

# Computer Science I

Mr. Chris Lemoine | Room 405

**CONFERENCE:** 2:30 pm – 4:00 pm (daily) | **TUTORING:** 7:15 am – 7:45 am (daily)

## Course Overview and Goals

The CodeHS Texas Computer Science I curriculum nurtures students' creativity and innovation by providing ample opportunities to create, execute, and demonstrate significant programs using different media.

Combined with computational thinking and data analysis, this practical approach inspires students to recognize task demands, devise search strategies, and utilize computer science principles to access, examine, and assess the information required to solve real-world problems. Students develop an understanding of computer science principles by studying technology operations, systems, and concepts.

## Learning Environment

Our course is designed to foster a supportive learning environment through a blended classroom approach.

All the content is web-based, and students write and run code in the browser. Teachers use tools and resources from CodeHS to best use classroom time and provide individual attention to students, ensuring a comfortable and encouraging learning experience.

## Programming Environment

Students use the CodeHS editor to write and run JavaScript programs in their web browsers.

## Prerequisites

The Computer Science I course is uniquely designed for individuals with no prior background in computer science. It offers a highly visual, dynamic, and interactive learning experience, making it engaging and ensuring active participation for new coders. Students will use the CodeHS editor to write and run JavaScript programs in their web browsers, a feature that sets this course apart.

## Grading Procedures

This course follows the district's grading procedure, which can be accessed on the district webpage. However, the key points are summarized below.

## Categories & Weights

Assignments in this course will be categorized as either **MAJOR ASSIGNMENTS** (tests, reports, research papers, projects/presentations, essays, etc.) or **MINOR ASSIGNMENTS** (daily practice, homework, quizzes, lab work, binder checks, etc.). At the end of the semester, your final grade will be broken down into three parts.

**MAJOR ASSIGNMENTS: 48%**

**MINOR ASSIGNMENTS: 32%**

**SEMESTER EXAMS: 20%**

## Absences

Students with an **EXCUSED ABSENCE** from school (including off-campus suspension) will have the opportunity to make up missed work at the rate of one day for one day missed, with a maximum of five days. Students will receive no credit for any major or minor assignment not made up within the allotted time.

Students with an **UNEXCUSED ABSENCE** will not have the opportunity to make up missed work; however, if the absence is determined to be caused by extenuating circumstances, makeup work may be allowed. The grade for the makeup work will be no higher than 70%.

## Retesting

Students will be given up to 3 additional school days to redo a **FAILING MAJOR ASSIGNMENT**, but the grade will be no higher than 70%. The teacher has the option of assigning an alternative major assignment and may require additional tutoring, assignments, etc., as appropriate. The teacher will indicate in the grade book that the assignment was redone.

Students will be given three additional days to make up a **LATE MAJOR ASSIGNMENT** and may be required additional tutoring, assignments, etc., as appropriate, with a progressive grade penalty of 10% per day.

## Course Breakdown

### Unit 1: What is Computing?

Students learn about the history of computing and the various parts that make up modern computers. They also consider computing's impact on today's world and its potential future impacts.

### Unit 2: Introduction to Programming in JavaScript with Karel the Dog

Students learn programming basics by commanding Karel the Dog in a grid world.

### Unit 3: Karel Challenges

Students will utilize all the basic concepts they learned in Intro to Karel to solve new challenges.

### Unit 5: JavaScript Basics

Students learn the basics of JavaScript, including variables, user input, mathematics, and functions.

### Unit 6: The Canvas and Graphics

Students learn how to add graphics objects and position them on the canvas

### Unit 7: Graphics Challenges

Students apply what they have learned about graphics and basic JavaScript to complete a set of challenges.

### Unit 8: JavaScript Control Structures

Students learn how to use control structures such as if/else statements and loops to make advanced programs in JavaScript.

### Unit 9: Control Structures Challenges

Students apply the foundational concepts from the Control Structures module to solve new challenges.

### Unit 10: Functions

Students learn to write reusable code with functions, parameters, and return values and explore the impact of variable scopes.

### Unit 11: Animation and Games

Students learn to move objects around the screen and let users interact using the mouse!

## Unit 12: Project: Breakout

Students learn how to make their own Breakout game from scratch using JavaScript.

## Unit 13: Basic Data Structures

Students learn about arrays, adding to/removing from them, iterating through them, their methods, and string manipulation.

## Unit 14 Final Project

Students learn about what makes an engaging and accessible user interface and will employ an iterative design process, including rapid prototyping and user testing, to develop their engaging projects.

## Unit 15: Computer Science Careers

Students learn about various computer science careers and organizations and what the next steps could be for them if they are interested.

## Class Materials

- Laptop or tablet with internet access
- Notebook and writing utensils
- Headphones (optional but recommended)

## Classroom Rules

- Be respectful to everyone
- Come prepared and ready to learn
- Follow all school policies regarding technology use
- Participate actively in class activities and discussions
- Complete assignments on time

## Teacher Expectations

- Students should attend class regularly and be on time
- Students should actively participate and engage with the course materials
- Students should seek help when needed and attend tutoring sessions if required

## Academic Dishonesty

In alignment with the philosophies from Carol Dweck's work on mindset, my approach to academic integrity focuses on fostering a growth mindset and understanding the learning process. Academic dishonesty undermines this process and the development of essential skills.

### Definition

Academic dishonesty includes cheating, plagiarism, fabrication, unauthorized collaboration, and other behavior that misrepresents your work or efforts. Understanding that these actions prevent genuine learning and personal growth is crucial.

## First Offense

- **EDUCATIONAL APPROACH:** Instead of immediate punitive measures, we will meet to discuss why academic dishonesty occurred and the importance of integrity in your work
- **REFLECTION ASSIGNMENT:** You will complete a reflection assignment on the impact of academic dishonesty on your learning and future goals. This assignment is designed to help you understand the value of honest effort and resilience and to reflect on how academic dishonesty can hinder your personal and educational growth.
- **REDO THE ASSIGNMENT:** You can redo the assignment or an alternative one to demonstrate your understanding and effort. The new grade will be capped at 70% to acknowledge the mistake while allowing room for growth. This policy is designed to provide a learning opportunity while maintaining the grading system's integrity.

## Second Offence

- **PARENTAL INVOLVEMENT:** You, your parents, and I will schedule a meeting to discuss the repeated behavior and collaboratively develop strategies for improvement.
- **INCREASED SUPPORT:** You will receive additional support, which may include tutoring sessions or check-ins with me, to ensure you have the skills and understanding needed to succeed.
- **REDO THE ASSIGNMENT:** You will again be allowed to redo the assignment with a maximum grade of 50%.

## Subsequent Offenses

- **ADMINISTRATIVE INVOLVEMENT:** Further instances of academic dishonesty will be referred to school administration for additional consequences, which may include academic probation or other disciplinary actions as per school policy.
- **SUPPORT PLAN:** We will develop a comprehensive support plan involving teachers, parents, and counselors to address underlying issues and promote positive behavior changes.

I aim to help you understand that learning is a process and mistakes are growth opportunities. By focusing on development and understanding, I strive to create an environment where you feel encouraged to put forth your best effort honestly and learn from your experiences.

## Acknowledgment

**I have read and understood the course syllabus for Computer Science I. I agree to adhere to the grading procedures, attendance policies, and all other guidelines outlined in this syllabus. By signing this statement, I understand that I acknowledge my commitment to the course requirements and expectations.**

Student Name (Printed) \_\_\_\_\_ Date \_\_\_\_\_

Student Signature \_\_\_\_\_

Parent Signature \_\_\_\_\_

Teacher Signature \_\_\_\_\_