Course Description

Course Prefix and Number:  LBSC 671
Course Title: Creating Information Infrastructures
Credits: 3

Time: Section - 12:01 am Tuesdays to 11:59pm Mondays
Location Section – Online

Class Website http://elms.umd.edu

First day of class: August 30, 2016
Last day of class: December 12, 2016

Instructor Information

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Contact Information

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Course listserv: lbsc671-sg01-fall16@coursemail.umd.edu
Office Hours

Online: In general I am available 9am - 11am on Saturdays but I have not found that standing office hours work well in an online setting. To setup a time to meet with me just get in touch via email (mitcheet@gmail.com is the fastest way to reach me) and we can setup a time to chat throughout the week.

By appointment over email, phone, or other means as necessary

Course Description

Creating Information Infrastructures introduces students to the foundations of acquiring and managing collections, information structures, indexing and discovery systems in Library and Information Studies. The course introduces theoretical concepts, trends, systems, and technologies central to this area of the field and equips students with the skills and conceptual background to create and manage information systems and services. The course is centered on the exploration of library and archival information systems, with students working to create, index, and produce their own objects and descriptive metadata for physical and digital contexts. In order to introduce students to the broad world of information institutions, how they manage resources and provide access for their users the course is broken into four thematic areas:

• **Terms of reference:** What are information institutions, and in what social context do they exist?
• **Get it:** What kinds of resources do information institutions manage, and how do they come to have them?
• **Find it:** How do institutions manage these resources, what conceptual and functional skills are required for this work, and what benefits and limitations exist for each approach (e.g., automated vs. manual)
• **Serve it:** How do information institutions provide access to these resources in physical and Web-based settings

A central goal of the course is to develop student proficiency that will support their graduate work in the remaining core and elective classes.

Student learning outcomes

1. Demonstrate mastery of concepts, models and information structures for life-cycle management of information assets by libraries, archives, and schools.
2. Demonstrate knowledge of the capabilities and limitations of current methods for acquisition, preservation, management, discovery and delivery of information in physical and digital form.
3. Demonstrate proficiency in creating and applying models, schema, representations and encodings for organizing information.
4. Demonstrate proficiency in designing and implementing information services that leverage current technologies.
5. Demonstrate familiarity with the effects of current trends in information creation, information technology, and information use on methods for acquisition, preservation, organization, management, discovery, and delivery of information.
Electronic support

ELMS

This class will make use of the UMD ELMS system for course information distribution and assignment submission. The course is located at http://elms.umd.edu

Course Listserv

You have been subscribed to the course listserv. This list will be used for course information and may be used to post questions, observations, and discuss issues.

To send messages to the class list use the information in the listserv welcome message that you receive.

Class lecture, hands-on activities, technical learning, readings, self-directed exploration, and discussion

Individual and group in class work and outside of class assignments

Reflective writing, quizzes, system design and implementation tasks, exams

Grading scale

Graduate: A+ 100-97%, A 96-93%, A- 92-90%, B+ 89-87%, B 86-84%, B- 83-80%, C 79-70%, D < 69%

Academic Integrity: What is academic dishonesty?

Academic dishonesty is a corrosive force in the academic life of a university. It jeopardizes the quality of education and depreciates the genuine achievements of others. Apathy or acquiescence in the presence of academic dishonesty is not a neutral act. All members of the University Community - students, faculty, and staff - share the responsibility to challenge and make known acts of apparent academic dishonesty.

Students have a responsibility to familiarize themselves with violations of the Code of Academic Integrity. Among these include:

Cheating

"Intentionally using or attempting to use unauthorized materials, information, or study aids in any academic exercise."

Fabrication

"Intentional and unauthorized falsification or invention of any information or citation in an academic exercise."

Facilitating Academic Dishonesty

"Intentionally or knowingly helping or attempting to help another to commit an act of academic dishonesty."
Plagiarism

"Intentionally or knowingly representing the words or ideas of another as one's own in an academic exercise."

For further clarification or information on the Code of Academic Integrity:
http://www.studenthonorcouncil.umd.edu/code.html

Students with Disabilities

The University is legally obligated to provide appropriate accommodations for students with disabilities. The campus' Disability Support Services Office (DSS) works with students and faculty to address a variety of issues ranging from test anxiety to physical and psychological disabilities. If a student or instructor believes that the student may have a disability, they should consult with DSS (4-7682, email Dissup@umd.edu). Note that to receive accommodations, students must first have their disabilities documented by DSS. The office then prepares an Accommodation Letter for course instructors regarding needed accommodations. Students are responsible for presenting this letter to their instructors.

Syllabus change policy

This syllabus is a guide for the course and is subject to change with advance notice.

Classroom Environment

Students are expected to follow the UMD community standards of behavior at all times in the classroom. http://www.president.umd.edu/policies/docs/V-100B.pdf

Attendance Policy

University policy excuses the absences of students for illness, religious observances, participation in University activities at the request of university authorities and compelling circumstances beyond the student's control. Students who miss a single class for a medical reason are not required to provide medical documentation, but students who are absent more than once are responsible for providing various forms of documentation, depending on the nature of the absence. Course syllabi should specify the nature of the in-class participation expected and the effects of absences on students' grades. For more information, see University Policy V-1.00G on Medically Necessary Absence.

Assignment due dates and extensions

Assignments must be completed using Elms. All quizzes and tests will be completed on the Elms platform. If you have difficulty using elms see the tutorial at https://elms.umd.edu/webapps/portal/frameset.jsp?tab_id=_300_1

Assignments must be turned in on time.

Quizzes and exams not completed on time (e.g. in class for in-person sections or by end of week for online sections) will not continue to be available and may not be completed after the due date.
Other assignments turned in late without prior approval will be docked the equivalent of one letter grade (e.g. a B instead of an A). If you are unable to turn the assignment in by the due date, contact me prior to the due date to arrange an alternative due date to ensure full credit.

Please see me privately or email me if you have an emergency.

Emergency Preparedness

http://www.umd.edu/emergencypreparedness/

CourseEvalUM

Course evaluations are a part of the process by which the University of Maryland seeks to improve teaching and learning. The University Senate approved the implementation of a standard, online, University-wide course evaluation instrument. Each course evaluation contains a set of universal questions, and some are supplemented by questions from specific colleges. Across the University, course evaluations are being administered through a web-based system dubbed CourseEvalUM. Students who leave no "Pending" evaluations in their Evaluation Dashboard each semester can view the aggregate results of a sub-set of universal items online.

Across the University, course evaluations are being administered through a web-based system dubbed CourseEvalUM. All information submitted to the Evaluation System is confidential. Instructors and academic administrators can only view summarized evaluation results after final grades have been submitted. Instructors and academic administrators cannot identify which submissions belong to which students. This standardized set of evaluation results provides the University with useful information on teaching and student learning across the campus.

For additional info see Student Fast Facts at:

https://www.irpa.umd.edu/Assessment/CourseEval/stdt_faq.shtml

Required Text:


- http://www.amazon.com/Metadata-standards-web-services-Libraries-Archives/dp/161069449X/ref=sr_1_1?ie=UTF8&qid=1450461419&sr=8-1&keywords=metadata+web+services+mitchell

Terminology

This class involves quite a bit of new vocabulary and technical terminology. In every important case, new terms and acronyms will be defined and explained. In your readings you may find some new terms however. The following terminology guides can be good sources for LIS specific vocabulary:

Teaching methods:

Class lecture, hands-on activities, technical learning, readings, self-directed exploration, and discussion

Individual and group in class work and outside of class assignments

Reflective writing, quizzes, system design and implementation tasks, exams

Student assignments/ Methods of evaluation:

Student evaluation includes technical skill assessment, grasp of conceptual knowledge and familiarity with current standards and approaches in information management. The course is designed to accommodate graded homework, quizzes, cumulative tests and hands-on activities. These assignments assess core and higher order learning outcomes by encouraging students to explore the skill-based and conceptual content of the course. In general, students who are successful in the course should be proficient in (1) concept identification, application and analysis in representation, classification and full-text indexing, (2) technical abilities and skills related to information infrastructures, (3) design of databases and (4) design and creation of web-based information systems.

Assignment guidelines:

Assignments are due on the following schedule

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<th>Activity</th>
<th>Points</th>
</tr>
</thead>
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<td>5</td>
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<tr>
<td>Quiz 2 (Week 4)</td>
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<tr>
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<td>Cumulative Test 1 (Week 7)</td>
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<td>Final project plans (Week 8)</td>
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Class 1. Information infrastructures and institutions (8/30 – 9/5)

Class preparation activities

Review syllabus

Acquaint yourself with course technologies

Readings


4. Watch: What happens when you click a link https://www.youtube.com/watch?v=keo0dglCj7I#t=47


Optional readings


Class overview

Introduce the structure for the semester grounded in a broad orientation to how information institutions work. Explore definitions and examples of information institutions including libraries, archives, schools and museums LASM. Explore the roles that these institutions play in society (e.g. memory, community, education, commerce).

Class activities

• Review the syllabus, assignments

• Complete worksheet

• Watch course videos:
  o Welcome video: https://www.youtube.com/watch?v=zI5LOb9Pg5w
  o ELMS tour: http://youtu.be/Ky-v0OW4NCE
Course overview: http://youtu.be/TZn5TbZNnJA

Review of Worksheet 1: http://youtu.be/7R_wrwdmvms

- Complete the introductory survey: Check ELMS week 1 for the link to the survey
- Participate in discussion forum

Assignments

Introductory Survey
Class 2.  Information systems as boundary objects (9/6 – 9/12)

Class preparation activities

Complete readings

Complete as needed – XHTML tutorial. If you have never worked with HTML, complete w3schools HTML tutorial - http://w3schools.com/html/html_xhtml.asp

Readings


13. Read - “User-centered models of information retrieval.” Introduction to modern information retrieval. Pp 249-261. – Available via ELMS site


Optional readings


18. Reading tip: Don’t get caught up on the math, just read the stories and think about the role that social networks play in helping us create information systems and information networks.

Class overview

Expand on the organizational orientation from class 1 and discuss social and cultural roles of LASM institutions. Explore concrete examples of information, cultural heritage and memory institutions and define concepts and ideas to give students a holistic understanding of “information infrastructure” field. Introduce course model (e.g. Metadata >> System >> User) and explore connections with other core courses. Explore theoretical foundation of the process of representation.

Class activities

• Complete worksheet

• Watch course videos:
  o Overview: http://youtu.be/V__gU0dQmftU
- Intro to Information Systems: http://youtu.be/aieszORqsWk
- Intro to HTML: http://youtu.be/FMgLqg4rZBY
- How to create HTML in a text editor: http://youtu.be/ee-fDv0UW74

- Participate in discussion forum

Assignments

Quiz 1 (Covers Class 1) Due
Class 3.  Acquiring and managing resources (9/13 – 9/19)

Class preparation activities

Complete readings

If completely new to CSS - Review CSS tutorial http://w3schools.com/css/default.asp

Readings


Optional readings

23. C. M. Sperberg-McQueen and David Dubin, Data Representation, DH Curation Guide. http://guide.dhcuration.org/representation/

Class overview

Explore resource acquisition and management work in LASM institutions. Introduce technical service disciplines and illustrate connections with other functional areas in information institutions by reinforcing role of core courses. For each LASM institution type explore the notion of resource operations in light of changing information institution models. At the end of the class students will understand the role of each of the activities in LASM institutions 1) Publication models (formal, in-formal), 2) Acquisition of materials (published, manuscripts, grey literature), 3) Management of formats (physical and digital), 4) Materials processing and management, 5) Appraisal, access and preservation, 6) Alternative acquisition, management and dissemination strategies.

Class activities

• Complete worksheet

• Watch course videos :
  - Resource acquisition and management: http://youtu.be/KgpH4Ojv0lg
  - Introduction to CSS and DOM (Skip to about 3:35 and go to about 7:00) http://youtu.be/w64Rmw0CBqA
  - Introduction to programming http://www.youtube.com/watch?v=g1_1LEgZB9g
- Overview of optional exercise (7:00 - ) http://www.youtube.com/watch?v=g1_1LEgZB9g
- Participate in discussion forum
Class 4. **Introduction to metadata (9/20 – 9/26)**

**Class preparation activities**

Complete readings

**Readings**


**Optional readings**


**Class overview**

Introduce metadata model (cataloging model, metadata schema, data representation model, data encoding/serialization). Discuss different types of metadata (e.g. descriptive, administrative, technical) and situate metadata within the broader context of information system design.

**Class activities**

- Complete worksheet
- Watch course videos
  - Overview and introduction to cataloging: [http://youtu.be/Pppa2bycDjc](http://youtu.be/Pppa2bycDjc)
  - RDA Toolkit overview: [http://youtu.be/XedsAhDcWqI](http://youtu.be/XedsAhDcWqI)
  - (Optional for this week if you want more details on RDA) Introduction to FRBR [http://youtu.be/pDPsjLQ8qPA](http://youtu.be/pDPsjLQ8qPA)
- Participate in discussion forum
Assignments

Quiz 2 (Covers Class 2, 3) Due
Class 5. Methods of description, representation and classification
(9/27 – 10/3)

Class preparation activities

Complete readings

Readings


Optional readings


38. Read section 0 of RDA - RDA Toolkit - Section 0, Introduction, 1–12. Retrieved from http://access.rdatoolkit.org. See TXT file from this week for login information


Class overview

Discuss cataloging methods and different forms of metadata in information institutions. Introduce concept of metadata schemas and role that metadata standards play in enabling creation of digital documents and representations. Reinforce specific cataloging standards/approaches (e.g. RDA, DACS, ISAD/G) and introduce metadata schema (e.g. MARC, DC, EAD). Reinforce context of these standards in broader metadata and information system design models. Draw connections to other types of information systems. Explore and apply classification structures. Explore information seeking processes and the connection between categorization and cognition.
Class activities

- Complete worksheet

- Watch course videos
  - Overview:
  - Introduction to FRBR http://youtu.be/pDPsjLQ8qPA
  - Introduction to Dublin Core http://youtu.be/1HWSyM916Q4
  - Introduction to Metadata evaluation http://youtu.be/LWmKJlff-Yk

- Participate in discussion forum

Assignments

Quiz 3 (Covers class 4) Due
Class 6.  Metadata schema, vocabularies and encoding (10/4 – 10/10)

Class preparation activities

Complete readings

Optional if you have felt lost with regards to technology so far in this class I would recommend spending some time with an XML tutorial –http://w3schools.com/xml/default.asp

Readings


Optional readings


Class overview

Expand on concepts in metadata schema including the notion of application profiles, abstract models (e.g. Dublin Core Abstract Model) and Resource Description Framework. Broaden student understanding of vocabularies by introducing new serialization standards (e.g. XML, JSON).

Class activities

• Complete worksheet

• Participate in discussion forum

• Watch course videos
  o Video 1 – Writing XML and introduction to eXchanger http://youtu.be/6Z3q_2uWekY
  o Video 2 – Introduction to XML http://youtu.be/ENVEL5ETYpM
  o Video 3 – Introduction to XML/Dublin Core (part 2) http://youtu.be/2BSIRwrgUcY
Class 7. Database design (10/11 – 10/17)

Class preparation activities

Complete readings

Readings


55. Note - Rose Vines also has tutorials IV-VII but they get a bit more complicated than we are going to.

Optional Readings


Class overview

Introduce relational database design concepts and techniques. Reframe student understanding of information systems by introducing web-based information system design (e.g. Model – View – Controller). Topics covered include entity relationship modeling, database creation, database querying and information filtering.

Class activities

Pre-recorded guest speaker Camille Salas (UMD student and Library of Congress Intern on ViewShare project)

- Complete worksheet
- Highly recommended - watch the viewshare video if you are thinking about final projects (otherwise, this is our week 9 content)
  - Guest speaker Camille Salas (UMD student and Library of Congress Intern on ViewShare project) Video at http://youtu.be/Y_5WUFbARjw (Starts around 2 minute mark)
- Watch course videos:
  - Overview: http://youtu.be/KEo3yaBk1h8
  - Database design: http://youtu.be/_Sdd3mqEstA
  - Creating Queries: http://youtu.be/OCW5-IQH0gA
o Creating Reports: http://youtu.be/wzp4fJKGQp8

o Link to our working database
  https://docs.google.com/file/d/0B210UXTUO1YdOXBvblE0aUpCbGs/edit?usp=sharing

  • Participate in discussion forum

Assignments

Cumulative test 1 (Covers weeks 1-6) Due

Final project selection due
Class 8. Deep dive: Final project focus (10/18 – 10/24), work on the programming assignment

Class preparation activities

Select the focus of your final project and perform your own "Deep Dive" into content. This may involve learning a technical skill, reading up on a trend or information infrastructure theory or collecting data for research.

This is a good week to dive into the programming assignment as well - estimated time to complete is 13 hours.

Readings

58. Content warning: The following video has some offensive language and deals with issues out of the San Bernardino attack. Students who do not feel comfortable engaging with this content should reach out to me to discuss alternative content for the week.


61. Guest speaker Camille Salas (UMD student and Library of Congress Intern on ViewShare project) Video at http://youtu.be/Y_5WUFbARjw (Starts around 2 minute mark)

62. Other readings are on you :)

Optional

63. Watch: The Data Brokers, The heart of the revolution, 60 minutes special.

Class overview

Student exploration of their final project topics.

Class activities

• Decide on your final project focus
  Engage in your own "Deep dive" on your final project

• Participate in discussion forum

Assignments
Class 9.  Search and retrieval in information systems (10/25 – 10/31)

Class preparation activities

Complete readings

Readings


65. Watch: How Search Works: http://www.youtube.com/watch?v=BNHR6IQJGZs

66. Watch: The evolution of search: http://www.youtube.com/watch?v=mTBShTwCnD4


Optional Readings


73. Read/skim: http://news.cnet.com/8301-17938_105-57619807-1/the-web-at-25-i-was-a-teenage-dial-up-addict/

Class overview

Explore methods for automatic indexing and ranking of information resources. Introduce foundation of web search techniques, full text searching of scanned books and image searching.

Class activities

• Complete worksheet

• Watch course videos

• What is Information Retrieval? http://youtu.be/flAa7gGyzV4

• How do advertisements impact IR? http://youtu.be/1kTwjAjgkIU

• Participate in discussion forum

Assignments

Quiz 4 (Covers class 7)
Class 10. Resource dissemination, access and use: Creation of Metadata rich services (11/1 – 11/7)

Class preparation activities

Complete readings

Complete worksheet

Readings


79. In conjunction with the worksheet: review the viewshare tutorial: http://viewshare.uservoice.com/knowledgebase/articles/77925-10-minute-viewshare-tutorial

Optional Readings


Class overview

Explore services that support access to physical and digital objects. Introduce broad types of information services including user-focused services (library catalog) and system-focused web-services (interoperability, harvesting, transformation) (ONIX, OAI/PHM).

Class activities

• Complete worksheet

• Watch course videos
  o Guest speaker Camille Salas (UMD iSchool graduate and previous Library of Congress Intern on ViewShare project) Video at http://youtu.be/Y_5WUFbARjw (Starts around 2 minute mark)
o Review ViewShare help videos as needed to complete the worksheet: http://viewshare.org/about/help/

o Digital Library Introduction: http://youtu.be/py8Kw0Qlj4o

o Introduction to web services: http://www.youtube.com/watch?v=wGLU3VEWpQM (Disregard comments about XSL)

o Introduction to OAI/PMH http://www.youtube.com/watch?v=V6Vct0mrB-o

• Participate in discussion forum
Class 11.  Metadata rich web services week 2 (11/8 – 11/14)

Foundations of the Internet:  Linked data and information services

Class preparation activities

Complete readings

Readings


84. See week 10 readings

Optional Readings


86. Good source for linked data information.  LinkedDataTools.com

Class overview

Continue exploring metadata rich web services

Class activities

• Complete worksheet

• Watch course videos
  
  o See videos from previous week

• Participate in discussion forum

Assignments

Quiz 5 (Covers classes 9, 10) Due

Update on final project

Class preparation activities

Complete readings

Readings


Optional Readings


Class overview

Revisit web-publishing document standards (e.g. HTML, CSS, JavaScript). Acquaint students at a high level with web publishing approaches.

Class activities

- Complete worksheet
- Watch course videos
  - Overview: [http://youtu.be/OHxLitYoWy4](http://youtu.be/OHxLitYoWy4)
  - Uploading files to TerpConnect: [http://www.youtube.com/watch?v=3uLLKveCJec](http://www.youtube.com/watch?v=3uLLKveCJec)
- Participate in discussion forum

Assignments

Quiz 6 (Covers class 11) Due
Thanksgiving Break (11/22 – 11/28)
Class 13.  Exploration of Data Management (11/29 – 12/5)

Class preparation activities

Complete readings

Readings

92. Read: Data Science/Data Scientist Definitions.  
https://drive.google.com/a/berkeley.edu/file/d/0B210UXTUO1YdbkFmTzZ2dWZBTms/edit?usp=sharing

http://www.youtube.com/watch?v=609xzblZs4k


96. NSDA Levels of Digital preservation 

Class overview

In this class we are exploring the broad area of Research Data Management in order to better understand how issues of organization and information technology have an impact in an emerging area of interest in libraries, archives, schools and museums.  Students will explore a real-world data management guide and try their hand at data management tools.

Class activities

• Watch course videos
  
  o Brief week overview:  http://youtu.be/2EMFP0VT-8M

• Select and complete one activity from the worksheet

• Review class content, prep for test.

• Participate in discussion forum

Assignments

Final projects due
Class 14.  **Next steps in information infrastructures (12/6 – 12/12)**

**Class preparation activities**

- Take cumulative test, discuss capstone project

**Class Readings**


**Class overview**

- Review course content and bridge student knowledge of information infrastructures, systems and services to other parts of the curriculum. Discuss professional paths for different areas of interest. Connect learning by re-visiting institutional, data life-cycle and information system models.

**Class activities**

- Participate in discussion forum

**Assignments**

- Last opportunity to turn in Programming activity
- Cumulative Test 2 (Covers classes 7-13) Due
Assignment 1: Regular learning assessment (6 Quizzes)

Weight: 30 points total

Description

Hands-on learning is an important part of this course. Each week we will complete worksheets and tutorials that guide us through the learning process and prepare us for learning quizzes. Assessment for these hands-on activities will take the form of six quizzes that will be based on the worksheets and related content. Each quiz is worth 5 points and will be available for 1 full week.

Due Dates

See course table of contents for timing.
Assignment 2: Discussion participation (Weekly)

Weight: 21 points

Description

In every class there are opportunities to discuss readings, current events, and issues. Please ask questions and participate in the discussions – by doing so you will make the class much more interesting.

This grade is based on participation in online discussion. As such you should post at least three times each week, once in the first few days, once in the middle of the week and once at the end. Posts do not in themselves need to be long rather you should ask provoking questions, answer questions when you know the answer and help out your fellow students when they need it.

Due Date and weight

Weekly: Each week is worth 1.5 class participation points.

Evaluation

Participation grades are based on the expectation that students engage in each class. In online settings this means posting, reading and discussing concepts throughout the week. Students can receive up to 1 point for writing engaging posts and .5 points for posting at least 3 times distributed over the course of the week.
Assignment 3: Cumulative tests

Description

The course will feature two cumulative tests. The first test will focus on content from Weeks 1 – 6) and the second test will focus on content from weeks 7 – 14). Both tests will be conducted through ELMS and will be based on content from the worksheets, readings and quizzes. The tests will be available for 1 week (on the week in which the test takes place). The tests are open book but individual (i.e. you are not allowed to work in groups). Unlike the quizzes, the tests are timed. As such you should select a two hour block to sit down and complete your test.

Due Date and weight: 20 points per test (40 points total)
Assignment 4: Course capstone project

Overview

In this class you should select ONE capstone project to complete. Although the specific project can be selected by you and does not need to absolutely fit one of the projects below, it should meet or exceed the elements of one of the suggested projects.

Weight: 10 percent

Due Dates

Project selection – Class 8
Project update - Class 11
Project due - Class 13

Evaluation

Regardless of the project selected it will be evaluated via the rubric published in ELMS

Individual reflective statements should be submitted via ELMS.

Capstone project Option 1 – Research paper

Research paper guidelines

- Your research paper may touch on your experiences in the course or may be informed by an external interest you have related to information infrastructures (e.g., resources, technologies, standards, lifecycles, communities).
- The paper should include 5 academic sources that were not part of the regular course readings and should be at least 8 double spaced pages long.
- It may be helpful to break your paper into four sections (Introduction/Problem statement, Literature review, Analysis/discussion, Conclusion)

Project deliverables

A 8+ page paper (double spaced) uploaded to ELMS

Grading guidelines

A successful paper should meet the following criteria:
- Paper meets 8 page length and 5 source requirements
- Paper explores issues of information infrastructure trends and in libraries, archives, schools and museums in depth and includes original literature review/analysis and original thought.
- Paper is well written and connects resources cited to original ideas
Overview

This assignment spans the course of the semester and is drawn from the skills and conceptual foundation that we develop in each class. In this assignment you will take a digital collection through the metadata model design, resource cataloging and resource publishing process using ViewShare, a hosted digital library platform offered by the Library of Congress.

Guidelines

• This may be an individual or group assignment. Students who work in groups must multiple base requirements (e.g. 2x the number of records, 2x the number of views)

• This assignment includes five separate processes: Topic/content selection, user needs assessment, metadata modeling, data loading / cataloging and interface design. Each of these steps is facilitated by the ViewShare platform.

  o Topic/content selection: You should identify a topic or content area for your digital library. It should be large enough and of common interest to the group

  o User needs assessment: You should identify potential users and use goals of your site (e.g. discovery, research, contribution). Create a short statement that explains what information needs a typical user of your collection would have and use it to guide your creation of metadata and interface needs.

  o Metadata modeling: You should use the skills you have learned this semester to evaluate your digital collection and select metadata elements that will help you describe your digital objects. The metadata model must include descriptive elements (e.g. title, creator, publication date), employ a categorization or classification system (e.g. LCSH, DDC, TGN, or your own developed categorization system) and must include one metadata element that allows you to leverage a visualization feature in ViewShare (e.g. Date timeline, geographic or pie chart.

  o Data loading / cataloging: Using the CSV option, create and load ViewShare data. You should have 10 digital objects (per person if in a group) to ensure a robust ViewShare library. While this process may be confusing and ambiguous you should watch instructional videos, use templates and ask questions of your professor and classmates.

  o Interface design: Your interface design needs to include at least one advanced “View” (e.g. Map, Timeline, scatter plot, or pie chart), include a search widget, and a list or tag cloud widget. Your interface should include a collection overview and be designed to leverage metadata. In addition, you should explore and experiment with the design features of Viewshare and consider the use of metadata labels, sorting and other features

• Project Deliverables

  o A unified Viewshare library that features a specific collection of digital objects that have been cataloged and presented using available Viewshare tools. The digital library should contain at least seven items cataloged per person (if working in a group).
A video presentation of around 2-3 minutes OR a paper that:

- Provides a quick overview of the digital library content
- Conducts a tour of notable features of the digital library (e.g. visualizations, metadata features, interface elements)
- Discusses challenges associated with developing the digital library.

Grading guidelines

- Evaluation of specific elements
  - Does your DL contain sufficient number of digital objects?
  - Is the metadata model selected appropriate to the collection? Is the metadata of high quality (e.g. Metadata loaded fits model and interface requirements)
  - Does the interface contain at least one advanced view, one search widget, one subject/browsing widget and one collection context widget?
    - Did your interface take advantage of the metadata model?
    - Did your interface include additional contextual features (e.g. sidebars, narrative statements, etc.) that give context to your digital library?
    - Does your interface reflect an exploration of design features?

- Video Presentation or paper
  - Inclusion of tour of platform, discussion of challenges and surprises, discussion of metadata model and interface features.

Resources to consider

Register for an account:  http://viewshare.org

User Guide http://viewshare.org/about/userguide/#s1.1

Import process: http://viewshare.org/import/


Capstone project Option 3 – Independent technology exploration

Reflective / research statement Guidelines

- You may select a technology that we have introduced in this class to explore in more depth through some development or experimental work. This should include some form
of original development or research and should result in a small scale project and reflective statement.

- An example of such a project would be an independently developed personal webpage that used the HTML and CSS expertise developed in class.

**Project deliverables**

The URL to an original project involving research and development on a topic/technology of your choosing

A 1-2 page paper (or short video) (double spaced) describing the project uploaded to ELMS

**Grading guidelines**

A successful project should meet the following criteria:

- Project is narrow in scope and explores a technology in depth.
- Paper sufficiently describes the project and related challenges
- Paper is well written and connects resources cited to original ideas

**Capstone project Option 4 – Create your own website**

**Website Guidelines**

- You should create a website with a specific purpose in mind. For example you may want to create a website that shows off photos from a trip you took, showcases recipes and pictures of dishes you create or serves as a personal/professional homepage.
- The website should consist of at least 3 separate pages, employ use of content (e.g. headers, paragraph content, links to internal and external sites), media (e.g. images, embedded media, linked videos), and have a focused use case and platform (e.g. my user is someone who wants to view recipes on their mobile phone).
- The website should employ semantic/xhtml techniques as outlined in our course documents, use CSS for styling and may make use of JavaScript or other advanced technologies if desired (Note that JavaScript is optional).
- The website should run on terpconnect, a hosted website service at the University of Maryland. See extra tutorial.
- The use of template-based layout sites like Wix.com or sites.google.com are not acceptable for this assignment

**Project deliverables**

The URL to an original project involving research and development on a topic/technology of your choosing

A 1-2 page paper (or short video) (double spaced) describing the project and reflecting on your experience uploaded to ELMS
Grading guidelines

A successful project should meet the following criteria:

- Project is narrow in scope and explores a technology in depth.
- See guidelines under website guidelines
Assignment 5: Programming exploration

Overview

In this assignment students learn more about programming and data manipulation using Python. This assignment is largely self-led and involves completing either the python (recommended) or JavaScript codeacademy course as well as a reflective statement about the process. **NOTE: If you have already completed this codeacademy course prior to class or if you know Python and JavaScript you should choose another programming activity at CodeAcademy or somewhere similar. Please clear this with me prior to working on it.**

Weight: 10 percent

Due Dates

Due last day of class but can be completed at any time

Evaluation

Did you complete the Code Academy course (e.g. all the way to "File input and Output" (Up to 6 points)

Did you write a substantial reflection about the experience (Up to 4 points)

Instructions

Code Academy course

- Create an account
- Complete the course (10-13 hours of work)
- Upload the completed certificate to the elms website

Project deliverables

A reflective statement (single question Quiz in ELMS)

A screenshot showing how far you got in the course

Grading guidelines

Did you complete the Code Academy course (Up to 6 points)

33% complete = 2 points

66% complete = 4 points
100% complete = 6 points

Did you write a substantial reflection about the experience (Up to 4 points)

Substantial reflection:  4 points

No reflection:  0 points