AP Computer Science A Syllabus

Course Title: AP Comp Sci A
Section Number: 3
Meeting Place: Room L211
Instructor: Mr. Alwin Tareen
Contact Information: `altareen+cs3@gmail.com`
Course Website: `http://altareen.github.io/apcompsci3`
Code Repository: `https://github.com/altareen/apcompsci3`
Grading Website: `http://www.engradepro.com`
Academic Assistance: Mon – Fri, 4:20PM, Room L211

Course Description:

This course will provide a comprehensive study of programming syntax, algorithms and data structures. Students will be expected to study and master a sufficient amount of material to perform well on the AP Computer Science A exam.

The content will include, but not be limited to, the following topics: `Java` language syntax, defining variables and arithmetic expressions, introduction to classes and object-oriented programming, conditionals and looping, the `String` class, the `ArrayList` class, creating, declaring and initializing arrays, searching and sorting arrays, classes, inheritance and interfaces, and recursion.

Textbooks:

- *Blue Pelican Java,* Version 7.0.1A, Charles E. Cook. This `PDF` file will be the primary textbook used in this class. It will be provided to students free of charge.
- *Barron's AP Computer Science A,* 7th Edition, Roselyn Teukolsky. Various sections of this book will be provided in `PDF` format for free, but students may purchase their own copy if they wish.
- *Java Methods: Object-Oriented Programming and Data Structures,* 3rd Edition, M. Litvin & G. Litvin. This is the textbook that is supplied to students by the school. It is useful as a reference guide, but it won't be used in class.

Materials:

Each student is required to bring their laptop computer to class. Both Windows and Mac OS operating systems are supported.

Homework:

- Homework assignments will be posted regularly on the class website in `PDF` format. Students are required to download and complete the assignment in electronic form. Homework submission instructions will be described within the assignment overview.
- Students are expected to submit their homework before the due date. I can check the exact moment at which a student submitted their homework, by examining the electronic timestamp.
- **Late Policy:** If a student submits their homework within 24 hours of the due date, I will impose a 50% grading penalty. After that time frame, the homework will be assigned a grade of 0.

Plagiarism:

- Copying part or all of a programming solution, from another student, or from an Internet source, is a violation of the *BNDS Academic Dishonesty Policy.*
- I understand that students can be overwhelmed with work, and the temptation to copy their homework from others can be hard to resist.
- I will be conducting random spot checks on various homework assignments. This involves cross-checking a student's submitted code with plagiarism detection software.
- Students who are suspected of academic dishonesty will be asked to meet with me, to look over the section of code under scrutiny. At this time, students will be given an opportunity to defend their case.
- If they are unable to refute themselves, students will be required to sign a confession statement. This will be handed over to the Dean of Students, who has the option to pursue further action.
- Homework assignments that have been plagiarized will receive a grade of 0.

Grading:

- **Homework:** Students are encouraged to put forth their best effort, even if the result does not compile, or produces an incorrect output. Students will receive partial credit in such cases.
- **Quizzes:** Short 15 minute quizzes on current topics. These will be announced in advance.
- **Tests:** An extensive test of the topics covered in the section. Tests will be graded with partial credit, and carefully analyzed for understanding and general knowledge. Tests will consist of problems similar to examples covered in class and homework. Students will be informed *at least* one week in advance. A missed test with and unexcused absence will receive a grade of 0. A missed test with an excused absence can be made up by appointment.
- **Grade Weighting:**

Homework	25%
Quizzes	25%
Tests	50%
Total	100%

Websites:

- Students will be required to visit the class website on a regular basis to obtain homework assignments and other course materials: `http://altareen.github.io/apcompsci3`
- Any Java programs that are covered in class, such as AP code examples, case studies and homework solutions will be posted in a public *code repository* at: `https://github.com/altareen/apcompsci3`
- Grades, student score averages, and the results of homeworks, quizzes and tests will be available at the school's *grading website* at: `http://www.engradepro.com`