Fundamentals of Cyber Security

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Course Description:

In the Foundations of Cybersecurity course, students will develop the knowledge and skills needed to explore fundamental concepts related to the ethics, laws, and operations of cybersecurity. Students will examine trends and operations of cyberattacks, threats, and vulnerabilities. Students will review and explore security policies designed to mitigate risks. The skills obtained in this course prepare students for Digital Forensics and Cyber Capstone.

Outline:

- *Digital Citizenship and Cyber Hygiene.*
- *ABCs of Cryptography*
- *Software Security*
- *Networking Fundamentals*
- *IT Infrastructure*
- *Cyber Defense*
- *Security Assessment*
- *Risk Management*
- *Linux / Windows 7 / Cyber Range*

Late Work Guidelines	**Re-teach/Re-test Procedure**	**Textbook**
-10 points off each day late Active participation and group collaboration Will be evaluated and given a grade. **Tutorials:** Usually 6:15 am till the start of school every morning.	Review material and test corrections, Re-take test within 5 days, Replacement grade may not exceed 70, Re-test policy does not apply to major projects. The Klein Collins HS Grade Repair Policy does not apply to this course	*Blown to Bits:* Your Life, Liberty, and Happiness after the Digital Explosion 1st Edition by Hal Abelson (Author), Ken Ledeen (Author), Harry Lewis (Author) – Free online

Online Resources used:	**Student Absence Procedures**
Khan Academy https://www.khanacademy.org/ W3School https://www.w3schools.com/ Cyber Range https://apps.cyber.org/login Cyber Start America https://www.cyberstartamerica.org/	One day to make up work for each day absent **Grades:** 9-12 .5 Credit
	Grade replacement: I offer grade replacement for an assignment. If a student competes on my Computer Science UIL team. I will replace a minor or major grade with a 100. Minor grade replacement for any ranking in the contest. Major grades replacement will happen if the student makes a grade of 75 or more on the UIL test (Perfect score 240). No limit to the number of contests you can attend. Replacement grade must be used in the current grading period.