

# Morgantown High School Cybersecurity Club 2020



**Objective:** To increase awareness of information security topics and to compete in cybersecurity competitions.

**Topics:** Throughout the year, we will cover common vulnerabilities in computer systems and the most efficient ways to mitigate them.

<ul style="list-style-type: none"><li>• <b>General</b><ul style="list-style-type: none"><li>- Ethics (white hat, grey hat, black hat)</li><li>- Legal consequences of hacking</li><li>- Programming (mainly Python, Bash, C)</li><li>- Cryptography</li></ul></li></ul>	<ul style="list-style-type: none"><li>• <b>OS Level Vulnerabilities</b><ul style="list-style-type: none"><li>- Buffer Overflows, Format Strings</li><li>- Malware (Rootkits, Trojans, Worms)</li><li>- DLL Injection</li><li>- CVEs / Known Issues</li></ul></li></ul>
<ul style="list-style-type: none"><li>• <b>Network Systems</b><ul style="list-style-type: none"><li>- TCP Protocol</li><li>- Three way handshake</li><li>- The OSI model</li></ul></li></ul>	<ul style="list-style-type: none"><li>• <b>Denial of Service Attacks</b><ul style="list-style-type: none"><li>- ICMP / SYN flood</li><li>- Slow Loris attack</li><li>- Teardrop attacks</li></ul></li></ul>
<ul style="list-style-type: none"><li>• <b>Web Based Vulnerabilities</b><ul style="list-style-type: none"><li>- SQL / Other Injections</li><li>- Cross Site Scripting</li><li>- Cross Site Request Forgery</li><li>- Broken Authentication</li></ul></li></ul>	<ul style="list-style-type: none"><li>• <b>Physical Attacks</b><ul style="list-style-type: none"><li>- Phishing / Spear Phishing</li><li>- Social Engineering</li><li>- "Lost and Found" USB</li><li>- SIM Jacking</li></ul></li></ul>

## Competitions:

- HackTM CTF Qualifier: February 01 – 03
- FireShell CTF: March 21 – 22
- PlaidCTF: April 17 - 19
- HSCTF 7: May 18 – 23

## Weekly Meetings:

- 2:30 – 3:30 on Thursdays in room 006
- Computers available
- New members always welcome
- Competitions are not mandatory

## Conduct:

- Do not use what you learn to break into any computer systems (that aren't part of an exercise or bug bounty)
- Always adhere to copyright restrictions when downloading material from the Internet
- Any form of cyberbullying or harassment will not be tolerated

*\*Breaking any of these rules of conduct will not only result in dismissal from the club, but also can result in criminal punishment\**

## Contact:

- For any questions or further information, please contact Michael Hoefler at [hoefler2002@gmail.com](mailto:hoefler2002@gmail.com)
- Club Sponsor: Mr. Gibson (room 006)