Must-Have Web Skills
HTML, CSS and Javascript – The Three Foundational Pillars of Web Technology
By Terry Zimmer, UWM School of Continuing Education Instructor

When the web was ‘invented’ and the new-fangled notion that text could be interactive (hypertext) was introduced, the novelty of interactive (hyperactive?) content led to hundreds of really good and thousands of really bad ways to engage users. One common theme dominated: the web was all about sharing your own content.

Fast forward to Web 2.0 and suddenly it became all about other content besides your own. HTML5 and CSS3, the latest in hypertext markup and cascading styles, “grew up” in that hothouse of mashups and portal interfaces, conceived in collaboration and dedicated to the proposition that all content was created for others to share liberally.

The phrase “separation of content and presentation” captures the renewed imperative of these technologies. They empower authors, designers and developers to create a web presence that can be experienced wherever and however the user chooses.

One word of caution: like “separation of powers”, this phrase does not prescribe work that is performed in isolation. It does not mean that you focus on one (content) before you begin to think about the other (presentation). More to the point, you do not assign one person (the subject matter expert) the work of authoring content, another (the designer) the task of styling it and yet someone else (the developer) the job of putting it all together, and have each throw his or her work over the wall to the next person as finished.

Designer Cennydd Bowles says it well:

“Style and substance are irretrievably linked. Like space and time, they are neither separable nor the same thing – there exists no hierarchy between them, no primacy. One informs the other. The other informs the one. It’s impossible to perceive content and presentation separately. The two combine to create something more valuable: meaning.”

Good collaboration requires planning and communication. Communication requires a common vocabulary and language.
Enter HTML and CSS.

Understanding the possibilities offered by HTML and CSS helps the author to plan the content in a way that can be easily communicated to the designer. The author does not have to know how to make magic happen - only that there is a rabbit to pull out of a hat. Similarly, the author does not have to decide where to place the content, but can plan the content better with the knowledge of the catalog of ways to convey meaning.

The designer does not need to know how every switch and gauge works - but does need a language to tell the developer to “dial down” (or “dial up”) features to create an effective style. The developer should be able to explain why an idea would or would not work without drawing a whiteboard full of jargon-filled explanation.

Learning HTML, CSS and Javascript (which, together, form a three-pillar web technology foundation) is like hanging a shelf on your wall. Hanging a shelf teaches you that behind the surface (the drywall) stands a solid framework (the studs). That bit of knowledge may not qualify you to build a house, but it does inform your options in decorating it and help you understand why the contractor says it’s impossible (or at least expensive) to put an arch in a load-bearing wall. Having a little hands-on experience with HTML, CSS and Javascript informs how you plan and design the content. It brings all parties to the same table when the planning and design must be implemented.

With all the choices your users now have in how to engage your web presence, the task of authoring and presenting content has gotten a lot more interesting. Planning and communicating have become vital to creating powerful user experiences to achieve your organization’s objectives on the web.

Terry Zimmer is an IT architect who teaches a variety of web design and development skills at the UWM School of Continuing Education. Learn more about some of his upcoming courses:

- **JavaScript Programming** - Get an introduction to using a client-side scripting language for browsers, and the basic programming constructs in JavaScript.
- **HTML Part II** - Learn intermediate HTML techniques for better page organization and enhanced communication.
- **HTML5 APIs** - Create more powerful pages across multiple kinds of browsers, improving web presence and making web pages mobile-ready.