AP COMPUTER SCIENCE A

Centennial High School ◆ Room J02 ◆ 2011-12

Teacher Contact Information
Ria Galanos ◆ galanos@fultonschools.org (preferred contact method) ◆ (770) 650-4230 ext 350
Class website ◆ http://www.fultonschools.org/teacher/galanos

Office Hours / Help Sessions / Make-up Sessions
I will be available each afternoon from 3:45-5:00pm for extra help, make-up and recovery, detentions, and conferences. The lab will also be open at this time. Mornings and lunch sessions will be scheduled by appointment only. I encourage all students who have questions to see me for extra help as soon as they need it.

Text
Java Software Solutions for AP* Computer Science, Addison Wesley, 2006, $64.47

Course Curriculum
This course follows the course description written by The College Board to present to high school students a university-level, introductory course in computer science. This is a two-semester sequence that will culminate in the Advanced Placement Examination in Computer Science A. The course emphasizes object-oriented programming methodology with a concentration on problem solving and algorithm development, and includes the study of data structures, design, and abstraction. Other topics covered include an overview of the history of computing, basics of computing systems, ethics in computing, syntax/semantics in JAVA, subroutines, selection, repetition, classes and their methods, and an introduction to the GridWorld Case Study.

Fall Semester
Ch 0 Computer Ethics
History of Computing
Colleges and Careers
Ch 1 Computer Systems
Ch 2 Objects and Primitive Data
Ch 3 Program Statements
Ch 4 Writing Classes
Ch 6 Arrays and ArrayLists
GridWorld Case Study (Ch 1)

Spring Semester
Ch 6 Searching and Sorting
Ch 8 Recursion
Ch 7 Inheritance/Polymorphism
Ch 5 Enhancing Classes
GridWorld Case Study (Ch 2-4)
AP Test Preparation
Capstone Project

Program Concentration
Business and Computer Science

Program Pathway
Computing

College Major Information
There are many college majors that require or benefit from computer programming. These include, but are not limited to: Accounting, Information Technology, Biology, Management, Business, Mathematics, Computer Science, Meteorology, Engineering, Music and Visual Arts, Economics, Physics, Information and Library Science.

Career Opportunities
Programmer, Applications Programmer, Applications Designer, Systems Analyst, IT Consultant, Software Developer, Computer Engineer

Salaries in Computer Science
Graduates of computing programs are in demand and land higher-paying first jobs on average than graduates in most other fields, according to a recent article on Yahoo! Hot Jobs that can be found at http://hotjobs.yahoo.com/career-articles-highest_paying_majors_in_college-273. A survey of 2007 Georgia Tech grads shows that those graduating with a BS in Computer Science reported the highest starting salary offer ($84,000) and the second highest median starting salary offer ($60,000) of all students graduating that year.

AP Test Date
The AP Computer Science A exam will be administered on Tuesday, May 8 during the morning session. Report time is typically 7:30am. This exam does not conflict with any other AP subject tests except for Spanish Language. If you are enrolled in AP Spanish, please let me know as soon as possible so that alternate testing arrangements can be made. The schedule of all AP exams for 2012 can be found at http://apcentral.collegeboard.com.

AP Practice Exam
To simulate the AP testing situation as closely as possible, a full-length practice test will be given on Saturday, April 28 or Sunday, April 29 from 2-5pm in the Media Center. Every effort should be made to attend one of these sessions, so please plan accordingly. The practice exam will count as the final exam grade for second semester.

AP Exam Credit Information
Please visit http://www.collegeboard.com/student/testing/ap/exgrd_get.html to learn if the colleges you are considering grant credit for a passing grade on the AP Computer Science A level exam.

Materials
Student agenda, textbook, pencils/pens, notebook paper, and a 3-ring binder.

Software
JCreator, Dr. Java, and the Sun JDK Compiler 1.6. You may want to install the software for your use at home. Although there are several freely available IDEs that you can download, I highly recommend JCreator and/or Dr. Java because of their ease of use.

Notebook
Students are expected to keep all work for this course in a 3-ring binder. The notebook should be divided into five sections, which should be labeled as follows:

Notes / Handouts
Homework / Classwork
Programming Assignments / Labs
Quizzes / Tests
Reference / Exam Prep

Grading System
Progress reports will be sent home every 6 weeks. Student grades are available via *ParentConnect*. Semester grades are calculated using a percentage system and will be weighted as follows:

Tests / Major Programming Projects	40%
Lab Exercises / Programming Problems / Quizzes	20%
Homework / PreLab Exercises / Articles / Worksheets	15%
Daily Quizzes	5%
Final Exam	20%

Evaluation

Tests – Tests help to prepare students for the AP examination by using both multiple-choice and free-response questions. There will be one or two tests administered for each chapter. Each test will be announced in advance. Any student absent the day of the review will be expected to take the test with the class on the scheduled day.

Major Programming Projects – A major programming assignment is one that combines a series of concepts into one challenging program. This assignment may require both in-school and out-of-school effort. There will be several major labs assigned each semester. For each assignment, you will be required to turn in a hard copy AND save the assignment to the appropriate folder on the shared drive. Labs are intended to be individual work. You will receive limited assistance from me and a set amount of time to complete the assignment. You must adhere to the class policies of ethics in creating code. Failure to do so will result in the issuing of an Honor Code Violation and a zero on the assignment.

Lab Exercises, Programming Problems, Homework, and Quizzes – All are assigned at the teacher's discretion. No late work will be accepted!!! Lab exercises are programming assignments or worksheets that focus on a single new concept as well as previous material. Quizzes are designed to determine whether students are keeping up with their assigned reading and will most likely be unannounced.

Articles – The bi-weekly computer news reporting and reflection assignments are designed to expand your knowledge on emerging computer technologies and their anticipated impact on both you and society.

Daily Quizzes – The daily quiz will encourage you to review your notes periodically as any material is fair game for the daily quiz. These quizzes are designed to help students prepare for the AP exam by writing code by hand daily.

Final Exam – The comprehensive final exam administered at the end of each semester will be worth 20% of the semester grade. No exemptions for Honors or Advanced Placement courses will be granted.

Make-up Work Policy

Attendance is very important. Excessive absences will likely prevent students from successfully completing the course. It is solely the student's responsibility to make contact with the teacher to initiate all make-up work. I encourage you to obtain at least two phone numbers of other classmates who can be contacted for make-up work or assistance with assignments. Please read and follow the Centennial High School policy on make-up work as printed in your student agenda. Students are expected to make up missed tests and quizzes as soon as possible and they only may be made up before or after school during the times designated in the beginning of this document. According to school policy, work made up due to an unexcused absence will receive a 10% grade reduction.

Recovery Policy – Fulton County Board of Education

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. All recovery work must be directly related to course objectives and must be completed ten school days prior to the end of the semester. Teachers will determine how students with extenuating circumstances may improve their grades.

Classroom Expectations

1. All school policies and rules as printed in the student agenda will be enforced in the classroom. Specifically, hats, active cell phones, food, drinks, inappropriate dress, and inappropriate language will not be permitted in our classroom. You may not use your cell phone as a watch.
2. Attend class daily.
3. Be on time to class. Students are to be in the classroom with their materials when the bell rings. Tardies will be handled according to the school's tardy policy.
4. Respect others. This includes substitute teachers.
5. Respect the classroom and computer lab. Ask for permission before borrowing anything.
6. Bring all needed materials to class. This includes textbook, binder, pen/pencil, and agenda.
7. Students are expected to pay attention and contribute to classroom activities. This includes taking notes, asking questions, correcting homework, and participating in group activities.
8. Students will not be permitted to use the restroom or go to their locker during lecture. If a student does not bring their agenda to class, passes will be written only in cases of emergency.
9. No food or drinks will be allowed near the computers. NO EXCEPTIONS!
10. Tests must be completed during the class period. Late passes will not be written.

Consequences

1st offense – Verbal warning 2nd offense – Parental contact 3rd offense – Parental contact
All offenses after the third will be referred to the appropriate administrator. Severe offenses will automatically be referred to the appropriate administrator. Keep in mind that disrespect in any shape or form will NOT be tolerated in the classroom.

AP Computer Science Plagiarism Statement

Plagiarism is the act of copying someone else's work without permission. Plagiarism can refer to the replication of a written work verbatim, or merely the reproduction of someone else's ideas. Acts of plagiarism might include, but are not limited to 1) copying a classmate's code); 2) using code from a published source without proper documentation; 3) using excessive editing suggestions of another student, parent, or tutor. Plagiarism on any project at Centennial High School will result in a zero for the assignment and an honor code violation. Unless directly stipulated by the teacher, collaboration on computer programs is not acceptable. Cheating on tests will result in a zero for that assignment. For more information on the honor code policy, please refer to the student agenda. Students who willingly provide other students with access to their work are also in violation of the Honor Code.

Classroom Plagiarism Policy

In the comment section of each program, students will have an opportunity to list sources of assistance they have received (including web addresses, parents, other students, etc.) This line is required, and students, by leaving it blank, are stating that they received no assistance in writing the program.

The Ten Commandments of Computer Ethics
by the Computer Ethics Institute

1. Thou shalt not use a computer to harm other people.
2. Thou shalt not interfere with other people's computer work.
3. Thou shalt not snoop around in other people's computer files.
4. Thou shalt not use a computer to steal.
5. Thou shalt not use a computer to bear false witness.
6. Thou shalt not copy or use proprietary software for which you have not paid.
7. Thou shalt not use other people's computer resources without authorization or proper compensation.
8. Thou shalt not appropriate other people's intellectual output.
9. Thou shalt think about the social consequences of the program you are writing or the system you are designing.
10. Thou shalt always use a computer in ways that insure consideration and respect for your fellow humans.

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Miss Galanos ◆ Centennial High School ◆ J02 ◆ 2011-12

Period (circle one) 3 5 7 8 Circle if allergic to: Bees Peanuts

Full name of student _____

Name you like to be called _____

Student email address _____

Math class you are taking this year _____

Briefly describe your programming background (if any) _____

Grade you expect to earn in this class _____

Extracurricular activities at Centennial _____

_____

Activities outside of Centennial (include hobbies and part-time jobs) _____

_____

Desired future profession _____

- □ I have read and understand the 2010-11 AP Computer Science course syllabus outlining the classroom policy, rules, grading procedure, and recovery policy.
- □ I understand that it is my responsibility to keep my parents abreast of my current average.
- □ I've recorded Miss Galanos' email address and understand that this is the best way to reach her.
- □ I understand that assignments will be posted on the classroom website.
- □ I understand that extra help is available according to the schedule outlined in the syllabus, assuming I put forth diligent effort on a daily basis.

Student signature _____ Date _____

- □ I, too, have read and understand the 2010-11 AP Computer Science course syllabus outlining the classroom policy, rules, grading procedure, and recovery policy.
- □ I understand that the student is to keep a record of his/her grades.
- □ I've recorded Miss Galanos' email address and understand that this is the best way to reach her.
- □ I understand that assignments will be posted on the classroom website.

Name of parent / guardian _____

Relationship to student _____

Parent / guardian email address _____

Parent / guardian signature _____ Date _____