

## Computer Science Discoveries\* 2025.26



**Instructor:** Danny James

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**Supply Fee:** \$25 (due on May 6, 2025)

**Extended Sessions:** None

**Prerequisites:** This course is for 9th- 12th grade students as well as mature 8th graders. No previous computer science experience required but a placement test will be required to gauge the student's critical thinking skills.

**Minimum class size:** 6

**Monthly Tuition-** \$48 / month

(9 equal payments August-April)

**Total Yearly Tuition-** \$432

### Course Description

Computer Science Discoveries is a 1.25 hour per week course designed to lay the foundation of computer programming concepts. These concepts include— learning how to create basic shapes, colors, fills, multi-shaped objects, mouse-and-keyboard interaction, and more— all using the Python programming language. These basic skills culminate in the ability to create animation and 2-D games. Along with these abilities, students will engage in problem solving, critical thinking, and algorithm development, leading to an increase in overall mindful engagement in students.

The topics in this class introduce students to all aspects of Computer Science and can help them determine if it may be a field of interest for further study. This class provides a good transition into AP® Computer Science for those desiring to study Computer Science beyond high school. Students will learn in a fun and interactive environment which will allow them to apply what they learn in a practical way. At the end of the school year, students will have learned skills that are much needed in the modern workplace.

### Primary Course Text

The course will use an online curriculum format developed by Carnegie Mellon and will focus on teaching computer science and programming skills in a fun and engaging way with a strong emphasis on problem-solving skills. There is no cost to the student for this curriculum beyond the supply fee and the instructor will supplement with additional resources as needed.

### Additional Required Resources

Students will be using SGA-supplied Chromebooks for use during class time as well as work at home. Students will be responsible for the care and protection of the devices while in their possession. Parents will need to sign a waiver indicating their financial responsibility for repair

or replacement should the student damage the chromebook (even accidentally). They must also have access to the internet to take advantage of various online resources used to supplement class content.

### **Course Expectations**

Students will access Google Classroom using their SGA-assigned email address. Parents will receive an invite for “guardian access” to their student’s information in order to track their student’s progress and understand the assignments. This platform works well in the Computer Science classroom and teaches students some of the workflow allowed through cloud integration, something that will be prominent in their lives as they move beyond school.

***In-Class Requirements*** – Computer Science Discoveries is the type of class that requires students to be actively engaged in the learning process. Whether it be through participation during class exploring the inner workings of a computer or simply having a discussion of emerging technology, students are expected to participate in a way that fosters learning.

***At-home Requirements*** – Because we only meet in class once weekly, it is imperative that study time also take place at home with parental supervision as needed. Because the concepts build on one another, it is imperative to stay caught up on each weeks’ homework. If a student falls behind or is struggling with a particular exercise or concept, they should reach out to the instructor via email immediately. I suggest spending at least an hour each day working on assignments and obtaining a grasp of the subject matter and its application. A complete list of all homework will be posted on Google Classroom each week, and a link to the Classroom will be placed within FACTS.

### **Teacher Responsibility**

The instructor will provide in-class instruction, weekly assignments, as well as assessments to gauge the student’s progress. Assignments will be posted weekly primarily on Google Classroom (see above) and students’ work will be graded in a timely manner. The instructor will be available for questions as needed.

### **Student Responsibility**

It is the student’s responsibility to keep up with assignments on Google Classroom and FACTS, read all communication from the instructor thoroughly, come to class prepared, participate in class discussions, and ask questions and seek help if needed.

### **Parent Responsibility**

Parents are responsible for overseeing assignments at home and making sure their student understands the material as the course progresses. To oversee assignments at home, parents may need to use their student’s login to Google Classroom. Parents are expected to read all communication from the instructor, check class notes and assignments on Google Classroom and FACTS weekly, proctor tests at home as instructed, review homework assignments as needed, and check student’s grades on FACTS regularly.