COURSE TITLE: Exploring Web Technologies **COURSE NUMBER:** CP550

CREDIT: 1 **GRADE LEVEL:** 10, 11, 12 **COURSE LENGTH:** 1 Semester

COURSE DESCRIPTION:
This course is a hands-on introduction to web technologies including HTML, DreamWeaver, PhotoShop, and Flash. Students will also be introduced to database Web technology, explore career options, and create Web sites for client case studies. By the end of this course, students will be able to create a complete website from start to finish.

PREREQUISITES: Digital Works

INSTRUCTIONAL MATERIALS:
Texts: HTML, 2nd Ed., Reding/Vodnik
Macromedia Dreamweaver MX, Bishop, Hunt, and Patel
Teacher-designed mini-projects and Web site projects
Lessons and tutorials included with software
Web site tutorials and articles on current resources

SOFTWARE:
Macromedia Dreamweaver, Flash, Coldfusion, Adobe Photoshop, Imageready,

INSTRUCTIONAL STRATEGIES: Direct instruction, demonstration, graphic organizers, application exercises, projects, cooperative groups, case studies, guest speakers, videos, Internet

ASSESSMENTS: Daily work performance, teacher observation, rubric, checklist, classroom discussion, projects, research relevant to topic, application performance, exams

COURSE OBJECTIVES:
Upon successful completion of this course the student should be able to:

1. Plan, design and create a web site using good design principles.
2. Use basic and intermediate HTML coding to create web pages.
3. Use basic JavaScript coding to enhance web pages.
4. Use industry standard tools to create Web pages, graphics and animations.
5. Convey a basic understanding of database-driven Web sites.
6. Relate school computer use to the district computer use policy and explain the consequences of violations.
7. Integrate skills in other curricular areas such as developing algorithms to solve problems, technical writing and storyboarding.
8. Identify career roles, educational requirements, salary ranges and job outlook in the web design and development field.

COURSE CONTENT

I. Understand Web Terminology and Concepts

HTML origins
Web Browsers
Web Servers
URLs
DNS and IP addresses
FTP

II. Apply Design Principles

Determine the message, audience, purpose of a site
Determine the structure of a site
Design the navigation of a site

III. HTML Coding

Create an HTML document and view it in a Web browser.
Create hypertext links between elements within a document.
Create hypertext links between documents.
Create hypertext links to pages on the Internet.
Explain how HTML handles color.
Insert background images into web pages.
Control the placement and appearances of images on a web page.
Design and create a Web page with Tables.
Create frames for Web presentation, and control their appearance and placement.
Create a page that is viewable by browsers that do and do not support frames.
Create a Web page using JavaScript.
Explain the principles of sound and video clips.
Enhance a web page with sound and video, both external and embedded.
Create a Web page with a scrolling marquee.
Embed an e-mail address on a web page
Upload a web page to a host site
Demonstrate the basic activities involved in maintaining and improving a site
Design and create image maps

IV. JavaScript Coding

Identify features and appropriate uses of JavaScript.
Identify placement (where to put) scripts.
Hide scripts from old browsers.
Put comments in scripts.
Alert the user.
Redirect the user.
Create and generate conditionals and loops.
Create and generate scrolling status bars and status bar messages.
Create rollovers.
Create cycling banners.
Build Slide Shows.
Display a random image.
Combine a rollover with an image map.
Automatically change background colors.
Debug JavaScript.

V. Graphics

Demonstrate fundamental skills of digital photography including capturing, downloading and processing digital images for the web.
Demonstrate an awareness of digital image file saving strategies.
Demonstrate skills of image capturing using a digital scanner.
Identify appropriate file types for specific types of graphics and pictures.
Create button graphisc for a web page.
Understand proper use of color in developing graphics.
Demonstrate ability to compress a digital image.

VI. Web Design & Publishing Tools

Create a multi-page web site.
Add images to web pages.
Create links.
Add background colors and images.
Add, edit and format text on pages.
Add image maps to pages.
Add forms to pages.
Change text colors and hyperlink colors.
Change default settings.
Create and edit a marquee.
Change a page's title.
Create and use frames effectively.
Insert lines or rules.
Create lists.
Create anchors or bookmarks.
Link to email addresses.
Attach an external resource to a page.

VII. Animation	Use and understand software layout Use the drawing, erasing, filling, and stroking tools Use the object tools Use the colors, preferences, snapping tools Manipulate objects Format type Import and place artwork Create and edit layers Create and edit rollover buttons Create keyframes Animate with layers Set frame rates Create tweened animation Tween shapes Create frame-by-frame animation
VIII. Database	Identify the need for a relational database management system Understand the basic features of a Database Understand and use a Table Understand and use Attributes Understand and use Rows Connect/Link to a Database Management System Send Data to the Database Retrieve Data From the Database differentiate between various web scripting technologies, assessing the relative strengths and weaknesses of each
IX. Career Development Skills	Apply good decision making skills Identify a problem and analyze it for resolution. Set priorities for tasks and when they will be accomplished. Participate in career exploration activities.
X. Integration of Academics	Create web sites for other academic areas to demonstrate knowledge of concepts Recognize, describe and predict patterns of data. Use critical thinking skills and technical writing skills while developing algorithms for web site design Construct, read, and interpret tables, charts and graphs.
XI. Personal Leadership Skills	Display courtesy, tactfulness and patience in dealing with peers and authority figures. Control emotions and actions under demands of time, pressure and opposition. Accept responsibility for personal decision and actions. Cooperate and compromise through teamwork and group participation acitivities.

METHODS OF EVALUATION OF COMPETENCIES:

Evaluation of student mastery of course competencies will be accomplished using the following grading scale:

A = 90 - 100 %
B = 80 - 89%
C = 70 - 79%
D = 60 - 69%
F = 0 - 59%