INSTRUCTOR
Seth Shaw
Office location: Baker University Center 316C
Office hours: Face-to-face, phone, WebEx: Monday through Friday, 10:00 A.M. – 2:00 P.M. EST, as available. Evening appointments are possible by appointment.

PREREQUISITES
ARST 5100 · Archives and Technology

CREDIT
3 weekly contact hours

SCHEDULE AND LOCATION
- Lectures: Wednesdays, 6:30 – 8:30 P.M. via WebEx

COURSE FORMAT
Online course including weekly, synchronous lectures by the professor and asynchronous discussion of the readings by the students.

COURSE DESCRIPTION
This course will provide a framework for understanding appraisal theory and how it is important in archival work. Students will learn the methods and procedures that archivists use to identify, evaluate, acquire, authenticate, and dispose of records in all formats. Review of theories and frameworks that archivists have used to guide appraisal work will enable students to make informed professional decisions concerning the selection and acquisition of archival material. The issues of collection development policies, ownership, and intellectual property rights will also be covered.

COURSE LEARNING OUTCOMES
1. Explain and differentiate the nature of web documents as records.
2. Describe the technical infrastructure of the internet, including identifying and describing the types of standards & technologies used for the web.
3. Apply core web standards and best practices to create websites and pages
4. To demonstrate principles of dynamic web content
5. Describe the common approaches to web-capture and their impact on preservation & access.
6. Analyze the organization and appraise the value of web content in terms of archival principles of provenance and original order

READINGS AND RESOURCES

Required texts
Note: The texts below are being reviewed and may be replaced with online materials. They are listed here and in the course outline to give a sense of the amount of required reading.


Optional texts and useful information

- W3Schools (Refsnes Data, 1999-2012). Offers many tutorials to complement the lectures and exercises. See http://w3schools.com/.

**Grading**

Class participation (lectures and discussion): 20%
Assignments (5 through the semester): 50%
Exams (Midterm & Final): 30%

**Expectations**

Students are responsible for their own education. Throughout the course, students should assess their progress towards the course objectives and outcomes. At the same time, the course instructor is responsible to facilitate students’ learning by structuring content, by providing a foundation of information through readings and lectures, by guiding discussion, and by answering students’ questions.

Students should bring curiosity and creativity to the course. They are expected to think critically about the course content – both the readings, the lectures, and discussion. Students are encouraged to (respectfully) challenge the ideas presented in the course. Those challenges must be justified based on the literature, empirical evidence, or other authoritative source. When evidence is contradictory, students should develop a synthesis that finds commonalities, identifies differences, and notes how a particular context may influence that synthesis. As such, there is seldom a "right" answer, but well-reasoned and well-informed points of view.

Students are expected to find, read, and share additional, relevant works and incorporate the ideas into class discussions.

**Computing Requirements and Responsibilities**

Each student enrolled at Clayton State University is required to have ready access throughout the semester to a notebook computer that meets faculty-approved hardware and software requirements for the student’s academic program. Students may use either a Windows (XP, Vista, 7 or 8) or Macintosh (OS X) computer. Computers should have at least 2GB of RAM, and 4GB or more is highly recommended. Computers must have at least 50GB free disk space.

Students must have a connection to the internet with sufficient bandwidth to participate in live video lectures. Connections using broadband cable modem are generally the best, and DSL is usually acceptable. Wireless broadband may not be adequate, and dial-up access is not acceptable.

Lectures and office hours (especially technical support) require a robust connection using WebEx. Students are responsible for working with WebEx to troubleshoot any problems that prevent them from connecting or maintaining a stable connection.

Students must configure their system so that there is no extraneous noise of audio feedback during lectures. The best solution is the use of a USB headset (earphones and microphones) similar to the Logitech USB Headset H390 (http://www.logitech.com/en-us/product/stereo-headset-h390?crid=36), which retails for approximately $25.

Students must have a webcam; an internal webcam in a laptop is acceptable. Microsoft’s Lifecam Studio USB webcam (https://www.microsoft.com/hardware/en-us/p/lifecam-studio/) retails for approximately $50.
**COURSE SCHEDULE**

*Dates are based on the January 2014 schedule and are included to suggest a sense of time requirements. Dates in future courses will vary as a result of start date, day of week, and holidays.*

<table>
<thead>
<tr>
<th>15 Jan — 1. Introduction and Orientation</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Web rapidly became more than a technology. It has become pervasive, affecting work and play, disintermediating services, and collapsing distances. The web provides both challenges and opportunities for recordkeeping and archives, both as a source of records and as a means to provide access to their collections.</td>
</tr>
</tbody>
</table>

*You should be able*

- To describe the origins of the web, including distinctions among the web, the internet, extranets, and other internet-based applications.
- To define hypertext and HTML.
- To describe the nature of web content as layered representations.
- To distinguish various roles involved in web development.

*Readings*


*Optional*


<table>
<thead>
<tr>
<th>22 Jan — 2. Infrastructure</th>
</tr>
</thead>
<tbody>
<tr>
<td>A browser (client) requesting content from a website triggers a response from a server. How the server responds depends on a number of factors, including the website software and the organization of the content.</td>
</tr>
</tbody>
</table>

*You should be able*

- To describe a client-server interaction under http.
- To define common web servers (IIS, Apache) and hosting solutions (shared, dedicated private, & virtually private).
- To describe the difference between simple, static sites and dynamic sites (including CMS).
- To locate Apache configuration files in a Linux environment.
- To describe the relationship between dev and prod.
- To create a dev environment and sync files with prod.

*Readings*

- Robbins. Ch. 1-3.

Assignment 1: Setup a web development environment. Due 2013-02-07 23:59.
Setting policies and procedures to organize the content on a website will make it easier to manage and can make the site easier to use and preserve. The organization and presentation of information is more than a matter of aesthetics. Good design makes it easy to find and use websites and other applications. Conventions and principles provide a good starting point for effective design, but even basic testing can significantly improve usability.

You should be able
- To articulate a policy for the audience, content, and outcomes of a website.
- To discuss what makes a website easy to use.
- To develop and implement a simple web architecture, including key components (for example, home page, contacts, about us, index, privacy) and navigation patterns.
- To explain the relationship between URL paths and information architecture
- To discuss naming conventions for files and directories.
- To describe mechanisms for maintaining site consistency (i.e. style guides, templates, and includes).
- To write for the web.

Readings

Reference

5 Feb — 4. Markup I (Basic HTML documents)

Basic elements of web markup. Variety of web development environments ranging from plain-text editors to graphical editing tools.

You should be able
- To distinguish structural, presentational, and hypertext markup.
- To describe the history of HTML
- To describe the use of document type declarations
- To describe the common methods of generating HTML
- To create a simple page using doctype, head, title, html, body, h, p, br, ol, ul, li, cite, blockquote, hr.
- To create structure in a simple page using div elements (to avoid table layouts).
- To use the elements table, th, tr, td, colspan, & rowspan.
- To describe the principles of valid and well-formed code; to use html validators.
- To transfer files to a server using ssh.

Readings
- Robbins, Ch. 4 - 5 & 8.

Optional Readings

Assignment 3:
Web Markup.
Due: 2013-02-28 23:59

12 Feb — 5. Markup II (Hypertext & media)

Basic elements for linking and embedding content. I.e. what puts the “HT” (Hyper-text) in HTML.

You should be able
- To create links, including external (absolute & relative) & internal (anchors).
- To create tags for embedding media (img, object)
- To define common image formats: TIFF, GIF, JPG, PNG
- To be able to discuss aspects of sizing graphics for the web (pixel dimensions & color/bit-depth)
- To discuss the use of streaming media.
- To describe the alt & metatags elements.

Readings
- Robbins, Ch. 6, 7, & 10.

Optional
- Robbins, Ch. 21 & 22.
19 Feb — 6. Markup III (Style)

Basic elements and strategies for modifying the appearance of HTML (& other XML) documents using Cascading Style Sheets (CSS).

You should be able
- To identify common design considerations (type, color, and space)
- To apply common section classes & identifiers, including header, nav, menu, content, article, section, aside, and footer.
- To use style elements to apply common formatting to HTML text & objects.
- To describe the RGB color model and how to represent colors using the model
- To modify and adapt an existing stylesheet.
- To evaluate the use of external stylesheets and internal style commands.

Readings
- Robbins, Ch. 11, 14, & 15.

Reference
- Robbins, Ch. 12, 13, 16 – 18
- Nixon, Ch. 18-19.
- Russ Weakley. “CSS Layouts” (Maxdesign, 2002).
- “HTML Layouts” (w3schools.com, checked 3 Mar 2013).
  http://www.w3schools.com/html/html_layout.asp
- “CSS Examples” (w3schools.com, checked 3 Mar 2013).
  http://www.w3schools.com/css/css_examples.asp

26 Feb — 7. Midterm Exam

The exam will be available on the website at 6:30 p.m. Completed exams must be submitted by 9:00 p.m.

5 Mar — 8. Dynamic Websites I (Coding Basics: Forms & JavaScript)

Introduce the basic elements of procedural programming using JavaScript in the client (browser) & the use of web forms.

You should be able
- To define synchronous and asynchronous interaction.
- To create a simple form with input, selection, option, textarea.
  - Describe variables and how they are used.
  - Understand & manipulate a web query string (GET Requests)
- To use JavaScript syntax to read and write
  - A simple statement
  - Conditionals
  - Looping & incrementing counters
  - Commenting code and documentation.

Assignment 4:
Web Coding.
Due: 2013-04-04 24:00.
Readings
- Robbins, Ch. 9 & 19-20.

Reference
- Nixon, Ch 13-16.

Optional
- CodeAcademy: JavaScript (online tutorial)
  http://www.codecademy.com/tracks/javascript

7 Mar — Midterm
Last day to withdraw from class and receive a passing grade (W). Withdrawing after this date automatically receives a WF (failing).

12 Mar. — Spring Break
No class.

19 Mar — 9. Dynamic Websites II (Coding Basics: PHP & Strings)
Revisits procedural programming using PHP on the server. String searching and manipulation.

You should be able
- To read and write PHP syntax
  · Statements
  · Conditionals
  · Looping & incrementing counters
  · Commenting code and documentation.
  · Function calls
- To parse strings, including substr, trim, concatenation.
- To describe the use of regular expressions for pattern matching

Readings
- Nixon. Chapter 3 – 5, 11
- PHP String Variables. PHP Tutorial (W3Schools).
  http://www.w3schools.com/php/php_string.asp

Optional

Reference
- PHP Tutorial (W3Schools). http://w3schools.com/php/default.asp
26 Mar — 10. Dynamic Websites III (Accessing Data)
Continues discussion of procedural programming including using PHP to access a
database and JavaScript to access RESTful webservice.

You should be able
- To connect to a database and generating output. (server-side requests)
- To use AJAX (client-side requests)
  - Describe RESTful interfaces
  - Recognize common data interchange formats and explain their purpose (e.g.
    XML & JSON)

Readings
- Nixon, 10 & 17

Optional
  http://arstechnica.com/information-technology/2012/12/web-served-part-4-get-your-
  database-on/.
  http://arstechnica.com/information-technology/2012/12/web-served-part-5-a-blog-of-
  your-own/ Optional.

Reference
- “PHP MySQL Introduction” (W3Schools.com).
  http://w3schools.com/php/php_mysql_intro.asp
- “AJAX Tutorial” (W3Schools.com). http://www.w3schools.com/ajax/

2 Apr — 11. Crawling & Search
Web design can have a significant impact on how pages are indexed and ranked in
searches.

You should be able
- To discuss basic search engine optimization.
- To explain the use of web analytics.
- To use sitemaps to enhance discovery by search engines.
- To use of robots.txt to control search engine access to a site.
- To describe webmaster tools from Google and Bing.

Readings
- Prom, Christopher J. “Using Web Analytics to Improve Online Access to Archival
- About, creating, and submitting sitemaps. At WebMaster Tools Help (Google).
  http://support.google.com/webmasters/bin/topic.py?topic=8476
  Questions,” http://www.robotstxt.org/faq.html, including the links to about 35 short
  subsections.
- Search Engine Optimization Starter Guide (Google, 2010).
  http://static.googleusercontent.com/external_content/untrusted_dlcp/www.google.co
9 Apr — 12. Web Archiving I (Theory)

The use of the web for record content has complicated archival processes. How do we adjust the archival process to account for the nature of web-based record content?

You should be able
- To explain the challenges and opportunities of selection and appraisal of web content.
- To explain how to describe a website in an archival manner.
- To describe the three common capture methodologies (local/static, WARC+proxy, API). Expanded on next week.

Readings

Optional

16 Apr — 13. Web Archiving II (Practice)

There are several approaches to capturing and preserving web content. This week we will explore when these approaches are appropriate and how they are done.

You should be able
- To describe the affordances for each of the three common capture methodologies
- To select an appropriate capture method for the record & archival context.

Readings

Reference

Assignment 5: Web Capture.
Due: 2013-05-02 24:00.
Optional

23 Apr — 14. Semantic Web
Although computers can currently index content well they have difficulty understanding the content. The semantic web is an attempt to give explicit meaning to web content.

You should be able
- To describe the fundamental concepts of the semantic web.
- To compare the difference between the semantic web and traditional web.
- To add microdata to simple webpages

Readings

Extra credit: Microdata. Due: 2013-05-07 24:00.

30 Apr — 15. Review, Wrap-up, & Implications
An overview of all the content discussed this semester.

7 May — 16. Final Exam period
The exam will be available on the website at 6:30 p.m. Completed exams must be submitted by 9:00 p.m. No late work accepted after this day.