

CNS210: Python Security  
Winter 2020

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### **Course Description**

This course covers an overview of Python, including how to create and run scripts, use threads, and handle exceptions. It will progress on how to networking, including using Python libraries for networking scripting and developing basic scripts with network functionality. HTTP programming and client, security scripting, Twisted Python, the Echo server, and forensic scripting are also covered. The course emphasizes debugging capability and security testing using Python.

### **Required Text Materials:**

N/A

### **Required Equipment:**

Portable USB powered hard drive (500 GB or bigger)

### **Course Objectives:**

- Write Python tools
- Appreciate tools written by others
- Troubleshoot Python code
- Use Git for managing code

**Methods to achieve objectives:** online discussion, video materials, coding and repository tools, example code, coding assignments, final coding project.

**Class Meeting:** Saturday 0900-1513 (3/16/2020-5/3/2020) - 9am-3:13pm, March 16th through May 3rd, 2020. (Online -- I will likely NOT broadcast live the whole day, most discussion will be over Discord/JetNet and materials will be made available throughout the week)

**Attendance:** Participation is always required for the purpose of interactive learning and group work opportunities.

**Academic Honesty:** Be careful not to plagiarize. Plagiarism is defined in The American Heritage Dictionary as "...using another's ideas as one's own..." All assignments related to this class are to be your own work. The JCC Catalog, defines academic honesty as "...the ethical behavior that includes (students') producing their own work and not representing others' work as their own..." The consequences of academic dishonesty include failure for the assignment and/or failure in the course overall.

**Homework:** Homework will consist primarily of the reading needed to accomplish the classroom lab assignments and any possible quizzes.

**Participation:** Your involvement in class discussions, participation with your team members during the hands-on labs and consistent attendance will be reflected in your participation score.

**Examinations:** There will be a final exam where you will demonstrate the course objectives. If you have an emergency and will miss the exam date, contact the instructor immediately.

### GRADING POLICY

**Requirements:**

Participation..... 200  
Homework..... 400  
Final project..... 400

Total Points Available..... 1000

**Grading Scale:**

4.0                    940 - 1000  
3.5                    880 - 939  
3.0                    820 - 879  
2.5                    760 – 819  
2.0                    700 - 759  
1.5                    640 - 699  
1.0                    580 – 639

Note: This syllabus is not a contract: it is a plan for the course. Each course and each group of students is unique. We may do more or less work than is outlined above. Total points in the course will be altered to reflect the dynamics of your and our class.

Due to COVID-19 the course was converted to an online format, utilizing JetNet, the BigBlueButton and other online resources. The starting date was also pushed back a week to accommodate.

Week 1 March 28th	<ul style="list-style-type: none"><li>• Syllabus</li><li>• Introduction</li></ul>
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	<ul style="list-style-type: none"><li>• Python Refresher</li></ul>
Week 2 April 4th	<ul style="list-style-type: none"><li>• Networking</li></ul>
Week 3 April 11th	<ul style="list-style-type: none"><li>• HTTP Programming</li></ul>
Week 4 April 18th	<ul style="list-style-type: none"><li>• Security Scripting</li></ul>
Week 5 April 25th	<ul style="list-style-type: none"><li>• Forensics Scripting</li></ul>
Week 6 May 2nd	<ul style="list-style-type: none"><li>• Twisted Python</li><li>• Go over Final</li></ul>
Week 7 May 11th	<ul style="list-style-type: none"><li>• Final project due</li></ul>