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Web Design Fundamentals

Web Design Fundamentals
Web Design & Development Bachelor of Science Degree





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Today's Topics

- Course Introduction
- Web Standards
- Introduction to HTML

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Course Introduction



The image shows the front cover of the book "Head First HTML with CSS & XHTML". The title is written in a large, bold, black font. Below the title is a photograph of a smiling woman with short blonde hair, wearing a striped shirt. Four small purple icons are positioned around her: a man holding a computer monitor, a television set, two people dancing, and a person sitting at a desk. Text on the cover includes: "Launch your Web career in one chapter", "A learner's guide to creating standards-based Web pages", "Watch out for common HTML & CSS traps and pitfalls", and "Learn why everything your friends know about style is probably wrong".

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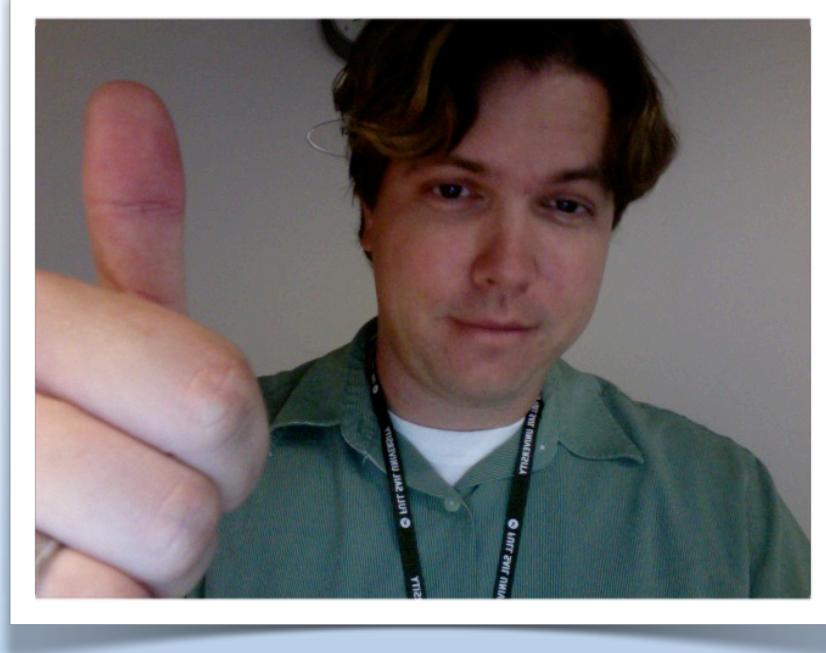




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Course Introduction

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Course Introduction

- Course Web Site
 - <http://wddbs.com/wdf>
- Course Assets
 - smb://studentvfile/WDF
- Drop-box
 - afp://dropbox.fullsail.com/WDF





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Textbook

- Head First - **HTML with CSS & XHTML**
 - A learner's guide to creating standards-based Web pages
 - Designed for beginners
 - by Elisabeth Freeman & Eric Freeman
 - “...currently direct the Head First series at O'Reilly and previously had their hands in the technology behind some of today's most popular websites like ABCNews.com, Disney.com, and ESPN.com”
 - <http://headfirstlabs.com/books/hfhtml/>





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Lecture / Lab Rules

- No food or drinks in the room
- Mute cell phones
- All deadlines are final, unless specified by the CD
- You are responsible for your hours out
- Excused absences require written documentation and make-up work
- GPS will be strictly followed





GPS Guidelines

- 10% of your grade comes from GPS
- GPS includes timeliness, respectfulness, preparation, attentiveness, and compliance
- Roll is called when class is scheduled to begin
- Within 15 minutes late, you are tardy
- After 15 minutes late, you are two hours out
- Five tardies equals two hours out
- See Student Manual for more information





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Web Standards



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Brief History of the Web

- Tim Berners-Lee
 - Credited with inventing the World Wide Web in 1990
 - a way for scientists to share data at the European Particle Physics Laboratory (CERN)
- Developed:
 - **HTML** - language web pages are written
 - **HTTP** - way to exchange HTML documents between networked computers
 - **WorldWideWeb** - the first web browser to display web pages
 - name was later adopted for whole system



Brief History of the Web

○ Mosaic

- first web browser to display images in browser window
- released in 1993
- popularized the use of the Web
- Evolved into Netscape Navigator

○ Browser Wars

- competition among Netscape Navigator and Internet Explorer web browsers in mid 1990's
- web designers had to create custom web sites targeting specific browsers and operating systems
- led to need for standardization





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Web Standards

- **Standard** - An established norm or requirement.
 - usually a formal document that establishes uniform engineering or technical criteria, methods, processes and practices
- **Web Standards** - A set of defined standards used in the implementation and deployment of web-based technologies





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Components of Web Standards

- Three components:
 - Structure / Meaning
 - HTML
 - Presentation
 - CSS
 - Behavior
 - JavaScript



Benefits of Web Standards

- To ensure web sites display consistently across standards-compliant browsers on various operating systems
- Content is still accessible on non-standards-compliant browsers
 - older browsers
 - mobile browsers
 - browsers for the disabled
- Easier to update and maintain web sites
- Improved search engine rankings
- [http://www.456bereastreet.com/archive/200512/
ten_reasons_to_learn_and_use_web_standards/](http://www.456bereastreet.com/archive/200512/ten_reasons_to_learn_and_use_web_standards/)



Who Makes Web Standards

- W3C
- World Wide Web Consortium
- Propose and publish web standards called **Recommendations** that often shape the way the web evolves
- Founded and headed by Tim Berners-Lee in 1994
- Composed of individuals and corporate entities
- <http://w3.org>



Who Campaigns for Web Standards

- WaSP
- Web Standards Project
- Composed of professional web designers and developers
- Spreads awareness of web standards
- Founded in 1998
- Hosts Task Forces - Microsoft, Adobe, Education, etc.
- <http://webstandards.org>



Web Standards Tools

- No **WYSIWYG** (*What You See Is What You Get*) software
 - we're writing markup
 - need to know what is what is happening behind the scenes
- Plain Text Editor for Mac
 - TextWrangler - <http://www.barebones.com/products/textwrangler>



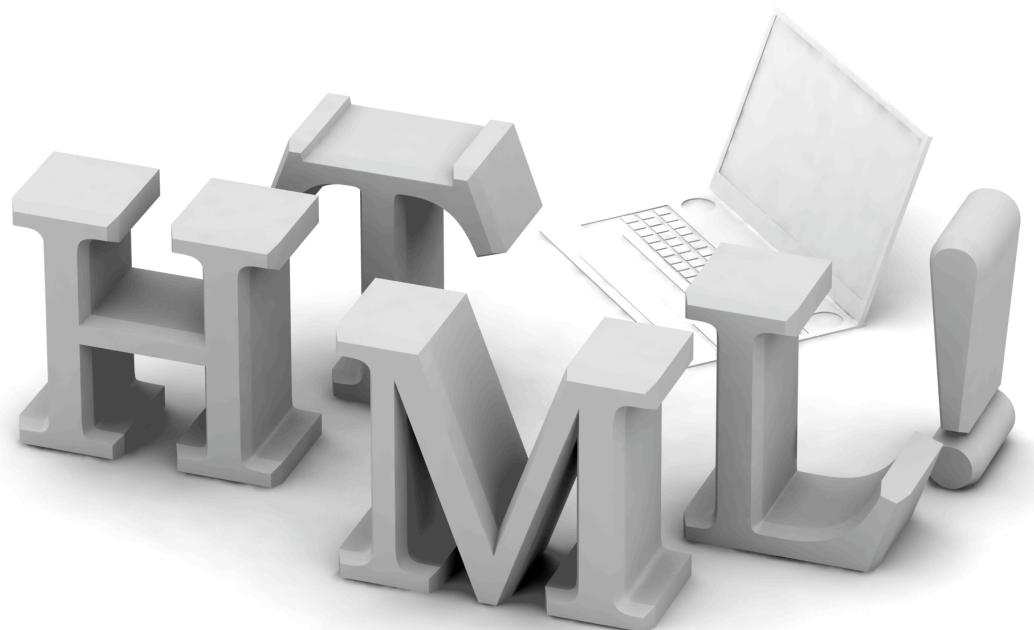
Web Standards Tools

- **Firefox** - <http://www.mozilla.com/>
 - open source, multi-platform, standards-compliant web browser
 - add-ons (extensions) allow for easy customization
- **Web Developer Add-on**
 - adds a menu and toolbar to the browser with various web design and development tools
 - <https://addons.mozilla.org/en-US/firefox/addon/web-developer/>





Introduction to HTML



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Introduction to HTML

- Markup Language
 - an encoding system embedded directly in a document to indicate how that document should be formatted
 - adds structure and meaning to a text document
- HyperText Markup Language
 - markup language used to create web pages
- Consists of *tags* and *content*
 - put them together and you get an *element*
- Tags can have *attributes* and *values*





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Tags

- Provide information on how the content is structured
- Adds meaning to content
 - enclosed in angle brackets
 - usually come in pairs: opening and closing tags
 - closing tags have a slash (*terminator*)
 - `<tag></tag>`





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Content

- Text, images, videos, animations, files, etc. of a web page
 - surrounded by tags
 - `<tag>content</tag>`





Element

- Three parts to an element are: *opening tag*, *content*, and *closing tag*.
 - `<p>This is a paragraph.</p>`





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Basic HTML Document

- HTML pages are plain text files
- Use lowercase letters to name HTML files
- Don't use spaces in file names
 - use underscores
- Use **.html** extension
- Can be opened and viewed in a web browser





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Basic HTML Document

- `<html>` - HTML content
- `<head>` - Header information (not viewable on the page)
- `<title>` - Title of the document (viewed in the title bar)
- `<body>` - Content that will be displayed on the page
- `<p>` - Defines a paragraph





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Basic HTML Document

```
<html>
  <head>
    <title>Document Title</title>
  </head>
  <body>
    <p>Document content</p>
  </body>
</html>
```



Attributes and Values

- Provide further information about the tag
- Value describes the attribute
 - should always be enclosed in double quotes
- Multiple attributes separated by a space
 - `<tag attribute="value">content</tag>`
 - `This is a tag with an attribute.`
 - ``





Attributes and Values

- ID attribute
 - to identify a *unique* element

```
<p id="sidebar">Sidebar paragraph.</p>
```
- Class attribute
 - to identify *multiple* elements
 - ```
<p class="blog_entry">Blog paragraph.</p>
```
  - ```
<p class="blog_entry">Another blog paragraph.</p>
```



Document Type Definition

- Commonly referred to as **DOCTYPE** or **DTD**
- Should always be present at the very beginning of a standards-compliant HTML document
- Defines which type of HTML the document is written
 - which tags and attributes are allowed
- Three types of HTML:
 - **Strict**
 - **Transitional**
 - **Frameset**





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Strict HTML

- Includes all elements and attributes that have not been *deprecated*
 - outdated by newer methods
 - most deal with visual presentation
 - may become obsolete in future versions of HTML
- For documents that use Strict HTML, use this DOCTYPE:
- `<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01//EN
"http://www.w3.org/TR/html4/strict.dtd">`



Transitional HTML

- Includes all elements and attributes in Strict *plus* deprecated ones
- For documents that use Transitional HTML, use this DOCTYPE:
- `<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"
"http://www.w3.org/TR/html4/loose.dtd">`





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Frameset HTML

- Includes all elements and attributes in Transitional HTML plus *frame* elements as well
- For documents that use Frameset HTML, use this DOCTYPE
- `<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Frameset//EN"
"http://www.w3.org/TR/html4/frameset.dtd">`





Choosing a DOCTYPE

- Strict DOCTYPE
 - document should be written exactly to the Recommendation
 - required for the WDDBS Degree Program

- Transitional DOCTYPE
 - for designers transitioning to web standards
 - you are learning standards-compliant HTML, so not needed!!!

- Frameset DOCTYPE
 - for the usage of frames
 - sites that use frames can't be bookmarked, inaccessible to browsers for the disabled, and confuse search engines
 - for this reason they are rarely used today





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Uses for DOCTYPE

- Used by **web browsers** to determine which rendering mode to use:
 - quirks mode
 - standards mode
- Used by **validators** to determine which rules to check the document against
 - finds syntax errors in an HTML document





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Quirks Mode

- Failure to include DOCTYPE triggers it
- A rendering mode used by web browsers for non-standard HTML
 - to maintain backwards compatibility
- Browsers decide what rules to follow
 - inconsistent display across different browsers



Standards Mode

- A rendering mode used by web browsers for standards-compliant HTML
- Browsers follow rules set in the Recommendation
 - consistent display across different browsers





HTML 4.01 Strict Document

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01//EN"  
"http://www.w3.org/TR/html4/strict.dtd">  
<html>  
  <head>  
    <title>Document Title</title>  
  </head>  
  <body>  
    <p>Document content</p>  
  </body>  
</html>
```





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Basic Body Tags

- `<h1>` - `<h6>` - Defines headings
- `` - Defines an unordered list
- `` - Defines an ordered list
- `<i>` - Defines a list item
- `<dl>` - Defines a definition list
- `<dt>` - Defines a definition term
- `<dd>` - Defines a definition description





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Today's Lab

- Intro to HTML
 - Reading / Viewing Assignment
 - Daily Questions
 - Basic HTML
 - Career Goals - Basic HTML

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