

# **COMPUTER SCIENCE PRINCIPALS**

INSTRUCTOR: KEVIN KAMRATH

## CONTACT INFORMATION

Mr. Kamrath: Computer Science Teacher

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I will respond to e-mails within one business day.

## **COURSE MATERIALS**

CodeHS and College Board

Recommended to have paper, pencil, a method of paper organization, and the computer the school provided charged.

Students will be able to access materials through Google Classroom or Classlink

## **COURSE DESCRIPTION & OVERVIEW**

AP Computer Science Principles is an introductory college-level computing course that introduces students to the breadth of the field of computer science. Students learn to design and evaluate solutions and to apply computer science to solve problems through the development of algorithms and programs. They incorporate abstraction into programs and use data to discover new knowledge. Students also explain how computing innovations and computing systems work, explore their potential impacts, and contribute to a computing culture that is collaborative and ethical.

The following are the major areas of study, or big ideas, that serve as the foundation of the course, enabling students to create meaningful connections among concepts and develop deeper conceptual understanding:

• **Creative Development:** When developing computing innovations, developers can use a formal, iterative design process or a less rigid process of experimentation, and will encounter phases of investigating and reflecting, designing, prototyping, and testing. Collaboration is an important tool at any phase of development.

**Data:** Data are central to computing innovations because they communicate initial conditions to programs and represent new knowledge.

■ Algorithms and Programming: Programmers integrate algorithms and abstraction to create programs for creative purposes and to solve problems.

• Computing Systems and Networks: Computer systems and networks are used to transfer data.

■ Impact of Computing: Computers and computing have revolutionized our lives. To use computing safely and responsibly, we need to be aware of privacy, security, and ethical issues. Each big idea is broken down into teachable segments called topics

Students will work in collaborative environment gaining and sharing knowledge with each other. Students will get hands on experiences with software design, data structures, and networking.

Students will be assessed in a variety of ways range from group projects, labs, and individualized test. All with the goal of guiding them to a successful ap exam.

#### **Classroom Behavior & Expectations**

- Students will respect each other.
- Students will respect the classroom and objects in it.
- Students will respect the teacher.

#### Electronics

- Phones are to be stowed in backpacks
- Listening to music within the classroom is prohibited
- Computers are to be brought to class, every day, charged.
- Computers are only to open and in use when instructed

Failure to comply with the electronics policy will first result in a warning, followed by the forfeit of access to that item. If a student forfeits an electronic device to me multiple times, parents will be notified.

#### Food

Students are not to eat food within the class. Nor are students to consume any beverage other than water in the classroom. If a student brings a drink that is not water and it is open, they will be asked to place in on a counter. Water cannot be on desks and must be kept on the floor. If a student has needs that require them to eat, they must let the teacher know of that need.

#### Academic Integrity

On individual assignments students are expected to do their own work. This means that it cannot be plagiarized. Moving into a more modern era the use of AI is considered to be plagiarism. Use of outside resources when not permitted will also result in a breach of academic integrity.

Whether a breach of academic integrity has or has not occurred is up to the teacher. The first breach of academic integrity results that assignment not being graded, and parents will be notified. After a second breach in addition to what would happen the first time the teacher would recommend the student be released from BST. If a third breach were to occur the teacher would no longer grade any work from the student.

#### Late/Make-up Work

Late work is only accepted the day after the assignment is due for a maximum of half credit.

If a student were to miss class and need to make up work. It is the student's responsibility to approach the teacher and ask what they need to do and how long they have to do it. They will always be allotted the same amount of time as other students.

If student's are given an assignment that takes multiple days and they miss a day in the middle of that assignment they will be awarded that extra day.

### **EVALUATION OF STUDENT ACHIEVEMENT**

This class will use the traditional grading scale.

Letter Grade	Percentage
A	90 - 100%
В	80 – 89%
С	70 – 79%
D	60 - 69%
F	50 - 59%

Category	Percentage
Assignments	20%
Projects	30%
Assessments	50%

Student's grade will be broken down into the following categories

## ACKNOWLEDGMENT OF COURSE POLICIES

Signing of this page serves as an acknowledgment that both student and parent/guardian have read and understand the course expectations as outlined above. In addition, signature of this page indicates familiarization with the Biomedical Science and Technology Academy policies found in the school handbook.

Student Name (Print) & Date

Student Signature

Parent/Guardian Name (Print) & Date

Parent/Guardian Signature