Information Security

**Purpose:** Students will learn information security topics framed through Cliff Stoll's "The Cuckoo's Egg". There will be 2-3 topics per week and an overview of the plot. The hands-on workshops will expose students to the different types of hacks/vulnerabilities that exist within a system.

**Audience:** Those who are new to information security, those who have been in infosec for only a couple of years, or high school and college students.

**Duration:** 10 weekly sessions, 2 hours per session

**Prerequisite:** None

### Learning Objectives:

By the end of this class, the students will have the opportunity to::

- Explore history and current state of cybersecurity.
- Gain exposure to a wide variety of information security topics, including network architecture, host forensics, network forensics, packet analysis, security management, honeypots, malware, exploitation, attribution, lateral movement, encryption, network scanning, and espionage.
- Gain exposure to problem spaces spanning multiple infosec job roles and the underlying themes that tie them all together.

### Topics

1. Intro to Information Security
2. Locard's Exchange Principle
3. Principle of Least Privilege,
4. Process Monitoring
5. Password Threat (Clear Text, Password Hashing)
6. Insider vs. Outsider Threat
7. Security Practitioners, Network Architecture, Social Engineering
8. Operational Security,
9. Attacker Pivoting
10. Cognitive Bias and Estimative Probability,
11. Open Source Intelligence and the Diamond Model
12. Industrial Control Systems, Honeypots
13. Evidence Collection
14. Capture the Flag!