

LIS 644: Digital Trends, Tools, and Debates

Information School
University of Wisconsin-Madison
Summer 2019

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Special course attributes: Tier T



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Course Description and Objectives

Students completing this course will earn three credit hours. One credit is the learning that takes place in at least 45 hours of learning activities, which include time in lectures or class meetings, in person or online, labs, exams, presentations, tutorials, reading, writing, studying, preparation for any of these activities, and any other learning activities.

This course has no prerequisites or co-requisites. No prior technology or computer-science experience is assumed. Course objectives:

- ♦ Broad awareness of digital technologies in use in libraries, archives, and other information agencies.
- ♦ Vocabulary and knowledge of conventions needed to communicate with technical staff.
- ♦ Ability to evaluate, plan and hire 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.

This course is designed to assess student progress in the following iSchool program-level learning outcomes: 1, 5, 7.

Course Policies

Instructors aim to make this course as accessible as possible to all students. Students seeking accommodations must provide instructors with a McBurney Center VISA within the first two weeks of class. For more information on obtaining a McBurney Center VISA, see <http://mcburney.wisc.edu/students/howto.php>.

Preferred name/pronouns: It is sometimes the case that a student’s legal name or gender assigned at birth are reported to me on official documents in a form not in keeping with that student’s preferred name or gender expression. Please let me know, as you are comfortable, about your preferences. My pronouns are she/her/hers. UW-Madison also permits students to indicate a preferred name: https://registrar.wisc.edu/preferred_name.htm

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. **THE SYLLABUS IS REQUIRED READING.**

Contacting me

READ THE SYLLABUS before asking a question, please; the syllabus may answer it! If it does not, please ask in the class’s Canvas help forums. Please use email rather than the Canvas instructor-contact form; email me **ONLY** with confidential

individual concerns or to set up a synchronous appointment. Any email question that could be answered on the forums will not receive a reply. I check class forums daily during the workweek, and do my best to answer email within two business days. I am not available weekends. If you can answer a classmate's question in any Canvas forum, please do so.

If you see dead links (it does happen, usually with no notice), weird due dates, or other syllabus or Canvas problems, please post them to the "Syllabus/Canvas questions and problems" forum on Canvas. I will do my best to resolve them promptly. I do not allow my own mistakes to cause harm to anyone's grade.

Course week, due dates, and assignment policies

Our course "week" runs from Monday to Monday for convenience; course content will open Sunday, however. In summer, each week will condense TWO modules of the fourteen-module course, EXCEPT for the week containing July 4 and the final week, which will contain only one module. I try to open course content one week early for students who need to work ahead; if you need more at some point during the term, I will try to accommodate you. Late assignments will be penalized one final-grade percentage point per day or fraction thereof late. McBurney accommodations aside, I will allow revision/resubmission at my discretion and on my schedule only; student resistance will remove the opportunity.

Module Readings

Most weeks have linklists associated with them. These are for enrichment, as well as assistance for those delving into related topics for course assignments. I encourage skimming linklists for items of interest, but you are *not* expected to read everything on them! You are expected to read everything else on the reading lists.

Module 1: What is technology? What information agencies do with technology. Technology in info-agency jobs.

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

Linklists: <https://pinboard.in/u:dsalo/t:trithemius>, <https://pinboard.in/u:dsalo/t:projectmanagement>

ObXXCD: <http://www.xkcd.com/1227/>

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

Hoffelder, "Infographic: new technology will slay us all and bring down Western civilization." <http://www.the-digital-reader.com/2013/12/30/infographic-new-technology-will-slay-us-bring-western-civilization/>

"Team compact." <http://www.leadingvirtually.com/virtual-team-tools-team-compact/>

Thonnes et al. "A digital resource for multinational student groupwork." [https://](https://internationalexperience.myblog.arts.ac.uk/files/2017/11/Teamwork_eBook_MWA_2017_5-2.pdf)

internationalexperience.myblog.arts.ac.uk/files/2017/11/Teamwork_eBook_MWA_2017_5-2.pdf (Absolutely use the exercises in this to inform your Team Compact!)

Walker, "What does it mean to work 'in tech'?" <http://cecily.info/2013/12/24/what-does-it-mean-to-work-in-tech/>

At least one of:

Triumph and Beile, "The trending academic library job market." <http://crl.acrl.org/content/76/6/716.full.pdf+html>

Career profiles in cataloging, metadata, and related fields: <http://www.ala.org/alcts/mgrps/camms/careerprofiles> (choose at least one or two profiles that interest you)

Yelton, "Three bins: my strategy for getting the most out of library school." [https://](https://letterstoayounglibrarian.blogspot.com/2014/04/three-bins-my-strategy-for-getting-most.html)

letterstoayounglibrarian.blogspot.com/2014/04/three-bins-my-strategy-for-getting-most.html

Edwards and Barker. "Comparing a new and veteran teacher librarian." [http://](http://search.ebscohost.com.ezproxy.library.wisc.edu/login.aspx?direct=true&AuthType=ip,uid&db=lxh&AN=126080403&site=ehost-live&scope=site)

search.ebscohost.com.ezproxy.library.wisc.edu/login.aspx?direct=true&AuthType=ip,uid&db=lxh&AN=126080403&site=ehost-live&scope=site

Haack et al. "New archivists seeking employment: exploring entry-level jobs in archives." [http://](http://search.ebscohost.com.ezproxy.library.wisc.edu/login.aspx?direct=true&AuthType=ip,uid&db=lxh&AN=133355468&site=ehost-live&scope=site)

search.ebscohost.com.ezproxy.library.wisc.edu/login.aspx?direct=true&AuthType=ip,uid&db=lxh&AN=133355468&site=ehost-live&scope=site (Cut to the chase for this one—the Results section.)

Unit 1: Technology basics

Module 2: Technology procurement.

Topics: Hardware and software procurement processes. Software development models: homegrown, open-source, off-the-shelf, vendor-provided, Software-as-a-Service, web-based. Website and web-application hosting. "The cloud." Requirements gathering, RFPs, technology standards. BYOD.

Linklists: <https://pinboard.in/u:dsalo/t:cloud>, <https://pinboard.in/u:dsalo/t:requirements>

ObXKCD: <https://xkcd.com/908/>

Arntz. "BYOD, why don't you?" <https://blog.malwarebytes.com/101/business/2017/10/byod-why-dont-you/>

Rothenberg. "SaaS to the max." <https://arstechnica.com/information-technology/2016/12/saas-to-the-max-the-limits-of-shifting-from-on-site-to-services/>

Meloni. "From the archives: web hosting 101." <https://web.archive.org/web/20100426071743/http://chronicle.com/blogPost/From-the-Archives-Website/23103/>

Mifsud, "Requirements gathering." <https://usabilitygeek.com/requirements-gathering-user-experience-pt1/>
(Going on to part 2 encouraged but optional.)

Westfall et al. "Selecting a vendor." <http://search.ebscohost.com.ezproxy.library.wisc.edu/login.aspx?direct=true&AuthType=ip,uid&db=lxh&AN=86746120&site=ehost-live&scope=site>

Eghbal. "Roads and bridges: the unseen labor behind our digital infrastructure." <https://fordfoundcontent.blob.core.windows.net/media/2976/roads-and-bridges-the-unseen-labor-behind-our-digital-infrastructure.pdf> (pp 1-28, 33-36, 77-88)

"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>

Chudnov, "Why we write software at GWU Libraries." <https://library.gwu.edu/scholarly-technology-group/posts/why-we-write-software-gw-libraries>

Module 3: The innards of computers and networks.

Topics: Bits, bytes, pixels. Parts of a computer. Choosing computer equipment for longevity; security and environmental challenges in hardware disposal. Parts of a network (cable, router, switch, DNS, TCP/IP, IPv4 and IPv6 addressing). Wireless, mobile, and whitespace networks. Network security/privacy measures: VPNs, Tor.

Linklists: <https://pinboard.in/u:dsalo/t:networking>

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

Tyson and Crawford, "How PCs work." (pages 2-3, 5) <http://computer.howstuffworks.com/pc1.htm>

Strickland, "How does the Internet work?" (pages 1-3) <http://computer.howstuffworks.com/internet/basics/internet.htm>

Roos, "How mobile broadband services work." (pages 1, 3, 4) <http://computer.howstuffworks.com/mobile-broadband-service.htm>

"How DNS works." <https://howdns.works/> (Episodes 1 through 6.)

Synecdochic, "IP logging, internet privacy, geolocation, and you: facts to consider." <http://synecdochic.dreamwidth.org/477886.html> (Read this for how IP addresses work, but don't miss the privacy implications either!)

Henry, "Why you should start using a VPN (and how to choose the best one for your needs)." <http://lifesacker.com/5940565/why-you-should-start-using-a-vpn-and-how-to-choose-the-best-one-for-your-needs> (You can use UW-Madison's WiscVPN for free while you're here! I recommend it!)

Newman. "Tor is easier than ever." <https://www.wired.com/story/tor-anonymity-easier-than-ever/>

Siegel/NPR. "New Hampshire library defends use of online anonymity software." <https://www.npr.org/2016/07/11/485593494/new-hampshire-library-defends-use-of-online-anonymity-software>

Module 4: The care and feeding of websites.

Topics: Web technology stack (web server, FTP, HTML, CSS, AJAX, database-driven applications, web-programming languages). Content management systems. Usability and user testing. Writing for the web. Common errors in library website design. Responsive design. Smartphones, apps, texting/SMS, mobile demographics, geolocation, privacy. Tablet computers for specific demographics.

Linklists: <https://pinboard.in/u:dsalo/t:webdesign>, <https://pinboard.in/u:dsalo/t:usability>, <https://pinboard.in/u:dsalo/t:accessibility>, <https://pinboard.in/u:dsalo/t:responsivedesign>, <https://pinboard.in/u:dsalo/t:mobile>, <https://pinboard.in/u:dsalo/t:webwriting>

Brain, "How web servers work." <http://computer.howstuffworks.com/web-server.htm> (pages 1-11)

Knight. "Responsive web design: what it is and how to use it." <https://www.smashingmagazine.com/2011/01/guidelines-for-responsive-web-design/>

Robertson, "How to evaluate a content management system." http://www.steptwo.com.au/papers/kmc_evaluate/

Jack. "Extreme trimming: getting a 650-page website down to 100." <https://medium.com/@AndyJack/extreme-trimming-getting-a-650-page-website-down-to-100-fed694c33b9a>

Schmidt, "Writing for the Web: Save the Time of the Reader." <https://web.archive.org/web/20150206115845/http://www.walkingpaper.org/5225>

University of Illinois Libraries. "9 principles for quality content." <https://publish.illinois.edu/libraryweb/content-style-guide/quality-content/>

Sauro. "15 mobile UX facts & insights." <https://measuringu.com/mobile-2018/>

Unit 2: Technology-related law, policy, and ethics

Module 5: Differential access to technology and related skills; technology bias

Topics: Digital divides. Technologies as class signals. Information professionals as technology providers, trainers, and support; wireless "hot spots" and similar stopgaps. E-Rate programs and their discontents; filtering. How racism, sexism, ableism, homophobia, and other unacceptable biases often play out in technology industries and projects. Search-engine bias.

Butterfield. "Race and the digital divide." <https://thehill.com/blogs/congress-blog/technology/443336-race-and-the-digital-divide-why-broadband-access-is-more-than>

Bowles. "The digital gap between rich and poor kids is not what we expected." <https://www.nytimes.com/2018/10/26/style/digital-divide-screens-schools.html>

Brodkin. "FCC data exaggerates broadband access on tribal lands." <https://arstechnica.com/tech-policy/2018/09/broadband-access-on-tribal-lands-is-likely-even-worse-than-fcc-says/>

Brodkin. "Comcast, Charter dominate US." <https://arstechnica.com/information-technology/2018/07/comcast-or-charter-is-the-only-25mbps-choice-for-68-million-americans/>

Crockett. "Meet the 11% of Americans who don't use the Internet." <https://thehustle.co/meet-the-11-of-americans-who-dont-use-the-internet/>

Singh. "After harsh criticism, Facebook quietly pulls services from developing countries." <https://theoutline.com/post/4383/facebook-quietly-ended-free-basics-in-myanmar-and-other-countries?zd=5&zi=gtclocknc> (Content alert: violence.)

Jarvis. "What a deleted profile tells us about Wikipedia's diversity problem." <https://undark.org/2019/04/25/wikipedia-diversity-problem/>

"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, dismissive, and/or gross)

Kelly and Hibner, "Thingamabobs and doodads: why tech support IS reference." <http://www.slideshare.net/awfullibrarybooks/thingamabobs-and-doodads-tech-support-is-reference-15085173>

Module 6: Technology, the law, and information agencies

Topics: Patriot Act. Legislation relating to children and the Internet. Terms of service agreements, CFAA, Swartz case. CIPA, COPPA, filtering, E-Rate. Copyright and attempts to enforce copyright strictures on the Internet; DMCA. Net neutrality.

Linklists: <https://pinboard.in/u:dsalo/t:neutralnet>, <https://pinboard.in/u:dsalo/t:sopa>, <https://pinboard.in/u:dsalo/t:filters>, <https://pinboard.in/u:dsalo/t:treaties>, <https://pinboard.in/u:dsalo/t:cipa> (note: this is my generic tag for legislative "save the children!" moral panics surrounding the Internet), <https://pinboard.in/u:dsalo/t:swartz>, <https://pinboard.in/u:dsalo/t:tos>

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

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

Batch, "Fencing out knowledge: impacts of the Children's Internet Protection Act 10 years later." http://www.ala.org/aboutala/sites/ala.org.aboutala/files/content/oitp/publications/issuebriefs/cipa_report.pdf

Watters. "The history of the future of E-rate and affordable internet access at schools." <http://hackeducation.com/2017/03/08/history-of-e-rate>

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)

Fiesler, Lampe, and Bruckman. "Reality and perception of copyright terms of service for online content creation." <http://dx.doi.org/10.1145/2818048.2819931>

Sims. "Library licensing and criminal law: the Aaron Swartz case." <https://crln.acrl.org/index.php/crlnews/article/view/8637/9062> (If you're thinking about collection development, e-resource management, or library management as part of your career, read this at least twice!)

Amer. "Net neutrality explained: the digital postman shouldn't charge twice." <https://www.sfchronicle.com/opinion/openforum/article/Net-neutrality-explained-The-digital-postman-13287823.php>

Peterson, "Why the death of net neutrality would be a disaster for libraries." *Washington Post*. <http://www.washingtonpost.com/blogs/the-switch/wp/2014/05/16/why-the-death-of-net-neutrality-would-be-a-disaster-for-libraries/>

Module 7: Security on the network

Topics: Authentication, attribution, authorization (two-factor authentication). Software threats (virus, trojan, worm), malware (adware, spyware, hijackers), denial of service attack. Phishing, pharming, social engineering. Server and network attacks ("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. Security policies.

Linklist: <https://pinboard.in/u:dsalo/t:security>

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

Brodin, "Viruses, trojans, and worms, oh my." *ars technica*. <http://arstechnica.com/security/2013/02/viruses-trojans-and-worms-oh-my-the-basics-on-malware/>

Cunningham, "Keep it secret, keep it safe." *ars technica*. <http://arstechnica.com/security/2013/01/keep-it-secret-keep-it-safe-a-beginners-guide-to-web-safety/>

Ion, "Weekend PSA: keep your computer safe from harm." *ars technica*. <http://arstechnica.com/security/2012/12/simple-tips-for-keeping-your-computer-safe-and-secure/>

Plum, "User Authentication." <http://www.arl.org/storage/documents/publications/spec267web.pdf> (pp 9-13)

Gangadharan, "Who is in control of your library's data?" http://www.slate.com/articles/technology/future_tense/2015/11/libraries_need_to_protect_patron_data_as_they_turn_high_tech.html

Caro and Markman, "Measuring library vendor cyber security." <http://journal.code4lib.org/articles/11413> (See also Andromeda Yelton's list of questions in <https://andromedayelton.com/talks/ltc2016/>)

Zurkus. "Are hackers gonna hack anymore? Not if we keep reusing passwords." <https://blog.malwarebytes.com/cybercrime/2019/03/hackers-gonna-hack-anymore-not-keep-reusing-passwords/>

Carruthers. "Interns and social media: a goldmine for hackers." <https://securityintelligence.com/posts/interns-and-social-media-a-goldmine-for-hackers/> (All the advice here applies to everyone, not just interns!!!!)

Module 8: Technology, privacy, surveillance, big data

(This module will be guest-taught by Zhiyan Chen as part of her Ph.D teaching-practicum exercise. All related information will be posted to Canvas.)

Unit 3: Digital content and collections

Module 9: Purchased electronic content

Topics: Ebooks, DRM, first-sale, leased/licensed vs. owned information, libraries as publishers. Licensing ebooks; e-reserves; "controlled digital lending." E-resources and privacy. Patron-driven acquisition. Acquiring and cataloging e-resources. ERM systems. Streaming video; AIME v. UCLA.

Linklists: <https://pinboard.in/u:dsalo/t:ebooks>, <https://pinboard.in/u:dsalo/t:drm>, <https://pinboard.in/u:dsalo/t:pod>

ObXKCD: <http://xkcd.com/750/> and <http://xkcd.com/488/>

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/>

Cohen. "The books of college libraries are turning into wallpaper." <https://www.theatlantic.com/ideas/archive/2019/05/college-students-arent-checking-out-books/590305/>

Colbow, "Why DRM doesn't work." http://bradcolbow.com/archive/view/the_brads_why_drm_doesnt_work/?p=205

ALA, "What is DRM and what does it mean for your library?" http://www.districtdispatch.org/wp-content/uploads/2012/07/drm_tip_sheet.pdf

Huckabee. "Judge throws out lawsuit over UCLA's streaming of videos to students." <https://www.chronicle.com/article/Judge-Throws-Out-Lawsuit-Over/135932/>

"ePUB: the language of ebooks -- a primer." <http://epubsecrets.com/epub-the-language-of-ebooks-a-primer.php>

Tompkins et al. "Consortial ebook licensing for the rest of us." <http://www.ala.org/acrl/sites/ala.org.acrl/files/content/conferences/confsandpreconfs/2017/ConsortialeBookPurchasingfortheRest.pdf>
Band. "The implications of the ReDigi decision for libraries." <http://policynotes.arl.org/?p=1763>
Giblin et al. "What can 100,000 books tell us about the international public library e-lending landscape?" https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3354215 (Abstract and introduction required; rest optional.)
Hautala. "What e-books at the library mean for your privacy." <https://www.cnet.com/news/what-e-books-at-the-library-mean-for-your-privacy/>

Module 10: Digitization and digital preservation

Topics: Digitization and digital preservation are NOT THE SAME. Digitization projects (collection development, funding, equipment, software, workflows, copyright). Digitization ethics. Archival master files vs. dissemination files. Mass digitization projects (Google Books, Hathi Trust, Europeana, DPLA). OCR. Threats to digital materials. Format migration vs. system emulation. Preservability of common file formats. Types of digital archives (institutional repository, disciplinary repository, data archive, "trusted digital repository," dark archive). Web archiving. Personal digital archiving.

Linklists: <https://pinboard.in/u:dsalo/t:digitization>, <https://pinboard.in/u:dsalo/t:googlebooks>, <https://pinboard.in/u:dsalo/t:hathi>, <https://pinboard.in/u:dsalo/t:dpla>, <https://pinboard.in/u:dsalo/t:mplp>, <https://pinboard.in/u:dsalo/t:digitalpreservation>, <https://pinboard.in/u:dsalo/t:personalarchiving>, <https://pinboard.in/u:dsalo/t:irs>, <https://pinboard.in/u:dsalo/t:webarchiving>

ObXKCD: Not an XKCD this time; instead, <http://derangementanddescription.wordpress.com/2014/03/07/will-digitization-solve-my-problem-a-helpful-flow-chart/>

Schonfeld, "Inside the New Museum's vast, beautiful, and totally insane digitization project." <http://www.theatlanticwire.com/entertainment/2013/07/new-museums-vast-beautiful-and-insane-digitization-project/67567/> (What makes it insane? Also, apologies for the ableist term.)

Robertson. "digitization: just because you can, doesn't mean you should." <http://tararobertson.ca/2016/oob/>

Earhart. "Can we trust the university? Digital humanities collaborations with historically exploited cultural communities." <https://oaktrust.library.tamu.edu/handle/1969.1/173030>

"The TRLN's intellectual property rights strategy for digitization of modern manuscript collections and archival record groups." <https://www.trln.org/files/2017/06/TRLNIPRightsStrategy.pdf>

"Unlocking the riches of Hathi Trust." <http://www.americanlibrariesmagazine.org/article/unlocking-riches-hathitrust>

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)

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

Bixenspan. "When the Internet Archive forgets." <https://gizmodo.com/when-the-internet-archive-forgets-1830462131>

Summers. "The Ferguson Principles." <https://inkdroid.org/2018/11/08/ferguson-principles/>

Unit 4: Digital contexts

Module 11: Information agencies and the social web

Topics: Social media and the news landscape: disinformation, bots, "fake news," "information voids," recommender-system poison, and how best to fight them. Managing social media; moderating online spaces. The Streisand effect and how to avoid it. Social media, SEO, and engagement. Social-media use professionally.

Linklists: <https://pinboard.in/u:dsalo/t:socialmedia>, <https://pinboard.in/u:dsalo/t:bigdata/t:privacy>

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

Museum of English Rural Life. "Digital content and marketing." https://drive.google.com/file/d/19N51M9IoNLWYmwd6MwnaJitJU-fP_tCy/view

Bernstein. "Social change." <https://www.brooklynmuseum.org/community/blogsphere/2014/04/04/social-change/>

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

Matias. "Posting rules in science discussions prevents problems & increases participation." https://civilservant.io/moderation_experiment_r_science_rule_posting.html

"School surveillance zone." <https://www.brennancenter.org/analysis/school-surveillance-zone>

Patel et al. "Social media monitoring." <https://www.brennancenter.org/publication/social-media-monitoring>

LoFranco. "CrossFit shuts Facebook and Instagram accounts amid privacy concerns." <https://morningchalkup.com/2019/05/23/crossfit-shutters-facebook-instagram-accounts-amid-data-privacy-concerns/> (Think: why did I assign you this, and what does it have to do with the previous piece?)

Matthews. "A cognitive scientist explains why humans are so susceptible to fake news and misinformation." <https://www.niemanlab.org/2019/04/a-cognitive-scientist-explains-why-humans-are-so-susceptible-to-fake-news-and-misinformation/>

Donovan. "How hate groups' secret sound system works." <https://www.theatlantic.com/ideas/archive/2019/03/extremists-understand-what-tech-platforms-have-built/585136/>

boyd. "The fragmentation of truth." <https://points.datasociety.net/the-fragmentation-of-truth-3c766ebb74cf>

Caulfield. "Network heuristics" <https://hapgood.us/2019/03/28/network-heuristics/> "Recognition is futile" <https://hapgood.us/2018/02/18/recognition-is-futile-why-checklist-approaches-to-information-literacy-fail-and-what-to-do-about-it/> and "Introducing SIFT, a Four Moves acronym." <https://hapgood.us/2019/05/12/sift-and-a-check-please-preview/> (If you are looking at K-12, youth services, or information-literacy instruction in your career, you need to follow Mike Caulfield and his work. Not optional!)

McCulloch. "The introvert's megaphone." <https://lissertations.net/post/1136>

Module 12: Teaching and learning, K-12/youth

Topics: "Digital natives" and other (faux or real) technology demographics. "Screen time" debates; early literacies. "CS for all." K-12 information security. Gamification, advertising, and exploitation. Education technology. Youth and social media; cyberbullying, sexting, steganography, etc.

Linklists: <https://pinboard.in/u:dsalo/t:digitalnatives>, <https://pinboard.in/u:dsalo/t:edtech>, <https://pinboard.in/u:dsalo/t:teched>, <https://pinboard.in/u:dsalo/t:gamification>, <https://pinboard.in/u:dsalo/t:k12/t:644>

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

Gonzalez. "We've got the screen time debate all wrong." <https://www.wired.com/story/year-in-review-tech-addiction-debate-all-wrong/>

Lorenz. "When kids realize their whole life is already online." <https://www.theatlantic.com/technology/archive/2019/02/when-kids-realize-their-whole-life-already-online/582916/>

"The digital native is a myth." <https://www.nature.com/news/the-digital-native-is-a-myth-1.22363>

"Children describe technology that gives them a sense of ambiguity as 'creepy.'" https://www.eurekalert.org/pub_releases/2019-05/uow-cdt051619.php

Tiffany. "Angry Birds and the death of privacy." <https://www.vox.com/explainers/2019/5/7/18273355/angry-birds-phone-games-data-collection-candy-crush>

Baron. "Classroom technology is indoctrinating students into a culture of surveillance." https://www.forbes.com/sites/jessicabaron/2019/01/29/classroom-technology-is-indoctrinating-students-into-a-culture-of-surveillance/?__twitter_impression=true

"Check the privacy." <https://www.checktheprivacy.org/> (Skim this for what it does. I want you to have it in your back pocket!)

Reich and Ito. "From good intentions to real outcomes: equity by design in learning technologies." https://clalliance.org/wp-content/uploads/2017/10/GIROreport_v3_complete.pdf (Executive summary required; rest strongly recommended for those interested in K-12 and youth services.)

Blikstein. "Pre-college computing education." <https://services.google.com/fh/files/misc/pre-college-computer-science-education-report.pdf> (Executive summary only.)

Pew Internet. "A majority of teens have experienced some form of cyberbullying." <https://www.pewinternet.org/2018/09/27/a-majority-of-teens-have-experienced-some-form-of-cyberbullying/>

Module 13: Teaching and learning (and research!), higher education

Topics: Distance learning; death of MOOCs. Makerspaces. Learning analytics. Open access, institutional repositories, library as publisher. Research-data management. Digital humanities. Changes in collection development; "last copy."

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

Hedreen, "Time zones, screencasts, and becoming real: one distance librarian's experiences and lessons learned." *Urban Library Journal*. <http://ojs.gc.cuny.edu/index.php/urbanlibrary/article/view/1350>

Lederman. "Lessons learned from a \$75 million failed experiment." <https://www.insidehighered.com/digital-learning/article/2018/02/21/lessons-learned-shuttering-universitys-internal-digital-learning>

Nicholson. "The 'value agenda:' negotiating a path between compliance and critical practice." <https://ir.lib.uwo.ca/cgi/viewcontent.cgi?article=1049&context=fimspres>

Samtami, "Meet the makers." *The Digital Shift*. <http://www.thedigitalshift.com/2013/06/k-12/meet-the-makers-can-a-diy-movement-revolutionize-how-we-learn/>

Johnson et al. "State of open at the University of California Boulder." https://scholar.colorado.edu/cgi/viewcontent.cgi?article=1133&context=libr_facpapers

Braunstein et al. "Introduction." *Digital Humanities in the Library* pp. xii-xviii. http://www.ala.org/acrl/sites/ala.org.acrl/files/content/publications/booksanddigitalresources/digital/9780838987681_humanities_OA.pdf

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

Module 14: Changing as the world around us changes

(You do not have to read everything on the reading list this week. Read the theory-of-change piece, read my reskilling piece, and pick at least one reading from each category below; otherwise, follow your own interests!)

Topics: Strategic planning around technology. Assessing technology projects and programs. Hiring and managing technologists. Professional development and reskilling. Change management. Barriers to change. Some current loci of technological change in information agencies.

Linklists: <https://pinboard.in/u:dsalo/t:libpublishing>, <https://pinboard.in/u:dsalo/t:envirosan>, <https://pinboard.in/u:dsalo/t:crowdsourcing>, <https://pinboard.in/u:dsalo/t:makerspaces>, <https://pinboard.in/u:dsalo/t:linkeddata>

ObXKCD: <http://xkcd.com/544>

Salo. "Why this book?" <https://expandingskills.dsalo.info/about-this-book/why-this-book/>

"What is theory of change?" <http://www.theoryofchange.org/what-is-theory-of-change/>

Futurology:

Lankes, "Libraries are obsolete." http://www.olaweb.org/assets/documents/olaq_18no2.pdf pp. 12-17 (reading the rest of the issue encouraged!)

English, "How young librarians are figuring out the field's future." <http://www.newsworks.org/index.php/thepulse/item/89910-how-young-librarians-are-figuring-out-the-future?l=mt> (N.b. Jarrett Drake is an archivist!)

Thomas, "Renegotiating the archive: scholarly practice in the digital age." <http://railroads.unl.edu/blog/?p=1195>

Morville, "Inspiration architecture: the future of libraries." <http://semanticstudios.com/publications/semantics/000664.php>

Zickuhr et al., "Library services in the digital age." <http://libraries.pewinternet.org/2013/01/22/Library-services/>

Rundle, "Libraries as software." <http://hughrundle.net/2012/04/04/libraries-as-software-dematerialising-platforms-and-returning-to-first-principles/>

Rogers, "Moving beyond book museums." <http://www.attemptingelegance.com/?p=1947>

Coping with tech:

Morgenstern and Jones, "Library strategic planning: voyage of starship Enterprise or Spruce Goose?" http://www.cla.ca/feliciter/2012/58-5/Feliciter5_Vol_58_web.pdf pp. 12-15 (reading the rest of the issue encouraged!)

Drake, "RadTech meets RadArch: Towards a new principle for archives and archival description." <https://medium.com/on-archivy/radtech-meets-radarch-towards-a-new-principle-for-archives-and-archival-description-568f133e4325>

Linderman, "How to hire a programmer when you're not a programmer." <http://37signals.com/svn/posts/2628-how-to-hire-a-programmer-when-youre-not-a-programmer> (Read critically, please!)

Chevalier, "Hiring based on hobbies: effective or exclusive?" <http://geekfeminism.org/2012/11/12/hiring-based-on-hobbies-effective-or-exclusive/> (Use this as a mental corrective to the piece above, which is seriously problematic despite a few useful tips.)

Roundtable: should librarians learn to code? <https://journal.lib.uoguelph.ca/index.php/perj/article/view/4121/4134>

Trends:

"A pivotal moment: developing a new generation of technologists for the public interest." <https://tfreedmanconsulting.com/wp-content/uploads/2016/05/pivotalmoment.pdf>

Benkler. "Degrees of freedom, dimensions of power." http://benkler.org/Degrees_of_Freedom_Dimensions_of_Power_Final.pdf

Conrad. "Public libraries as publishers: critical opportunity." <https://quod.lib.umich.edu/j/jep/3336451.0020.106?view=text;rgn=main>

Johnson. "Chief privacy officers." <https://www.edsurge.com/news/2019-03-25-chief-privacy-officers-a-small-but-growing-fleet-in-higher-education> (Not just higher ed!)

Sefton-Green, "Towards the value, purpose, and sustainability of out-of-school learning." <http://dmlcentral.net/blog/julian-sefton-green/towards-value-purpose-and-sustainability-out-school-learning>

Coyle, "Linked data first steps & catch-21." <http://kcoyle.blogspot.com/2013/07/linked-data-first-steps-catch-21.html>

Williams, "The library as copy machine: part I." <http://librarian.newjackalmanac.ca/2013/07/the-library-as-copy-machine-part-i.htm>

ASSIGNMENT INFORMATION

All assignment point totals, rubrics, and due dates are in Canvas. (Maintaining them both in this syllabus and in Canvas led to vastly too many due-date errors on my part.) **PLEASE IGNORE CANVAS'S PERCENTAGE-GRADE CALCULATIONS**; they are scaremongery garbage, but I can't make Canvas turn them off. Available points in this course total to 100, so the best way to keep track of your grade is to track how many points you lose on assignments.

Final grade scale: 100-93.5 A; 93.4-89.5 AB; 89.4-83.5 B; 83.4-79.5 BC; 79.4-73.5 C, 69.5-73.4 D, below 69.5 F

No extra credit opportunities are available in this class.

In-module assignments

Roughly every other module will contain an in-module assignment aimed at letting you discover and/or practice tools, raising your confidence in learning new technologies, and introducing you to technologies important to other iSchool courses.

Descriptions and instructions for these are on Canvas. Assignment titles/themes:

- Keeping current, with technology's help
- Self-SEO (evaluating your web presence and planning to improve it)
- Law, technology, and Future You (investigating relevant technology law)
- Physical or digital? Making choices (in collection development)
- Answering poorly-informed arguments about digitization
- Privacy-related assignment TBD (see module 8)
- Your data double (on learning analytics)
- Your next technology adventure

Expanding your technology boundaries

BASIC ASSIGNMENTS

Throughout the course, you will work on technology projects aimed at improving your mental models of contemporary computing, broadening your skills, and introducing you to concepts and skills underlying iSchool technology coursework. You will do one basic assignment in each of four broad topic areas.

Basic assignments are due every two course modules with the first due date at the end of Module 5 (see Canvas for exact due dates). All basic assignments may be turned in early, if you like! Canvas will contain orientation material for basic assignments; you can also ask questions in the "Technology Boundaries: support forum" on Canvas.

Topic area 1: Web standards and markup (LIS 646 "Information Architecture," LIS 853 "Metadata Standards and Applications")

On Canvas you will find an "HTML" file. Some horrible little gremlin (okay, okay, it was me) has gone through it and made it no longer valid HTML! Fix it until the W3C validator at https://validator.w3.org/#validate_by_input gives no errors and no warnings. To show your work, take a screenshot of the validator page with your code pasted in and an HTML comment containing your name before the opening <head> tag (e.g. <!-- Dorothea Salo -->) and upload it to the Canvas dropbox.

Topic area 2: Digitization and digital preservation (LIS 879 "Digital Libraries," LIS 668 "Digital Curation")

Create archival master files AND web-friendly files by digitizing **TWO** print documents (note: neither books nor handwritten documents please; typewritten/printed documents, brochures, newspaper pages, etc. are fine) and **TWO** photographs or other analog images. Print documents must be OCR'd. Place all files in a folder; zip the folder and upload it to the Canvas dropbox.

Caveat: If you can't get access to a scanner that will create archival-quality masters, that's okay, but please include a statement of where your masters fall short when you turn this in. Most copy shops should have capable-enough scanners; many public libraries do as well. It is your responsibility to investigate and reset scanner-software settings.

Other caveat: It is possible that your master files will be too big for Canvas to upload—it's happened before. If this happens, grab a screenshot of the master file's file size and related properties (Mac: right-click and Get Info; Windows: right-click and Properties) and turn that in instead.

Topic area 3: Relational databases (LIS 751 “Database Design”)

Read the “Introduction to SQL” then complete the first three lessons in the SQLBolt tutorial <https://sqlbolt.com/lesson/introduction>. For each lesson, take a screenshot containing the solution to the final problem and your name in a SQL comment (e.g. `/* Dorothea Salo */`). Turn these in to the Canvas dropbox.

Topic area 4: Programming/coding (LIS 500 “Code and Power”)

Go through the Javascript exercises at <http://www.crunchzilla.com/code-monster> until you get through lesson section 15 (“Quiz: for loops”)—when you’ve drawn four boxes with a for loop, you’re done. Add a one-line Javascript comment to the top of your last quiz problem (e.g. `//Dorothea Salo`), take a screenshot, and turn the screenshot in to the Canvas dropbox.

FAILURE ASSIGNMENT

You can’t tech if you can’t fail. Mistakes, frustration, and difficulty are normal, even inescapable aspects of technology work. I have failed at technologies so many, many times I can’t even count—especially if we count temporary failures. Yet over the years, I’ve seen vastly too many iSchool students shy away from technology courses, tech-focused work, and technology learning opportunities because they feel so threatened by potential or actual failure. Let me be clear on my (evidence-based) belief about this style of avoidance: *it is a swift road to much larger professional failures*.

So in this course I will do my best to make you fail, without penalizing your grade for failing! It’s the only way I can think of to lift you over this unnecessary and counterproductive barrier. I will also ask you to reflect on your beliefs, processes, and strategies around taking on an unfamiliar and difficult technology task, with an eye to improving them.

REFLECTIONS: You will reflect on your process in stages throughout the course via the “Technology Boundaries: Reflections” discussion topics on Canvas. (This is partly to force you not to procrastinate. Nobody does their best tech work when they’re rushed.) Due dates for the first and last reflections are set (late responses lose points), but the middle two have “soft” due dates—I put a due date in Canvas as a procrastination-avoider, but responses that Canvas thinks are late can receive full credit.

These reflections will be visible to your classmates. I intend this! Students often feel that they are the only people not “getting it.” This is usually wrong. The best way to demonstrate that wrongness is to... actually demonstrate it! I expect all of you to treat yourselves and one another with kindness, good humor, and humility. I reserve the right to confront you and dock your grade for scorn, dismissiveness, and other hurtful behavior, including outside the strict confines of our (physical or online) “classroom.” (I’m not oblivious. I know hurtful behavior can happen in iSchool social spaces. I’m saying it had better not happen around this assignment.)

- **GETTING STARTED:** How are you feeling about this project? Is this typical of how you approach work that is unfamiliar to you? What do your feelings motivate you to do, and how constructive is that motivation? Taking your answers to the above questions into account, how might you improve your mental responses to unfamiliarity?
- **GETTING LOST / HITTING A WALL:** At some point during this project, you will probably either feel hopelessly lost, or run into a problem you can’t figure out (or find out) how to solve. When you hit this point, STOP AND WRITE IT UP. What was your first/default instinct about how to go about solving the problem? Why did/didn’t it work? What were your subsequent problem-solving/troubleshooting steps? How do you manage your frustration? How can you do better at all this next time?
 - If you are lucky enough never to hit a wall, answer the above questions anyway. Nobody’s that lucky always!
- **TRACKING YOUR WORK AND LEARNING:** As you get toward the end of what you are able to accomplish (given the inevitable time/energy constraints of this course), ask yourself how you track what you’ve learned—if you suddenly had to do this task again after a year, what traces of this experience would help you? With that in mind, what do you think are good ways to track this kind of work and learning, to avoid having to re-climb technology learning curves?
- **E-PORTFOLIO WRITEUP:** By the end of the course, turn in a writeup of this assignment as an e-portfolio artifact appropriate to iSchool Program-Level Learning Outcome 5: “Students demonstrate competency with information technologies important to the information professions.” (You may write toward other outcomes you believe appropriate as well, if you wish.) Your writeup should make clear to me (pretend I am a prospective boss!) your improved understanding of the technology you chose, your sense of situations in which it is and is not appropriate, and your ability to implement it (or similar technology) in a real-world work situation. If you didn’t complete the task, you are allowed to write your statement as though you did!

FINAL DELIVERABLE: For each suggested project, I have listed a product to turn in to Canvas. Your product doesn't have to be perfect, obviously—chances are good that you'll fail; I'm trying to set you up to, after all! I do want to see how far you got, though, so turn in your closest approximation to the listed product at course end.

Suggested projects

This assignment is intended to get you out of your comfort zone. Make sure it does! For example, if you are a database administrator already, stay away from the advanced relational-database assignments. If I find out you have played to your existing strengths, *you will lose all points for this assignment*. Consider: your employers will be under no obligation to limit your work to what you already know how to do!

I am happy to hear other ideas for projects you want to fail at. (This is especially important if your prior technology preparation makes all my suggested projects un-fail-able for you.) I am also happy to advise on projects you can fail at that are relevant to your professional goals. In either case, please ask in the Canvas "Technology Boundaries: support forum" by Monday of the week of Module 3; I cannot accept requests after that.

Projects, topic area 1: Web standards and markup (LIS 646 "Information Architecture," LIS 500 "Code and Power," LIS 853 "Metadata and XML")

1. Download the HTML for a library home page of your choice. Fix it until it validates, if it doesn't already. Next, alter it to contain schema.org metadata about the library (based on the properties available at <http://schema.org/Library>). You must correctly identify the page as talking about a Library (with the `itemscope` and `itemtype` attributes) and add at least THREE different correctly-placed properties (with the `itemprop` attribute) on the page. It is fine to add extra text or HTML to accommodate enough schema.org attributes. Upload the resulting HTML document to the "Technology Boundaries: final deliverable" dropbox.
2. Build a basic website for an organization of your choice (real or fictional) based on weblog or content-management software that you install (on a web server or on your own computer) yourself. (Weebly, Wix, Squarespace, Wordpress.com and the like are OFF LIMITS for this assignment. You may, however, use a pre-built theme for any CMS you decide to use.) Do your level best to be sure your site validates and works acceptably on smartphones and tablets. If you develop your site on your own computer, zip it and upload it to the "Technology Boundaries: final deliverable" dropbox; if it is on the live web, put the URL to your site instead.

Projects, topic area 2: Digitization and digital preservation (LIS 668 "Digital Curation and Collections")

1. Accession a digital object. Locate a hard drive, CD-ROM collection, floppy disk, website at risk of disappearing, and/or other set of born-digital or already-digitized materials (ask me if this is difficult; personal materials are fine). If you are on campus, you may use RADD in the iSchool Library to image disks or drives; if not, I recommend using an image or two from the Real Data Corpus, http://simson.net/page/Real_Data_Corpus. Using the Archivematica sandbox at <https://sandbox.archivematica.org/administration/accounts/login/>, assess the collection's fitness for preservation and accession it, applying appropriate metadata. Put a link to your Archivematica collection in the "Technology Boundaries: final deliverable" dropbox. (This option strongly recommended for archives track.)
2. Turn a plain-text ebook from Project Gutenberg into an .epub. Ensure it includes at least three of the following features, correctly tagged in the .epub HTML: lists (ordered or unordered), footnotes, epigraphs, block quotations, images. HTML files in your .epubs must validate as XHTML 1.0 or 1.1 or HTML5 per the W3C's validator; .epubs must validate as EPUB 3 per the IDPF's validator (<http://validator.idpf.org/>). .epubs must contain as much descriptive metadata as feasible. Upload the .epub file to the "Technology Boundaries: final deliverable" dropbox.

Projects, topic area 3: Relational databases (LIS 751 "Database Design")

POSSIBLY-USEFUL PREPARATORY MATERIAL:

Allardice, "Foundations of programming: databases." <http://www.lynda.com/Access-tutorials/Foundations-Programming-Databases/412845-2.html?org=wisc.edu> (Watch/read "Welcome," "What are databases?" "The features of a relational database," "Exploring unique values and primary keys," "Defining table relationships," "Creating SQL queries" and "Creating the WHERE clause.")

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

Create a database of at least three interlinked tables about a hobby or interest of yours, using Microsoft Access or MySQL (for this option, I suggest installing MAMP, <https://www.mamp.info/en/>). This database must include:

- correct naming conventions for entities/tables and attributes/columns
- at least one PK-FK relationship with a correctly-set-up foreign key

- autonumbered primary keys in each table
- at least three instances/rows of data per table

Upload the MS Access file (or MySQL dump) to the “Technology Boundaries: final deliverable” dropbox.

Projects, topic area 4: Metadata editing and crosswalking tools (LIS 652 “XML and Linked Data,” LIS 853 “Metadata Standards and Applications,” LIS 871 “Digital Libraries”)

Use OpenRefine to clean up the thesis-and-dissertation metadata spreadsheet I have posted to Canvas in the following ways:

- Remove all leading and trailing whitespace from all cells (the Givenname column has lots of it)
- Add First Name, Use Name, and Middle Name columns based on the Givenname column. You can recognize Use Names because they are in parentheses.
- Separate Subjects and Keywords so that there is only one per cell. (You will end up with lots of columns with lots of empty cells; this is fine.)
- (Not required and not trivial, but worth trying: Add a Date column in proper ISO8601 format—that is, YYYY-MM-DD; do not bother with timestamps—based on the submission-date column.)

When you are finished, export the metadata as a CSV file (note: NOT EXCEL, because Excel will stupidly destroy any nice ISO8601 dates you made!) and upload the file to the “Technology Boundaries: final deliverable” dropbox.

Technology communication

These assignments are meant to improve your ability to communicate with people about technology, regardless of your relative levels of technology savvy. Not coincidentally, they should also improve your job-interview skills.

Job advertisement and phone interview

Even if you do not consider yourself a technical person, you will certainly participate in hiring them during your career. Write a job advertisement such as you might find on an employer’s website or via a job-search site such as Archives Gig. Be sure the fictional employer in your ad is a recognizable type of organization; you may adapt language from job ads you find provided you do not slavishly copy an entire listing. First, turn in to the assignment dropbox on Canvas (single PDF preferred):

- a job ad, including:
 - ◆ a description of the employer
 - ◆ list of job duties
 - ◆ list of required skills
 - ◆ list of preferred skills
- links to or screenshots of at least three job postings that reasonably strongly resemble the ad you have written
- three questions you would ask candidates in an interview to determine whether they are competent to do the job. Tailor the questions *specifically to the technology-related skills and duties of the position*; generic and non-technology-related questions will receive zero points.

You may describe and document a job whose focus is not explicitly on technology, but includes *significant* (at least 40% of the job) technology-specific responsibilities. You may alternately choose from the technology-centric job titles listed below (your supporting job postings need not use the titles below verbatim, as job titles for the “same job” do vary):

- Data Curator/Research Data Manager (academic library, corporate environment, academic IT department, government)
- Digital Asset Manager (corporate environment, government)
- Digital Preservation Librarian/Digital Archivist (academic library, archives, corporate environment, government)
- Digital Repository Librarian/Archivist (academic library, corporate library, archives)
- Digitization Librarian/Archivist (academic library, archives, corporate environment, public library)
- Metadata Librarian/Archivist (academic library, archives, corporate environment, public library)
- Distance-Education Librarian, Educational Technology Librarian (academic library, school library)
- Emerging Technologies Librarian/Archivist (any workplace type)
- E-Records Manager (corporate environment, government, academic library, archives)
- E-Resources or E-Serials Librarian/Archivist (academic library, corporate library, library consortium, public library, archives)
- ILS Librarian (public library, academic library, public or academic library consortium)
- Library/Archives Application Developer, Library/Archives Programmer (any workplace type, but be realistic!)

- Social Media Manager (any workplace type)
- Systems Librarian/Archivist, Tech Support Librarian/Archivist (any workplace type; do not write a laundry-list job description! make sure the job makes sense!)
- Web Librarian/Archivist (any workplace type)

Off-limits, please: strictly-analog records managers, knowledge managers, scholarly-communications librarians, management positions, vendor sales or training positions.

Phone/online interview: When you have turned in your job ad and questions, exchange them with a classmate (I will pair you) and arrange a time to speak by phone or online audio/video chat (Skype, appear.in, Zoom, etc). Allow at least 20 minutes for each interview, though they may not actually take that long. (In-person interviews *are not acceptable*; the point is to practice remote interviewing.) Your classmate will interview you pretending to be the employer in your ad; you then interview them pretending to be the employer in their ad.

Before the interviews, read your classmate’s ad and secretly write two *technology-related* questions that the employer in it might ask. At least one of these questions should be a “scenario” question, in which you ask how your classmate would respond to a problematic technical or sociotechnical scenario likely to occur on the job. As with the questions you wrote for your own ad, your goal for the new questions based on your classmate’s ad is to find out whether your classmate can fulfill the technology requirements of the position. (N.b. no one is being assessed/graded on whether they can! It’s too early for that!)

During the interview, ask your classmate all five questions (your classmate’s three and your two). Finally, ask the question “do you have any questions for us?” (and make up an answer to whatever they ask). After the interview, email your classmate (CCing me; please put “644” in the email’s subject line) the questions you invented based on their ad, your overall impression of the interview, and two constructive suggestions for improvement.

Technology grant application

The group project in LIS 644 is designed to expose you to *non-technical* (budgetary, staffing, planning, project-management) aspects of technology projects in information agencies. If your group is interested in a different grant opportunity from those listed below (especially a local grant I’m unlikely to have heard of), please discuss it with me; I usually agree. Real-world grant applications are welcome but not required; be aware that real-world situations are usually significantly more challenging. It is fine if more than one group writes applications for a single grant opportunity.

I have left my successful IMLS Sparks! grant application on Canvas for you. IMLS is pretty good about posting successful applications—if you pick one of their grants to apply to, look on their website for earlier successful ones!

You are responsible for **ALL PORTIONS** of the grant application (except as noted below), including budgets, timelines, and assessment or outreach plans! If the funder asks for a letter of interest or other pre-screening document, please write that as well as the full grant application, inventing supporters as needed. You may not exceed page limits set by the funder. You will have to fabricate information about the grant applicant and (if needed) authors of letters of support; do so realistically. (Do not hesitate to look for case studies, prior grant applications or reports, or anything else that will ground your grant application in reality.) You are **NOT** responsible for any *staffing-related portions* of the grant (so no résumés, project staff descriptions, etc; these are just too unreasonably time-consuming to fabricate). You must still budget staff time if the grant requires it, however.

Before or during Module 12, the Project Manager (PM; see below) will exchange the draft grant with another group’s PM for feedback from that entire group. (I will tell you whom to exchange with.) Pretend your group is the funder’s grant committee; would you fund this grant? Why or why not? If not, how would you strengthen it to make it fundable? PMs should email feedback between one another with “644” in the subject line, CCing me. (I won’t reduce grades if a draft needs work; I just want to know that feedback was sent!)

The application will be graded on its correctness (per grant guidelines), realism, mission-appropriateness, and persuasiveness. *As with real-life grants*, careless typos, shoddy grammar, unnecessary verbosity, and lousy writing will be penalized. Use the Writing Center if you need it!

Grant options

As stated above, I will consider other scenarios and grant programs, but please tell me about them as soon as possible!

1. The small town of Minuscule has a favorite daughter who became a well-regarded artist. Minuscule Public Library (which also houses its one-room historical-society/archives) has a collection of letters, photos, VHS and Mini-DV home videos,

- and (small) realia related to the artist, and is interested in digitizing these materials for an online exhibit and ultimately including them in the Digital Public Library of America. (Assume that Minuscule PL can store digitized files and metadata with a DPLA Content Hub but does *not* have access to a DPLA Service Hub.) Write an LSTA grant (specify a state; it need not be Wisconsin), an NEH Digital Projects for the Public or Public Humanities Projects grant, an IMLS Save America's Treasures grant, or an NHPRC Access to Historical Records grant to do the digitization.
2. The American Condiment Archive has significant unprocessed donations of born-digital materials on various digital media, from floppy disks to hard drives to email to the websites and social-media accounts of important figures in condiment history. It currently does not have equipment, infrastructure, or staff know-how to assess, accession, preserve, and provide appropriate access to these materials. Write an NEH Sustaining Cultural Heritage Collections or NHPRC Access to Historical Records grant that covers equipment, infrastructure, and staff training. (Assume one full-time professional archivist, some part-time paid paraprofessional help, and some volunteers.)
 3. Mayuscule Public Library Consortium wants to implement a makerspace and learn-to-code program in its flagship urban library. Assume the existence of a mostly-suitable space (however you define that, but please be realistic) on the first floor of the library. Write an LSTA or IMLS Community Catalyst Initiative grant to help fund any necessary remodeling (word to the wise: electrical outlets!), makerspace construction, equipment, and first year of operation. Please define your desired service population(s) carefully; "makerspace" is a broad service category, and not all are created equal.
 4. The great State of Confusion is drowning in e-records. Worse, its records office just weathered a giant scandal over an elected politician sending work-related email through Gmail instead of the state's own servers. Confusion's state-records office is convinced it must get a handle on this email problem, and its major partners University of Confusion and Confusion State University are willing to pitch in on a solution that helps them too. Write a grant to New York's Local Government Records Management Improvement Fund (http://www.archives.nysed.gov/grants/grants_lgrmif.shtml) to plan, develop/purchase, and launch a better email management system.

Project management and 360 evaluation

Your group should immediately select a Project Manager (PM). The PM is responsible for all communications about the project to me, to the group with whom your group is exchanging grant drafts, and to any real-world client(s). The PM is also ultimately responsible for dividing up and scheduling the work, and keeping the group "on time and under budget." The PM 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. PM and group are responsible for ensuring that neither the PM nor any other group member is overloaded.

During the last week of the semester, everyone must email the instructor a short "360 evaluation" of the other members of their group: a suggested *and briefly justified* participation score for each group member, including the PM and yourself, out of 3 points. I will use this information to raise or lower individual project-participation grades as I see fit; only I will ever see the email. Please put "360" in the subject line, to help protect my inbox.

Semester Team Compact and schedule

By the due date listed on Canvas, the PM will submit a Team Compact and week-by-week task schedule for the group's work on the grant application. (The Rules of Engagement matrix at <http://www.leadingvirtually.com/wp-content/uploads/2008/07/rulesofengagementmatrix.pdf> may be helpful, but you are not required to use it.) Please make clear which group members will be working on which segments of the grant, and when results (final and intermediate) are due.

Risk management strategies should also be outlined: obvious contingencies to plan for include any group member's sudden incapacity (dropping the class, illness or injury, unexpected travel, etc) or an unexpected and time-consuming complexity popping up in the project, but any other threats to the project that occur to the group may of course also be considered. Part of the point of this project is to avoid mid-project surprises and end-of-project all-nighters; your charter should reflect a fairly detailed understanding of what every part of the project will entail.

Each group member should email the PM an acknowledgement that they have participated in the Team Compact's construction and are committed to the workload and due dates outlined in it. (No need to copy me, but the PM may forward me someone's acknowledgement should a difficulty arise.)

ON GROUP PROJECTS

The idea that group projects are uniquely designed to torture iSchool students is a snare and a delusion. All information professions include immense amounts of collaborative work, from grantwriting to 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 how best to encourage fruitful teamwork among colleagues.

Program-level learning outcomes table

Course learning objective	Related to iSchool 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.	5. Students demonstrate competency with information technologies important to the information professions.	Position description assignment. Technology-boundaries assignments.	Webinar and position description graded on quality and variety of information sources discovered and used.
Vocabulary and knowledge of conventions needed to communicate with technical staff.	5. Students demonstrate competency with information technologies important to the information professions.	Position description assignment. Technology-boundaries assignments. Reflections on technology-boundaries failure. Grant application.	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.	4. Students demonstrate understanding of professional competencies important for management of information organizations.	Grant application.	Grant application graded on ability to discover and gauge alternatives, select those fit for purpose.
Ability to contribute appreciably to a team working on a defined project; awareness of project-management tools and techniques.	4. Students demonstrate understanding of professional competencies important for management of information organizations.	Grant application.	360 peer evaluation feeds into grade. For project managers, communication quality with instructor affects grade.
Sufficient courage, self-awareness, and skill for self-sufficiency in acquiring technical knowledge.	5. Students demonstrate competency with information technologies important to the information professions.	Technology-boundaries assignments, in-module assignments. Reflections on technology-boundaries failure.	
Development of ethical and principled approaches to technology adoption and education.	1. Students demonstrate understanding of societal, legal, policy, or ethical information issues.	Grant application, in-module assignments.	Mission-appropriateness of grant narrative part of grade.