

IE Class Webmastering Curriculum

Course Outline

Foundations

Lesson	Topics Covered	Exercises	TEKS (Texas Only)	Dates
The Foundation lessons will provide students with a general understanding of computers, how the internet works, the web design process, how to acquire web hosting and publish to it, and other concepts that any web designer should be familiar with.				
Foundations Lesson 1	Preparing for the Course: An introduction to web site design is given. Students are instructed as to the necessary file system that they will need to create for the course. They are also introduced to IE Editor, the practice editor in IE Class.	Questions 1	C3B	
Foundations Lesson 2	Computer Basics: Students are given an overview of the various components, including the hardware and software of the computer and how they work together.	Questions 2 Crossword 2	C1A , C1B C1C, C1D C1E, C1F C1G, C2A C4C,	
Foundations Lesson 3	Introduction to the Internet: The history and background of the Internet is covered. Students are also given an overview of how information is transferred on the Internet and the domain name system. The purpose of the Acceptable Use Policy is also covered. A PowerPoint presentation is available for this lesson.	Questions 3 Crossword 3	C1A, C1E C1F, C1G C3B	
Foundations Lesson 4	The Web Design Process: The planning process of web site development is covered, including the various web site structures. The components of page layout and design are also covered. A PowerPoint presentation is available for this lesson.	Questions 4 Crossword 4	C1E, C6A	
Foundations Lesson 5	Color Theory: Students will learn the basics using color in their site, about the RGB color scale, the different color schemes, and how to logically select colors for their site based on a specific color scheme.	Questions 5	C1E	
Foundations Lesson 6	Copyright Guidelines: Students are given an overview of copyright guidelines relevant to commercial web design. The copyright qualifications are explained as well as what is and is not available in the public domain. The Fair Use Guidelines are also introduced.	Questions 6	C3A	
Foundations Lesson 7	Getting Your Site Online: Students will learn how to obtain a domain name and how to select a web server to host their site. Students will also learn how to upload sites to the Internet using a simple FTP program. WS_FTP is a simple FTP Client that is available to teachers and students for educational use.	Questions 7	C1E, C1G	

NOTE: We suggest covering Foundations Lessons 1 – 3 before starting HTML Lessons. The remaining Foundation Lessons may be covered in conjunction with the HTML lessons.

Web Graphics

Lesson	Topics Covered	Exercise	TEKS (Texas Only)	Dates
<p>Students will be introduced to the basic concepts of graphic editing and how to prepare images for use on their web pages. Students will also learn how to create quality images from scratch using the concepts that are common in most graphics packages. The featured graphics package in this unit is GIMP. GIMP is a freely distributed Open Source graphics package that is capable of performing many of the functions of Photoshop or Fireworks, and can save images in the native formats of those packages. GIMP is free for anyone to download and install, including students and teachers, and free for school to teach.</p>				
Web Graphics Lesson 1	Basic Concepts: This lesson will cover the different image types, image resolution concepts, and terminology. Students will also be introduced to the GIMP interface and how to open and save images.	Worksheet Lab 1-1	5B 7B, 7H	
Web Graphics Lesson 2	Cropping and Resizing: This lesson will focus on preparing existing images for use on the web. Students will learn to use GIMP to resize images and to crop images down.	Lab 2-1 Lab 2-2	5B 7B	
Web Graphics Lesson 3	Working with Filters: This lesson will give students experience in modifying and enhancing images using the filter tools built into GIMP.	Lab 3-1 Lab 3-2	5B,	
Web Graphics Lesson 4	Selected Regions: Students will learn to select specific regions of an image and make	Lab 4-1 Lab 4-2 Lab 4-3	5B 7B	
Web Graphics Lesson 5	Banners & Buttons: Students will learn to manipulate and enhance text to create banners for their website.	Lab 5-1 Lab 5-2	5B 7B	
Web Graphics Lesson 6	Creating Image Maps: Students will learn about Image Maps and how to use the Image Map feature in GIMP to create custom image maps for their site.	Lab 6-1 Lab 6-2	5B 6B, 7B	
Web Graphics Lesson 7	Working With Layers: Students will learn what layers are and how they are used with graphic design.	Lab 7-1 Lab 7-2 Lab 7-3	5B 7B	
Web Graphics Lesson 8	Image Colorization: Students will learn how to manipulate colors of images and how to add colors to individual sections of black & white images.	Lab 8-1 Lab 8-2	5B 7B	
Web Graphics Lesson 9	Animated GIFs: Students will learn the basics of simple animation, and how to create animated GIF type images for their web pages.	Lab 9-1 Lab 9-2		

NOTE: Web Graphics may be taught prior to the HTML unit, or after completing HTML Lesson 5. After HTML Lesson 5, various labs will have students create their own graphics for their website, so the Web Graphics Unit will be incorporated throughout the course.

GIMP may be downloaded and distributed freely from www.gimp.org. Unlike expensive software applications that most students, and teachers, will typically only have the opportunity to use at school, any student may download and install GIMP at home for their personal use thus expanding their opportunities to utilize what they learn in class.

Designing With HTML

Lesson	Topics Covered	Exercise	TEKS (Texas Only)	Dates
The HTML Lessons will teach students the basics of creating web pages. Students should use Notepad or some other basic text editor that allows them to create web pages using code.				
HTML Lesson 1	Basic Tags and Structure: Students will learn the basic HTML tags and page structure. Students will learn to create and save basic web pages and how to view them in their web browser.	Questions 1 Lab 1-1 & 1-2 Lab 1-3 Lab 1-4 & 1-5	C2B , C5B, C6A, C7C, C7D, C7F C8A, C8D, C8E	
HTML Lesson 2	Creating Lists: Students will learn and create the three basic HTML lists; ordered, unordered, and definition. Students will then learn to create nested lists and how to customize the lists.	Lab 2-1 & 2-2 Lab 2-3 Lab 2-4 Lab 2-5 Lesson 2 Quiz	C2B , C5B, C6A, C7C, C7D, C7F C8A, C8D, C8E	
HTML Lesson 3	Building the Site/Creating Links: Students will learn how to create HTML links and to connect web pages. Students should be reviewed on the basic web pages structures. Students will also learn how to create email links and page jumps.	Lab 3-1 Lab 3-2	C2B , C5B, C6A, C7C, C7D, C7F C8A, C8D, C8E	
HTML Lesson 4	Text and Fonts: Students will learn how to modify fonts on a web page and the various attributes of the FONT tag.	Lab 4-1 Lab 4-2	C2B , C5B, C6A, C7C, C7D, C7F C8A, C8D, C8E	
HTML Lesson 5	Working with Images: Students will learn how to import images into their web pages. They will also learn how to control the size and placement of the images, and to wrap text around the images. Layout concepts are also covered in this lesson.	Lab 5-1 Lab 5-2 Lab 5-3 Lab 5-4 Lab 5-5	C2B, C5A,, C5B, C6A C7C, C7D C7F, C8A, C8D, C8E	
Project 1: After HTML Lesson 5 is completed, Project 1 should be assigned. Project 1 will allow students to create a web site on their own using the concepts covered in the first five HTML lessons. Emphasis should be placed on proper coding, site structure, and readability of content.			C2B, C4B, C5A C6A, C6B, C7, C8, C9, C10 C11, C12	
HTML Lesson 6	Creating Tables: Students will learn how to create basic tables in HTML. Students will also learn sizing and spacing techniques with tables, and how to use tables in laying out web page content.	Lab 6-1 Lab 6-2 Lab 6-3 Lab 6-4 Lab 6-5 Lab 6-6	C2B , C5B, C6A, C7C, C7D, C7F C8A, C8D, C8E	
HTML Lesson 7	Merging Cells in a Table: Students will learn how to merge cells across columns and rows in a table. Students will use column and row spanning to build more complex tables, and they will learn how to used advanced tables as a layout technique.	Lab 7-1 Lab 7-2 Lab 7-3 Lab 7-4 Lab 7-5 Lab 7-6 Lab 7-7	C2B , C5B, C6A, C7C, C7D, C7F C8A, C8D, C8E	
HTML Lesson 8	Creating Nested Tables: Students will learn how to create complex table structures and nested tables. Students will use these techniques as a layout and design tool.	Lab 8-1 Lab 8-2 Lab 8-3 Lab 8-4 Lab 8-5 Table Quiz 8	C2B , C5B, C6A, C7C, C7D, C7F C8A, C8D, C8E	
Project 2: After HTML Lesson 8 is completed, Project 2 should be assigned. The emphasis should be on layout and design, balance, and consistency.			C2B, C4B, C5A C6A, C6B, C7, C8, C9, C10 C11, C12	

Lesson	Topics Covered	Exercise	TEKS (Texas Only)	Dates
HTML Lesson 9	Creating Frames: Students will learn how to divide the browser into frames and load different pages into each frame. Students will learn to direct linked pages to open into specific frames. Students will also learn and apply the various frame attributes.	Lab 9-1 Lab 9-2 Lab 9-3 Lab 9-4 Lab 9-5	C2B , C5B, C6A, C7C, C7D, C7F C8A, C8D, C8E	
HTML Lesson 10	Inline Frames: Students will create inline frames and learn how to specify which links are to open in the frame and which are to open a new main page.	Lab 10-1	C2B , C5B, C6A, C7C, C7D, C7F C8A, C8D, C8E	
HTML Lesson 11	Audio and Video: Students will embed audio and video files onto their web pages. They will also learn to control the presentation of media files.	Lab 11-1 Lab 11-2	C5A, C5B	
Project 3: After HTML Lesson 10 is completed, Project 3 should be assigned. Project 3 is the final project in the HTML Lessons. The emphasis should be on proper usage of frames, navigation, page layout and design.			C2B, C4B, C5A C6A, C6B, C7, C8, C9, C10 C11, C12	

Cascading Style Sheets

Lesson	Topics Covered	Exercises	TEKS (Texas Only)	Dates
The Style Sheet Lessons will teach students the fundamentals of using Cascading Style sheets and how to apply them at the inline, embedded, and external level. Students will also learn how to use style sheets to layout content.				
Style Sheets Lesson 1	Style Sheet Basics: Students will learn the structure of a style rule, the units of measure used in Style Sheets, the three levels of style sheets, and how to apply style sheets at each level.	Lab 1	C2B , C5B, C6A, C7C, C7D, C7F C8A, C8D, C8E	
Style Sheets Lesson 2	Setting Font and Text Styles: Students will learn about the various text and font properties and how to use them in style sheets and apply them to their web pages.	Lab 2	C2B , C5B, C6A, C7C, C7D, C7F C8A, C8D, C8E	
Style Sheets Lesson 3	Margins and Borders: Students will learn to modify and apply margins and borders to various objects using style sheets.	Lab 3	C2B , C5B, C6A, C7C, C7D, C7F C8A, C8D, C8E	
Style Sheets Lesson 4	CSS Classes and IDs: Students will learn to create style sheets using classes and ids. They will learn how classes are applied and when they are to be used.	Lab 4	C2B , C5B, C6A, C7C, C7D, C7F C8A, C8D, C8E	
Style Sheets Lesson 5	Background Images and Lists: Students will learn to import images through a style sheet to be used as bullets and backgrounds.	Lab 5	C2B , C5B, C6A, C7C, C7D, C7F C8A, C8D, C8E	
Style Sheet s Lesson 6	Cursor & Scrollbar Properties: Students will learn to modify the scrollbar and cursor on a web page using style sheets.	Lab 6-1 Lab 6-2	C2B , C5B, C6A, C7C, C7D, C7F C8A, C8D, C8E	
Style Sheets Lesson 7	Positioning & Page Layout: Students will be introduced to the <div> and tags. They will learn to use style sheets instead of tables to establish page layouts.	Lab 7-1 Lab 7-2	C2B , C5B, C6A, C7C, C7D, C7F C8A, C8D, C8E	
Style Sheets Lesson 8	CSS Filters: Students will use CSS Filters to modify and distort images and text presentation on a web page.	Lab 8-1 Lab 8-2	C2B , C5B, C6A, C7C, C7D, C7F C8A, C8D, C8E	

NOTE: Cascading Style Sheet concepts will be continued throughout the Dreamweaver, JavaScript, and PHP Lessons and Labs.

Dreamweaver

Lesson	Topics Covered	Exercise	TEKS (Texas Only)	Date
<p>The Dreamweaver unit is the newest addition to IE Class. The purpose is to give students exposure to using an visual editor with the coding sills they have already learned as well as introducing some of the built in features of the application.</p>				
Dreamweaver Lesson 1	Creating A Site Profile: Students will learn how Dreamweaver manages sites through profiles, and they will learn how to setup a site profile for sites that are to be managed remotely and locally.	Questions 1	C2B , C5B, C6A, C7C, C7D, C7F C8A, C8D, C8E	
Dreamweaver Lesson 2	Creating & Editing Documents: Students will learn how to create and edit web documents in Dreamweaver. Students will work in Code View and learn to integrate HTML coding skills with Dreamweaver.	Lab 2-1 Lab 2-2	C2B , C5B, C6A, C7C, C7D, C7F C8A, C8D, C8E	
Dreamweaver Lesson 3	Image Navigation Features: In this lesson, students will learn to create image maps, image rollovers, and how to create navigation toolbars.	Lab 3-1 Lab 3-2	C2B , C5B, C6A, C7C, C7D, C7F C8A, C8D, C8E	

If Using Dreamweaver CS3 or MX

Dreamweaver Lesson 4	Flash Elements & Multimedia: Students will learn to create Flash Text elements, Flash buttons, and Flash image viewers.	Lab 4-1 Lab 4-2	C2B , C5B, C6A, C7C, C7D, C7F C8A, C8D, C8E	
Dreamweaver Lesson 5	Working In Design View: Students will how to use the automated coding features in Dreamweaver's Design View.	Lab 5	C2B , C5B, C6A, C7C, C7D, C7F C8A, C8D, C8E	
Dreamweaver Lesson 6	Creating Style Sheets: Students will learn to use the Dreamweaver Style Sheet tools for creating Embedded and External Style Sheets and how to create and edit style rules.	Lab 6	C2B , C5B, C6A, C7C, C7D, C7F C8A, C8D, C8E	
Project 4: After Dreamweaver Lesson 6 is completed, Project 4 should be assigned. The emphasis of Project 4 should be on the utilization of style sheets in website design and the use utilization of Dreamweaver tools. Students will design a site that achieves complete separation of layout and styles from site content.			C2B, C4B, C5A C6A, C6B, C7, C8, C9, C10 C11, C12	

If Using Dreamweaver CS4

Dreamweaver Lesson 4	Working In Design View: Students will how to use the automated coding features in Dreamweaver's Design View.	Lab 4	C2B , C5B, C6A, C7C, C7D, C7F C8A, C8D, C8E	
Dreamweaver Lesson 5	Spry Widgets	Lab 5-1 Lab 5-2		
Dreamweaver Lesson 6	Customizing and Editing Style Sheets: Students will learn to use the Dreamweaver Style Sheet tools for creating Embedded and External Style Sheets and how to create and edit style rules.	Lab 6	C2B , C5B, C6A, C7C, C7D, C7F C8A, C8D, C8E	
Project 4: After Dreamweaver Lesson 6 is completed, Project 4 should be assigned. The emphasis of Project 4 should be on the utilization of style sheets in website design and the use utilization of Dreamweaver tools. Students will design a site that achieves complete separation of layout and styles from site content.			C2B, C4B, C5A C6A, C6B, C7, C8, C9, C10 C11, C12	

Forms & JavaScript

Lesson	Topics Covered	Exercise	TEKS (Texas Only)	Dates
The JavaScript focus will teach general programming concepts, yet keeping the design emphasis. Students will learn to use JavaScript as a tool for creating attractive and efficiently designed web sites.				
JavaScript Lesson 1	CGI Forms Overview: Students are introduced to HTML Forms and how they interact with CGI Scripts.	Questions 1		
JavaScript Lesson 2	The Form Elements: Students will learn to use and apply the various form elements. Students will create working forms that send data to live CGI scripts. Students will also learn to modify form elements appearances by using style sheets.	Lab 2-1 Lab 2-2 Lab 2-3 Lab 2-4 Lab 2-5 Lab 2-6	C2B , C5B, C6A, C7C, C7D, C7F C8A, C8D, C8E	
JavaScript Lesson 3	Programming Basics: Students will be introduced to the programming process and Object Oriented Programming. Students will use the document object to output information.	Questions 3 Lab 3-1 Lab 3-2	C2B , C5B, C6A, C7C, C7D, C7F C8A, C8D, C8E	
JavaScript Lesson 4	Variables & Functions: Students will learn how to use variables in JavaScript programs. Functions will also be introduced. Students will learn to create and use functions in their web pages.	Lab 4-1 Lab 4-2	C2B , C5B, C6A, C7C, C7D, C7F C8A, C8D, C8E	
JavaScript Lesson 5	Using Forms with JavaScript: Students will be introduced to the event handlers and how to call specific functions based on certain events. They will also use JavaScript functions to process form data from a form.	Lab 5-1 Lab 5-2	C2B , C5B, C6A, C7C, C7D, C7F C7G, C8A, C8D, C8E	
JavaScript Lesson 6	Window Object Methods: Students will learn to use the window object and its properties and methods.	Lab 6-1 Lab 6-2 Lab 6-3	C2B , C5B, C6A, C7C, C7D, C7F C8A, C8D, C8E	
JavaScript Lesson 7	JavaScript Arrays: Student will be introduced to data structures and will learn how to created arrays in JavaScript. Students will be able to access specific elements of the array and output information from an array.	Lab 7-1	C2B , C5B, C6A, C7C, C7D, C7F C8A, C8D, C8E	
JavaScript Lesson 8	Repetition Structures: Students will learn to use and control program flow using the for, while, and do/while loops.	Lab 8-1	C2B , C5B, C6A, C7C, C7D, C7F C8A, C8D, C8E	
JavaScript Lesson 9	Selection Statements: Students will learn to use the if, if/else and switch statements to control program flow.	Lab 9-1 Lab 9-2 Lab 9-4 Lab 9-4	C2B , C5B, C6A, C7C, C7D, C7F C7G, C8A, C8D, C8E	
Project 5: At the completion of the JavaScript lessons, Project 5 should be assigned. This project should allow students to put to practice what they have learned throughout the course in developing a business web site. Emphasis should be on using JavaScript as a design tool for creating efficient and dynamic web pages.			C2B, C4B, C5A C6A, C6B, C7, C8, C9, C10 C11, C12	

PHP / MySQL Scripting

Lesson	Topics Covered	Exercise	TEKS (Texas Only)	Dates
<p>The PHP lessons will introduce students to web design concepts using PHP, including form processing, user management, and expand on the concepts of dynamic and database driven web sites.</p>				
PHP Lesson 1	<p>Getting Started with PHP: Students will be introduced to PHP scripting style and structure, on how PHP code is processed, and how it interacts with HTML.</p>	Lab1-1 Lab 1-2	C2B , C5B, C6A, C7C, C7D, C7F C8A, C8D, C8E	
PHP Lesson 2	<p>Variables & Predefined Functions: Variables will be introduced and students will learn how to create and use variables in web documents using PHP. Students will also learn how to use the predefined functions in PHP.</p>	Lab 2-1 Lab 2-2	C2B , C5B, C6A, C7C, C7D, C7F C8A, C8D, C8E	
PHP Lesson 3	<p>User Defined Functions: Students will learn to create their own functions and how to execute them. They will also learn practical methods for using functions in web page construction.</p>	Lab 3-1 Lab 3-2	C2B , C5B, C6A, C7C, C7D, C7F C8A, C8D, C8E	
PHP Lesson 4	<p>Selection Statements: Students will be reviewed on the comparison operators and logical operators. They will also learn how the if, if/else, and switch statements are used in PHP.</p>	Lab 4-1 Truth Tables Wks	C2B , C5B, C6A, C7C, C7D, C7F, C7G, C8A, C8D, C8E	
PHP Lesson 5	<p>Repetition Statements: Students will learn how the <i>for</i>, <i>while</i>, and <i>do-while</i>, loop is used in PHP.</p>	Lab 5-1 Lab 5-2	C2B , C5B, C6A, C7C, C7D, C7F C8A, C8D, C8E	
PHP Lesson 6	<p>Form Processing & Data Files: Students will learn to pass form information to a PHP script and how to process the data and generate an output.. Students will also learn how to create, retrieve, and edit datafiles in PHP Scripting.</p>	Lab 6-1 Lab 6-1	C2B , C5B, C6A, C7C, C7D, C7F, C7G, C8A, C8D, C8E	
PHP Lesson 7	<p>MySQL Databases / Storing Data: Students will learn how to create databases, insert, update, delete, and select data from a database table. Students will also learn how to use the data stored in a MySQL database in web page construction.</p>	Lab 7-1 Lab 7-1	C2B , C5B, C6A, C7C, C7D, C7F C8A, C8D, C8E	
PHP Lesson 8	<p>Advanced Data Manipulation: Various advanced concepts will be introduced to students such as string manipulation and arrays.</p>	Lab 8-1 Lab 8-2	C2B , C5B, C6A, C7C, C7D, C7F C7G, C8A, C8D, C8E	
PHP Lesson 9	<p>Sessions and Cookies: Students will learn how to create and manage sessions and cookies. Students will also learn how sessions and cookies are used in visitor management.</p>	Lab 9-1 Lab 9-2	C2B , C5B, C6A, C7C, C7D, C7F C7G, C8A, C8D, C8E	
<p>Project 6: At the completion of the PHP lessons, students will design a database driven Content Management System utilizing session security techniques, and MySQL databases.</p>			C2B, C4B, C5A C6A, C6B, C7, C8, C9, C10 C11, C12	