

Syllabus: LIS 644, Digital tools, trends and debates

School of Library and Information Studies, University of Wisconsin-Madison

Fall 2012: Thursdays 2:00-4:30 pm

Dorothea Salo (please call me "Dorothea")

salo@wisc.edu; 608-265-4733

Office address: 4261 Helen C. White Hall

Office Hours: by appointment, please!

AIM, Skype: DorotheaSalo

Class links: <http://pinboard.in/u:dsalo/t:644>



To the extent possible under law, the person who associated CC0 with this work has waived all copyright and related or neighboring rights to this work. This work is published from: United States.

Course Objectives

- Broad awareness of digital technologies in use in libraries and other information agencies.
- Vocabulary and knowledge of conventions needed to communicate with technical staff.
- Ability to evaluate, plan for, select, and safely and securely work with digital technologies.
- Awareness of the social and legal forces that impact digital technologies; controversies surrounding them; and the complex relationship between digital technologies and the future of information agencies.
- Ability to contribute appreciably to a team working on a defined project; awareness of project-management tools and techniques.
- Sufficient courage, self-awareness, and skill for self-sufficiency in acquiring technical knowledge.
- Development of ethical and principled approaches to technology adoption and education.

Course Policies

I wish to fully include persons with disabilities in this course. Please let me know within two weeks if you require special accommodation. I will do my best to keep this information confidential.

Academic Honesty: I follow the academic standards for cheating and plagiarism set forth by the University of Wisconsin.

This course involves technology education, not technology training; an explicit goal is self-sufficiency in acquiring knowledge about novel technology. I encourage students who want training in specific technologies to discuss possibilities with me.

Readings

There are no required textbooks or software purchases for this course.

Contacting me

Please use the Learn@UW help forum *before* emailing me; please also do your best to assist your colleagues there. I am not available Fridays or weekends; otherwise, I do my level best to answer email within two business days. To meet with me in person, please make an appointment *via WiscCal*.

If you see dead links (it does happen, usually with no notice), weird due dates, or other syllabus problems, please post them to the "Syllabus problems" forum on Learn@UW. I will resolve them as quickly as possible.

Grading Schema and Due Dates

<u>Assignments:</u>	<u>Percentage</u>	<u>Due Date</u>
Weekly work	30%	(13 weeks; three lowest dropped)
Position description and interview	15%	27 September
Interview evaluation email		4 October
Pecha kucha	20%	(between 18 October and 8 November)
Project plan/ technology implementation	15% / 15%	
Project and technology chosen		13 September
Work charter and schedule due		20 September
Project plan and bibliography due		1 November
360 evaluations and Krikelas Award applications due to me		6 December
Failure assessment	5%	6 December

No extra credit opportunities are available in this class. Failure to complete the position description/interview project, the pecha kucha, OR more than 3 weekly assignments will result in an automatic F for the course.

Please finish readings by the class meeting time under which they are listed. (Yes, you catch a break for the first week of class.)

Unit 1: Fundamentals

Week 1 (September 6): What is technology? Managing technology and technology projects in libraries. Jobs in library technology.

Learning objectives: Technology, technology "stacks," technology "affordances." Attitudes toward technology and change. Project management tools and techniques. Technology-centered information-agency jobs. Technology in other information-agency jobs.

Weekly assignment (due 9/13): Build your personal learning network.

ObXKCD: <http://xkcd.com/349/>

Trithemius, *In praise of scribes* (excerpts). Translated by Dorothea Salo. <http://misc.yarinareth.net/trithemius.html>

Click a few links in my Trithemius linkstore: <http://pinboard.in/u:dsalo/t:trithemius>

Wamsley, "Controlling project chaos: project management for library staff." *PNLA Quarterly* 73:2 (2009). http://www.pnla.org/quarterly/Winter2009/PNLA_Winter09.pdf (pp. 5-6, 27)

Leon, "Project management for humanists." #alt-academy <http://mediacommons.futureofthebook.org/alt-ac/pieces/project-management-humanists>

Lefurgy, "What skills does a digital archivist or librarian need?" <http://blogs.loc.gov/digitalpreservation/2011/07/what-skills-does-a-digital-archivist-or-librarian-need/> (please read the comments also)

Wilder, "The New Library Professional." *Chronicle of Higher Education*. <http://chronicle.com/article/The-New-Library-Professional/46681/>

Week 2 (September 13): The innards of computers and networks. Technology standards.

Learning objectives: Parts of a computer. Network stacks. (cable, router, switch, DNS, TCP/IP, IPv4 and IPv6 addressing). What standards are for. Standards bodies (W3C, OASIS, ISO, NISO, IETF), library standards and standards work (RDA, "BibFrame," controlled vocabularies), "open standard."

Weekly assignment: Upgrade the lab.

ObXKCD: <http://xkcd.com/927/>

Tyson and Crawford, "How PCs Work." (pages 2-3, 5) <http://computer.howstuffworks.com/pc2.htm>

Erdman, "TCP/IP." <http://www.networkclue.com/routing/tcpip/>

Mathew, "Explaining SOPA." <http://meta.ath0.com/2011/12/21/explaining-sopa/> (read this for how DNS works, DNS spoofing, DNSSEC)

Cargill, "Why standardization efforts fail." *Journal of Electronic Publishing*. <http://dx.doi.org/10.3998/3336451.0014.103>

Taylor and Williams, "RDA: Resource Description and Access." *Ariadne*. <http://www.ariadne.ac.uk/issue63/rda-briefing-rpt> (sections 1-3, 6)

Coyle, "Bibliographic Framework Transition Initiative." <http://kcoyle.blogspot.com/2011/08/bibliographic-framework-transition.html>

"About the World Wide Web Consortium (W3C)." <http://www.w3.org/Consortium/>

"Overview of the IETF." <http://ietf.org/overview.html>

Week 3 (September 20): Technology, the law, and libraries

Learning objectives: Patriot Act. DOPA, S.49, COPA, CIPA, Do Not Track Kids Act. Terms of service agreements. CDA, filtering, E-Rate. Copyright and attempts to enforce copyright strictures on the Internet (ACTA, "three strikes" laws, SOPA, PIPA, RWA). Net neutrality.

Weekly assignment: Write a bug report.

ObXKCD: <http://xkcd.com/488/>

ALA, "The USA Patriot Act and Libraries." <http://www.ala.org/advocacy/advleg/federallegislation/theusapatriotact> (stop at "Reauthorization History" section)

"Gagged for 6 Years..." http://www.democracynow.org/seo/2010/8/11/gagged_for_6_years_nick_merrill

"Carol Brey-Casiano tells a Patriot Act story." <http://americanlibrariesmagazine.org/print/4390>

Carr, "Library Filtering Remains Controversial." *Baseline*. <http://www.baselinemag.com/c/a/IT-Management/Library-Filtering-Remains-Controversial-581401/>

Anderson, "Libraries dying for bandwidth." <http://arstechnica.com/tech-policy/news/2009/11/libraries-dying-for-bandwidthwheres-the-fiber-and-cash.ars>

Marwick, "To catch a predator?" First Monday. <http://www.uic.edu/htbin/cgiwrap/bin/ojs/index.php/fm/article/view/2152/1966> (Abstract and introduction required; the rest is optional, but fascinating)

MacDonald, "SOPA and PIPA Infographic" <http://pinboard.in/cached/c1e67492336a/>

Smith, Kevin. "ACTA and the Embrace of Big Government." <http://blogs.library.duke.edu/scholcomm/2010/10/25/acta-and-the-embrace-of-big-government/>

Lifehacker. "An introduction to net neutrality." <http://lifehacker.com/5720407/an-introduction-to-net-neutrality-what-it-is-what-it-means-for-you-and-what-you-can-do-about-it>

Karr, Tim. "Comcast Busted." <http://www.savetheinternet.com/blog/10/11/30/comcast-busted-new-tolls-netflix-arent-all-you-should-worry-about>

Unit 2: Living on the network

Week 4 (September 27): Security on the network

Learning objectives: software threats (virus, trojan, worm), malware (adware, spyware, hijackers), phishing, pharming, social engineering, denial of service attack. Spam (email, web-comment, referrer; botnets). Server and network attacks (denial-of-service attack, "man-in-the-middle" attack, cross-site-scripting attack, dictionary attack, brute-force attack), vulnerabilities and patches (zero-day exploit), firewalls, privileges and privilege-based attacks (rootkit), password guidelines. Identity management (authentication, attribution, authorization).

Weekly assignment: A reflection on personal digital security.

ObXKCD: <http://xkcd.com/350/> and <http://xkcd.com/936/>

Plum, "User Authentication." <http://www.arl.org/bm~doc/spec267web.pdf> (pp 9-13)

Granier, "SPAM and AntiSpam." <http://www.sans.edu/student-files/presentations/Spam-AntispamBattlefield.pdf> (pp 1-21)

"What's the difference between..." <http://lifehacker.com/5560443/whats-the-difference-between-viruses-trojans-worms-and-other-malware>

"Botnet." http://searchsecurity.techtarget.com/sDefinition/0,290660,sid14_gci1030284,00.html

Hruska, "IRS easily baited, vulnerable to social engineering-based attacks." Ars Technica. <http://arstechnica.com/news.ars/post/20070805-study-finds-irs-vulnerable-to-social-engineering-based-attacks.html>

"All About Phishing." <http://www.webopedia.com/DidYouKnow/Internet/2005/phishing.asp>

Delio, "Pharming Out-Scams Phishing." Wired. <http://www.wired.com/techbiz/it/news/2005/03/66853>

"Rootkit." <http://searchmidmarketsecurity.techtarget.com/definition/rootkit>

"Denial of Service attacks." http://www.cert.org/tech_tips/denial_of_service.html

Piscitello, "Anatomy of a cross-site scripting attack." <http://www.watchguard.com/infocenter/editorial/135142.asp>

Bradley, "Zero day exploits." <http://netsecurity.about.com/od/newsandeditorial1/a/aazeroday.htm>

Baekdal, Thomas. "The usability of passwords." <http://www.baekdal.com/tips/password-security-usability>

Canavan, "Information Security Policy." http://www.sans.org/reading_room/whitepapers/policyissues/information-security-policy-development-guide-large-small-companies_1331 (Sections 1-3. Skim sections 5 and 6.)

For consultation: Data Security and Compliance Terms. <http://www.imperva.com/resources/glossary/glossary.html>

Week 5 (October 4): Websites and their care and feeding. Mobile websites and apps.

Learning objectives: weblog, wiki, content management system, content transclusion (via RSS, Twitter, etc). Usability and user testing. Writing for the web. Common errors in library website design. Search-engine optimization. Responsive design. Smartphones, apps, web development for mobile devices, texting/SMS, mobile demographics, geolocation, privacy. QR codes.

Weekly assignment: Rewrite a library web page.

Reidsma, "Your library website stinks and it's your fault." <http://matthew.reidsrow.com/lrc2012/> (watch the entire video)

Marty and Twidale, "Usability@90mph." First Monday. <http://www.firstmonday.org/htbin/cgiwrap/bin/ojs/index.php/fm/article/view/1260/1180>

"User Testing in the Wild: Joe's First Computer Encounter." <http://jboriss.wordpress.com/2011/07/06/user-testing-in-the-wild-joes-first-computer-encounter/> (beware the comments; some are good, some are stunningly creepy)

Fulton, "Library perspectives on Web content management systems." First Monday. <http://firstmonday.org/htbin/cgiwrap/bin/ojs/index.php/fm/article/view/2631/2579> (Pay attention to the politics of CMS migration.)

"About Drupal." <http://drupal.org/about>

Pettit, "Beginner's guide to responsive web design." <http://thinkvitamin.com/design/beginners-guide-to-responsive-web-design/>

Schmidt, "Writing for the Web: Save the Time of the Reader" <http://www.walkingpaper.org/5225>

"Library Accessibility: What You Need To Know." <http://www.ala.org/ascla/asclaprotocols/accessibilitytipsheets/> (read all; pay special attention to "Management" and "Assistive Technology")

Wikipedia, "Search engine optimization." http://en.wikipedia.org/wiki/Search_engine_optimization
Enis, "Patrons expect more mobile services." The Digital Shift. <http://www.thedigitalshift.com/2012/08/mobile/patrons-expect-more-mobile-services-handheld-librarian-conference/>
Reidsma, "Libraries and the myth of mobile phone use." <http://matthew.reidsrow.com/articles/21>
MIT Libraries, "Apps for Academics." <http://libguides.mit.edu/apps> (click through the tabs, skim the pages)
Tynan, "Who's tracking your cell phone?" http://www.pcworld.com/businesscenter/article/236456/whos_tracking_your_cell_phone.html
Suda, "Designing for the Mobile Web." <http://articles.sitepoint.com/article/designing-for-mobile-web>

Week 6 (October 11): Information agencies and the social web

Learning objectives: Online audio/video, Twitter, Facebook, Google+, LinkedIn, chat, Wikipedia and libraries, geolocation, crowdsourcing, professional networking online, social bookmarking/citation management, tagging, folksonomy, mashups (AJAX) and widgets, APIS and protocols.

Weekly assignment: Evaluate the advocacy potential of a social-media tool for a particular information-agency type.

ObXKCD: <http://xkcd.com/802/>

"Application programming interface." http://en.wikipedia.org/wiki/Application_programming_interface

Miller, "So what's a mashup anyway?" http://blogs.talis.com/panlibus/archives/2006/06/so_whats_a_mash.php

Lamb, "Folksonomies and Rich Serendipity." http://www.greenchameleon.com/gc/blog_detail/folksonomies_and_rich_serendipity/

"Chat reference." <http://www.teachinglibrarian.org/oldsite/chat.htm>

Hickey, "Back to school: an Evernote scavenger hunt." <http://blog.evernote.com/2012/08/16/back-to-school-an-evernote-scamenger-hunt-education-series/>

Potter and Woods, "Escaping the echo chamber." http://www.netvibes.com/nedpotter#The_Echo_Chamber (at minimum, click through the Prezi presentation OR read the article)

Simon, "An open letter to museums on Twitter." <http://museumtwo.blogspot.com/2008/12/open-letter-to-museums-on-twitter.html>

Madrigal, "What Big Media could learn from the NYPL." <http://www.theatlantic.com/technology/archive/2011/06/what-big-media-can-learn-from-the-new-york-public-library/240565/>

Halpern, "Walking a fine line: You 2.0 vs. well, You." <http://hacklibschool.wordpress.com/2011/07/25/walking-a-fine-line-you/>

Week 7 (October 18): Teaching and learning on the network

Learning objectives: "Digital natives" and other (faux or real) technology demographics. Distance education, digital research guides, MOOCs. Teaching technology to non-users, the digital divide. Gamification, badges.

Weekly assignment: SQL Quiz 1

ObXKCD: <http://xkcd.com/627/>

Coombes, "Generation Y: Are they really digital natives or more like digital refugees?" <http://www.slav.schools.net.au/synergy/vol7num1/coombes.pdf>

"Information behaviour of the researcher of the future." <http://www.bl.uk/news/pdf/googlegen.pdf>

Dworschak, "Logging Off: The Internet Generation Prefers the Real World." <http://www.spiegel.de/international/zeitgeist/0,1518,710139,00.html>

"Keeping an electronic eye on Johnny." http://host.madison.com/ct/news/local/education/local_schools/article_17ea45ba-ad97-11df-8583-001cc4c03286.html

"Game-Based Learning." <http://www.nmc.org/publications/horizon-report-2012-higher-ed-edition> (download the PDF and read pp. 18-21)

Look at at least two tags and at least two questions on <http://libraries.stackexchange.com/>. Now look through the badges system.

Poke through UW-Madison's LibGuides at <http://researchguides.library.wisc.edu/> and read through the information about Library Course Pages <http://www.library.wisc.edu/lcp/index.html>

West and Engstrom, "Touring the Digital Divide." <http://www.librarian.net/talks/sxsw10/> (read the slides at least)

"Guidelines for distance learning library services." <http://www.ala.org/acrl/standards/guidelinesdistancelearning> (Part I)

"MOOCs from Here." <http://www.insidehighered.com/blogs/confessions-community-college-dean/moocs-here>

West, "On the Fly Tech Support" <http://www.librarian.net/talks/iowa2009/index.html> (read the slides, click some links)

Kelly and Hibner, "Thingamabobs and Doodads: why tech support IS reference." <http://www.slideshare.net/hhibner/thingamabobs-and-doodads-tech-support-is-reference-4440135>

Grussell, "Introduction: The Database Approach." <http://db.grussell.org/section002.html> (NOT the rest of the page.)

Unit 3: Library-specific technology

Week 8 (October 25): The Integrated Library System and related software. N.B. Dorothea is presenting at WLA this week. Class will NOT MEET IN PERSON. Project groups are welcome to use the classroom space at normal class time to meet if they wish. Lecture video will be posted to Learn@UW.

Learning objectives: Software development models (off-the-shelf, customized, homegrown, open-source) and their pros and cons. Software selection processes. Protocols and APIs (recap). ILS modules. ILS vendors. "Resource discovery" landscape. Metasearch versus local indexing. Electronic-resource managers. Proxy servers. Link resolvers (the "appropriate copy" problem). OpenURL. The future of MARC.

Weekly assignment: SQL quiz 2

ObXKCD: <http://xkcd.com/225/> and <http://xkcd.com/743/>

"Comparison of open source and closed source." Wikipedia. http://en.wikipedia.org/wiki/Comparison_of_open_source_and_closed_source

Askey, "Yes, we love open-source software. No, you can't have our code." <http://journal.code4lib.org/articles/527>

Lown, Sierra, and Boyer, "How users search the library from a single search box." <http://crl.acrl.org/content/early/2012/01/09/crl-321.full.pdf+html>

Coco, "Convenience and its discontents." <http://acrlog.org/2012/01/27/convenience-and-its-discontents-teaching-web-scale-discovery-in-the-context-of-google/>

Dempsey, "Outside-in and inside-out." <http://orweblog.oclc.org/archives/002047.html>

Watters, "The search for a minimum viable record." <http://radar.oreilly.com/2011/05/minimum-viable-record.html>

Rochkind, Jonathan. "article search, and catalog search." <http://bibwild.wordpress.com/2011/08/08/article-search-and-catalog-search/>

Coyle, Karen. "From MARC to principled metadata." <http://kcoyle.blogspot.com/2011/05/from-marc-to-principled-metadata.html>

Taylor, Mike. "Bibliographic data, part 1: MARC and its vile progeny." <http://reprog.wordpress.com/2010/09/02/bibliographic-data-part-1-marc-and-its-vile-progeny-2/>

Apps and MacIntyre, "Why OpenURL?" <http://www.dlib.org/dlib/may06/apps/05apps.html>

Farkas, "What's the deal, JSTOR?" <http://meredith.wolfwater.com/wordpress/2010/08/24/whats-the-deal-jstor/>
w3schools.com, SQL tutorials. http://www.w3schools.com/SQL/sql_syntax.asp, http://www.w3schools.com/SQL/sql_select.asp, and http://www.w3schools.com/SQL/sql_where.asp

Week 9 (November 1): Metadata and search engines.

Learning objectives: Metadata types (descriptive, administrative, structural, preservation). Common metadata standards and other XML languages in information agencies (METS, MODS, Dublin Core, TEI, EAD). What is a markup language? XML. XML well-formedness. XML validity (DTDs, schemas, validators, tag libraries and other documentation). Index, spider/crawler, TF/IDF, search engine optimization. Relevance ranking, deduplicating, and faceted browsing. Linked data and RDF.

Weekly assignment: SQL Quiz 3

ObXKCD: <http://xkcd.com/369/>

Franklin, "How Internet Search Engines Work." <http://computer.howstuffworks.com/search-engine.htm> (Parts 1-4)

Rochkind, Jonathan. "Information retrieval and relevance ranking for librarians." <http://bibwild.wordpress.com/2011/03/28/information-retrieval-and-relevance-ranking-for-librarians/>

Antelman, Lynema, and Pace. "Toward a 21st Century Library Catalog." <http://eprints.rclis.org/archive/00007332/>

"A Gentle Introduction to XML." <http://www.tei-c.org/release/doc/tei-p5-doc/en/html/SG.html> (Through "An example schema," but keep going if you like.)

SAA. "What is EAD?" <http://www.archivists.org/saagroups/ead/aboutead.html>

Dempsey, Lorcan. "Metadata sources." <http://orweblog.oclc.org/archives/002009.html>

Riley, "Seeing Standards." <http://www.dlib.indiana.edu/~jenlrile/metadatamap/> (Download the poster and read the legend and definitions carefully.)

Kennedy, "Nine questions to guide you in choosing a metadata schema." <https://journals.tdl.org/jodi/article/viewArticle/226/205>

Cundiff and Trail, "Using METS and MODS..." <http://www.loc.gov/standards/mods/presentations/mets-mods-morgan-ala07/>

Chapple, "Database keys." <http://databases.about.com/od/specificproducts/a/keys.htm>

Week 10 (November 8): Digitization and file formats

Learning objectives: Classifying and evaluating file formats. Lossy vs. lossless formats. Image formats (JPEG, TIFF, JPEG 2000, PNG, GIF). Audio and video formats (codecs, sampling rate/bitrate, WAV, AIFF, mp3, MPEG4). Planning and managing digitization projects. OCR.

Weekly assignment: SQL quiz 4

ObXKCD: <http://xkcd.com/619/>

Search for some of your favorite file formats on <http://wotsit.org/>.

Matthews, "Digital image file types." <http://www.wfu.edu/~matthews/misc/graphics/formats/formats.html>

Read through Rutgers' opinions on archival file formats at <http://rucore.libraries.rutgers.edu/collab/reference.php?group=ALL&auth=ALL&type=dos&submit=Search&orderby=date>.

ICPSR, "Digital Preservation Tutorial," section 3 "Obsolescence": "File Formats and Software" and "Hardware and media" http://www.icpsr.umich.edu/dpm/dpm-eng/eng_index.html

Lazorchak, "Whither digital video preservation?" <http://blogs.loc.gov/digitalpreservation/2011/07/whither-digital-video-preservation/>

Pilgrim, "Video on the web." <http://diveintohtml5.org/video.html> (Stop at "Encoding video with Miro converter.")

"Creating and keeping your digital treasures: A user guide." http://www.slwa.wa.gov.au/_data/assets/pdf_file/0015/12048/Creating_and_Keeping_your_Digital_Treasures-A_User_Guide.pdf

"What is OCR?" http://www.webopedia.com/TERM/O/optical_character_recognition.html

"SQL Join." http://www.quackit.com/sql/tutorial/sql_join.cfm (read ONLY about inner joins; outer joins will confuse you!)

Week 11 (November 15): Digital preservation

Learning objectives: Threats to digital data. Format migration vs. system emulation. "Preservation copy" and Google Books.

Types of digital archives (institutional repository, disciplinary repository, data archive, "trusted digital repository," dark archive). LOCKSS/CLOCKSS and Portico. eScience, cyberinfrastructure, and data curation. Personal digital archiving.

Weekly assignment: Reflect on the longevity of your personal digital materials.

ObXKCD: <http://xkcd.com/512/>

Rosenthal, "Requirements for digital preservation systems: a bottom-up approach." D-Lib Magazine. <http://www.dlib.org/dlib/november05/rosenthal/11rosenthal.html>

"Sustainable Economics for a Digital Planet." http://brtf.sdsc.edu/biblio/BRTF_Final_Report.pdf (pp 1-16)

ICPSR, "Digital Preservation Management." http://www.dpworkshop.org/dpm-eng/eng_index.html (Introduction, sections 1, 2, 5.)

Skinner and Schultz, "Preserving Our Collections, Preserving Our Missions." http://www.metaarchive.org/sites/default/files/GDDP_Educopia.pdf (pp. 1-9)

Library of Congress. "Personal Digital Archiving Day Kit." <http://www.digitalpreservation.gov/personalarchiving/padKit/index.html> (download and read the PDF reference copy)

"About LOCKSS." http://www.lockss.org/lockss/About_LOCKSS

"How CLOCKSS works." http://www.clockss.org/clockss/How_CLOCKSS_Works

"About Portico." <http://www.portico.org/about/>

Lynch, "Institutional repositories." <http://www.arl.org/resources/pubs/br/br226/br226ir.shtml>

Peek through SSRN (<http://ssrn.com/>) and MINDS@UW (<http://minds.wisconsin.edu/>).

ARL, "Agenda for Developing E-Science." http://www.arl.org/bm~doc/ARL_EScience_final.pdf (pp. 3-13)

November 22: Happy Thanksgiving!

Week 12 (November 29): Ebooks

Learning objectives: IDPE, EPub vs. PDF vs. .mobi, DRM, "first-sale," leased vs. owned information, libraries as publishers, print-on-demand. Licensing ebooks; e-reserves. Acquiring and cataloging ebooks. DMCA and its exceptions.

Weekly assignment: An emerging technology plan.

ObXKCD: <http://xkcd.com/750/>

Ball, "E-books in practice: the librarian's perspective." <http://epub.uni-regensburg.de/2047/1/Ball.pdf>

"E-reader Pilot at Princeton." <http://www.princeton.edu/ereaderpilot/index.xml> (read through the whole site, and at least the summary version of the final report)

Houghton-Jan, "Imagine no restrictions: digital rights management." <http://www.libraryjournal.com/article/CA6448189.html>

Mod, "Books in the age of the iPad." http://craigmod.com/journal/ipad_and_books/

Tenopir, "Usage and Functionality." <http://www.libraryjournal.com/article/CA6718560.html>

Bayley, "E-Book Buyer's Guide to Privacy." <http://www.eff.org/deeplinks/2010/01/updated-and-corrected-e-book-buyers-guide-privacy>

Neuberger, "Who Owns Your Ebook...? Probably Not You." <http://www.pbs.org/mediashift/2010/08/who-owns-your-e-book-of-war-and-peace-probably-not-you225.html>

Anderson, "Landmark study: DRM truly does make pirates of us all." *ars technica*. <http://arstechnica.com/tech-policy/news/2009/05/landmark-study-drm-truly-does-make-pirates-out-of-us-all.ars>

Yelton, "Ebooks, choices, and the soul of librarianship." *The Digital Shift*. <http://www.thedigitalshift.com/2012/07/ebooks/ebooks-choices-and-the-soul-of-librarianship/>

Albanese, "PW talks with Jonathan Band." <http://www.publishersweekly.com/pw/by-topic/digital/copyright/article/52123-public-defender-pw-talks-with-jonathan-band-lawyer-to-the-library-community-ala-2012.html>

w3schools.com, SQL tutorials. http://www.w3schools.com/SQL/sql_and_or.asp and http://www.w3schools.com/SQL/sql_func_count.asp.

Unit 4: Overarching concerns

Week 13 (December 6): Privacy

Learning objectives: Library attitudes toward privacy. Privacy and threats to privacy in networked environments. Legal threats to privacy online (CALEA, ECPA). Teaching patrons about privacy. Ebooks and privacy. Data mining and reidentification.

Weekly assignment: Privacy-policy language for a personalized library service

ObXKCD: <http://xkcd.com/155/> and <http://xkcd.com/522/>

Take the EFF's Know Your Rights! quiz at <https://www.eff.org/pages/know-your-digital-rights-quiz>

Owen, "Big e-reader is watching you." *Paid Content*. <http://paidcontent.org/2012/06/29/big-e-reader-is-watching-you/>

Cline, "iPhone location-tracking incident boosts stock of 'privacy by design.'" http://www.macworld.com/article/159777/2011/05/privacy_by_design.html

Klinefelter, "Library Standards for Privacy: A Model for the Digital World?" http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1621837

"Big data is our generation's civil rights issue, and we don't know it." <http://solveforinteresting.com/big-data-is-our-generations-civil-rights-issue-and-we-dont-know-it/>

"The Fundamental Limits of Privacy for Social Networks." <http://www.technologyreview.com/blog/arxiv/25146/>

Onion. "Google Responds to Privacy Concerns with Unsettlingly Specific Apology." <http://www.theonion.com/articles/google-responds-to-privacy-concerns-with-unsettlin,16891/>

Madrigal, "Why Facebook and Google's concept of 'real names' is revolutionary." <http://www.theatlantic.com/technology/archive/2011/08/why-facebook-and-googles-concept-of-real-names-is-revolutionary/243171/>

Schneier, Bruce. "Privacy Salience and Social Networking Sites." http://www.schneier.com/blog/archives/2009/07/privacy_salience.html

Hotz, "Facebook and privacy: six years of controversy." <http://mashable.com/2010/08/25/facebook-privacy-infographic/>

Harris, "FTC says yes to Facebook inclusion in background checks." <http://www.zdnet.com/blog/feeds/ftc-says-yes-to-facebook-activity-inclusion-in-background-checks/3973>

Week 14 (December 13): Collecting and circulating digital materials

Learning objectives: Google Books. The impact of ebooks and other digital materials on collection development, technical services, reference, and other information-agency functions.

ObXKCD: <http://xkcd.com/86/>

Salo, "Turning collection development inside out." <https://vimeo.com/20019850>

Samuelson, "GBS as copyright reform." <http://www.slideshare.net/naypinia/samuelson-gbs-as-copyright-reform>

Band, "GBS March Madness." <http://www.arl.org/bm~doc/gbs-march-madness-diagram-final.pdf>

Grimmelmann, "Inside Judge Chin's Opinion." http://laboratorium.net/archive/2011/03/22/inside_judge_chins_opinion

Hellman, "What the Google Books Settlement Agreement Says about Privacy." <http://go-to-hellman.blogspot.com/2009/08/what-google-books-settlement-agreement.html>

Kolowich, "Flipping the script." *Inside Higher Ed*. <http://www.insidehighered.com/news/2012/07/20/library-groups-see-double-standard-authors-guilds-stand-against-hathitrust>

Cairns, "Monographs don't support the library mission." <http://personanondata.blogspot.com/2011/06/ala-speech-parallel-universe-monographs.html?spref=tw>

Schonfeld and Housewright, "What to Withdraw." <http://www.ithaka.org/ithaka-s-r/research/what-to-withdraw/What%20to%20Withdraw%20-%20Print%20Collections%20Management%20in%20the%20Wake%20of%20Digitization.pdf>

ASSIGNMENTS

Weekly assignments

Each week, you will have an assignment or reflection to complete, due at the start of the next class period. Pay special attention to instructions for turning these in! Some will be brought to class on paper, others posted to Learn@UW forums, others deposited in a Learn@UW dropbox.

Each reflection, which should be roughly the length of a typical thoughtful medium-to-long weblog entry, will have a dedicated forum on Learn@UW, and will be screened until the day after they are due. I will assess these reflections on clarity of communication, depth of thought, and use of readings and other background knowledge as support.

Week 1: Build your personal learning network

Your LIS education must not stop when you graduate. It is simply unacceptable for professionals to stagnate as new technologies and techniques for the creation, organization, dissemination, and preservation of information emerge. Begin an online personal learning network by:

- writing a goals statement: what you hope to accomplish and expect to learn, e.g. “my network will help me keep current on incorporating social media into reference and outreach services.” More than one of these is fine!
- writing an application statement: how you plan to apply your new learning to your professional life (your library-school-student life is fine as well). E.g. “I will offer to start and maintain an appropriate social-media account for the library I currently work in.”
- writing a scope statement: the (porous) boundaries you draw around your professional development based on your career path; this is necessary to keep from drowning! E.g. “I will focus on rural public libraries,” or “I am particularly interested in born-digital academic-library collections.”
- building the foundations of your learning network by listing at least *five* CURRENT, ACTIVELY CHANGING information sources. Consider including listservs, journals, continuing-education coursework (including MOOCs), conferences *specific to your goals and scope* (broad-brush conferences like ALA Annual are not acceptable), Twitter accounts and / or hashtags, Facebook or LinkedIn groups, wikis (not Wikipedia, please; everyone knows about that), and weblogs. You MAY NOT include static (unchanging or rarely-changing) websites or LibGuides. Your five entries must be of at least three different types (so five Twitter accounts is not acceptable).

Bring your statements and list on paper to the next class session. DO NOT THROW IT AWAY; you will use it again.

Week 2: Upgrade the lab!

Go into the SLIS computer lab, and on one computer there (they're all more or less the same), find out:

- the name of its CPU chip
- the amount and type of RAM installed
- the size of its hard drive
- what ports and slots it has

Using Consumer Reports's buying guide at <http://www.consumerreports.org/cro/computers/buying-guide.htm> to help you, answer the following question: does it make more financial sense to replace the lab's computers or upgrade them somehow (and if so, how?) Justify your answer in 2-3 sentences, and bring it to class along with your list, on paper.

Week 3: Report that bug!

Find something that really annoys you about Learn@UW. (I suspect this is not hard.) Write a bug report useful enough that a developer could fix your bug. Remember the pattern:

1. what you did
2. what happened when you did it
3. what you expected to happen instead
4. any information about your computer setup that you think might be helpful for diagnosis

Bring your bug report to class on paper.

Week 4: Personal digital security

On the Learn@UW forum, please reflect on computer-security issues you have personally experienced, and ones you've witnessed or heard about from family and friends. (Don't worry; we're all friends here! I've had blogs and Twitter

accounts hacked, for that matter.) With those experiences as background, suggest one *feasible* way an information agency (library, archive, records-management office, etc) can help improve its patrons' computer-security practices *without panicking or confusing them*.

Week 5: Rewrite a library web page

Find an information-agency web page or LibGuide to rewrite for conciseness and clarity, according to best practices for web writing. You may revise the navigation scheme of the site as well, if you do not approve of it. Bring a printout of the original page, your rewrite (which need not be in HTML or look anything like the original; do it in a word-processor if you prefer), and a brief bullet-list of the problems you were trying to fix, to the next class meeting.

Week 6: Evaluate the advocacy potential of a social-media tool for a particular library type

In class, you will randomly draw the name of a social-media tool and a type of library. Come to the next class with a less-than-two-page (double-spaced) evaluation of the tool for that library or population, including:

- a description of the tool and what it does
- a description of what demographics appear to be using it most, and what they use it for
- how the library might use it to advocate for itself and its services
- which patron groups might be most likely to respond to such an advocacy campaign
- whether you think it is worthwhile for this library type to engage with this tool

Weeks 7-10: SQL quizzes

You will be assigned a problem-set, often web-based (which you can self-correct). Paste your answers into the quiz space in Learn@UW.

Week 11: Your digital stuff and its longevity

On the Learn@UW forum, please reflect on your digital trail. What do you have of your personal history and experience in digital form? Solely in digital form? How are you caring for it? What is its greatest vulnerability? Finally, name one action you will take in the next year to preserve your personal digital creations.

Week 12: An emerging technology plan

Given your career goals, list three new technologies, technology-related changes in librarianship, or technology-related changes in society that you believe you need to know more about than you do. Go back to your personal learning network plan and add to it accordingly. Bring your original and revised plans to the next class session on paper.

Week 13: Privacy policy language for a personalized library service

Your library plans to keep individual library circulation histories because patrons have been asking for them. Write a section of a library privacy policy clearly explaining to patrons how the service will work and what the privacy implications are. Recall that nobody likes reading legalese. Bring your policy to the next class session on paper.

Position description and phone interview

Write a position description such as you might find on an employer's website or via a job-search site such as lisjobs.com. Be sure to invent and describe a specific type of information organization to use as context for the position; you may adapt language from the postings you find as you see fit providing you do not slavishly copy an entire listing. Turn in:

- links to or screenshots of at least three roughly similar job postings
- three questions *specifically related to the duties of this position* that you would ask candidates in an interview
- a position description, including lists of job duties, required skills, and preferred skills ("job ad")

You may choose from the titles listed below if you wish (you need not use the titles verbatim, nor do your supporting job postings need to use the titles verbatim):

- a) ILS Librarian (public library, academic library, public or academic library consortium)
- b) Emerging Technologies Librarian (any library type)
- c) E-Resources or E-Serials Librarian (academic library, corporate library, library consortium, public library)
- d) Digital Repository Librarian (academic library, corporate library)
- e) Web Librarian (any library type)
- f) Distance-Education Librarian (academic library)
- g) Library Application Developer, Library Programmer (any library type, but be realistic!)
- h) Systems Librarian (any library type; beware of laundry-list job descriptions!)
- i) Technical Support Librarian (library vendor, library consortium, academic library, school library)

- j) Metadata Librarian (academic library, archives, vendor)
- k) Digitization Librarian (academic library, archives, special library)
- l) Data Curator (academic library, corporate library, academic IT department)
- m) Digital Preservation Librarian/Digital Archivist (academic library, archives)
- n) E-Records Manager (corporate library, academic library, archives)

Alternately, you may describe and document a library position whose focus is not explicitly on technology, but includes *significant* (at least 40% of the job) technology-specific responsibilities. Off-limits, please: records managers, knowledge managers, scholarly-communications librarians, high-level management positions.

Questions: Tailor the questions *specifically to the envisioned scope and duties of the positions*. (“If you were a tree...” is not what I am looking for; I will remove points for generic questions!) At least one question should be a “scenario” question, in which candidates are asked to react to a problematic scenario likely to occur on the job.

Phone/Skype interview: Exchange your position description and questions with a classmate, and arrange a time to telephone or Skype each other, allowing at least 20 minutes for each interview. (In-person interviews *are not acceptable!*) Interview your classmate as though you were on the search committee for the job s/he described: ask him/her the three questions s/he wrote, *as well as at least two more* that you invent based on his/her position description. Finally, ask the question “do you have any questions for us?”

Afterwards, please email your classmate (CCing me) the questions you invented for him/her, your overall impression of his/her interview, a suggested grade for it (out of 5 points), and at least two suggestions for improvement. Put the job ads you found and the job ad and questions you wrote in the assignment dropbox on Learn@UW.

Grading breakdown (out of 20 final-grade points):

Appropriate exemplars	1 point
Position description (including appropriateness of position to library described)	5 points
Quality of interview questions	5 points (one per question)
Quality of peer interview evaluation	4 points
Quality of interview response	5 points

Pecha kucha

Job candidates at nearly all academic libraries and many public libraries give a short (20-minute) talk to potential colleagues, usually on a topic specified by the library. Many librarians also present at conferences or for local patron audiences. To help accustom you to professional presentations, you will prepare a “pecha kucha” talk: twenty slides, twenty seconds per slide, for a total of six minutes, forty seconds. You may use any presentation tool that allows slide auto-advance (PowerPoint instructions: <http://www.technipages.com/powerpoint-2007-automatically-advance-slides-during-presentation.html>; Apple Keynote instructions: <http://www.igniteaustin.org/2010/01/how-to-set-up-autoadvance-on-apple-keynote.html>). You are expected to adhere **STRICTLY** to pecha-kucha time limits!

Your talk will be recorded. You are expected to watch the video and reflect upon the quality of your talk and how you can improve your self-presentation in a post to the class website or in an email to me. If you would like the video for your eportfolio, you may absolutely have it; just ask me.

Grading breakdown (out of 20 final grade points):

Explains standard clearly; doesn’t overexplain	4 points
Professional slides (including slide attractiveness, correct auto-advance, spelling/grammar)	4 points
Professional self-presentation (including timing, enthusiasm, enjoyability of talk, management of computer and software)	4 points
Information correctness and clarity	4 points
Reflection accuracy and honesty; rating honesty	4 points

Your pecha-kucha should usefully and enjoyably introduce a *technology-related standard*. (Controlled vocabularies are out of scope for this talk, though metadata standards are fine.) Examples include (but are emphatically not limited to):

- School libraries: IEEE LOM, SCORM, technology-literacy academic standards for Wisconsin or another state, or in the Common Core
- Academic libraries: digitization-related standards, digital-preservation standards, COUNTER, OpenURL, OAI-PMH, OAI-ORE
- Public libraries: MARC, RDA, .epub
- Archives: EAD, TEI, EAC-CPF
- Any information organization: MARC, Z39.50, RDF, FRBR, SKOS, W3C standards *other than* HTML and CSS, metadata standards

You are required to attend the session on which you are scheduled to present; you are welcome to come to other sessions as well. You will turn in a rating (1-5 stars), plus constructive comments if you see fit, for each pecha kucha you see on the day you present.

Pecha kuchas will take place:

- between noon and 2 pm: October 18, November 15
- between 5 and 7 pm: November 1, November 8

For an excellent explanation of why learning to present well is important, see <http://weblogs.swarthmore.edu/burke/2009/10/22/the-skilled-presentation-of-self-in-everyday-life/>. For tips on handling speaking anxiety, see http://www.macworld.com/article/151903/2010/06/stevejobs_presentations.html.

Failure assessment

You can't learn in this course if you don't fail. Fail early and often. If you don't fail at technology, more than once, you're not taking enough risks, you're not getting far enough out of your comfort zone, and you're not learning!

Keep track of what goes wrong over the course of the semester: a new tool you can't get your head around, a piece of software you didn't use right, a blind alley on your final project, a stance you took during class discussion (or believed beforehand) that you now know is wrong.

By the due date, turn in to the Learn@UW dropbox a one-page or less (single-spaced) essay listing your failures, what you learned from them, and how your professional self-image has changed as a result. Give yourself a grade (out of five points) based on your risk-taking, the quality of your coping strategies and post-failure mitigation responses, and your creativity and resilience faced with failure.

Inspiration for this assignment: <http://www.insidehighered.com/views/2012/08/21/essay-importance-teaching-failure>

COURSE PROJECT

The final project consists of a PROJECT PLAN and a TECHNOLOGY IMPLEMENTATION. These may be related (that is, the implementation may be an attempt to solve one of the problems), but they do not have to be! If your group is interested in a different technology implementation or problem, please feel free to discuss it with me. Real-world projects or implementations are welcome, but not required; be aware that they are usually significantly more difficult.

Both project plan and technology implementation should be considered eportfolio-worthy projects. If your technology implementation will not survive semester's end, make sure you take screenshots or collect other useful evidence about it!

Grading breakdown (out of 30 final-grade points):

Bibliography (quality, exhaustiveness, annotation quality)	3 points
Participation; results of 360 evaluation	7 points
Project plan (see below)	10 points
Technology implementation (see below)	10 points

PROJECT PLAN

Read the problems below. Choose one to solve, and then write a project plan for solving it. Your plan should include an implementation timeline. See the Resource Discovery at UW Libraries blog (<http://uwlibdiscovery.blogspot.com/>) and report (<http://staff.library.wisc.edu/rdetf/RDETf-final-report.pdf>) for a real-world example. You will be graded on the feasibility, comprehensiveness, depth of understanding, and persuasiveness of your plan as presented.

Consider and plan for the following (where relevant and appropriate):

budget	software/hardware choices
staffing, staff buy-in, and sustainability	outreach and marketing
training, ease of use, usability	accountability and assessment
security and privacy	digital preservation

1. The town of Minuscule has a favorite daughter who became a well-regarded artist. Minuscule Public Library is in possession of a collection of letters, photos, and (small) realia related to the artist, and is interested in digitizing these materials for an online exhibit. Make a project plan for the library. Include an equipment-cost estimate, an estimate of staff hours required, and a plan for the technology needed to mount the exhibit. Do not neglect file-format, metadata, and preservation considerations.
2. The library at Challenge College, a mid-sized private liberal-arts institution, is in the market for new library-management technology, as their current Integrated Library System is nearing end-of-life, and they are interested in "discovery layer" technology to supplement their current OPAC. Compose a whitepaper explaining the library's options and recommending a solution package. You may assume that the library has one full-time systems librarian; you must assume that she has other duties in addition to managing the ILS.
3. A noted local archive is beginning to receive requests to accept and accession digital materials of various sorts. The archive isn't sure what to do. Help them implement a system for accessioning, preserving, and (where appropriate) providing web access to the materials. Do not neglect donor-agreement considerations. (This problem recommended for students on the archives track.)
4. Mayuscule Public Library Consortium's public website and private intranet are a complete mess, a jumble of hand-coded HTML pages, many of which are obsolete. Only three people can change content on them, and they are hopelessly overworked. Make a plan (including timeline and cost estimates) for transitioning the intranet to a more sustainable and collaborative infrastructure. Do not neglect training and policy-development considerations.
5. Mayuscule Consortium also wants to implement a "virtual branch library," comprising (at minimum) chat reference, a sensible and sustainable social-media presence, marketing of library subscription databases, and ebook lending. Write a plan to start up the virtual branch, including *at least one* additional service, program series, or type of electronic resource that the virtual branch will offer. When you plan for staffing, remember that this is a consortium!

TECHNOLOGY IMPLEMENTATION

Do not choose a technology any group member is already expert in! This defeats the entire point of the project; if I come to believe you have done this, your project will lose one letter grade. If you can't find a technology to work with that someone in the group is not already expert in, see me to switch groups. Your group will need to demo your technology to me outside of class, either during the scheduled final exam period or at another time agreeable to group and instructor.

Your grade is based on your successful completion of the stipulations in the description of each implementation option. You will also be graded on the efficiency and elegance of your approach to solving the problem (with due allowance made for learning-on-the-job).

Please compose an application for the Krikelas Award based on your technology implementation (criteria and submission guidelines at <http://www.slis.wisc.edu/838.htm#krikelas>). I will choose three applications for award consideration. LIS 644 projects have won this award in past years!

IMPLEMENTATION OPTIONS

1. Build EAD files. (This option is strongly recommended for those on the archives track.) Starting from the Microsoft Word finding aids at http://www.folklife.si.edu/archives_resources/festival.aspx and http://www.folklife.si.edu/archives_resources/finding.aspx, recast the finding aids in EAD. At least one finding aid per group member must be completed (look for ways to automate the work!). The resulting EAD files should be well-formed and valid. Please explain how you validated them, and any particularly tricky validation problems you came across.
2. Build an online exhibit with Omeka, Drupal, CollectiveAccess, or a similar content-management or digital-library system (no WordPress and no readymade web-hosted services, please). You are expected to install, configure, and populate the software, to use a theme other than the software's default (you do not have to build the theme from scratch, however), and to install and use at least one software mod or plugin. At least three items per group member should be uploaded and described with appropriate metadata.
3. Build a Linux computer for library patrons. Install and customize Linux (any variant) on a desktop or (preferably) laptop computer such that it could be used by public-library patrons or a specific subgroup thereof. Consider legal obligations, security, privacy, use cases, and usability carefully! (Installing into a partition on a machine used for other things is fine.) Do at least one usability test with a friend, classmate, or family member not in your project group.
4. Build a basic website for an organization of your choice that is based on weblog or content-management software (which you are expected to install) and includes at least three social-media features. Do at least one usability test with a friend, classmate, or family member not in your group.
5. Build a screencast (between five and ten minutes long) advertising or training on a library service. You are expected to use appropriately-licensed background music, do some video editing, have at least one screencast sequence and one live-video sequence, and have a credit roll.
6. Build at least one ebook per group member in .epub format, from public-domain or appropriately Creative-Commons-licensed plain-text books (try <http://projectgutenberg.org/>). Considered together, the books must include at least three of the following features: lists (ordered or unordered), footnotes, epigraphs, block quotations, images. I expect professional-level typography via CSS (distinctive headings, correct dashes, smart quotes, correct paragraph indentation including after headings, etc), within the limits of the medium. HTML files must validate as XHTML 1.0 or 1.1 per the W3C's validator; .epubs must validate per the IDPF's validator (<http://validator.idpf.org/>) or a local installation of EpubCheck.

PROJECT MANAGEMENT AND GROUP EVALUATION

Your group should select a Project Manager. The PM is responsible for all communications about the project to me: this will entail a project charter and schedule (due the fourth class meeting), the bibliography and project plan (due the ninth class meeting) and end-of-semester project deliverables (Krikelas Award application, demo arrangements). The PM is also responsible for keeping the group "on time and under budget." S/he may come to me at any time with concerns about group progress or group dynamics. Other group members with concerns should approach the PM first for resolution. PM and group are responsible for ensuring that neither the PM nor any other group member is overloaded. (The PM doing the entire group project is a failure, not a success!)

At the end of the semester, everyone will email me a short "360 evaluation" of the other members of their group: a suggested *and justified* participation score for each group member, including the PM, out of 5 points. I will use this information to raise or lower individual project-participation grades as I see fit; only I will see the email.

BIBLIOGRAPHY

Please track what you read and find for both project plan and technology implementation, even for blind alleys, via a link- or citation-tracking tool with an online display such as Pinboard, Zotero, or Mendeley. Include brief (two sentences max; less preferred; summative quotations from source acceptable) annotations explaining the relevance and usefulness of each link. The PM will submit a link to the bibliography mid-semester, though you may of course add to it should you find useful links afterward.

On group projects: The idea that group projects are uniquely designed to torture library school students is a snare and a delusion. Librarianship includes immense amounts of collaborative work, from local committees and task forces to involvement in national professional organizations and everything in between. None of the obstacles to working in groups – scheduling, free riders, personality conflicts – disappears when you receive your degree. If you are not good at working in a team, now is the time to learn!

Likewise, formal project management is a highly marketable skill. Even if you are not your group's PM, learning everything you can about how to plan, charter, steer, and budget a project will serve you well, as will thoughtful reflection on encouraging fruitful teamwork among colleagues.

Course learning objective	Related to SLIS Program-Level Outcome(s)	Assignments providing evidence of Program-Level Outcome(s)	How mastery of Program-Level Outcome(s) will be assessed
Broad awareness of digital technologies in use in libraries and other information agencies.	3d. Students understand and use appropriate information technologies.	Final project bibliography. Pecha kucha. Position description assignment. SQL assignments. Learning-network assignment. Emerging-technology assignment.	Graded on quality and variety of information sources discovered and used.
Vocabulary and knowledge of conventions needed to communicate with technical staff.	3d. Students understand and use appropriate information technologies. 4b. Students demonstrate good oral and written communication skills.	Bug report assignment. Pecha kucha.	Graded on clarity and comprehensibility of expression, correctness of terminology use.
Ability to evaluate, plan for, select, and safely and securely work with digital technologies.	3d. Students understand and use appropriate information technologies.	Security reflection. Project plan.	Reflection graded on honesty and improvement plans; project plan graded on ability to discover and gauge alternatives, select those fit for purpose.
Awareness of the social and legal forces that impact digital technologies; controversies surrounding them; and the complex relationship between digital technologies and the future of information agencies.	1a. Students apply key concepts with respect to the relationship between power, knowledge, and information. 2a. Students evaluate and debate information policy and ethics applicable in local, national, or global contexts. 2b. Students apply core ethical principles to professional practice.	Learning-network assignment. Privacy-policy assignment. Pecha kucha assignment on a technology standard. Emerging-technology assignment.	Graded on depth of consideration, ethical quality of responses, breadth of awareness, willingness to experiment and make considered judgments.
Ability to contribute appreciably to a team working on a defined project; awareness of project-management tools and techniques.	4a. Students participate effectively as team members to solve problems.	Project plan, technology implementation.	360 peer evaluation feeds into final-project grade. For project managers, communication quality with instructor affects grade.
Sufficient courage, self-awareness, and skill for self-sufficiency in acquiring technical knowledge.	3d. Students understand and use appropriate information technologies.	Pecha kucha assignment, technology implementation.	See assignment rubrics.

Course learning objective	Related to SLIS Program-Level Outcome(s)	Assignments providing evidence of Program-Level Outcome(s)	How mastery of Program-Level Outcome(s) will be assessed
Development of ethical and principled approaches to technology adoption and education.	<p>1a. Students apply key concepts with respect to the relationship between power, knowledge, and information.</p> <p>2b. Students apply core ethical principles to professional practice.</p>	Project plan, technology implementation.	See assignment rubric, particularly considerations of audience, privacy, and security.