



CIS3451: Computer Science

Contact Information for Instructor:

Room: 222A

Name: Ms. Williams, Technology Teacher

Extra Help Days & Time: Wednesday in Room 222A - 2:30pm - 3:15pm

School Number: (914) 376-8425

Email: twilliams4@yonkerspublicschools.org and/or: [TEAMS](#)

Please note that students can seek extra-help with any teacher.

Course Description:

- Students will be required to utilize a number of learned web design skills as well as real life aptitudes such as reading, writing, imagination, self-expression, problem solving, attention to detail, work ethic, follow through, and communication skills. Students will be able to Designed to help build your foundation in competencies like computer programming to secure the system.
- Students will be introduced to various skills, methods, and techniques related to basic web design, including **HTML** hand coding, CSS (Cascading Style Sheets), image optimization, basic animations and using notepad.
- Students will be introduced to **Python** to interpreted high-level general-purpose programming language. Its design philosophy emphasizes code readability with its use of significant indentation. Its language constructs as well as its object-oriented approach aim to help programmers write clear, logical code for small and large-scale projects.
- Students will be introduction to **Scratch**, which is a high-level block-based visual programming language and website targeted primarily at children 8-17 as an educational tool for coding.
- Students will be introduction to **JavaScript**, which is high-level, often just-in-time compiled, and multi-paradigm. It has curly-bracket syntax, dynamic typing, prototype-based object-orientation, and first-class functions.

Textbook:

1. Beginner's Step-by-Step Coding Course
Kate Russell
ISBN: 978-1-4654-8221-1
2. Learning Web Design, 4th Edition,
Jennifer Niederst
ISBN: 978-1-449-31927-4

Classroom Rules:

1. Be on time.
2. Be respectful.
3. Be prepared.
4. Use computers, material and all equipment properly.
5. Be enthusiastic and creative!
6. You break it, you pay for it.
7. By attending this class, you automatically agree to these terms.
8. For privacy and confidentiality of students, photography, audio, and visual recording is prohibited in the classroom by students.

NOT PERMITTED:

1. Food, drinks, candy/gum.
2. Personal electronics **CELL PHONES** are put on vibrate and in assigned pocket holder.
3. Teacher has option of giving a zero for the quarter or zero for class participation grade for misuse of Internet access.
4. Logging onto social websites like Facebook, YouTube, Snapchat, Instagram etc.

Grading Policy:

A student can earn an “A” for the class by the quality of their work, class participation, and attendance along with meeting deadlines. A student’s grade will be affected by not meeting the criteria for grades below. Please note I have the discretion to change the grading policy as needed. Please login to Schoology.com to see your grades and current percentages.

Grades:

| | |
|---|-----------------------|
| Classroom Participation/Behavior/ Punctuality - | 10% |
| Schoology Assignments | 30% |
| Literacy Article Assignments/Research Paper | 20% |
| Quizzes/Tests/Projects- | 30% |
| Dress Code | 10% (of BONUS Points) |
| applied to Classroom Participation | |
| Extra Credit Assignments must be handed in by due date otherwise no points. | |

Grades will be based on the following grading scale:

A (100-97%), **A-** (96-93%), **B** (92-89%), **B-** (88-85%), **C** (84-79%), **C-** (78-73%),
D (72-65%), **F** (64% and below)

Requirements:

- A. Homework and Projects will be assigned based on classroom presentations/Discussions, as well as other source materials.
- B. Quizzes/Tests will be based on topics covered in class, as well as any handouts and outside reading assigned. You must login to your Schoology or TEAMS account to access them. Do not share your password or account with anyone. Once the work is submitted, that will be your grade.

- C. Papers will be typed with certain requirements such as: at least 5 paragraphs, 3 pages minimum, with the following being mandatory: include a bibliography page; double spaced; font-Arial at 12pt; your name; your period and date.
- D. Materials:
- *Notebook- where you can take notes (notebook check for 10 extra MP points)
 - *3 ring binder (1.5 or 2in)
 - *1 Black/Blue Pen
 - *Flash/Thumb drive (at least 8 Gigabytes) to save projects on or upload to Schoology/TEAMS

Lateness Policy: As it applies to any and all assignments that must completed or turned in at a certain date, every additional day late will be a 10% deduction per day late. Absences do not impact this policy as most assignments can be completed and turned in remotely, so special circumstances that would prevent you from working above and beyond coming to school will require additional documentation (note from doctor or parent). Every three days late will lead to a 10% deduction to your quarterly grade.

Topics Covered during the year (not in this order):

Part 1: INTRODUCTION

- a. What is programming?
- b. Coding in the real world
- c. Working as a software developer
- d. Programming languages

Part 2: WEB TECHNOLOGIES

- How the Web works
- Code editors
- Exploring basic HTML
- Build a better website

PROJECT: Build a web page

- Cascading Style Sheets
- CSS selectors
- CSS styling
- Responsive layouts

PROJECT: Styling the web page

- What is JavaScript?
- Variables and data types
- Logic and branching
- Input and output
- Loops in JavaScript
- Functions in JavaScript
- JavaScript debugging
- Object-oriented JavaScript
- Libraries and frameworks
- Graphic user interfaces

PROJECT: Animating the web page
PROJECT: Responsive website

Part 3: PYTHON

- What is Python?
- Installing Python
- Using IDLE
- Variables in Python
- Data in Python
- Logic operators and branching
- Input and output
- Loops in Python
- Functions
- Debugging

Part 4: SCRATCH

- What is Scratch?
- Scratch interface,
- Sprites,
- Colored blocks and scripts
- Output using movement
- Output using looks and sounds
- Managing program flow
- Manipulating data
- Logic and decisions
- Input
- Sending messages
- Using functions