

Web Accessibility and Design, Fall 2007

EDIT/EDSE 526/426

Course Information

Semester: Fall 2007
Credit hours: 3.0

Instructor

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By appointment.

Course Description

This 3-credit course will enable students to use Macromedia Dreamweaver and other Web development tools to design and develop a comprehensive web site in accordance with universal web design standards and web accessibility guidelines as defined in Section 508 of the Rehabilitation Act and the Web Content Accessibility Guidelines (WCAG) 1.0. Students will learn to evaluate and report on the accessibility of existing web content from the perspective of different disability types, using a user-centered, principle-based approach.

Focus Areas

This course is has three focus areas:

1. **Semantic structure** of web content using XHTML
2. **Style and presentation** of web content using CSS
3. **Accessibility** of web content using universal design principles

Student Outcomes

The course is designed to enable students to:

1. **Evaluate the semantic structure and accessibility of existing web content** by:
 - o Defining and explaining the major issues and principles related to web accessibility and user adaptability
 - o Describing the current laws and standards concerning web accessibility.
 - o Judging the compliance of existing web content with accessibility guidelines using a combination of checklists, tools, and accessibility knowledge.
2. **Create web content that is accessible to a broad range of users, including people with disabilities** by:
 - o Hand-coding basic web content, structured in XHTML
 - o Styling XHTML-based content using basic CSS

- Developing a multi-featured web site that incorporates principles of web accessibility and user adaptability—in accordance with the Section 508 guidelines at a minimum—using Dreamweaver.

Professional/Technical Standards Taught

- XHTML (strict)
- CSS
- Section 508 of the Rehabilitation Act (the portion dealing with web accessibility standards)
- WCAG (Web Content Accessibility Guidelines)

Course Web Site

The course is available at <http://moodle.gmu.edu/>

Readings

Web-based resources will be provided by the instructor.

Software

Note: You do not necessarily need to buy any of the software listed below, but you will need access to it. All of the required software will be available in the classroom computer labs in Commerce I and Robinson A350. The lab in Robinson A350 usually has more public free-use time than Commerce I. Check with the lab schedules.

- **REQUIRED: A plain text editor.** One of the simplest text editors is Notepad in Windows, which will work just fine. You may prefer a more sophisticated text editor such as [PSPad](#) or [TextPad](#) (for Windows) or [Text Wrangler](#) (for Mac).
- **REQUIRED: Dreamweaver**, since the instructor will use Dreamweaver to demonstrate the techniques. Dreamweaver is available in the computer labs in Commerce I and Robinson A350 on campus. Students may also purchase their own copy at the discounted educational rate through the campus bookstore or any other retailer such as [AcademicSuperstore.com](#), [JourneyEd.com](#), [Gradware.com](#), [CampusTech.com](#), or others. A 30-day trial version is available for download from the Adobe site, but obviously the semester lasts more than 30 days, so you'll either need to buy it eventually, use the copy in the computer labs. (*Note: I may grant permission to use another web development tool if you feel you must use another tool, but I will not provide detailed instructions for any tool other than Dreamweaver.*)
- **Optional: Any graphics program** that can create graphics for the web. We will not learn techniques for any of these programs in this class (other classes do this), but if you already know how to use them, or if you are willing to try them, they are very useful. The computer labs have Adobe Photoshop and Adobe Fireworks. For those installing the software on their own computers, if you can't afford the more expensive programs, try the cheaper ones. If you don't like any of the programs in this list, try searching on the web for "free graphics programs" (or something similar) and you'll see that you have quite a few options. (Prices shown are approximate educational price.)
 - High-end graphics software (which is powerful but perhaps overly complicated for people who aren't used to it):

- *Adobe PhotoShop*—(Windows/Mac) very common among graphics professionals; can be purchased alone (about \$290) or in the Adobe Creative Suite (about \$380); the downside is that it is expensive and can be complicated to use.
- *Corel PhotoPaint*—(Windows) this is a powerful tool similar to PhotoShop; it comes with the CorelDraw Graphics suite (about \$90); the downside is that, like PhotoShop, this has many advanced features that can be difficult to get used to.
- *Corel Painter*—(Windows/Mac) for creating computer-based fine art; works best when used in conjunction with a graphics tablet; the downside is that it can be non-intuitive for non-artists (about \$100)
- *Gimp*—(Windows/Linux) FREE. This is a powerful graphics tool at the most reasonable price of all; as with the others, the downside is that the interface is sometimes confusing to people who haven't used advanced graphics programs.
- Mid-level software:
 - *Corel Paint Shop Pro*—(Windows/Mac) quite robust at a reasonable price (about \$40); quite user-friendly compared to some of the previously-mentioned programs.
 - *Adobe Fireworks*—(Windows/Mac) great for web graphics, it comes with Macromedia Studio 8 (about \$275); quite user-friendly.
 - *PhotoPlus*—Version 6 is free. Version 8 is \$9.99. This is a great option for students on a budget. It will do most things you need to do for the web.

Semester Schedule

This course is asynchronous, which means that you can read the materials and complete the assignments at any time of day. You may read ahead if you like, or procrastinate and fall behind. You are in charge of your own success in this course. Regardless of what type of schedule you choose, you must turn in assignments on time. A suggested schedule for reading the course materials is listed below:

Tentative Schedule of Activities

| Dates | Classes | Assignments |
|----------------------|---|---|
| Aug. 27 | <ul style="list-style-type: none"> • Read General Course Info and Assignments • Topic 1: Overview of Accessibility and Web Design | |
| Aug. 31 (Tuesday) | — | Due: Assignment 1. Update your profile and introduce yourself to the class (3% of final grade) |
| Sep. 3 | LABOR DAY HOLIDAY: NO CLASS | |
| Sep. 10 | <ul style="list-style-type: none"> • Learning XHTML | Due: Assignment 2. Discussion forum questions (7% of final grade) |
| Sep. 17 | <ul style="list-style-type: none"> • Learning XHTML (continued) | — |
| Sep. 24 | <ul style="list-style-type: none"> • Dreamweaver & FTP | Due: Assignment 3. Create 2 practice XHTML documents |

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| | | (15% of final grade) |
| Oct. 1 | <ul style="list-style-type: none"> • Templates, site structure, and navigation | |
| Oct. 8 | COLUMBUS DAY: CLASS IS TUESDAY! | |
| Oct. 9 (Tuesday) | <ul style="list-style-type: none"> • Cascading Style Sheets (CSS) | Due: Assignment 4. Upload a practice template and web site (15% of final grade) |
| Oct. 15 | <ul style="list-style-type: none"> • Accessibility: Disability Types • Accessibility: POUR (Perceivable, Operable, Understandable, Robust) • Accessibility: Laws and Standards | |
| Oct. 22 | <ul style="list-style-type: none"> • Accessibility: Images • Accessibility: Tables • Accessibility: Forms • Accessibility: Frames | |
| Oct. 29 | <ul style="list-style-type: none"> • Accessibility: Accessibility Evaluation Tools (and their limitations) • Accessibility: Semantic Structure • Accessibility: Microsoft Office • Accessibility: Adobe PDF | |
| Nov. 5 | <ul style="list-style-type: none"> • Accessibility: Captions • Accessibility: Flash • Accessibility: JavaScript | |
| Nov. 12 | <ul style="list-style-type: none"> • More on Templates and Navigation • Hands-on CSS | |
| Nov. 19 | <ul style="list-style-type: none"> • More hands-on CSS | Due: Assignment 5 Accessibility Evaluation (25% of final grade) |
| Nov. 26 | <ul style="list-style-type: none"> • Special Topics: Depending on class needs and preferences • Open lab: Work on Final Project | |
| Dec. 3 | <ul style="list-style-type: none"> • Special Topics: Depending on class needs and preferences • Open lab: Work on Final Project | |
| Dec. 10 | READING DAY: NO CLASS | |
| Dec. 12 (Tuesday) | | Due: Assignment 6 Web Design Project (25% of final grade) Due: Assignment 7 Web Design Project Checklist |

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| | (5% of final grade) |
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Grades

Grading Scale

| Points | Grade |
|-------------|-------|
| 94-100 | A |
| 90-93 | A- |
| 87-89 | B+ |
| 84-86 | B |
| 80-83 | B- |
| 70-79 | C |
| 69 or below | F |
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General Grading Criteria

| Credit | Criteria |
|----------------|--|
| Full credit | The student completed the assignment as directed <i>AND</i> on time. |
| Partial credit | The student did not finish the assignment, turned in the assignment late, or did not follow the instructions properly. |
| No credit | The student did not turn in the assignment, or turned it in more than a week late. |

CEHD Statement of Expectations

The College of Education and Human Development (CEHD) expects that all students abide by the following:

- Students are expected to exhibit professional behavior and dispositions. See <http://gse.gmu.edu> for a listing of these dispositions.
- Students must follow the guidelines of the University Honor Code. See http://www.gmu.edu/catalog/apolicies/#TOC_H12 for the full honor code.
- Students must agree to abide by the university policy for Responsible Use of Computing. See <http://mail.gmu.edu> and click on Responsible Use of Computing at the bottom of the screen.

Students with disabilities who seek accommodations in a course must be registered with the GMU Disability Resource Center (DRC) and inform the instructor, in writing, at the beginning of the semester. See www.gmu.edu/student/drc or call 703-993-2474 to access the DRC.