

# LBSC 671: Creating Information Infrastructures


## Section 0101: Spring 2015



Mondays 6 - 8:45 p.m., Hornbake 2119

Dr. Katy Lawley, Instructor









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- Office visits by appointment - I am always happy to meet with students and can meet in person, by phone, or Skype.

### 1. Course Calendar

<b>Date &amp; Topic</b>	<b>Read before class</b>	<b>Assgn't given</b>	<b>Assgn't due</b>
Session 1: 1/26/15  Course introduction: Information institutions, collections, and infrastructures	<ul style="list-style-type: none"><li>• Digital Curation Centre. (2012). <a href="http://www.dcc.ac.uk/resources/curation-lifecycle-model">http://www.dcc.ac.uk/resources/curation-lifecycle-model</a> (Links to an external site.)</li><li>• Sheila Corral, The Concept of Collection Development in the Digital World, in Maggie Fieldhouse and Audrey Marshall, eds. <i>Collection Development in the Digital Age</i>. Great Britain: Facet Publishing, 2012 pp. 27-43. Available from the University of Maryland Libraries as an unlimited-user ebook.</li></ul>	GA1	
Session 2: 2/2/15  Connections between people and resources	<ul style="list-style-type: none"><li>• (skim) Taylor, A. &amp; Joudrey, D. (2009). <i>Organization of Information</i>. Chapter 1. <a href="#">Click here to access PDF</a> </li><li>• Borgman, Christine (2003) The Invisible Library: Paradox of the global information infrastructure. <i>Library Trends</i>, 51 (1), 652-674. <a href="http://www.ideals.illinois.edu/bitstream/handle/2142/8487/librarytrendsv51i4j_opt.pdf">http://www.ideals.illinois.edu/bitstream/handle/2142/8487/librarytrendsv51i4j_opt.pdf</a> (Links to an external site.)</li><li>• Bates, Marcia. (2002). The cascade of interactions in the digital library interface. <i>Information Processing and Management</i>, 38(3), 381-400.</li></ul>		

<p>Session 3: 2/9/15</p> <p>Metadata and metadata schemas</p>	<ul style="list-style-type: none"> <li>• Taylor &amp; Joudrey. Chapter selections. <a href="#">Click here for PDF.</a> </li> <li>• Library of Congress. (2009). What is a MARC record and why is it important? <a href="http://www.loc.gov/marc/umb/um01to06.html">http://www.loc.gov/marc/umb/um01to06.html</a> (<a href="#">Links to an external site.</a>)</li> <li>• C. M. Sperberg-McQueen and David Dubin, Data Representation, DH Curation Guide. <a href="http://guide.dhcurator.org/representation/">http://guide.dhcurator.org/representation/</a> (<a href="#">Links to an external site.</a>), <a href="#">Sections 3 &amp; 4</a></li> </ul>		
<p>Session 4: 2/16/15</p> <p>Lab Session. Meeting dates &amp; times TBD</p> <p>XML for metadata</p>	<ul style="list-style-type: none"> <li>• Tidwell, D. (2002). Introduction to XML. IBM DeveloperWorks. <a href="http://www.ibm.com/developerworks/xml/tutorials/xmlintro">http://www.ibm.com/developerworks/xml/tutorials/xmlintro</a> (<a href="#">Links to an external site.</a>)</li> <li>• Windsor Solutions. (2010). Practical XML – Part 1. <a href="http://youtu.be/dfeoEb6XAZk">http://youtu.be/dfeoEb6XAZk</a> (<a href="#">Links to an external site.</a>) <ul style="list-style-type: none"> <li>○ Good overview of using XML to represent hierarchical relationships (8:44)</li> <li>○ IBM Developer Works. (2010). An introduction to XML: The basics part 1. <a href="http://youtu.be/Q0k5ySZGPBc">http://youtu.be/Q0k5ySZGPBc</a> (<a href="#">Links to an external site.</a>)</li> <li>○ Step-by-step creating an XML document (12:07) <ul style="list-style-type: none"> <li>▪ <a href="#">Stop at minute 5:35</a></li> <li>▪ Good overview/introduction to why XML is useful</li> <li>▪ Tutvid. (2009). How to write a simple XML document: Tutorial. <a href="http://youtu.be/UqwGSo82cwU">http://youtu.be/UqwGSo82cwU</a> (<a href="#">Links to an external site.</a>)</li> </ul> </li> </ul> </li> </ul>	GA2	GA1
<p>Session 5: 2/23/15</p> <p>Subject description: Classification s &amp; Controlled vocabularies</p>	<ul style="list-style-type: none"> <li>• Rowley, J. and Hartley, R. (2008). <i>Organizing knowledge: An introduction to managing access to information</i>. Pp. 134 – 149. <a href="#">Click here to download PDF.</a> </li> <li>• Introduction to the Dewey Decimal Classification (DDC). (2012) <a href="http://www.oclc.org/content/dam/oclc/webdewey/help/introduction.pdf">http://www.oclc.org/content/dam/oclc/webdewey/help/introduction.pdf</a> (<a href="#">Links to an external site.</a>) <ul style="list-style-type: none"> <li>○ Sections:</li> <li>○ 1.1 – 7.16,</li> <li>○ 8.1 – 8.3,</li> <li>○ 13.1 – 13.3</li> </ul> </li> </ul>		

	<ul style="list-style-type: none"> <li>○ Refer to Glossary to clarify meanings of terms (Classes, Subdivisions, Built number, etc.). <a href="http://www.oclc.org/content/dam/oclc/w ebdewey/help/glossary.pdf">http://www.oclc.org/content/dam/oclc/w ebdewey/help/glossary.pdf</a> (Links to an external site.)</li> <li>○ Introduction to Library of Congress Subject Headings. (2007). <a href="http://www.tulane.edu/~techserv/lcsh%20intro d.html">http://www.tulane.edu/~techserv/lcsh%20intro d.html</a> (Links to an external site.) <ul style="list-style-type: none"> <li>▪ You may stop reading when you get to the section called, “Verifying LCSH.” This introduction was written catalogers in mind who would be using the MARC format, so sometimes MARC-related characters will show up in the examples (usually preceded by a \$). Don’t worry about the MARC-specific guidelines or codes. Just read this document to glean principles of providing subject access via LCSH.</li> </ul> </li> </ul>		
<p>Session 6: 3/2/15</p> <p>Metadata for systematic resource description</p>	<ul style="list-style-type: none"> <li>• Tillet, B. (2004). What is FRBR? A conceptual model for the bibliographic universe. <a href="http://www.loc.gov/cds/downloads/FRBR.PDF">http://www.loc.gov/cds/downloads/FRBR.PDF</a> (Links to an external site.)</li> <li>• RDA Introduction. <i>For instructions on accessing RDA so that you may read the introduction, see the Readings note in this week’s module.</i></li> </ul>	GA3	GA2
<p>Session 7: 3/9/15</p> <p>Midterm quiz; Database design I</p>	<ul style="list-style-type: none"> <li>• Vines, Rose. (2011). Databases from scratch I: Introduction. <a href="http://geekgirls.com/2011/09/databases-from-scratch-i-introduction/">http://geekgirls.com/2011/09/databases-from-scratch-i-introduction/</a> (Links to an external site.)</li> <li>• Vines, Rose (2011). Databases from scratch II: Simple database design. <a href="http://geekgirls.com/2011/09/databases-from-scratch-ii-simple-database-design/">http://geekgirls.com/2011/09/databases-from-scratch-ii-simple-database-design/</a></li> <li>• Vines, Rose. (2011). Databases from scratch III: The design process. <a href="http://geekgirls.com/2011/09/databases-from-scratch-iii-relational-design-process/">http://geekgirls.com/2011/09/databases-from-scratch-iii-relational-design-process/</a></li> </ul>	GA4	
<p>3/16/15</p> <p>SPRING BREAK</p>			

<p>Session 8: 3/23/15</p> <p>Database design, II</p>	<ul style="list-style-type: none"> <li>Fehily, C. Chapter 4: Retrieving data from a table. In <i>SQL: Visual Quickstart Guide</i>. Berkeley, CA: Peachpit Press, pp. 33-44. <a href="#">Click here to download PDF.</a>  </li> </ul>		GA3
<p>Session 9: 3/30/15</p> <p>Foundations of the Internet</p>	<ul style="list-style-type: none"> <li>Kernighan, B. W. (2011). Chapter 9: The Internet. In <i>D is for Digital: What a well-informed person should know about computers and communications</i>. <a href="#">Click here for PDF.</a>  </li> </ul>		GA4
<p>Session 10: 4/6/15</p> <p>Lab Session. Meeting date &amp; time TBD</p> <p>HTML &amp; CSS: Building blocks of the Web</p>	<ul style="list-style-type: none"> <li>Kernighan, B. W. (2011). Chapter 10: The World Wide Web. In <i>D is for Digital: What a well-informed person should know about computers and communications</i>. <a href="#">Click here for PDF.</a>  </li> <li>Basic HTML Tutorial: <a href="http://w3schools.com/html">http://w3schools.com/html</a> <ul style="list-style-type: none"> <li><b>Before your lab session:</b> Work through all chapters up to and including Paragraphs.</li> <li>After the lab, the other chapters will be very helpful for enhancing your HTML knowledge and working through GA5.</li> <li>Be sure to play with the ‘Try It Yourself’ boxes in each chapter and Exercises at the end of the Attributes, Headings, and Paragraphs chapters.</li> <li>CSS: <ul style="list-style-type: none"> <li>Work through all parts of this tutorial: <a href="http://www.csstutorial.net/css-intro/introductioncss-part1.php">http://www.csstutorial.net/css-intro/introductioncss-part1.php</a></li> <li>Watch: <a href="http://youtu.be/Wz2klMXDqF4">http://youtu.be/Wz2klMXDqF4</a> (<a href="#">Links to an external site.</a>)</li> </ul> </li> </ul> </li> </ul>	GA5	
<p>Session 11: 4/13/15</p> <p>Information retrieval</p>	<ul style="list-style-type: none"> <li>Baeza-Yates, R. and Ribeiro-Neto, B. (1999). Chapter 1: Introduction. In <i>Modern Information Retrieval</i>, Addison Wesley Longman. <a href="#">Click here to download PDF.</a>  </li> <li>Excerpts from <i>Information Retrieval: Implementing and Evaluating Search Engines</i> (2010) by Stefan Buttcher, Charles L.A. Clarke, Gordon V. Cormack. <ul style="list-style-type: none"> <li><a href="http://www.ir.uwaterloo.ca/book/01-introduction.pdf">http://www.ir.uwaterloo.ca/book/01-introduction.pdf</a> (<a href="#">Links to an external site.</a>)</li> <li><a href="http://www.ir.uwaterloo.ca/book/02-basic-techniques.pdf">http://www.ir.uwaterloo.ca/book/02-basic-techniques.pdf</a> (<a href="#">Links to an external site.</a>)</li> </ul> </li> </ul>		

<p>Session 12: 4/20/15</p> <p>Metadata Interoperability &amp; Linked Data</p>	<ul style="list-style-type: none"> <li>• Tauberer, Joshua. (2008). “What is RDF and what is it good for?” RDF: about.</li> <li>• Library of Congress. (2012). BIBFRAME Primer Document. <a href="http://www.loc.gov/bibframe/pdf/marclid-report-11-21-2012.pdf">http://www.loc.gov/bibframe/pdf/marclid-report-11-21-2012.pdf</a> (Links to an external site.)</li> <li>• Woodley, Mary S. (2012). “Crosswalks, Metadata Harvesting, Federated Searching, Metasearching: Using Metadata to Connect Users and Information.” Introduction to Metadata. <a href="http://www.getty.edu/research/publications/electronic/publications/intrometadata/path.html">http://www.getty.edu/research/publications/electronic/publications/intrometadata/path.html</a> (Links to an external site.)</li> </ul>		
<p>Session 13: 4/27/15</p> <p>Controlled Vocabularies, Linking, and the Web: Thesauri &amp; Semantic Web</p>	<ul style="list-style-type: none"> <li>• Berners-Lee, T., Lassila, O., and Hendler, J. (2001). The semantic web: A new form of web content that is meaningful to computers will unleash a revolution of new possibilities. <i>Scientific American, May 1, 2001.</i></li> <li>• Sporny, Manu. (2007). Intro to the semantic Web. <a href="http://youtu.be/OGg8A2zfWKg">http://youtu.be/OGg8A2zfWKg</a> (Links to an external site.)</li> <li>• Koster, Lucas. (2012). Local library data in the new global framework. <a href="http://commonplace.net/2012/01/local-library-data-in-the-new-global-framework/">http://commonplace.net/2012/01/local-library-data-in-the-new-global-framework/</a> (Links to an external site.)</li> </ul>	GA6	GA5
<p>Session 14: 5/4/15</p> <p>Sharing Resources on the Web;</p> <p>Student Presentations I</p>	<ul style="list-style-type: none"> <li>• Berners Lee, T. (2009). On the next Web. <a href="http://www.ted.com/talks/tim_berniers_lee_on_the_next_web.html">http://www.ted.com/talks/tim_berniers_lee_on_the_next_web.html</a> (Links to an external site.)</li> <li>• Lagoze, C. and Van de Sompel, H. (2001). The Open Archives Initiative: Building a low-barrier interoperability framework. Joint Conference on Digital Libraries. <a href="http://www.openarchives.org/documents/jcdl2001-oai.pdf">http://www.openarchives.org/documents/jcdl2001-oai.pdf</a> (Links to an external site.)</li> <li>• OAI for beginners – the Open Archives forum online tutorial. <a href="http://www.oaforum.org/tutorial/index.php">http://www.oaforum.org/tutorial/index.php</a> (Links to an external site.)</li> </ul>		
<p>Session 15: 5/11/15</p> <p>Student Presentations II;</p>			GA6

Exam Review			
5/17/15			Final portfolio due @ 11:59 p.m.
5/18/15	EXAM WEEK (ends on W 5/20)		Final due @ 11:59 p.m.

## 2. 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.

## 3. Student learning outcomes

- Demonstrate mastery of concepts, models and information structures for life-cycle management of information assets by libraries, archives, and schools.
- Demonstrate knowledge of the capabilities and limitations of current methods for acquisition, preservation, management, discovery and delivery of information in physical and digital form.

- Demonstrate proficiency in creating and applying models, schema, representations and encodings for organizing information.
- Demonstrate proficiency in designing and implementing information services that leverage current technologies.
- 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.

#### **4. Grading and assessment**

Each element of your grade is described in more detail below. The percentage breakdown is:

- Graded Activity Sequence: 60%
- Assignment Reflections: 10%
- Final Exam: 20%
- Participation: 10%

##### **4.1 Graded activity sequence: 60%**

Over the course of this semester, we will explore some of the processes, tools, and technologies for managing information resources in the context of libraries, archives, and school library media centers. The Graded Activity Sequence includes six components (assignments) that will allow you to experiment with these in the context of an information institution of your choosing.

You will choose your setting: an information institution or a particular collection or unit within an information institution. The first activity (GA1) will be to analyze and describe your setting. The next five activities (GAs 2-6) will enable you to experiment with different tools for representing, organizing, storing, and displaying resources from your setting.

Note: You should select either a small institution, or a collection or unit within a larger institution. Consult with the instructor during your selection process.

Your Graded Activity Sequence counts as 60% of your final course grade (70% if you choose not to take the final exam). The Sequence components will be weighted as follows:

**GA1 - GA6: 75% of GAS. The stronger 3 assignments will be weighted twice the amount of the weaker 3.**

Assignments will be graded on:

- The degree to which they meet stated assignment requirements,
- Factual/technical correctness,
- Spelling, grammar, and document design.

Students whose performance is satisfactory on all of these criteria would receive a grade in the 90 - 94 range. Performance that is greater than or less than satisfactory on those criteria will adjust the assignment grade up or down.

### **In-class presentation: 10% of GAS**

Each student will spend 5-7 minutes presenting their work to the class. During the project presentation, the student should briefly introduce the chosen institution, then the student should present the work product of one or more of the GAs. The idea of these presentations is for everyone to see how the processes, tools, and techniques might be applied in other venues, so the presentation's time should be devoted to showing and/or describing what was done for the assignment(s), along with the student's observations of what made this implementation particularly easy, difficult, useful/useless for end users, or any other noteworthy aspect of the exercise.

While the format of presentations is relatively informal, this does not excuse students from actively preparing to present. On-screen projections (Power Point, Prezi, etc.) and handouts are optional, but each student should have prepared talking points and a discernible flow to his or her presentation. The quality of your presentation will count for 10% of the GAS grade, and grading criteria include:

- Preparedness,
- Ability to identify meaningful aspects of assignment to discuss,
- Ability to communicate with audience,
- Ability to keep presentation within time requirements,
- Ability to manage and answer questions from audience.

### **Final portfolio: 15% of GAS**

For the final portfolio, any number of the six GAs may be amended as appropriate to incorporate improvements that were either suggested by the instructor with assignment feedback or discovered by the student later in the semester.

*The portfolio is optional!* If you choose not to submit a portfolio, the original grades of your GAs will be averaged and used as the portfolio grade.

#### **4.2 Assignment Reflections: 10%**

For *two* of the assignments in the Graded Activity sequence, students will write one-page reflections addressing the tools/processes/techniques used in the assignments in light of current trends in information creation, information technology, and information use. GA1 is not eligible for a reflection.

#### **4.3 Final Exam: 20%**



The final exam will be posted in ELMS on May 11, 2015. The exam will be due no later than 11:59 p.m. on Monday, May 18, 2015. Late exams will not be accepted unless under urgent circumstances and with instructor approval.

#### 4.4 Participation: 10%

In order to receive full credit for the Participation portion of your grade, you need to do more than just show up. Please engage in classroom and online discussions for your own benefit and to allow classmates the benefit of your perspective. Each student comes into the semester with a score of 5 (out of 10) on participation. Your attendance and engagement can increase or decrease your score from there.

**You are responsible for all material presented during class, including announcements and changes in the course calendar and syllabus.** Also, your attendance in class is a component of your participation grade. If you must miss a class, please notify the instructor as soon as possible, preferably before class. You should also contact one or more classmates to arrange sharing of any notes and announcements you missed.

#### 5. Course Materials

There is no required text for this course. All required readings will be available electronically, either via the open Web (linked from the syllabus and weekly modules), downloadable from ELMS, or available from Research Port of the UM Libraries Catalog. Students who have any trouble accessing a reading should contact the instructor as soon as possible so that broken links or missing documents may be remedied.

A site has been created in ELMS for this course section. Each class session has a module, which will include download-able Power Point slides, links to the readings for that session, and links to other content as warranted. Students are heartily encouraged to use the ELMS discussion features to post questions, answers, observations, or announcements. All assignments and the definitive copy of your syllabus (including course calendar) will also be in ELMS.

#### 6. Students with Special Circumstances

If you are a student with a documented disability, please see the instructor as soon as possible to discuss appropriate academic accommodations.

If you are a student for whom religious observances will affect your attendance or ability to complete any assignments on time, please see the instructor as soon as possible so that we may figure out the appropriate adjustments.

If you have any other circumstance that might affect your attendance, participation, or performance, you are welcome and encouraged to communicate with the instructor. There is much more room to adjust course requirements if notification is given in advance of any lag or lapse in performance.

## **7. Academic Integrity**

Along with certain rights, students also have the responsibility to behave honorably in an academic environment. Academic dishonesty, including cheating, fabrication, facilitating academic dishonesty, and plagiarism, will not be tolerated. Any abridgement of academic integrity standards will be referred directly to the campus judiciary. Confirmation of such incidents will result in the earning of an "XF" grade for the course and may result in more severe consequences such as expulsion. Students would be wise to familiarize themselves with the University's Code of Academic Integrity at <http://www.president.umd.edu/policies/iii100a.html>.

Bottom line: If you have any questions about permissible behavior, ask first!