Computer Science Syllabus

RCAS Policies/Procedures

Students will be required to follow all RCAS policies and procedures. To view the RCAS High School Student Handbook, click [handbook.](#)

Course Description

An interactive computer science course for students brand new to programming that teaches the foundations of computer science using the Python language. Not only will this year-long course prepare students for AP Computer Science A and AP Computer Science Principles, but it will teach students how to think computationally and solve complex problems, skills that are important for every student. *This course may count as either one credit of Career and Technical Education or as a science elective towards the Advanced Career Endorsement only.*

Grading

The course consists of video lectures, daily programming exercises, longer coding assignments, regular quizzes, projects, and exams.

Course grade will be based on the following components:
- Practice Activities (20%)
- Assignments and Quizzes (40%)
- Tests (40%)

Textbook

N/A

Reading

N/A

Optional Reading

N/A

Instructional Resources

Projectstem.org
EarSketch

Essential Questions

What is Computer Science?
How to apply number calculations and data?
How to make decisions with coding?
How to incorporate Ifs, Booleans, Else-ifs, and Min/Max
How to program with repetition and loops?
How to program in EarSketch?
How to incorporate graphics?

What are functions?
What are arrays?
What is a 2D array?
What is the Internet?
Career Connections – Who Uses Computer Science?

Essential Learning Intentions

Upon successful completion of this course, you will:
- 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.