-Introduction to Cyber Security Offense Syllabus-

*Syllabus is subject to change

Prerequisites:
A grade of "C" or better in both Comp Eng 3150 and Comp Sci 3600.

Location:
CS 209

Time:
4:00PM - 6:30PM

*Syllabus is subject to change

Course Text:
Listed texts are not required, but highly recommended.
Black Hat Python by Justin Seitz

Contact Details:
Sammie Bush
slbnmc@mst.edu

Course Website:
TBD

Course Description:
Students will learn tactics and gain skills needed to be effective in ethical cybersecurity offense operational careers. They will develop tools and leverage techniques to complete offensive goals in cyberspace. Assignments will be given in the form of Capture the Flag (CTF) challenges with write-ups. Assessments will cover conceptual and tool knowledge.

Course Topics:
-ARM Reverse Engineering
-ARM Exploitation
-Network Enumeration

-Remote Exploitation
-Tool Development
-Web Exploitation
-IoT Exploitation

Assignments and Project:
Assignments will be given in the form of CTF Challenges. Upon competition of these challenges, a write-up describing your solution must also be submitted.

Project:
More details on the final project will be provided later in the semester.

Assessments:
There will be a quiz given at the beginning of every class period online. It must be completed within the time limit.

Grading:
Challenges = 60%
Quizzes = 20 %
Final Project = 20%

A : [90.00 - 100] %
B : [80.00 - 89] %
C : [70.00 - 79] %
D : [60.00 - 69] %
F : < 60 %

Academic Honesty:
You're here to learn and better yourself! Write all your work in your own words, and write your own code. Do not copy-paste (plagiarize) from any source. If you are not sure, err on the side of caution and do your work independently. Occasional infrequent help from a friend when your are really stuck may be reasonable, though if that "help" is frequent enough that your collaboration results in almost identical code, it was too much collaboration for an assignment intended to be independent work (which all are unless explicitly assigned as group work).
If you are found to be engaging in any form of academic dishonesty, the most

severe penalties permitted by the university will be enacted. Incidences will typically result in grades of 0 for the respective course components, as well as notification of the student's advisor, the student's department chair, and the campus undergraduate studies office. Further academic sanctions may be imposed as well in accordance with university regulations (http://academicsupport.mst.edu/academicintegrity/). Those who allow others to copy their work are also committing plagiarism and will be subjected to the same procedures.

The Honor Code can be found at this link: http://stuco.mst.edu/honor-code/. Page 30 of the Student Academic Regulations handbook describes the student standard of conduct relative to the University of Missouri System's Collected Rules and Regulations section 200.010, and offers descriptions of academic dishonesty including cheating, plagiarism or sabotage (http://registrar.mst.edu/academicregs/index.html).

We check your assignments against each other with software that is VERY good at detecting similarities and differences between any text files, including your source files. These methods are difficult, if not impossible to trick. Please do not try to copy-paste, share sources directly, or write all your code in a group or pair for individual assignments; you will not like the consequences!

Attempting to deceive attendance checking procedures is considered academic dishonesty for ALL parties involved. For example, do not submit someone else's pre-lab or lab assignment for them because they are not attending class.

Burns & McDonnell Student Success Center:
The Student Success Center is a centralized location designed for students to visit and feel comfortable about utilizing the campus resources available. The Student Success Center was developed as a campus wide initiative to foster a sense of responsibility and self-directedness to all S&T students by providing peer mentors, caring staff, and approachable faculty and administrators who are student centered and supportive of student success. Visit the SSC at 198 Toomey Hall; 573-341-7596; success@mst.edu; web: http://studentsuccess.mst.edu/

Accessibility and Accommodations:
If you have a documented disability and would like accommodations in this course, please facillitate providing documentation to the professor as early as possible in the semester. Disability Support Services staff will need to send a letter to the professor specifying the accommodation you will need. It is the universityâ€™s goal that learning experiences be as accessible as possible. If you anticipate or experience physical or academic barriers based on disability, please contact Student Disability Services at (573) 341-6655, sdsmst@mst.edu, visit

http://dss.mst.edu/ for information, or go to mineraccess.mst.edu to initiate the accommodation process. Please be aware that any accessible tables and chairs in this room should remain available for students who find that standard classroom seating is not usable.

Title IX:
Missouri University of Science and Technology is committed to the safety and well-being of all members of its community. US Federal Law Title IX states that no member of the university community shall, on the basis of sex, be excluded from participation in, or be denied benefits of, or be subjected to discrimination under any education program or activity. Furthermore, in accordance with Title IX guidelines from the US Office of Civil Rights, Missouri S&T requires that all faculty and staff members report, to the Missouri S&T Title IX Coordinator, any notice of sexual harassment, abuse, and/or violence (including personal relational abuse, relational/domestic violence, and stalking) disclosed through communication including but not limited to direct conversation, email, social media, classroom papers and homework exercises. Missouri S&T's Title IX Coordinator is interim chief diversity officer Neil Outar. Contact him (naoutar@mst.edu; (573) 341-6038; Temporary Facility A-1200 N. Pine Street) to report Title IX violations. To learn more about Title IX resources and reporting options (confidential and non-confidential) available to Missouri S&T students, staff, and faculty, please visit http://titleix.mst.edu.

Classroom Egress Maps:
http://designconstruction.mst.edu/floorplan/