



Career and Technical Education

Syllabus for AP Computer Science A

Term: 2023-2024

Teacher: Chris Jones

Teacher's Contact: christopher.jones@apsva.us

Office Hours: Warrior's Period, and by appointment

Prerequisite

Students are expected to have completed Computer Programming with a final grade of B or better. Any student who does not satisfy this prerequisite must discuss with Mr. Jones. Students may be allowed to remain in the class with instructor's approval, which will be considered on a case-by-case basis.

Course Description & Course Goals

Advanced Placement Computer Science is a rigorous course emphasizing programming methodology, algorithms, and data structures. Emphasis is placed on applications involving arrays, linked lists, trees, and sorting techniques. Many projects involve outside-of-class practice, study, and reading. Students entering this course must have a solid knowledge of Java programming language. This course meets the requirements for AP Computer Science as outlined in the syllabus published by the College Entrance Examination Board.

Tentative Pacing Outline

NOTE Sections of this course will rely heavily on existing high-quality online curricula. For more information about this content, see the syllabus for this course:

- [CodeHS](#)

Semester 1	Semester 2
Unit 0: Introduction to This Course	Unit 6: Arrays
Unit 1: Primitive Types	Unit 7: ArrayLists
Unit 2: Using Objects	Unit 8: 2D Arrays
Unit 3: Boolean Expressions and if Statements	Unit 9: Inheritance
Unit 4: Iteration	Unit 10: Recursion
Unit 5: Writing Classes	Unit 11: Preparing for the AP Exam

Course Competencies and/or Standards

Computer Programming standards are called competencies. You can find the competencies for this course in the College Board's [Course and Exam Description Document](#)

Syllabus Quiz

Please review this syllabus with a parent or guardian, and complete "Syllabus Quiz" in Canvas by Tuesday, September 6, 2022.

In the Syllabus Quiz, there will be a question that says "Did you read the entire syllabus?" Please use that box to tell me about your favorite animal.

Class Expectations for Students and Teacher

- Students are expected to follow the Acceptable Use Policy as well as other school policies
- Arrive on time
- Be mindful of your neighbors' workspaces
- During lecture time, please close your laptop and take off your headphones
- During work time (not quiz/test time), you are encouraged to work with others, but DO NOT do their work for them
- No food or drink in the lab area
- Keep the lab clean – no trash!
- When it is time to leave you should throw away any trash at your station, straighten the keyboard and mouse, and push in your chair

Communication Expectations

- Students are encouraged to ask for help in class, but all official requests to Mr. Jones (eg for assignment clarifications, extensions, recommendations) must be made in writing
- Mr. Jones is happy to communicate with students and their families via email, Canvas messages, and ParentSquare
- Mr. Jones makes every effort to respond to all communication within one school day
- Student messages to Mr. Jones must be formal and professional. Mr. Jones will request that students re-write emails that do not meet this standard. See this link for help writing formal emails.

Industry Credentialing Certification/Licensures

Credentials are industry certifications to validate student skill attainment to a potential employer or college admissions officer. These tests, recognized by industry, are at no cost to the student. Students in this course will be eligible to take:

Workplace Readiness Skills Exam -- [Objectives found here](#)

AP Computer Science A Exam

Career & Technical Student Organization (CTSO)

A CTSO is a required co-curricular student professional organization that aligns with the course. While some activities may be done during class time, others are extracurricular activities. The CTSO for this course is called Future Business Leaders of America (FBLA). For additional information, see <https://www.vafbla-pbl.org/> or contact Ms. Naughton

Academic Integrity

In this course, collaboration among students is encouraged. However, copying another's work or allowing your work to be copied is not acceptable and is a violation of Wakefield's academic integrity policy. Some assignments will require students to sign an honor pledge. By signing the pledge, students acknowledge their understanding of the honor policy and that they have not violated that policy in any way. The pledge states either:

"On my honor, I pledge that I have neither given nor received information on this assignment."

or

"On my honor, I pledge that I have only given [received] information on this assignment to [from] the following individual(s)"

Failure to abide by the honor code will result in consequences as laid out in the student handbook, but at minimum students will earn a zero on the relevant assignment.

Grading Overview

Grade Composition

The final grade for the course is determined using a "quality points" system. Each quarter will represent 20% of the final grade, and the final exam will also be worth 20%. Each quarter, students are assessed on the categories in the table below.

Category	Weighted Percentage	Description
Projects and Labs	50%	Performance-based activities designed to allow the students to practice new skills. These are formative assessments.
Assessments	50%	The student will demonstrate their competency attainment of technical skills. Summative assessments generally combine performance-based and theoretical application.

Each of these categories is evaluated using a points-based system, where larger-effort assignments are worth more points than smaller-effort assignments.

Homework - Policy Implementation Procedure I-11.2 PIP-1 Homework

Homework allows students to practice, prepare, study, and extend learning. Homework is not assigned as a behavioral consequence.

- **Grades 9-12:** maximum of a total of 60 minutes per week per course; an additional 30 minutes of independent, choice reading each night is recommended. Students who are enrolled in Advanced Placement, International Baccalaureate, and/or dual enrolled courses may be assigned additional work commensurate with the expectations of the course.

Special Expectations for AP Classes

AP classes provide amazing opportunities to study diverse offerings with the rigor of college level courses. We want you to do well and succeed in these courses and encourage you to seek out all the support available to make your experience positive. As an advanced course, we do want to ensure that you are prepared for the content. As such, students are expected to perform at or above a “C” average. Students will earn extra quality points when they complete the course and Create Task and sit for the external AP examination. Students who complete both on time will be exempt from final examinations for this course. Students who fail to submit the required Create Task will not be eligible to sit for the external examination. Failure to sit for the external examination will result in the loss of the quality point on the school transcript and they will be required to take a final exam on the date specified in the WHS calendar. If this happens, the final course grade will be an average of the four quarter grades and the final exam grade.

Arlington Public Schools (APS) pays for the examination fees for all AP and IB courses. Any student who registers for an AP or IB course, but does not take the corresponding exam or complete the required IB internal assessment (IA), will be required to reimburse APS for their examination fee(s). The cost of each exam is established by the College Board and International Baccalaureate Organization.

Final Exam Information

This course does have a final exam. Students whose overall grade for the year is already an A may request to be exempted from the exam.

Absences

Students are expected to complete all assignments. Students who are absent are expected to check Canvas to find out what they missed and to be ready to move forward upon their return. Missed work due to an absence is expected to be completed as outlined by Arlington Public Schools Attendance Policy. Help is available to students by contacting the teacher via email to make an appointment for academic support.

Late Policy

All work will have a due date and it is important to complete the work on-time as the technical skills in this course build upon each other. While late work is not penalized in the grade calculation, there is a finite amount of time in which missing assignments will be accepted. Assignments will not be accepted later than one week from the original due date. Missing work will be recorded in the Gradebook as “Missing” and calculated as a zero until submitted and graded.

It is understood that extenuating circumstances may arise in which work cannot be submitted on-time. In such cases, the student is expected to communicate with the teacher, in advance, so a conversation regarding a solution can be discussed.

Gradebook

All graded items will be in Canvas, and only Interim/Quarter grades will be entered in StudentVUE/Synergy

Grading Policies

APS Grading Policy Implementation Procedures (PIP) I-7.2.34 PIP-2

Letter Grade	Percentages	Quality Points	AP, IB, and Dual Enrollment Quality Points
A	90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100	4.0	5.0
B+	87, 88, 89	3.5	4.5
B	80, 81, 82, 83, 84, 85, 86	3.0	4.0
C+	77, 78, 79	2.5	3.5
C	70, 71, 72, 73, 74, 75, 76	2.0	3.0
D+	67, 68, 69	1.5	2.5
D	60, 61, 62, 63, 64, 65, 66	1.0	2.0
E	0 – 59	0.0	0.0

Note: Student grades reflect student achievement and not student behavior. Quarterly grades will round up when the percentage is .5 or higher. Work Habits, such as Homework, will be reflected in the report card comments. + = Surpasses expectations, # = Meets Expectations, ^ = Approaching Expectations and N = Needs Improvement.

Calculating Final Course Grades

Final grades will be calculated using quality points. Each quarter and final exam will count for 20% of the final grade.

Grade Rounding to Determine Final Course Quality Point

3.75 to 4.0	A
3.25 to < 3.75	B+
2.75 to < 2.25	B
2.25 to < 2.75	C+
1.75 to < 1.25	C
1.25 to < 1.75	D+
0.75 to < 1.25	D
< 0.75	E

Daily Materials

- Each student must bring their fully-charged, school-issued laptop to class each day.
- Students must have and regularly check a personal, professional email address.
- Students are also responsible for knowing how to access, and regularly checking, their accounts to APS resources such as Canvas, email, and Google Drive
- We will be using a variety of internet and software resources, some of which are outlined below
- Students are recommended (*but not required*) to bring earphones to class.

Course Resources

Students should be comfortable using Canvas and StudentVUE.

In addition, we will be heavily using online resources including those listed below. Additional resources may be introduced throughout the year. Students are also invited and encouraged to discover and share their own resources.

Online Curriculum Resources:

- [Project STEM](#)
- [CodeHS](#)
- [CMU CS Academy](#)
- [AP Classroom](#)

Other Resources:

- [Repl.it](#)