



Computer Science

Mr. Abarca • aaabarca@gsd200.org • Trimester Class, 2021-2022

Course Description

Introduction to Computer Science is an introductory-level course for students brand new to programming and computer science. In this course, you will learn problem-solving strategies, software design, and the foundations of computer science. You'll do so using two key tools: the Project STEM programming environment and EarSketch, a software package that turns your code into music.

Course Goals

- Have the basic technical vocabulary of computer science.
- Understand basic principles of thinking and solving problems with computers and computation.
- Be able to use fundamental elements of computer programs, such as commands, variables, conditionals, and loops.
- Understand the representation of data in computer memory.
- Design, plan, implement and test programming projects.
- Be able to use principles of programming to write and edit musical compositions in EarSketch.

Text and Reading Materials

All materials will be provided by the instructor

State Standards: This course is designed to meet the national and state standards for Science, Technology, Engineering and Math. It will also align with the ELA common core state standards.

Required Supplies

- Notebook with standard or graph paper
- Pens and regular pencils

Course Outline

- Hardware and Software Basics
- Input and Output
- Binary
- Variables
- Functions
- Modular Division
- Random Numbers
- Working with Big Data
- Booleans
- Conditional Statements
- Algorithms
- While Loop
- Iteration
- For Loop
- Effects in EarSketch
- Tempo and Pitch

- Recording and Uploading Songs
- Making Custom Beats

Course Schedule

- Video Lessons: Mrs. Dovi is the primary instructor featured on the lesson videos. Many videos in the course are "code along", and you will be asked to follow along with Mrs. Dovi as she codes. When she tells you to pause the video and try a problem yourself, pause the video and give it a try! Remember, the best way to learn coding is to actually code.
- EarSketch Connections: Within many lessons in this course, you'll see EarSketch connections that draw on your new Python skills, and apply them to the art of making music. These connections allow you to play music samples directly in the Edhesive course.
- Lesson Practice: After most lessons, there will be a series of multiple choice and fill in the blank questions. These are graded lesson practice questions.
- Code Practice: After most lessons, there will be a series of code practice questions. These are also graded.

Major Assignments

The culminating project will be built in EarSketch, a software package that turns your code into music. Students will take all that they have learned to create music through coding.

Assessment Format

Assessment will be both formative and summative and based on quizzes, tests, presentations, and assignments amongst other methods.

Classroom Expectations

- Students will be expected to adhere to all policies, procedures, and rules as outlined in their Grandview High School student handbook.
- Students will also be expected to adhere to the following classroom expectations:
 1. Be prepared—Bring proper materials, and study for tests, quizzes, etc.
 2. Be ready to learn—Be on time and in your seat when the bell rings ready to engage.
 3. Be respectful—Treat all staff, students, guest speakers, etc. with a great deal of respect. These individuals are vital to your success and are here to see all of you succeed.
 4. Be honest—Cheating, plagiarism, and other types of academic dishonesty will not be tolerated.
 5. Be helpful—Look for ways to help one another, and be a team player. Be a friend and help someone in need.

Computer Use

- You will be responsible for adhering to all District, School, Department, and Classroom computer usage guidelines. Failure to follow those guidelines may result in the loss of your computer privileges.
- NO FOOD OR DRINK IN THE COMPUTER LAB

Absence and Tardy Policy

Attendance is mandatory. **If you are not in your seat when the bell rings you are considered tardy.**

Grading Scale

Point Value	Letter Grade	High Percentage	Low Percentage
4.00	A	100.00	93.00
3.70	A-	92.99	90.00

3.30	B+	89.99	87.00
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3.00	B	86.99	83.00
2.70	B-	82.99	80.00
2.30	C+	79.99	77.00
2.00	C	76.99	73.00
1.70	C-	72.99	70.00
1.30	D+	69.99	67.00
1.00	D	66.99	60.00
0.70	F	59.99	57.00
0.30	F	56.99	53.00
0.00	F	52.99	

Grading Policy

- Student attendance, effort, attitude and other behaviors will be reported separately from achievement.
- Late work will not be marked down
- Students have a right to make up work missed due to absences.
- In the case of academic dishonesty students will be referred to the office to receive their consequence. Students will be given the opportunity to take the test over or receive a zero.
- Grades will be based on the achievement toward district course/grade level standards. Therefore, the grades will be organized and recorded by unit of study.
- Students will be able to track their progress through Skyward.

Caveat

This is a general syllabus and cannot detail the entire scope of the curriculum. The instructor reserves the right to make adjustments or changes throughout the trimester to best fit the needs of students and classes.