

# Cybersecurity I

## Mr. Kercheval, Room N117

### **Contact Information:**

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Google Classroom code: haf37rp

Welcome to Cybersecurity! Please read all the class expectations and if you have any questions, don't hesitate to ask.

### **Course Content/AP Considerations:**

This course is created by AP but is currently in its *pilot phase*, which means that much of the course is still under development. Its official title is “Career Kickstart Cybersecurity 1: Networking Fundamentals.” We are among the first 150 schools to offer this course ever! With that in mind, here are some things to know and consider about this course:

- This course mostly covers networking, which is the way that computers communicate with each other over the internet, and where they are most vulnerable to cyber attacks.
- Next year, BCHS will offer the second course in this pathway, which will cover more localized cyber threats like malware, site-based attacks like XSS and SQL injection, and social engineering.
- There will be an “AP” test at the end of the year, which will help the course developers gain insight into how to test this course on a larger scale in the future. Because this is a pilot course, the test will be free for you, but the score you receive will not be eligible for transfer into college credit.

The entire course and exam description, which we will follow closely, is available for you to read at [n117.dev/ced.pdf](#).

### **Required materials:**

- Notebook paper and pen/pencil
- Student chromebook
- Class-issued Linux computer (which will stay in the room)

**Quizzes/Tests:** This class will involve unit tests and unit projects, which are weighted the same. I will also give frequent, short quizzes to keep track of how you're learning content, and to prepare you for the types of questions you will see on the AP test. If you miss a quiz or a test, you must make it up within one week. Please contact me if you need an extension or exception to this rule.

**Homework:** Many homework assignments will consist of small, non-coding-based work to reinforce the day's topics, and will be due the following class period. Each week on block day I will also assign collaborative labs, weighted as homework, for you to complete over the weekend.

**Projects:** Each unit, we will complete a project of larger scale than the weekly homework assignments. I will often encourage you to complete these projects with a partner. **I anticipate that these projects will be challenging, and I will hold you to a high standard when assessing your submissions.**

**Late Work Policy:** Late homework will be accepted until the last day of the unit in which it is assigned for full credit. Additional late assignments will be accepted until a broad cutoff at the end of the semester, for 90% credit.

**Grades:** Grades are weighted and scaled based on the following breakdowns:

<b>Weight:</b>		<b>Scale:</b>	
Unit Projects/Tests:	60%	90 – 100%	A
Homework/Quizzes:	25%	80 – 89%	B
Final Exam:	15%	70 – 79%	C
		60 – 69%	D
		59% and below	F

**Axioms/Advice:** Many parts of computer science have a steep learning curve, and you may need to re-frame how and when you work academically in order to be successful in this class. My advice for computer science students is to:

- 1. Start early.** You will not be able to complete a project if you start it the night before it is due. Your software will be easier to understand, less error-prone, and more effective for you as a learner if you spread the work out. Spend the first day or so thinking about the project and working out procedures and algorithms in English or using physical objects before you attempt to program anything.
- 2. Write a little, test a little.** Separate your program into small, easily testable chunks that you can piece together. Finding a bug in 5 lines of code is much easier than finding a bug in 500.
- 3. Use resources and ask for help.** It's nearly impossible to write a program without external insight or support. Talk to others about bugs you encounter, ask Mr. Kercheval for help, ask Google and Stack Overflow for debugging tips (more details on what is and isn't allowed when discussing your code with others are in the course academic integrity agreement).

### **Academic Integrity and Ethics:**

Computer science is an interesting field because of the ease with which code can be copied from the internet, or, more recently, generated by artificial intelligence (AI) programs. In line with the College Board's outlook on AI, **artificial intelligence may be used** for code development and debugging in this course. Beware, however, that AI programs tend to be limited in the quality of code they produce. You are responsible for both citing and thoroughly understanding any software you submit that contains code that you did not write. Please be conscious as well of the seriousness of much of this course's content. This is an empowering class; if you use what you learn here for unethical purposes, you will be removed from the class.

More details on this policy are available at [n117.dev/integrity\\_sec.pdf](https://n117.dev/integrity_sec.pdf).