Course Syllabus: AP Computer Science A | 2018-2019

Course Name: AP Computer Science A
Semester: Fall, 2018 – Spring, 2019
Period: 1,2 & 3
Teacher: Mrs. Pam Whitlock
Room: G 127
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Website: http://www.cswithwhitlock.com/

COURSE TITLE: AP Computer Science A with Java
Course #: 11.0160010

Overview of the Computer Science Curriculum This course is designed to meet the objectives described in the College Board's Computer Science A Course Description.

Course Overview: AP Computer Science A is an introductory course in computer science. It is equivalent to an introductory Computer Science course at a college or university. Because the development of computer programs to solve problems is a skill fundamental to the study of computer science, a large part of the course is built around the development of computer programs or parts of programs that correctly solve a given problem. The course also emphasizes the design issues that make programs understandable, adaptable, and, when appropriate, reusable. At the same time, the development of useful computer programs and classes is used as a context for introducing other important concepts in computer science, including the development and analysis of algorithms, the development and use of fundamental data structures, and the study of standard algorithms and typical applications. In addition, an understanding of the basic hardware and software components of computer systems and the responsible use of these systems are integral parts of the course. More information can be found on the College Board website: https://apstudent.collegeboard.org/apcourse/ap-computer-science-a

Program Pathway: This is the third course the Computer Science Pathway.

Course Goals (and College Board curriculum requirements): After the completion of this course, students should be able to:

- design and implement computer-based solutions to problems in a variety of application areas [CR1]
- use and implement commonly-used algorithms and data structures [CR2]
- develop and select appropriate algorithms and data structures to solve problems [CR3]
- code fluently in an object-oriented paradigm using the programming language Java [CR4]
- Students are expected to be familiar with and be able to use standard Java library classes from the AP Java subset [CR5]
- complete structured lab components compromising a minimum of 20 hours of lab time [CR6]
- recognize the ethical and social implications of computer use [CR7]
- More details in the course description: https://apcentral.collegeboard.org/pdf/ap-computer-science-a-course-description.pdf

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Computer facilities: Students have access to the lab computers every day during class. Students also have access to computers each day, before and after school, in the media center. The course uses a subset of the Java language with the Dr. Java IDE. This software is freely available at the Dr. Java website (http://drjava.sourceforge.net/).

AP Practice Exam

All students are expected to take a full length, practice AP exam that will count as their final exam grade for the spring semester. This mock exam will take place from 4:00 pm – 7:00 pm on Thursday, May 2, 2019. (Date subject to change.)

AP Exam

All students will be expected to take the AP Computer Science Exam. It will be administered on Friday, May 19, 2018 at 12:00 pm. The exam will consist of two sections: a multiple choice section and a free response section. Each section will be given 90 minutes for completion.

Textbook and Supplemental Materials

- Lewis, John, William Loftus, and Cara Cocking. Java Software Solutions for AP Computer Science. 2nd ed. Upper Saddle River, NJ: Prentice Hall, 2007
- Barron's AP Computer Science A, 7th edition.
- Additional resources:
  - Introduction to Computer Science website developed by Bradley Kjell at Central Connecticut State University (CCSU) http://chortle.ccsu.ctstateu.edu/cs151/cs151java.htm
  - Oracle's Java API: http://docs.oracle.com/javase/7/docs/api/
  - http://practiceit.cs.washington.edu/
  - http://codingbat.com/

Course Topics

Fall Semester		Spring Semester
Ch 1 Computer Systems		**Ch 5** Enhancing Classes
Ch 2 Objects and Primitive Data		**Ch 6** Searching and Sorting
Ch 3 Program Statements		**Ch 7** Inheritance and Polymorphism
Ch 4 Writing Classes		**Ch 8** Recursion
Ch 6 Arrays and Arraylists		**Exam Review in class** **Final / mock AP exam**:5/2/19 ; 4 – 7 pm **AP Exam on 5/17/19** at 12:00 pm
		Independent projects: Choices could include App development, game development or robotics

Materials Needed for the Course: Student agenda, Binder/notebook, Barron's AP Computer Science Review book (7th edition) usb drive, pens/pencils, a great attitude!

CHS Computer Science Plagiarism Statement:

A particular kind of honor code violation occurs with plagiarism. Plagiarism is defined as the use of another's words, ideas, or programming code and the presentation of them as though they are entirely one's own. Acts of plagiarism include but are not limited to using words, programming code or ideas from a published source (including the Internet) without proper documentation; using the work/artwork/programming code of another student (e.g., copying another student's artwork, code, homework, composition); using excessive editing suggestions of another student, teacher, parent, or paid editor. Plagiarism on any project or paper at Chattahoochee High School will result in a zero for the assignment and an Honor Code Violation. Unless directly stipulated by the teacher, collaboration on written work/projects/programming code is not acceptable. Students who willingly provide other students with access to their work are in violation of the Chattahoochee High School Honor Code.

Career, Technical and Agricultural Education (CTAE) Department

Grading Scale

Grade	Range
A	90 - 100
B	80 - 89
C	70 - 79
F	69 & below

Grade Distribution: Student grades in all CTAE classes will be based on the following system:

Category	Weight	Description	Expected Time to return grades to students
Major Assessments	50%	Unit Tests, Major Unit Programming Projects	Tests: 5 school days Projects: 7 – 10 school days
Minor Assessments	20%	Quizzes, live coding tasks, instructional labs	3 school days
Other	10%	Homework, CodingBat, PracticeIt, Reflections	3 school days
Final Exam	20%	Cumulative final exam for Fall and Spring semesters	

Fulton County School Board Policy IHA Grading and Reporting System Provision for Improving Grades

1. Opportunities designed to allow students to recover from a low or failing cumulative grade will be allowed when all work required to date has been completed and the student has demonstrated a legitimate effort to meet all course requirements including attendance. Students should contact the teacher concerning recovery opportunities. Teachers are expected to establish a reasonable time period for recovery work to be completed during the semester. All recovery work must be directly related to course objectives and must be completed ten school days prior to the end of the semester.
2. Teachers will determine when and how students with extenuating circumstances may improve their grades.

CTAE Department Provision for Grade Improvement Policy

Students who have received a grade below 75% on a major test/project have the opportunity to recover their grade through the Grade Improvement process.

- The maximum grade that can be earned is 75%.
- Students must initiate the recovery process.
- Once notified of the low grade, students have up to 10 days to initiate and complete the recovery work.
- The individual teacher will determine the means of recovery.
- Students can have no more than 5 unexcused absences from the class.
- All missing work/zeros must be made up before the recovery process can begin.

Late/Missing Work

- Work that is turned in after the deadline will receive a maximum grade of 75%.
- Work that is missing will receive an NHI (not handed in).
- If the missing work is not submitted within 10 days from the initial deadline, the NHI will be changed to a zero permanently.

CTAE End of Pathway Assessment (EOPA)

The Georgia Department of Education has made available an End-of-Pathway Assessment to ascertain the competence of our Career Technology students. The End-of-Pathway Assessment measures the level of technical skill attainment of each career pathway completer. The End-of-Pathway Assessment will be administered to all CTE students who have finished or are finishing a pathway. The End-of-Pathway Assessment will be administered in April and students that pass the test will receive an industry-recognized certification. Seniors who pass the test will receive a special CTE cord to wear at graduation.

TARDY POLICY: You are expected to be in class and ready to work when the tardy bell rings. We will follow the tardy policy as directed in the Chattahoochee student handbook.

CLASSROOM EXPECTATIONS

1. Come to class:
   With the Right Materials
   At the Right Time
   With the Right Attitude
2. Show respect for everyone (yourself, your peers, your teacher, and all property)
3. Unless specifically instructed by Mrs. Whitlock, personal electronic devices (cell phones, I-pods, I-touches etc.) are not allowed to be visible or used in the classroom. These items will be collected if seen.
4. Complete all homework and class work with 100% effort and work on self-evaluation and improvement.
5. All Chattahoochee handbook and Fulton County rules will be followed.

HELP SESSIONS, CONFERENCES:

If you fall behind or need extra help/time, see Mrs. Whitlock to set up a help session. I encourage all students who have questions to see me for extra help as soon as they need it!

Computer Usage Policy

1. I will limit my use of technology in school to the educational objectives established by my teachers;
2. I will not retrieve or send unethical, illegal, immoral, inappropriate or unacceptable information;
3. I will follow the rules on network etiquette, which includes the use of appropriate language and polite responses. I will not use abusive language of any type, including swearing and name-calling;
4. I will not share my home address or phone number with another user for any purpose;
5. I understand that information received on-line is private property, unless specified. I will not plagiarize information received in any form;
6. I will not use or access another person's account, and I will not share my password with anyone else;
7. I will not attempt to bypass the security built into the system or network, and I recognize that doing so will result in immediate cancellation of my privileges as well as disciplinary measures dictated by this school's administration;
8. I will not interfere with or disrupt network users, services or equipment. Disruptions include, but are not limited to, distribution of unsolicited advertising, propagation of computer viruses, and using a network to make unauthorized entry to any other machine accessible via a network;
9. I will not use technology access provided by Fulton County Schools for illegal purposes of any kind;
10. I will not use technology access to transmit threatening, obscene, or harassing materials
11. I will not engage in any on-line chat rooms nor play any on-line games unless specifically authorized to do so by my teacher for educational purposes;
12. By signing this waiver and consent, I understand and agree that Fulton County Schools will not be held responsible if I participate in any such activities;
13. I understand my responsibility as a user of telecommunications. I have read the above rules and realize that any infraction will cancel my user privileges and may result in further disciplinary action, including suspension from school.

14. I agree to adhere to any additional computer usage policies as set forth in the school agenda.

Student Organization

Future Business Leaders of America (FBLA) is a co-curricular student organization in Business and Computer Science that promotes leadership, career planning, community service, and social networking. Every student will be required to complete FBLA management assignments. Additionally, FBLA will be blended into all the standards of the course. Membership is strongly encouraged for all students enrolled in this course. Dues are $21 for local, state, and national membership. See me for an application.

**This syllabus is subject to change at the teacher's discretion without prior notice.

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Please return this page, signed, by August 10, 2018. This is a homework grade.

By signing the contract below, I acknowledge that I have read and understood this syllabus for AP Computer Science. I also understand that:

- The primary expectation for students in my classroom is to be focused on APCS the entire class period.
- Students can expect that the instructor will provide the following: A safe environment that is conducive to learning, a healthy mix of written assignments and communicative activities, fair evaluations that test the exact objectives of the given unit, knowledge of the exact grading criteria for any assignment and finally the student can expect that Mrs. Whitlock will give 100% every day to facilitate the learning of her students.
- All devices (phones, tablets and computers) must be used solely for the content that has been assigned by Mrs. Whitlock.
- The student is responsible for all instruction whether present or absent.
- The student is responsible for turning in all work when it is due and making up any missed assignments.
- Help sessions are available from Mrs. Whitlock.

I understand that academic integrity creates a strong academic and ethical environment at Chattahoochee High School. I pledge that I will be personally responsible for upholding the values of academic integrity by being honest and not tolerating academic dishonesty.

Student Name: _____ Period: _____

☐ Check the box if you have registered with Remind. Code: **@4d63d8**

Student Signature: _____

      (I understand my responsibility regarding make-up work and I have registered for Remind)

Parent Signature: _____

      (I have read and discussed the syllabus with my son/daughter.)