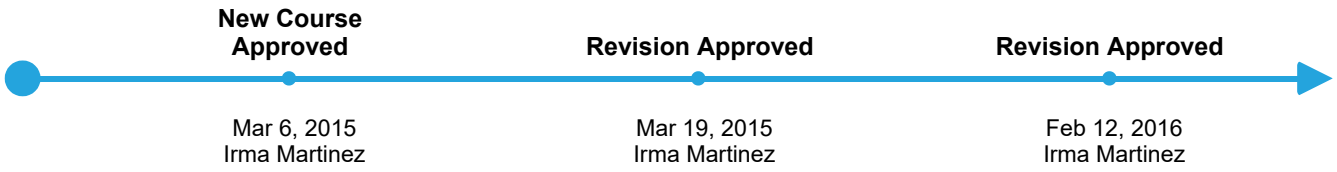
Website Programming & Design A/B

Santa Maria Joint Union High School District



asic Course Information

hool(s) Offering This Course:

School Name	Course Learning Environment	Transcript Code(s)
anta Maria High School (053305)	Classroom Based	Abbreviation: Web Prog & DesA, Course Code: BU6013 Abbreviation: Web Prog & DesB, Course Code: BU6014
ioneer Valley High School (053847)	Classroom Based	Abbreviation: Web Prog & DesA, Course Code: BU6013 Abbreviation: Web Prog & DesB, Course Code: BU6014

Title:	Website Programming & Design A/B
Length of course:	Full Year
Subject area:	College-Preparatory Elective (G) / Interdisciplinary
UC honors designation?	No
Prerequisites:	Computer Applications 1 (Recommended)
Co-requisites:	None
Integrated (Academics / CTE)?	Yes
Grade levels:	11th, 12th

ourse Description

urse overview:

The purpose of this course is to teach web page design and beginning programming with the coding languages HTML, JavaScript, and CSS. Students will be able to design and build a website from scratch. Students will develop a basic understanding of design principles and the user/software/hardware interface as well as understanding the logical process of computer problem solving. Students will also learn skills for research, development, and the publishing processes. Understanding, critical thinking, and problem solving skills related to programming will be developed as students get an introduction to the fields of web development and computer science.

urse content:

I. Orientation

A. Course objectives, expectations, procedures	A. Review course objectives, expectations, procedures.
B. Introduction to website design	B. Understands introduction to website design programming language.
C. History of web design	C. Reviewed history of web design.
D. Current trends in web design	D. Identifies current trends.
E. Employment outlook/ opportunities	E. Reviewed employment outlook/opportunities.

II. HTML/JavaScript

Students will learn basic structure of HTML and Javascript programming with the use of opening and closing tags in pairs to create their web pages. They will learn the proper placement of web document sections and techniques to create functional sites with organizational techniques that make the site easier to navigate for the user. Creating interest & ease of use with the use of color, images, tables, and surveys and frames will be learned. They will

incorporate CSS formatting techniques for the appearance and behavior of the webpage. They will add JavaScript programming and functions to create user interactivity. They will learn to troubleshoot coding errors. The topics are covered in lessons 1-9 of the primary textbook.

TOPIC	EXAMPLE
A. Basic HTML formatting tags	A. Identifies basic formatting tags and structure.
B. Save and view web page	B. Identifies file naming conventions save and view web page through a browser.
C. Use lists, headings, lines	C. Uses HTML to create and format lists, lines, headings
D. Create links	D. Uses HTML to create onsite and offsite links.
E. Format web page text	E. Uses style attribute to format the appearance of body & text

F. Insert graphics	F. Demonstrates how to insert and manipulate graphics.
G. Tables	G. Use HTML to create a table with various types of data
H. Forms	H. Use HTML to create a form with various inputs
I. Frames	I. Use frames to divide the window and use links across frames
J. Apply CSS and Create an external CSS file	J. Demonstrates how to use CSS to control the formatting of the page(s).
K. Learn Javascript	K. Uses correct JS syntax: strings, objects, methods, parameters, conditional statements
L. Create an alert and a rollover	L. Demonstrates how to use JS to create an alert message and functions for a rollover link & image.
M. Create a JavaScript banner and slideshow	M. Demonstrates how to use JS functions to create banners (cycling & random) and slideshow.
N. Create a form	N. Demonstrates how to use JavaScript to create a functional, validated, clearing form with buttons.
O. Functions across frames	O. Be able to create functions that work across frames and understand the parent-child relationship

III. Web Design Fundamentals

Students will learn the design process beginning with an idea and going through the planning stages. They will clarify the audience and purpose of their site, and come up with a design concept and storyboard their idea before programming.

TOPIC	EXAMPLE
A. Design Evaluate and Review	A. Identifies design standards for review.
B. Brainstorming	B. Shares and presents ideas for design.
C. Information Design – Site message, audience, design, scope	C. Identifies site message, audience, and scope and applies to plan
D. Interaction Design – Storyboard, site map	D. Creates a storyboard, layout and site map. Wireframes site with responsive design.
E. Presentation Design – site graphics, banner, navigation	E. Designs site graphics, including banner and navigation.
F. Design elements – proportion, balance, unity, space	F. Understands the role of proportion, balance, unity and space in design.
G. Usability – Human interaction design	G. Understands usability and accessibility concepts.

IV. Introduction to Design Applications

Students will learn to use the Dreamweaver software application to create sites that have all the elements they learned to program in HTML and JavaScript. In addition, they will learn to evaluate the website structure and present and publish a website. This is covered in units A – J of the primary textbook.

TOPIC	EXAMPLE
A. Web publishing application using Dreamweaver	A. Uses web publishing application software.
B. Develop and create a functioning website	B. Uses Dreamweaver to format page, text, images, links, menus, tables, forms and uses CSS and media interactivity features.
C. Multimedia applications	C. Uses multimedia application software.
D. Updating and posting pages	D. Updates and uploads pages.
E. Cloud Computing	E. Understands cloud computing.
F. Security	F. Understands network security.

V. Computer Graphic Design Concepts (infused throughout the course)

Students learn the principles of art and design including line, space, shape, form, color, and positive/negative space and white space and how it affects the usability and appeal of the web site. Students will also understand the various types and formats of computer graphics available. They will learn about web safe fonts.

TOPIC	EXAMPLE
A. Design considerations	A. Understands design considerations.
B. Output considerations	B. Understands output considerations.
C. Color theory	C. Demonstrates use of color theory.
D. Typography	D. Understands typography and web safe fonts

VI. Project Management (infused throughout the course)

Follow through a long term project from concept to fruition. Manage project needs and deadlines.

TOPIC	EXAMPLE
A. Writing the Project Proposal	A. Writes a project proposal.

B. Writing the Design Document	B. Writes a design document and storyboard.
C. Cost analysis	C. Research project costs of developing a website
D. Creating a Project Schedule	D. Creates a project timeline with deadlines.
E. Writing a Status Report	E. Writes a status report.
F. Quality Assurance	F. Performs quality assurance testing.
G. Client Communication and Requirements	G. Communicates with the client and understands client requirements for site.

VII. Marketing your Site

Understand the principles of using the internet for sales and promotion. Analyze if goals are met with the website. Review pricing and distribution goals. Use consumer research and site review to evaluate effectiveness of site both locally and globally.

TOPIC	EXAMPLE
A. Search engine optimization	A. Optimizes a website using search engines optimization techniques.
B. Marketing	B. Creates a marketing plan.
C. eCommerce	C. Understands eCommerce.
D. Business Development	D. Understands business development.
E. Social Networking	E. Understands use of social networking to publicize site (Facebook, Twitter, blogs).
F. Marketing	F. Understands marketing with mobile apps.
G. Analytics	G. Uses analytics to analyze effectiveness
D. Equipment and tools	D. Selects equipment and tools, applies technology to specific tasks and maintains and troubleshoots equipment.
E. Safety procedures and practices.	E. Follows safety procedures and practices.
F. Ethics and confidentiality.	F. Demonstrates (shows) understanding of ethics and confidentiality.

VIII. Career/Occupational Knowledge and Workplace Skills (infused throughout the course)

Students will demonstrate career skills that will enable them to be successful in the workplace and in post-high school educational settings. Teamwork and collaboration are encouraged and practiced. Critical thinking and problem solving are developed through independent project based learning.

TOPIC	EXAMPLE
A. Technology and information	A. Accessing and utilizing technology and information.
B. Safety standards	B. Practicing occupational safety standards.
C. Critical thinking and solving problems	C. Thinking critically and solving problems effectively.
D. Basic skills in reading, writing, mathematics, listening and speaking	D. Uses basic skills in reading, writing, mathematics, listening and speaking as they relate to occupation specific skills.
E. Real world problems and situations	E. Applying knowledge to real world problems and situations.
F. Independent & collaborative work	F. Works independently and collaboratively.
G. Communication	G. Communicates effectively and appropriately.
H. Reliability	H. Performs reliably and responsibly.
I. Diversity	I. Working with diverse populations effectively and respectfully.
J. Punctuality and Dependability	J. Is punctual and has good attendance
K. Directions	K. Follows directions.
L. Supervision	L. Works well with minimum supervision.
M. Cooperation	M. Is cooperative and works with peers
N. Initiative	N. Takes initiative by working beyond minimum requirements.
O. Grooming	O. Meets job standards of neatness and grooming.
P. Constructive Criticism	P. Responds appropriately to constructive criticism.

ourse Materials

Other

Title	Authors	Date	Course material type	Websit
Written Assignments	[empty]	[empty]	Review of key concepts and vocabulary that is learned from reading and research. short answer questions allow the student to demonstrate their mastery and understanding of material	[empty]

Title	Authors	Date	Course material type	Websit
Direct Whole Group Instruction	[empty]	[empty]	Demonstration and visual presentation.	[empty]
Independent Practice	[empty]	[empty]	Students practice with step-by-step instructions.	[empty]
One-on-One Instruction	[empty]	[empty]	Teacher assists and gives feedback to students individually.	[empty]
Cooperative Learning Group	[empty]	[empty]	Collaboration and sharing of information is encouraged so students are learning from and working with each other. Group projects encourage teamwork and cooperation.	[empty]
Independent Internet Reaserch	[empty]	[empty]	Structured research skills are developed throughout the course, both individually and in small groups and provide platforms of analysis and synthesis of information.	[empty]
Double shooting Errors and Revisions	[empty]	[empty]	Learning to recognize coding errors and know where and how to find them and how to fix them	[empty]
Projects	[empty]	[empty]	Students demonstrate use of all skills and concepts in original works. Students do a written self evaluation after a project to analyze what worked, what they would change about the process, and what they learned.	[empty]
Oral Presentation and Peer evaluation	[empty]	[empty]	Students share and present original works and evaluate sites for effectiveness.	[empty]