COURSE SYLLABUS
COMPUTER SCIENCE 3
CLIENT-SIDE WEB DEVELOPMENT
S.Y. 2022 – 2023

COURSE DESCRIPTION

The course employs output-based learning and focuses on client-side web development using HTML, CSS, and JavaScript. It enables the students to produce aesthetically pleasing websites, adhering to the current web standards. The course motivates students to collaborate and participate in values social issues and learn the value of teamwork to accomplish various projects.

COURSE OBJECTIVES

At the end of the school year, the students should be able to:

- Promote curiosity and independent exploration of WWW resources.
- Appreciate and critique a web page/site.
- Use basic HTML tags and attributes.
- Manipulate the appearance of web page elements through Cascading Style Sheets.
- Perform the different stages in the development of web sites.
- Use a variety of techniques to embed multimedia into a Web page.
- Understand and use the built-in Script objects for mathematical calculations, string processing, date, and time manipulation.
- Apply basic programming algorithms using a web scripting language.
- Create web pages suitable for the client's needs and specifications and adhere to web standards.

COURSE TOPICS

FIRST QUARTER

I. Introduction to Web Development
   A. How the Internet works
II. Basic HTML
   A. doctype, html, head, title, body
   B. div, span, ul, ol, h1 to h6
   C. img, a, br, p, strong, em, del
   D. tag-specific attributes
III. Table
   A. table, tr, td, th, colgroup, col
   B. attributes specific to tables
IV. Best practices for web design & layout
   A. Color
   B. Wireframing
V. Introduction to Cascading Style Sheets
   A. Selectors (tag, id, class)
   B. Types (in-line, internal, external)
   C. Basic Syntax
   D. Properties
   E. All properties for font, text, background, and box model
   F. float, position, width, height, top, bottom, left, right

SECOND QUARTER

VI. What's new in HTML5?
   A. Layout tags (header, footer, nav)
   B. Multimedia tags (video, audio)
VII. Advanced CSS
   A. Text Links (link, visited, hover, active)
   B. Events in CSS (onmouseover, onclick, onmouseout)
   C. Image sprite
   D. What's new in CSS3 (selectors, background, border, transform)

THIRD QUARTER

VIII. JavaScript Overview
   A. Syntax (script elements, rules)
   B. Variable declarations and data types (primitive)

FOURTH QUARTER

XII. JavaScript Forms for an Alternative User Interface and Interaction
   A. HTML Form Tags (form, input, buttons, submit)

C. Operations (logical, arithmetic, comparison, assignments) D. Basic Statements (I/O statements, assignment, and conditional) IX. JavaScript Functions E. Declaring and calling functions F. Event Handlers G. Mouse Tracking H. Processing Function Output X. Commonly used JavaScript Objects I. Math and String functions J. Date and Number Object XI. Control Statements K. If, if…else, if-else-if, switch	B. Form Handling (onSubmit, onChange) C. Form Properties (value, disabled, selected, hidden) XIII. More Control Structure A. While, do-while, for XIV. Arrays A. Declaring arrays B. Using arrays (integer index, associative arrays) C. Sort and Search (traversing Arrays using loops) XV. User Validation A. Data Validation XVI. Session Handling A. Cookies B. Local Storage

GRADING SYSTEM

Formative Assessment (40% compliance, 60% score)	25%
Alternative Assessment	40%
Summative Assessment	35%
TOTAL	**100%**

REFERENCES

Robbins, J. N. (2007). *Learning Web Design*. (3rd Ed.). O'Reilly Series
Powell, T. (2010). *HTML and CSS: The Complete Reference*. (5th Ed.). McGraw-Hill
Robson, E. & Freeman, E. (2010). *Head First HTML and CSS*. O'Reilly Media
Castro, E. &Hyslop, B. (2011). *HTML5 and CSS*. (7th Ed.)

COURSE MATERIALS

1. Online account – PSHS-issued Google Workspace for Education (@clc.pshs.edu.ph)
2. Online account – PSHS Knowledge Hub
3. Online account – GitHub
4. Software – Visual Studio Code or Notepad++
5. Software – NetSupport School

CLASSROOM RULES

1. Students are requested to proceed straight to the laboratory during the period. Bags should be left in the classroom as lights and electric fans are turned off and doors closed before leaving for the lab. Valuables such as wallets and phones may be kept in pockets.
2. Maintain minimum public health standards (i.e., use of masks and physical distancing)
3. Disinfect before entering the lab through designated entrances.
4. Mobile devices may be used to take notes with permission from the teacher. The teacher reserves the right to confiscate devices used for distractive or non-academic purposes.
5. Computers in the laboratory are shared among other scholars. Responsible use of computers such as properly turning them on and shutting down is expected.
6. Online accounts must be signed out before shutting the computer down. If an online account is found to be signed in, it must first be signed out before continuing with any activity.

CONSULTATION HOURS

Mondays, Tuesdays, and Wednesdays
7:40 AM – 8:30 AM

Prepared by:	Checked by:	Approved by:
JAN MICHAEL R. IBANEZ *Subject Teacher* *Date: September 7, 2022*	**MARY ANN F. QUIOC** *Head, Computer Science Unit* *Date:* SEP 07 2022	**KARIZZ ANNE L. MORANTE** *Chief, Curriculum and Instruction Division* *Date:* 12 Sept. 2022