

COURSE SPECIFICATION OF INFORMATION TECHNOLOGY

Course Title:	Web Systems & Technologies
Course Code:	ITEC-518-520
Degree Program:	BS(Information Technology) P-III (1st semester)
Course rating:	3 credit hours (Theory)
Pre-requisites:	

Course Objectives:

This course aims to provide the skills of Designing and implementation of web based applications. It includes Basic and advanced Internet programming and their implementation in html, Java scripts and VB scripts & active server pages, design & implementation of commercial web pages, design & management of electronic commerce related objectives, PHP technology basics and intermediate level, frameworks using PHP or any other technology.

Course Outline:

Introduction to Internet Programming: Client Server model, Web Browsers, HTTP

Basic HTML: headers, body, basic html tags, tables, Unordered and Ordered Lists

HTML Form Processing: Building a form, Text fields and value, size, maxlength, html buttons, radio, checkboxes, prechecked, Selection lists Action and Method - GET and POST.

Client Side Scripting Languages: Basics of JavaScript and VBScript

Web Servers: Introduction to some popular Web Servers (Apache, IIS, etc)

CGI: Introduction to CGI scripting, html form interface with CGI scripts, automating processing such as info forms and email, Programming CGI interfacing via forms.

Server Side Scripting Engines: Introduction to Active Server Pages and Java Server Pages

Servlets: Introduction to Java Servlets API

PHP intro, forms, database connectivity etc and framework like joomla, drompal etc

File and Database Connectivity

Learning Material/References:

1. Internet & World Wide Web How to Program 3rd Edition) by [Harvey M. Deitel](#), [Paul J. Deitel](#) and [Andrew B. Goldberg](#).
2. Web enabled Commercial Application Development Using...HTML, DHTML,

Weekly Lecture Plan

Week 1	Introduction to the Course, What is Web Development, Tools and Technology for Web development
Week 2	Introduction to HTML, HTML Tags and Basic Elements, HTML Attributes, Heading, Paragraph, Styles.
Week 3	HTML Formatting Tags, Comments, Tables, Lists, Bullets, Links, Images. Classes.
Week 4	HTML Project, Website Development
Week 5	Introduction to CSS. What is CSS, Uses Purpose Advantages, 3 Types of CSS , Class
Week 6	CSS Classes, External CSS, Borders, Margins, Layouts,
Week 7	CSS Menu, Page Layouts, Tables, Positions,
Week 8	CSS Project, CSS based Website Development.
Week 9	Assignment, CSS , Introduction to JavaScript
Week 10	JavaScript, Bootstrap
Week 11	PHP Introduction, Installing and Configuring Server, PHP variables,
Week 12	PHP Loops, Conditional Operators, Web Forms, MySQL, Sessions
Week 13	Functions, Submitting Form and Reading Data from MsSQL Database.
Week 14	Form Validation, Cookies, Creating Shopping Application
Week 15	Creating Dynamic Website, Sending Email, Ajax, Cookies, Sessions.,
Week 16	Web Project,

WEB Systems and Technology (ITEC-528)

[BSIT P-III First Semester]

LIST of ALL HTML TAGS

[Institute of Information and Communication Technology
University of Sindh, Jamshoro.]

[By:
Dr. Zeeshan Bhatti]

LIST OF ALL HTML TAGS

WHAT IS HTML

1. HTML is the standard markup language for creating Web pages.
2. HTML stands for Hyper Text Markup Language
3. HTML describes the structure of a Web page
4. HTML consists of a series of elements
5. HTML elements tell the browser how to display the content
6. HTML elements are represented by tags
7. HTML tags label pieces of content such as "heading", "paragraph", "table", and so on
8. Browsers do not display the HTML tags, but use them to render the content of the page

A SIMPLE HTML DOCUMENT

Example Explained

```
<!DOCTYPE html>
<html>
  <head>
    <title>Page Title</title>
  </head>
  <body>

    <h1>My First Heading</h1>
    <p>My first paragraph.</p>

  </body>
</html>
```

- The `<!DOCTYPE html>` declaration defines this document to be HTML5
- The `<html>` element is the root element of an HTML page
- The `<head>` element contains meta information about the document
- The `<title>` element specifies a title for the document
- The `<body>` element contains the visible page content
- The `<h1>` element defines a large heading
- The `<p>` element defines a paragraph

First level tags

First level tags are the main tags used to structure an HTML page. They are essential to producing the "minimum code" for a web page.

Tag	Description
<html>	Main tag
<head>	Page header
<body>	Page body

Minimum code for an HTML page:

```
<!DOCTYPE html>
<html>
<head>
<meta charset="utf-8" />
<title>Title</title>
</head>

<body>

</body>
</html>
```

Header tags

These tags are all located in the web page header, in other words between <head> and </head>:

Tag	Description
<link />	Link with a style sheet
<meta />	Web page metadata (charset, keywords, etc.).
<script>	JavaScript code
<style>	CSS code
<title>	Page title

Text structuring tags

Tag	Description
<code><abbr></code>	Abbreviation
<code><blockquote></code>	Quotation (long)
<code><cite></code>	Quote the title of a work or an event
<code><q></code>	Quotation (short)
<code><sup></code>	Exponent
<code><sub></code>	Index
<code></code>	Strong highlighting
<code></code>	Normal highlighting
<code><mark></code>	Visual highlighting
<code><h1></code>	Level 1 title
<code><h2></code>	Level 2 title
<code><h3></code>	Level 3 title
<code><h4></code>	Level 4 title
<code><h5></code>	Level 5 title
<code><h6></code>	Level 6 title
<code></code>	Image
<code><figure></code>	Figure (image, code, etc.)
<code><figcaption></code>	Figure description
<code><audio></code>	Sound
<code><video></code>	Video
<code><source></code>	Source format for tags <code><audio></code> and <code><video></code>

Tag	Description
<code><a></code>	Hypertext link
<code>
</code>	Line feed
<code><p></code>	Paragraph
<code><hr /></code>	Horizontal separation line
<code><address></code>	Contact address
<code></code>	Deleted text
<code><ins></code>	Inserted text
<code><dfn></code>	Definition
<code><kbd></code>	Keyboard entry
<code><pre></code>	Formatted display (for source codes)
<code><progress></code>	Progress bar
<code><time></code>	Date or time

List tags

This section lists all the HTML tags used to create lists (bulleted lists, numbered lists, definition lists, etc.)

Tag	Description
<code></code>	Unordered bullet lists
<code></code>	Numbered List
<code></code>	Bulleted list item
<code><dl></code>	List of definitions
<code><dt></code>	Term to be defined
<code><dd></code>	Term definition

Table tags

Tag	Description
<code><table></code>	Table
<code><caption></code>	Table title
<code><tr></code>	Table row
<code><th></code>	Header cell
<code><td></code>	Cell
<code><thead></code>	Table header section
<code><tbody></code>	Table body section
<code><tfoot></code>	Table footer section

Form tags

Tag	Description
<code><form></code>	Form
<code><fieldset></code>	Field group
<code><legend></code>	Field group title
<code><label></code>	Field description
<code><input /></code>	Form field (text, password, checkbox, button, etc.).
<code><textarea></code>	Multi-line entry field
<code><select></code>	Drop-down list
<code><option></code>	Drop-down list item
<code><optgroup></code>	Item group in a drop-down box

Section tags

These tags are used to build the outline of our website.

Tag	Description
<code><header></code>	Header
<code><nav></code>	Main browsing links
<code><footer></code>	Page footer
<code><section></code>	Page section
<code><article></code>	Article (independent content)
<code><aside></code>	Additional information

Generic tags

Generic tags are tags that have no semantic meaning.

Indeed, all other HTML tags have a *meaning*: `<p>` means "Paragraph", `<h2>` means "Subtitle", etc.

You sometimes need to use generic tags (also called **general purpose tags**) as none of the other tags are appropriate. You most often use generic tags to build your design.

There are two generic tags: inline and block.

Tag	Description
<code></code>	Inline generic tag
<code><div></code>	Block generic tag

These tags are only useful if you associate them with a `class`, `id` or `style` attribute:

- `class`: specifies the name of the CSS class to be used.
- `id`: gives the tag a name. This name must be unique throughout the page as it identifies the tag. You can use the ID for many things, for example to

create a link to an anchor, for an ID type CSS style, for operations in JavaScript, etc.

- `style`: this attribute allows you to directly specify the CSS code to be applied. You're not required to have a separate style sheet, you can include the CSS attributes directly. Note that it's preferable to use an external style sheet rather than this attribute as it makes your website easier to update later on.

These three attributes are not restricted to generic tags: you can use them with no problem in most other tags.

HTML LAB TASKS

Submission Guidelines:

All Students are required to complete the following tasks and then take the Screenshot of the output form the browser submit. Create a Word File and Paste output of each task on Word file in sequence.

Practice 1:

1. Print your name in green.

```
<html>
  <body>
    <font color="green">John</font>
  </body>
</html>
```

2. Print a paragraph that is a description of a book, include the title of the book as well as its author. Names and titles should be underlined, adjectives should be italicized and bolded.

```
<html>
  <head> <title> Paragraph Task </title></head>
  <body>
    <p>
      One particular book which is recommended reading is <u>The Street Lawyer</u> by
      <u>John Grisham</u>. This book is about a lawyer who begins re-evaluating his
      priorities in life when a bad
      incident occurs within his law firm. Consequently, he becomes acquainted with the inner
      city streets, and realizes the harsh existence of the homeless, and vows to give them a
      chance in the courts. <u>The Street Lawyer</u> is a <b><i>great</i></b>
      book. It is <b><i>well written</i></b> and <b><i>interesting</i></b>. Other books by
      <u>John Grisham</u> include <u>The Firm</u>, <u>The Pelican Brief</u>, and
      <u>The Client</u>.
    </p>
  </body>
</html>
```

3. Print your name to the screen with every letter being a different heading size

```
<html>
  <head> <title> Name Heading Task </title></head>

  <body>
    <h4>J</h4>
    <h3>o</h3>
    <h2>n</h2>
    <h1>e</h1>
  </body>
</html>
```

4. Create some links to various search engines (google, yahoo, altavista, lycos, etc). Now Use Image Icons for each link along with Text

```
<html>
<body>
<a href="http://www.google.com">
Search the web with Google!
</a>

<br /><br />

<a href="http://www.yahoo.com">
Search the web with Yahoo!
</a>

<br /><br />

<a href="http://www.bing.com">
Search the web with Bing!
</a>

<br /><br />

<a href="http://www.altavista.com">
Search the web with Altavista!
</a>

<br /><br />

<a href="http://www.lycos.com">
Search the web with Lycos!
</a>
</body>
</html>
```

5. Create links to five different pages on five different websites that should all open in a new window
6. Create a page with a link at the top of it that when clicked will jump all the way to the bottom of the page.
7. Display an image that has a border of size 2, a width of 200, and a height of 200
8. Display an image that when clicked will link to a search engine of your choice (should be opened in a new window).
9. Display an image that when clicked will link to itself and will display the image in the browser by itself.

```
<html>
  <body>
    <a href="/images/apple.jpg" target="_top">
    
```

```

        </a>
        <p>
        Click on the image to see it in the browser by itself.
        </p>
    </body>
</html>

```

10. Display five different images. Skip two lines between each image. Each image should have a title.
11. Below is a simple table, and the HTML source that created it. Note that tables are normally colorless unless otherwise specified.

Heading 1	Heading 2
Data cell 1	Data cell 2
Data cell 3	Data cell 4

```

<table>
  <tr>
    <th>Heading 1</th>
    <th>Heading 2</th>
  </tr>
  <tr>
    <td>Data cell 1</td>
    <td>Data cell 2</td>
  </tr>
  <tr>
    <td>Data cell 3</td>
    <td>Data cell 4</td>
  </tr>
</table>

```

12. Now that you see how a table is built, try making one that looks like the image below. (Note that the first line is the table's caption.)

Sleep Requirements by Age	
Age	Hours of Sleep Required
3 Months	15 Hours
5 Years	11 Hours
18 Years	8.25 Hours

13. This exercise will focus on just a few of the more useful properties. In particular, it uses the colspan, rowspan, height, and width attributes. It also makes use of the bgcolor attribute. The following example demonstrates the use of these tools.

Pink cell	
Red cell	Yellow cell

```

<table border="1">
  <tr>
    <td colspan="2" bgcolor="pink">Pink cell</td>
  </tr>
  <tr>
    <td bgcolor="red">Red cell</td>
    <td width="100" bgcolor="yellow">Yellow cell</td>
  </tr>
</table>

```

14. Now use the colspan and rowspan attributes to create the table structure as shown in image below

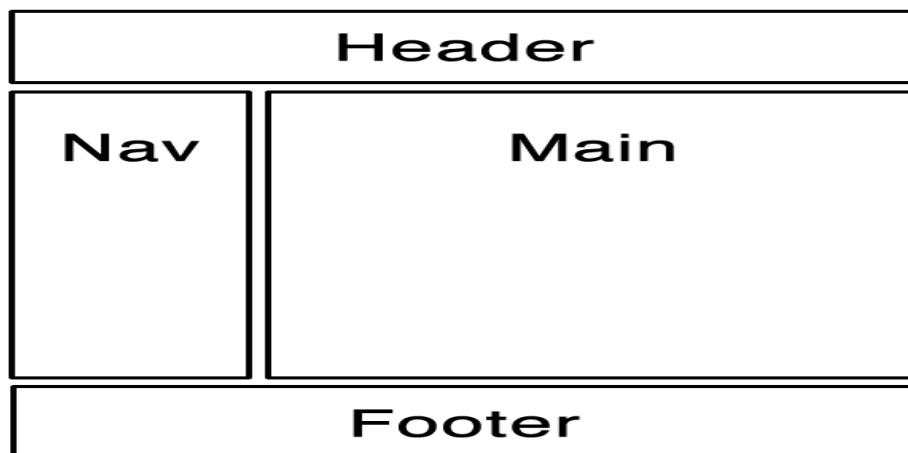
Red cell		Blue cell
Green cell	Gray cell	Yellow cell

15 : Here is a sample table created to display a schedule: Notice that it uses many of the attributes, especially ROWSPAN and COLSPAN. The HTML code that created this table is listed below. If you examine this code closely, you'll notice that the fourth row (11:00) seems to be missing a few cells. This is because the third row has two cells with ROWSPAN=2, which means they each automatically take up a cell in the fourth row as well.

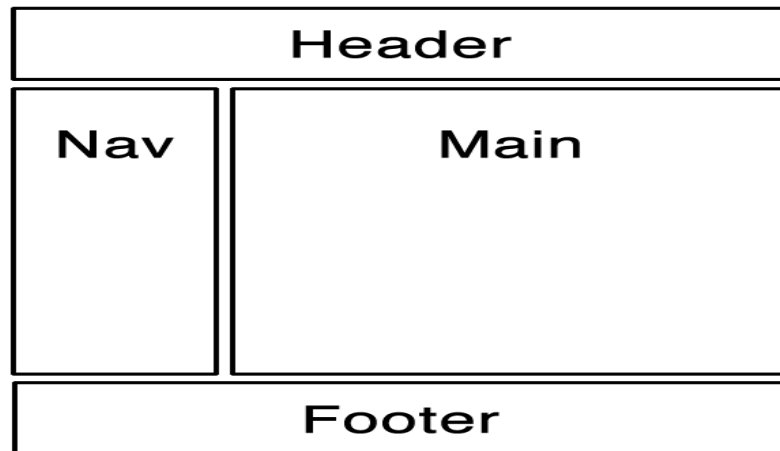
Schedule					
Time	Monday	Tuesday	Wednesday	Thursday	Friday
9:00	MAT 104		MAT 104		MAT 104
10:00		PHI 201		PHI 201	
11:00	SPA 207		SPA 207		SPA 207
Noon	LUNCH				

HTML code for Schedule	
<pre> <TABLE BORDER="1" CELLPADDING="5"> <CAPTION><H3>Schedule</H3></CAPTION> <TR BGCOLOR="SILVER"> <TH BGCOLOR="BEIGE">Time</TH> <TH>Monday</TH> <TH>Tuesday</TH> <TH>Wednesday</TH> <TH>Thursday</TH> <TH>Friday</TH> </TR> <TR ALIGN="CENTER" VALIGN="MIDDLE"> <TD BGCOLOR="BEIGE">9:00</TD> <TD>MAT 104</TD> <TD></TD> <TD>MAT 104</TD> <TD></TD> <TD>MAT 104</TD> </TR> </pre>	<pre> <TR ALIGN="CENTER" VALIGN="MIDDLE"> <TD BGCOLOR="BEIGE">10:00</TD> <TD></TD> <TD ROWSPAN="2">PHI 201</TD> <TD></TD> <TD ROWSPAN="2">PHI 201</TD> <TD></TD> </TR> <TR ALIGN="CENTER" VALIGN="MIDDLE"> <TD BGCOLOR="BEIGE">11:00</TD> <TD>SPA 207</TD> <TD>SPA 207</TD> <TD>SPA 207</TD> </TR> <TR ALIGN="CENTER" VALIGN="MIDDLE"> <TD BGCOLOR="BEIGE">Noon</TD> <TD COLSPAN="5" BGCOLOR="TURQUOISE"> L U N C H</TD> </TR> </TABLE> </pre>

Task 16: create a simple two Column layout website **using Tables**. Each link is properly active and properly managed with content like a website. Sample for two column layout is shown in figure.



Task 17: Create a simple two Column layout website **using Div Tag**. Each link is properly active and properly managed with content like a website. Sample for two column layout is shown in figure



Task 18: Create a Simple HTML5 Form as shown below

Color:	<input type="color" value="#000000"/>
Date:	<input type="text" value="dd-----yyyy"/>
Month:	<input type="text" value="-----"/>
Week:	<input type="text" value="Week --, ----"/>
Number:	<input type="text"/>
Number (between 1 and 10):	<input type="text"/>
Email:	<input type="text"/>
File:	<input type="button" value="Choose file"/> No file chosen
<input type="button" value="Submit"/>	

Solution:

```
<form action="">
  <table cellpadding="10">
    <tr><td>Color: </td><td><input type="color" name="color" /></td></tr>
```

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```

<tr><td>Date: </td><td><input type="date" name="date" /></td></tr>
<tr><td>Month: </td><td><input type="month" name="month" /></td></tr>
<tr><td>Week: </td><td><input type="week" name="week" /></td></tr>
<tr><td>Number: </td><td><input type="number" name="num" /></td></tr>
<tr><td>Number (between 1 and 10): </td><td><input type="number" name="num"
min="1" max="10"/></td></tr>
<tr><td>Email: </td><td><input type="email" name="email" /></td></tr>
<tr><td>File: </td><td><input type="file" name="file" /></td></tr>
<tr><td><input type="submit" value="Submit"/></td><td></td></tr>
</table>
</form>

```

Website Project 1:

Create a Web Programming assignment submission Website. With links to each tasks . You can add colors, images etc.

Web Systems and Technology HTML Lab Task Assignment

Name: Student Name

Roll Number:

Task 1 | Task 2 | Task 3 | Task 4 | Task 5 | Task 6 | Task 7 | Task 8 | Task 9 | Task 10 |

Task 1: Write Task/Question here

Output:

Output of Task

Task 2: Create a Web page with HTML having following structure and Data. Use Images of your choice.

About Victoria Kirst

My name is Victoria and I am jolly, clumsy, and four-eyed.

My Classes This Quarter

- CSE 451 - Operating Systems
- CSE 471 - Computer Design and Organization
- PHYS 121 - Physics: Mechanics
- CSE 498 - Research w/ Prof. Luis Ceze

My Favorite Movies

(I actually don't watch too many movies, so...here goes!)

1. The last 30 minutes of Forrest Gump ([IMDB](#))
2. Star Trek Episode V with Zazu ([IMDB](#))
3. Fight Club (not really, but I've seen like 3 movies total so this is my 3rd fave by technicality) ([IMDB](#))

My Moods



Happy:



Sad:

Fun Facts About My Neighbors

- Sue Smith: *Effervescent* is a word that describes her.
- Bill Thompson: Loves playing *Yu-Gi-Oh*.

Website Project 3:

Create your personal Portfolio/CV website with minimum 6 pages (Home, Biography, Education, Specialization, Expertise, Hobbies and MyWork). All Pages are Must. Choose any title for your website but all navigation links should work properly with tabular form galleries and user all form tags in contact us for best practice.