

## **HONORS AND AP HONORS COMPUTER TECHNOLOGY**

### **DESCRIBE the GROWTH of COMPUTER TECHNOLOGY**

Explore basic hardware components of a computer

Discuss types of software and the pros and cons of a company  
developing their own software solution or buying prepackaged software

Discuss people and events in the history of computer hardware and software

Define the program compilation process and project design methodology

Describe how technology is integrated with business

### **UTILIZE COMPUTER TERMINOLOGY**

Create a Glossary of terms

Use the vocabulary correctly

### **USE MICRO COMPUTERS**

Identify parts

Power up/down

Load/save files

Troubleshoot basic problems

Use the printer

Use a scanner

Use a digital camera

### **APPLY CONCEPTS AND LOGIC OF PROGRAMMING**

Prepare flowcharts

Prepare and use documentation

Prepare test data

Use proper system commands

Use the concepts of global naming conventions

Understand the importance of global naming conventions  
when applied to a team project

Exhibit proper technique to debug and correct errors

Modify existing programs to meet new needs

### **PROGRAM USING HTML**

Create an HTML file using TAGS, headings, and text paragraphs

Modify the page: change colors, center and add a horizontal rule

View the page in your browser and print the page and its code

Include links within the page, to another page within the same site

Include links to another web site and to E-mail

Insert images, modify attributes, create a link using the image

Enhance text with bold, italics, color; change default bullet style

Set the link target and add links to the targets

Plan, design and code a table

Modify the table's borders, spacing, and column width

Span rows and columns

Create an image map, locate X-Y coordinates, use tag attributes

- Plan and layout a web page with frames
- Create a frame definition file
- Create header, navigation & home pages for frame definition file
- Create a form having text, radio button, and text area controls
- Create submit and reset buttons on a form
- Modify a page with a form to include selection menus
- Apply styles to font and text attributes, backgrounds, lists, and block level boxes
- Code programs using embedded styles
- Code programs using external styles

## **JAVASCRIPT**

- Using loops to process groups of data
- Modifying and creating HTML elements at runtime
- Debugging code errors
- Introduction to array manipulation

## **BASH**

- Using the command prompt
- Using builtin BASH commands
- Creating custom scripts to perform certain tasks

## **PROGRAM USING C**

- Interacting with user input provided by command line
- Using for, while, do-while, and goto loops to iteratively perform tasks
- Using arrays to hold sequential data.
- Using structs to group related data
- Using pointers to dynamically interact with memory

## **PROGRAM USING PYTHON**

- Declare and initialize primitive data types
- Utilize the methods of String types
- Understand the basic elements of program development
- Create functions with a void type and a return type
- Understand recursion
- Keyboard input
- Understand how to update variables
- Use square root without Math Class
- Use loops to search for a letter in a string
- Understand how to use the in operator
- Use a list
- Traverse through a list
- Use different methods lists have
- Understand the differences of objects and values

## **PROGRAM USING JAVA**

Convert data-types by casting  
Understand differences between constants and variables  
Use and initialize the Scanner class  
Identify parts of a method  
Add parameters to methods  
Learn about classes and objects  
Create classes and constructors  
Overload a method  
Create and call constructors with parameters  
Use the this reference  
Understand AND and OR operators  
Understand the format and use switch statements  
Understand loop structure  
Nested loops  
Understand how to compare String objects  
Search and sort arrays  
Pass and return arrays form methods  
Inheritance  
Override superclass methods  
Create arrays of subclass objects  
Create and use interfaces  
Try and Catch  
Create Exception classes  
Write to and read from a file

## **PROFESSIONAL STANDARDS**

Work Effort  
Safety Habits  
Work Area Organization  
On Task Behavior  
Responsibility  
Initiative  
Team Work  
Respect  
Interpersonal Skills