**COMPUTER SCIENCE I**

**Overview:**

The goal of this course is to provide a brief introduction to computer programming with C++. Computer Science I was designed to teach students how to use basic data-types and control statements before continuing on to the study of Java in Computer Science II.

**Grading Format:**

* 30% Written Programs
* 30% Tests/Quizzes
* 30% Schoology Assignments / Homework
* 10% Final Exam

**Schoology:**

* Schoology (www.schoology.com) will be used for Tests, Quizzes, and Code-Reading Practices
* Schoology Practices show students which problem(s) were marked incorrect
* Students are given three attempts to get the highest grade possible on each Schoology Practice
* Students have until the end of the nearest grading period to use all of their Schoology attempts

**Absences / Late Work:**

1. Students who are absent have two school days to complete all missed work

\*\*It is the student’s responsibility to make-up missing class work

1. Homework assignments are based upon completion and are discussed in class. Late homework assignments are not accepted.
2. Programming assignments that are not finished on the due date will still be graded. However, if the student has extra time in the future to finish the assignment, the student’s grade will be updated.

**Course Website:** websites.pdesas.org/tylerdcrone

* All of the PowerPoints used in class will be posted to the course website
* All of the in-class programming assignments and worksheets will be posted to the course website

**Tests/Quizzes**

* Students will be given a notice of at least two days before receiving a test
* Quizzes may be given at any time without notice
* A student who is absent the day before the test **is still expected** to take the test on the predetermined day
* Tests and quizzes will fall under the same grading category (*Tests)*, however, tests will be worth more points than quizzes

**Contact Information**

* Email: cronet@cmsd.k12.pa.us

**CSI Topic Overview:**

1. COUT Object
2. Escape Sequences
3. Variable Declaration
4. Variable Initialization
5. Assignment Statements
6. Mathematical Expressions
7. CIN Object
8. Constant/Read-Only Variables
9. Math Functions
   1. Power
   2. Absolute Value
   3. Square Root
10. Relational Operators
11. If-Statements
    1. Nested If-Statements
    2. Linked-If-Statements
12. Logical Operators
13. While-Loops
    1. Count-Controlled
    2. User-Controlled
14. For-Loops
15. Random Numbers
16. Nested Loops
17. String Variables
    1. Comparing Strings
    2. String manipulation
18. Arrays
    1. Integer
    2. Double
    3. Looping through Arrays
19. Functions