COURSE TITLE: AP Computer Science A	
TEACHER NAME: Ms. Lidan Zhou	E-MAIL: LZHOU@forsyth.k12.ga.us
ROOM: 474	PHONE: (770) 781-2264 EXT: 100474

Forsyth County Schools
Course Syllabus 2022/2023

Course Description: The AP Computer Science A course introduces students to computer science with fundamental topics that include problem solving, design strategies and methodologies, organization of data (data structures), approaches to processing data (algorithms), analysis of potential solutions, and the ethical and social implications of computing. The course emphasizes both object-oriented and imperative problem solving and design. These techniques represent proven approaches for developing solutions that can scale up from small, simple problems to large, complex problems. It is both a college-prep course for potential computer science majors and a foundation course for students planning to study in other technical fields such as mathematics, engineering, physics, and chemistry. Even some "non-technical" fields such as business and psychology require students to take an entry-level programming course.

Standards: Forsyth County offers many State Board of Education approved CTAE Career Pathways with three sequenced courses. *To view course standards, pathway guides, and plans of study, visit the following links:*

Standards: *https://www.gadoe.org/Curriculum-Instruction-and-Assessment/CTAE/Pages/cluster-pathway-courses.aspx*

Programs of Study:
https://www.gadoe.org/Curriculum-Instruction-and-Assessment/CTAE/Pages/Programs-of-Study.aspx

Standard 1 in all CTAE courses is to demonstrate employability skills required by business and industry. This includes communication, demonstrating creativity, exhibiting critical thinking and problem-solving skills, modeling work readiness traits required for success in the workplace, and applying the appropriate skill sets to be productive in the workplace. Standard 1 also places emphasis on presenting a professional image through appearance, behavior, and language.

CTSO Affiliation (Career Tech Student Organizations): CTSOs are co-curricular organizations with leadership programs and competitive events which reflect current curriculum standards and competencies for the instructional programs they serve. Teachers infuse CTSO activities into the instructional activities, thereby helping students see the real world value of their academic studies. The CTSO for this course appears below, and students are encouraged to take advantage of these additional leadership opportunities.

FBLA: The mission of Georgia FBLA is to bring business and education together in a positive working relationship through innovative leadership and career development programs.

Required Assignments: The course includes the required content organized into the following units based on the AP Course and Exam Description:
Unit 1: Primitive Types
Unit 2: Using Objects
Unit 3: Boolean Expression and if Statement
Unit 4: Iteration
Unit 5: Writing Classes
Unit 6: Array
Unit 7: ArrayList
Unit 8: 2D Array
Unit 9: Inheritance
Unit 10: Recursion

To fulfill the 20-hour lab requirement, the course will use the provided College Board labs as suggested in the guides:
- Consumer Review Lab
- Data Lab
- Steganography Lab
- Celebrity Lab

Additionally, the course will provide the following optional labs from Project STEM for additional hands-on lab experience:
- Magpie Lab: this lab implements a chatbot and incorporates String manipulation.
- Elevens Lab: students will apply design and object oriented principles to create and play a solitaire game.
- Picture Lab: students will write methods that modify digital pictures and learn to traverse a 2D array of integers or objects.

Learning Resources/Textbook(s): *Java Software Solutions (JSS)*, Lewis, Loftus, & Cocking, 3rd Edition, 2011, Pearson Education, Inc. (provided by the school).
Barron's AP Computer Science A, Roselyn Teukolsky, 7th edition (It is highly suggested that students purchase their own copy at approximately $30)
Previous versions 5th or 6th Edition, Barron's Educational Series, Inc. are acceptable but ignore all references to GridWorld.

AP Computer Science Quick Reference Guide (provided by the school and available on-line).

Availability for Extra Help: *Ms, Zhou is available to meet with students who need extra help after school Monday to Thursday and appointment during IF.*

Class Supply: *None*

Makeup Work: *Make up work is defined as work assigned during a student's absence, not work assigned prior to an absence. The student has five (5) school days upon returning to school to complete make-up work. The teacher has the discretion to grant a longer period to make up work, if there are extenuating circumstances.*

Grading Calculations:
Non-EOC Course Average = 50% (1st Sem. Course Work) + 50% (2nd Sem. Course Work)
1st and 2nd Semester Course Work = 75% Summative + 25% Formative

Grading Policy:
A = 90 – 100
B = 80 – 89
C = 70 – 79
Failing = Below 70

Formative Assessments include, but are not limited to homework, class work, practice tests, rough drafts, and sections of projects/ research papers/presentations.

Summative Assessments include, but are not limited to unit tests, final projects, final essays, final research papers, and final presentations.

A quality point is provided to students who successfully complete the entire course which is designated as Advanced Placement, International Baccalaureate, or Dual Enrollment.

Learning Resources/Textbook(s): All learning resources, both print and digital, are meant to support and enhance the student learning experience of this class. Below are the names of the textbooks and websites that will be used in this course. Some of the web-based resources require parent permission per federal regulations. Federal laws that guide parent permission requirements are as follows:

- **Children's Internet Protection Act (CIPA):** The school is required by CIPA to have technology measures and policies in place that protect students from harmful materials including those that are obscene and pornographic. Any harmful content contained within inappropriate sites will be blocked. http://fcc.gov/cgb/consumerfacts/cipa.html
- **Children's Online Privacy Protection Act (COPPA):** COPPA applies to commercial companies and limits their ability to collect personal information from children under 13years of age. No personal student information is collected for commercial purposes. https://www.ftc.gov/tips-advice/business-center/guidance/complying-coppa-frequently-asked-questions-0
- **Family Educational Rights and Privacy Act (FERPA):** FERPA protects the privacy of student education records and gives parents the right to review records. Under FERPA, schools may disclose directory information in certain circumstances. http://www2.ed.gov/policy/gen/guid/fpco/ferpa

Please review the resource list. Each website related to the curriculum resources is provided along with their privacy policies. Should you have any questions regarding these resources immediately contact the course teacher via email or phone.

Name of Resource*	Hard copy/Website	Privacy Policy

Virtual Job Shadow	Website	https://www.virtualjobshadow.com/resources/policy/
EVERFI Digital Lessons	Website	https://everfi.com/privacy-policy/
TestOut Online Training	Website	https://www.testout.com/company/privacy
Talk Hiring Job Interview Practice	Website	https://www.talkhiring.com/privacy-policy
Certiport/Pearson Microsoft Resources	Website	https://home.pearsonvue.com/privacy
Adobe Certified Associate (ACA)	Website	https://home.pearsonvue.com/privacy
Adobe Creative Cloud	Website	https://www.adobe.com/
YouScience	Website	https://www.youscience.com/privacy-policy/
Java Programming, Joyce Farrell, 9th ed.	Textbook	N/A

The following resources are county approved. These resources may vary by school due to sequencing, pacing, curriculum design, and/or individual needs of students.

Parent Initial for Approval **	Name of Resource	Website	Privacy Policy
	NOCTI EOPA Preparation Materials	https://www.nocti.org/index.cfm	https://www.nocti.org/pdf/Privacy_Notice.pdf
	NCH Express Accounts	https://www.nchsoftware.com/accounting/index.html	https://www.nch.com.au/general/privacy.html
	CodeHS	https://codehs.com/	https://codehs.com/privacy
	Repl.it	https://repl.it/~	https://repl.it/site/privacy

	Codingbat Java	Website	https://codingbat.com/privacy.html
	AP Classroom by College board	Website	https://apclassroom.collegeboard.org/
	W3Schools Java	Website	https://www.w3schools.com/java

** The following resources are web-based resources that require parent permission. By signing the syllabus, the parent is approving these resources. Should you have any questions regarding any of these classroom resources, please contact your student's teacher via email.

Dress for Success: Career and technical education pathways in Forsyth County incorporate Dress for Success Days throughout the school year. These experiences allow students to foster confidence and continue to develop a positive self-image, while understanding the importance of dressing well for their future profession. At certain intervals throughout the course, students will analyze industry standards of the profession and study the importance of dressing well for a job interview. This will culminate into being fully prepared for Community Mock Interviews which occur as students complete a career pathway.

Industry Credentialing/Credentials of Value (EOPA): Students are encouraged to select a career pathway beginning in the ninth or tenth grade that is connected to college and career goals. This course is one of three courses in the career pathway chosen by a student. At the conclusion of the third pathway course, students will be required to take an industry credentialing assessment. This assessment provides students an opportunity to demonstrate what they have learned by completing an online, nationally recognized exam and allows students the ability to earn a FCS Pathway Medallion and State Career Pathway Diploma Seals upon graduation. Student directory information may be shared with credentialing vendors offering the assessment.

The rigorous/technical coursework that you have been taking or will take in future years will provide you the foundational knowledge you will need for this exam. Your teacher will provide you the testing details and share the study guide and resources that are available to also assist you in preparation for this industry certification exam.

Credential of Value (EOPA) Assessment Name: IT Specialist Software Development
Credential of Value (EOPA) Assessment Vendor: Certiport

AP® Computer Science A exam: Date: Wednesday, May 3, 2023, 12PM local.

The AP Computer Science A Exam has consistent question types, weighting, and scoring guidelines every year, so you and your students know what to expect on exam day.
Section I: Multiple Choice

Initials _____ (every page initialed by parent)   Updated July 2022

40 Questions | 1 Hour 30 Minutes | 50% of Exam Score

- The multiple-choice section includes mostly individual questions, occasionally with 1–2 sets of questions (2 questions per set).
- Computational Thinking Practices 1, 2, 4, and 5 are all assessed in the multiple-choice section.

Section II: Free Response

4 Questions | 1 Hour 30 Minutes | 50% of Exam Score

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The full version of the AP Computer Science A (APCSA) course syllabus is available on Ms. Zhou's It's Learning course main page. Please log on your It's Learning account, find the APCSA syllabus in the RESOURCE folder. Read and sign the return slip below.

I, _____, have read this course syllabus and approve of its contents. I agree to allow my student to use each of the classroom resources listed in the learning resource section. I will support my student following the classroom expectations outlined in this course syllabus. I agree that I am the person who is legally allowed to consent for my student whose name is listed below.

_____
Student's Name (Print)

_____
Parent's Name (Print)

_____   _____
Parent Signature   Date

*** Ms. Zhou is the advisor for **FBLA**, sponsor for SFHS Coding club, Cyberpatriot Competition team at SFHS, American Computer Science League at SFHS, Asian Students Association at SFHS. <u>**All these clubs are extra-curricular and voluntary.**</u> If you are interested in joining any of the clubs, please contact Ms.Zhou via her email. All club fee payment links are available on My Payment Plus.*