Web System Design and Management

GLIS 634

Fall 2017

Quick Links

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Duration: Sept. 8th - Dec. 1st, 2017

Class times: Fridays, 11:30 - 2:30 pm

Location: LEA 212

Labs : LEA 212; during 2nd half of class

Office hours : Contact TA via email. Appointment with instructor upon request.

Description

This course seeks to provide students with the skills and understanding that they will need to create modern web sites that are appreciated by users: the strategy, design, and management of a web site.

- Principles and practices of designing websites in the context of information organizations.
- Conceptual approach to organizing information for the World Wide Web including design and implementation.
- **Topics include:** Web development tools, markup languages, and Javascript.

Learning Objectives

- **Foundations:** Understand the history and architecture of the World Wide Web and its relevance to the organization and dissemination of information; Understand the relevance of the World Wide Web to the information professions.
- **Development:** Understand how HTML and CSS are used to create web pages; Understand how technologies such as JavaScript and PHP are used to create dynamic web sites; Understand the issues relating to developing web sites for mobile and other non-traditional devices; Understand how to create content for the web; Create web pages using HTML and CSS;
- **Design:** Understand the various components that make up a site's information architecture (organization, navigation, page layout); Create an information architecture for a web site; Understand how to assess the usability of an existing web site; Understand the importance of branding in web site design.
- **Management:** Understand the elements of a web strategy; Create a web strategy for an organization.

Course schedule

Week	Date	Title	Readings
1	Sept.8	Introduction Web Strategy **Make teams**	Krug 8,9
2	Sept.15	HTML 1 **Find 2-3 library Web sites that need change**	Duckett 1-3
3	Sept.22	HTML 2 **Send team composition and chosen site to instructor** **Exercise 1**	Duckett 4-6, 8
4	Sept.29	CSS 1 **Exercise 2**	Duckett 10-12
5	Oct.6	CSS 2 **Exercise 3**	Duckett 13, 14, 16
6	Oct.13	Study Break	
7	Oct.20	CSS Page Layout **Exercise 4** **Project Briefs due at 11:59pm**	Ducket 15, Krug 3,4,6,7
8	Oct.27	Javascript 1: dynamic pages with JavaScript **Exercise 5**	Duckett 7, Goodman Part II (5,8,9,12,14)
9	Mov.3	Javascript 2: jQuery	Chaffer 2,3,4
10	Nov.10	Site Organization and Navigation **Exercise 6**	Morville 4-9, 11, 12
11	Nov.17	Usability **Exercise 7 due at 11:59pm**	Krug 1, 2, 10, 11
12	Nov.24	Content Management Systems (CMS) **Site Proposals due at 11:59pm**	
13	Dec.1	**Team Presentations - Site Proposals** **Submit slides on myCourses before 6:00pm the day before.** **Teammate assessements due next day on Dec. 2nd at 11:59pm**	
14	Dec.8, 1-3pm	**Final Exam. EDU 431**	HTML, CSS, Javascript, Slides, readings

Textbooks

The following textbooks are all freely available from McGill libraries.

- Duckett, Jon (2011). *HTML & CSS: Design and Build Websites.* Indianapolis, IN: John Wiley & Sons. http://mcgill.worldcat.org/oclc/796829490
  - **Note:** this is a personnal recommendation. There are excellent freely available online tutorials for HTML/CSS; for example, w3schools.com

- Krug, Steve (2006). *Don't Make Me Think.* 2nd ed. Indianapolis, IN: New Riders. http://mcgill.worldcat.org/oclc/61895021

- Morville, Peter and Louis Rosenfeld (2007). *Information Architecture for the World Wide Web.* 3rd ed. Sepastopol, CA: O'Reilly. http://mcgill.worldcat.org/oclc/86110226

- Goodman, Danny (2010). *JavaScript bible.* 7th ed. Hoboken, N.J., Wiley. http://mcgill.worldcat.org/oclc/682621164

- Chaffer, Jonathan, and Karl Swedberg (2007). *Learning jQuery: better interaction design and web development with simple JavaScript techniques.* Packt Publishing. http://mcgill.worldcat.org/oclc/772917700
  - jQuery API documentation provides simple examples. http://api.jquery.com/

Software

Software purchase is not necessary for this course. Freely available code editors do a fine job.
We use Komodo Edit (not the paid "IDE" version), which is installed in the computer lab. See https://www.activestate.com/komodo-ide/downloads/edit for installation details. Careful to select Komodo **Edit** (as opposed to Komodo **IDE**, which is the paid version).

Assessments

HTML, CSS, and Javascript exercises (20%, individual)

A series of increasingly demanding individual HTML, CSS and Javascript exercises submitted over several weeks, details of the exercises will be provided in separate handouts:

1. **Report Markup:** Create a simple HTML page (easy)

2. **Image Gallery:** Create multiple HTML pages with images (easy)

3. **Report Display:** Use CSS to change how the report from exercise #1 is displayed (Medium)

4. **Annual Report:** Use HTML and CSS to recreate the formatting of a business document (Medium)

5. **Positioning:** Using CSS positioning to create standard layouts. (Hard)

6. **Javascript:** Using Javascript to make a dynamic web page. (Hard)

7. **Curriculum Vitae Assignment (20%):** Create a web version of your CV. Exercise 7 will not be graded unless exercises 1-6 are submitted on time (see note below).

Exercises 1-6 will not be graded but **you must submit them** the night before their respective in-class review (see schedule) at 11:59pm. Failure to submit any assignment will result in a **25% deduction** for exercise 7.

Note that exercises 1-2 are easy: do not get lured into a false sense of security by assuming the rest are just as easy. They are not.

Each exercise must meet the following criteria:

- HTML code must [validate as HTML5](#).
- CSS must [validate as CSS 3](#).
- *Note:* exercises that do not validate will be ***deducted by 50%***
- Be sure to follow submitting rules stated [below](#).
- HTML & CSS can look different in various browsers (e.g., Internet Explorer, Safari, Chrome, FireFox, etc.): for the purposes of this course, at the very least, ensure that your code works perfectly in the most popular browser.
- For all elements, your CSS must set cascading default values for
    - colors,
    - font families, and
    - font sizes.
- When styles are used, they must be in one or many external style sheets. Exercises that use document or inline styles will be ***deducted by 25%.***
- Use a good number of tags, attributes, and CSS properties. Demonstrate that you've learned and tried various options. This being said, **don't use a feature just for the sake of it:** implement a feature because it makes sense.
- **Everything eventually changes.** Your HTML, CSS and Javascript **must** be well organized and formated (e.g.: proper indenting) to make it easy for someone else to read and maintain.
- **The work must be your own.** Using tools or web sites that generate code will be considered plagiarism. Such generated code is easy to recognize.

Web Site Redesign Project Brief (20%, group)

You will prepare a specification for the redesign of an existing web site of a public library or archive. This defines a web strategy and its articulation in terms of the primary users of the site and the tasks they need to perform.

The point of this exercise is to establish with the client what are the issues, and get them to agree on these issues *before* providing solutions.

Requirements

The project brief must include the following:

1. An executive summary (1 page max.)

2. A brief overview of the library/archive, and the community it serves.

3. The overall mission and goals of the library/archive.

4. The top three goals that the library/archive has for its web site, in order of priority*. These are goals that you decide upon based on your understanding of the library/archive, its community, and the capabilities of the web.
Goals should be formulated in terms of what the site should do for the organization.

5. List and briefly describe the top three categories of people who are the primary audiences for the library/archive's web site, in order of priority*. Note that overly broad user groups such as "adults" or "citizens" or "general users" or "everybody" are not useful user groups because they do not tell you anything about how you should design you site. Every community has stronger concentrations of some kinds of people based on education, revenu, family, etc. Find survey data if you have to but establish useful user groups.

6. For each category of user, list, describe, and prioritize * their primary uses of the site. These are the tasks that users should be able to complete or that the site should support
Note: your tasks should balance the priorities of the library and the priorities of the user.

7. A brief assessment of the library/archive's current web site, focusing on how well it meets or does not meet the site goals and tasks you have defined above.
Note: The assessment of the current site should not be a series of solutions. It is a listing of issues (e.g., poor navigation, missing content, etc.), and why these are issues (e.g., wasted time, errors, etc.).

8. Be sure to follow submitting rules stated below.

Follow the list with a brief justification for your selection and prioritization.

Project Teams

You will form teams of four people (baring approved exception).
Teams are expected to communicate and work together throughout the semester. Everyone on the team is responsible for the entire work, and will receive the same grade for the work submitted.

Conflicts between team members should be addressed as soon as possible using honest communication.

Unresolvable issues should be brought to the instructor's attention as soon as possible.

Selecting a library/archive Web Site

The library/archive you choose should be a public library or archive from a North American city or town.

For libraries, ideally there should be only one branch serving the population, although you can choose a situation where there are 2-3 branches (i.e. you cannot choose a city like Montreal or Toronto that has a public library system made up of a large number of branches).

Most importantly, the web site should be, in your opinion, in need of redesign.

Audience

The report should be written with the assumption that it will be read by the team of librarians/archivists and developers who will be coming up with a new design for the website, as well as the librarians/archivists who work at the public library/archive in question.

Format

The report should be written as concisely as possible. Use headings to organize your report and make it easy to scan. Make good use of lists (bulleted or numbered) and tables to convey information. Avoid the long paragraphs of prose common to most academic papers.

Consistently use either APA or MLA citation style.

Marks will be deducted from papers that are poorly formatted, organized, presented and/or written.

Your report should contain **no more than 2000 words** (not including the cover page and bibliography). Be concise in your writing, focus on the things that are more important as opposed to being comprehensive.

Be sure to follow submitting rules stated below.

Site Proposal (30%, group)

You will work in the same project teams to develop a proposal and prototype Web site to meet the needs of the library/archive described by the Project Brief.

Site Proposal Requirements

- An executive summary (1 page max.)
- Strategy and objectives: restate the web strategy and site objectives for the site in your own words based on conversations with the "client" (i.e. the originating project team).
- Information architecture: propose an information architecture for a site that will support the web strategy. Your information architecture must include:
  - A site structure diagram showing the pages in the site and how they are organized.
  - A general description of the visual elements making up the site described by wireframe diagrams showing the layout for the home page and at least one 'inside' page.

  Your information architecture must be text-complete, i.e. it must use the actual text that will be presented on the site. This being said, long text can be replaced by placeholder copy.

- Operational plan: Outline the ongoing work that would be involved in operating the proposed web site.

- Performance: Describe how you would measure the performance of the site to determine if it was successful.
- Home Page Prototype: code the HTML/CSS for the home page of the proposed web site.
  Note: as usual you must use the css reset.

Format

Your proposal should be **somewhere between 2000-3000 words** in length, not including the cover page and bibliography. This word count should only be considered a rough guide, as a good portion of your proposal will likely be presented using diagrams, illustrations, and tables that provide a lot of information without increasing the word count significantly. Again, remember that it is better to focus on the things that are more important than it is to be comprehensive.

Use headings to organize your report and make it easy to scan. Make good use of lists (bulleted or numbered) and tables to convey information. Avoid the long paragraphs of prose common to most academic papers.

Your report should consistently use either APA or MLA citation style.

Note that you still need to properly cite any sources as you would in any academic paper.

Marks will be deducted from papers that are poorly formatted, organized, presented and/or written.

Be sure to follow submitting rules stated below.

Audience

The report should be written with the assumption that it will be read by:

1. the client (i.e. the project team who wrote the brief)
2. the librarians who work at the public library/archive in question
3. the design and development teams would use the document to plan, estimate, and carry out the first iterations of the site development.

Presentation (5/30 points)

As part of this assignment your team will need to do a presentation to the class that should generally be **no more than 8 minutes**. The exact time limit of the presentations will depend on the number of projects: it is announced in the weeks prior to the presentation. Aim for 8±2 minutes.

Exceeding the given time limit will result in an automatic 10% deduction.

You will present the library/archive, its community, as well as the web goals and target audience for the site.The objective is to **present your site design to the "client"**. The audience should be able to:

1. understand the design you are proposing
2. believe it meets the requirements defined in the project brief

3. Clearly state how your solution will add value (e.g., increased traffic, better communication, etc.). How does your solution address the issues of the current situation? What were the issues, show the improvement with your solution

The presentation must include a **PowerPoint slide deck** that has to be submitted to myCourses the day before. For the sake of efficiency, ***no other type of slide deck format is accepted***.

You will present the submitted slide deck. No changes or additional files will be permitted between the submission and the presentation.

Be sure to follow submitting rules stated below.

Each person on the team has to present.

You do not have to provide the full design proposal report to the audience; prioritize and choose the content to present.

The following presentation guidelines should be followed:

- You must practice your presentation orally as a group to ensure timing and transitions.
- You cannot simply paste text from your proposal into your slides. You must make short bullet points that summarize an idea you will talk about.
- You cannot simply paste a complex diagram from your proposal into your slides as this will make it illegible and overload the slide. Make smaller zoom-in images to talk about portions.
- If you show it, make sure we can see/read it. Careful with small font or diagrams.
- If you show it, talk about it. No point showing content that is not presented orally.
- Present an outline at the start of the presentation to set the expectations of the audience.
- Project your voice with energy! Talk to the audience as opposed to your slides or paper.
- If you show your actual design you can receive early feedback.

Evaluation

The following grid will guide the evaluation of the presentation and project:

	Excellent (A)	Good (B)	Not Satisfactory (F)
Organization of ideas	The presentation is clearly and logically structured. Ideas are well articulated and communicated. Reader can follow line of reasoning. Details are minimized so that	The presentation is clearly and logically structured. Ideas are articulated. A few minor points may be confusing.	Organization is not evident. Lack of connection between ideas. Arguments are not clear. Reader can follow only with effort.

	main points stand out.		
Writing and visuals	Language is coherent and precise. Slides are clear, uncluttered, and easy to read. Bullets are used effectively to convey the message. Aesthetically slides are pleasing.	Language is clear and precise. Slides are a little cluttered with too much writing, but fairly easy to understand. Aesthetically slides are simple and plain.	Language is vague. Slides are cluttered, difficult to follow, containing whole paragraphs. The use of colours and fonts are distracting and do not enhance the presentation.
Solution Design	The problem statement is motivated and clearly modeled. Motivation for main user groups and tasks is clear. Choice of significant problems to solve is clearly motivated. Solutions are clearly explained, compared with alternatives. The audience is clearly shown how the solutions solve the problems. The overall content compellingly shows the potential impact of the web site.	The problem statement is well defined. With a few exceptions, elements are well justified. Presented facts or opinions are clearly identified and explained. The Web site is usable. There are a few usability concerns. The content is compelling but leaves a few unanswered concerns.	The problem statement is poorly defined. Missing explanations and motivations for choices. It is not clear how the solutions will address which issues. The solution Web site is a slight modification of the original.

Teammate Assessment (2.5% for the assessor, 2.5% from other team members)

Each team member will assess the overall performance of overy other teammate. The quality of the assessment will dictate your score on 2.5%, and the assessments from your teammates will greatly influence your score on 2.5%, as ultimately chosen by the instructor.

Assign a score to each teammate (1 to 5) that represents your willingness to work with this person again.

Each teammate's assessment should be a maximum of **200-250 words (could be much less), for a maximum total of 600-800 words**.
Do not feel obliged to say anything if everything went well. The text should explain **only** less than perfect scores.

Be sure to follow submitting rules stated below.

Final Exam - HTML/CSS (25%)

The final exam covers theory (i.e., slides and readings) and your practical knowledge of HTML/CSS.

All documentation is allowed up to 4 double sided 8.5 by 11 in. paper sheets. You can use both sides of the paper for total of 8 pages of notes. Notes can be in any format (e.g., printed, handwritten, etc.).

Submitting your assignments

- All assignments must be submitted electronically using the Assignments tool in myCourses. **Email submissions are not accepted.**

- Submissions that contain **multiple files must be packaged in a single zip file**. No other formats are acceptable (e.g., RAR, multiple files).
  Multi-file submissions not packaged in a single zip file will be deducted by 20%.
  Single file submissions can be submitted as is without zipping.

- **All diagrams, tables, etc. must be inserted in your document**: they cannot be submitted as separate files (.xls, .pdf, etc).

- Late assignments will not be accepted, and will receive a grade of zero (0). Extensions are only granted in the most exceptional of circumstances, and they must be requested at least one week before the assignment is due.

General Information

Academic Integrity

McGill University values academic integrity. Therefore, all students must understand the meaning and consequences of cheating, plagiarism and other academic offences under the Code of Student Council and Disciplinary Procedures. See www.mcgill.ca/students/srr/honest/ for more information.

Academic Policies

Additional policies governing academic issues which affect students can be found in the McGill Charter of Students' Rights.

Language of Instruction

In accord with McGill University's Charter of Students' Rights, students in this course have the right to submit in English or in French any written work that is to be graded.

Students with disabilities

If you have a disability please consult the Office for Students with Disabilities

Syllabus may change

In the event of extraordinary circumstances beyond the University's control, the content and/or evaluation scheme in this course is subject to change.