

CIS 233PC : PYTHON FOR CYBER SECURITY

Transcript title

Python for Cyber Security

Credits

4

Grading mode

Standard letter grades

Total contact hours

50

Lecture hours

30

Other hours

20

Recommended preparation

CIS 122.

Course Description

Introduces students to intermediate Python programming skills utilizing a variety of cyber security related activities and techniques. Utilizing Python programs and libraries in a virtualized "sandbox" environment, students will create Python programs to scan network vulnerabilities, perform cryptography, perform password cracking, and more. Participation in this class requires signing a "white hat" agreement.

Course learning outcomes

1. Demonstrate proficiency in using Python for fundamental white hat security techniques.
2. Design a virtual testbed environment for safe testing of security techniques.
3. Develop intermediate level Python programming skills.

Content outline

1. Python Basics Review
2. Creating GUIs in Python
3. Classes, Inheritance, Lambda
4. Introduction to Cryptography
5. Advanced Cryptography
6. Rainbow Tables and Hacking the Hash
7. Recon and Attacks in Python
8. Model Driven Programmability
9. Databases using Python
10. Errata topics on Python programming for Cybersecurity

Required materials

None.