

# **Computer Science Pre-AP / Intro CS**

## **2<sup>nd</sup> Semester Syllabus**

Using Scratch, Jeroo, Python, and Java

### ***A bit more Python***

Algorithms and Lists

Group project – games, simulation or animation

### ***Transition from Python to Java***

Java Basics / Output ( console / GUI ) ( lab a – ASCII Art )

Variables && Data Types ( lab b - Variables )

Java Basics / Input ( console / GUI ) ( lab c - input )

OOP/Methods/Parameters with Graphics ( lab 1 )

OOP/Instance Vars/ with basic math ( lab 2 )

OOP/Constructors/ with basic math / Strings ( lab 3 and lab 4 )

Basic Decisions -- ( Ifs / If else ) ( lab 5 )

More Objects – More String Info If Needed ( lab 6 )

Advanced Decisions – ( Ifs / else if ) ( lab 7 )

Iteration – Loops ( for, while, do-while ) ( labs 8 and 9 )

Boolean Algebra/do while ( && ! | | ) ( lab 10 )

Iteration – Nested Loops ( for, while, do-while ) ( lab 11 )

Scanner ( String chopping and File input ) - ( lab 12 and lab 13 ) - **OPTIONAL TOPICS**

One dimensional arrays ( lab 14 )

### **Large Semester Project**

### **Final Exam**