The University of Western Ontario (UWO), Faculty of Information and Media Studies (FIMS)
Library and Information Science Masters Program (MLIS)
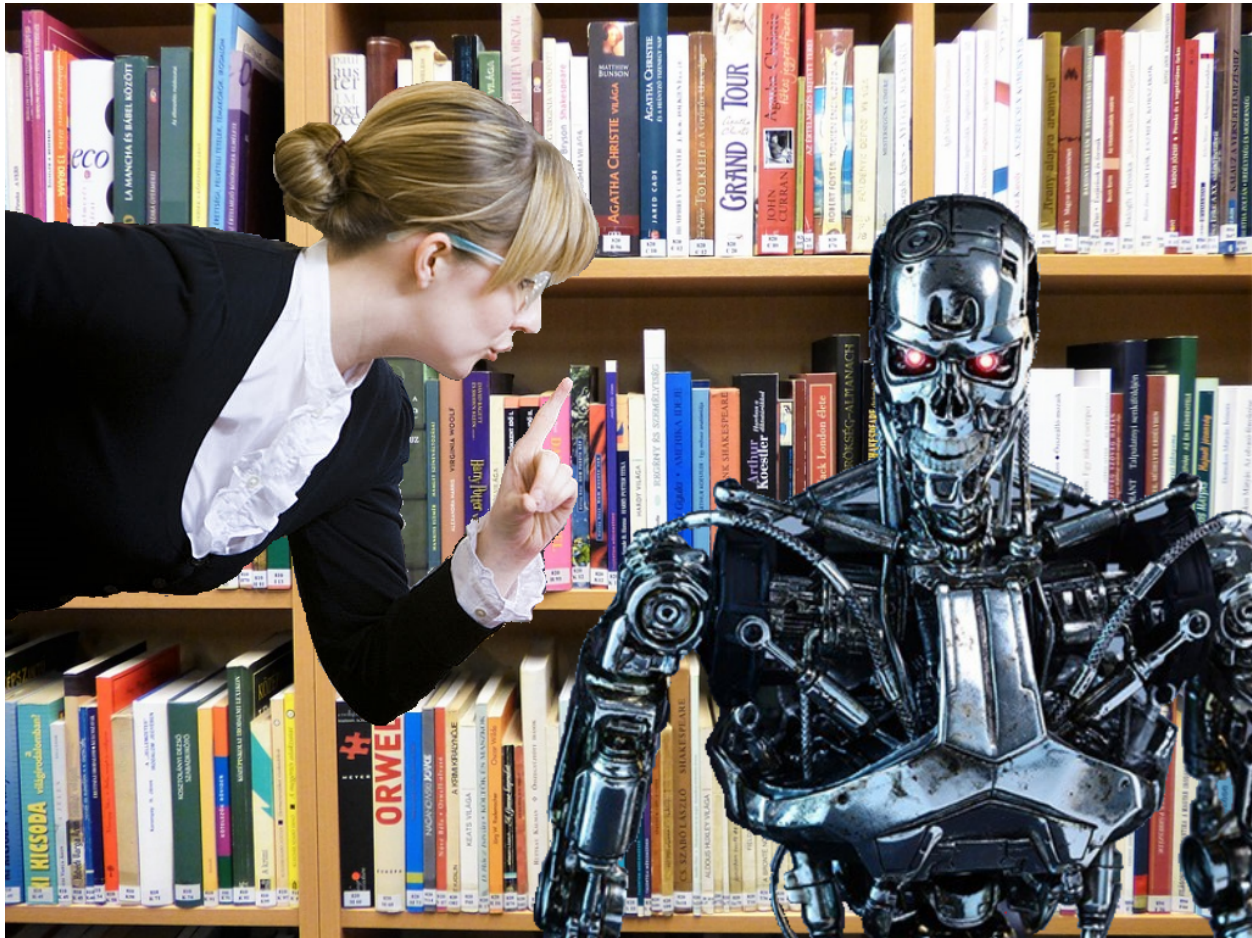**LIS 9704: Librarianship and Evolving Technologies**

Instructor: Alex Mayhew   Time: Wednesdays 1:30-3:30

amayhew@uwo.ca   Room Number: Zoom

Office Hours: Thursdays, 12-1pm

COURSE DESCRIPTION

Technological changes have had a profound impact on society and are poised to have an even
greater impact in the future. Due to its history, the field of Library and Information Science (LIS)
is uniquely positioned to help students navigate many of the effects of these technologies. The
advent of modern information technologies and automation presents unique challenges and
opportunities for the future of the profession. This course will give students a window into these
issues in the form of concepts, theories and thinkers about librarianship and the future of
technology.

PURPOSE OF THE COURSE

This course serves a number of purposes: First, to make students aware of the current and emerging technological landscape and the effects it will have on society. Second, to provide opportunities for students to think about and plan for the use of these technologies in the context of libraries and information organizations. Finally, to demonstrate to the students the inevitability of change, the uncertain nature of that change, and the tangibility of that change.

LEARNING OUTCOMES

By the end of the course, as a successful student, you will be able to:	Demonstrated, in part, through:
1. Demonstrate familiarity with the contemporary and emerging technological landscape, its history, and its relevance to LIS contexts and institutions; (Program-level learning outcomes 1 and 2)	• In class discussion • Online participation • Reflection papers
2. Assess, evaluate, and recommend technological solutions and risk factors for a variety of institutions and their user groups; (Program-level learning outcome 4, 6, and 8)	• Term-length project • Online participation • Team presentation
3. Successfully create novel technology based experiences and programs in an LIS setting, keeping in mind opportunities to translate these skills into other areas of LIS; (Program-level learning outcome 4 and 7)	• Term-length project
4. Gain understanding of the emerging technological environment and reflect critically and thoughtfully on those predictions through multiple forms of writing. (Program-level learning outcome 9)	• Reflection papers • In class discussion

Students will be required to complete individual and group assignments and to participate in in-class discussions and activities. In keeping with FIMS MLIS program policy, attendance at classes is required.

SUPPORT SERVICES

Students who are in emotional/mental distress should refer to MentalHealth@Western http://www.uwo.ca/uwocom/mentalhealth/ for a complete list of options about how to obtain help.

Please reach out to the services available if you are experiencing any mental health issues. There are staff and services here to help and support you.

ACCESSIBLE EDUCATION WESTERN (AEW)

Western is committed to achieving barrier-free accessibility for all its members, including graduate students. As part of this commitment, Western provides a variety of services devoted to promoting, advocating, and accommodating persons with disabilities in their respective graduate program.

Graduate students with disabilities (for example, chronic illnesses, mental health conditions, mobility impairments) are strongly encouraged to register with Accessible Education Western (AEW), a confidential service designed to support graduate and undergraduate students through their academic program. With the appropriate documentation, the student will work with both AEW and their graduate programs (normally their Graduate Chair and/or Course instructor) to ensure that appropriate academic accommodations to program requirements are arranged. These accommodations include individual counselling, alternative formatted literature, accessible campus transportation, learning strategy instruction, writing exams and assistive technology instruction.

DIGITAL AND CLASSROOM PARTICIPATION

Students are encouraged to actively participate and to come to class prepared in order to get the most out of the course. Participation also extends online to the course site (https://owl.uwo.ca/), where assignments and additional resources can be accessed. Use of digital technologies will be required in class for several activities. Laptops for class use are available from the Graduate Resource Library on the 3rd floor of the FIMS and Nursing Building (FNB). There is no required textbook for the course. Readings will be assigned from a selection of books and articles on reserve on the OWL Course Website.

ENROLLMENT RESTRICTIONS

Enrollment in this course is restricted to graduate students in the MLIS program

STATEMENT ON ACADEMIC OFFENCES

Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at the following Web site:

http://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_grad.pdf
Students are encouraged to use laptops or other devices to take notes and otherwise participate,
however the expectation is that these devices will be used for course-related purposes only
during class time. Use of these devices is at instructor's discretion, as is what constitutes
non-course related use.

CLASS SCHEDULE

Week	Topics, Readings (APA), in class Exercises, and Supplemental readings
Week 1 Sep 14	Topics: Digital Literacy: What did it, does it, will it mean? In class: Digital Literacy self-assessment Readings: Ingerman, Å., & Collier-Reed, B. (2011). *Technological literacy reconsidered: A model for enactment. International Journal of Technology and Design Education*, 21(2), 137-148. doi:10.1007/s10798-009-9108-6
Week 2 Sep 21	Topics: A Brief History of Technology in Libraries Readings: Kilgour, F. G. (2013;1970;). History of library computerization. *Information Technology and Libraries*, 3(3), 218-229. doi:10.6017/ital.v3i3.5256 Supplement: LOC Standards: https://www.loc.gov/librarians/standards
Week 3 Sep 28	Topics: The Internet and Global Reach Readings: Buschman, J. (2018). The New Technocracy Positioning Librarianship's Core Values in Relationship to Technology Is a Much Taller Order Than We Think. In *Applying Library Values to Technology.* Association of College and Research Libraries. Supplement: CBT Nuggets. (2019). A Story about the TCP/IP Protocol Stack. https://www.youtube.com/watch?v=ZGhEdLntk3Q
Week 4 Oct 5	Topics: Open Access, Open Source and Copyright Readings: Doctorow, C. (2017). Cory Doctorow: A New Deal for Copyright. *Locus Online*. http://locusmag.com/2015/01/cory-doctorow-a-new-deal-for-copyright/ Supplement: Kitchener, C. (2017). Mentorship Cut Short by Suicide. *The Atlantic*. https://www.theatlantic.com/business/archive/2017/08/lawrence-lessig-aaron-swartz/537693 Doctorow, C. (2009). Why Copyright is Worth Fighting About. *The Agenda with Steve Paikin*. https://www.youtube.com/watch?v=TBf7ov031Ag

Week 5
Oct 12
	Topics: Blockchain and TOR: Privacy and anonymity
	In class: Digital Privacy self-evaluation
	Readings:
	Al Jawaheri, H.. (2020). Deanonymizing Tor hidden service users through Bitcoin transactions
	            analysis. *Computers & Security*, 89, 101684. https://doi.org/10.1016/j.cose.2019.101684
	Supplement:
	Western Libraries. (2018). Research Guides: Online Privacy: YOUR PRIVACY. *Guides.lib.uwo.ca*.
	            https://guides.lib.uwo.ca/online_privacy

Week 6
Oct 19
	Topics: Linked Data vs. Big Data
	Readings:
	Bourg, C. (2017). What happens to libraries and librarians when machines can read all the books?
	            https://chrisbourg.wordpress.com/2017/03/16/what-happens-to-libraries-and-librarians-when
	            -machines-can-read-all-the-books/
	Supplement:
	Grandy, N. (2007). Explaining Semantic MediaWiki. *Oxford Geek Night*.

Week 7
Oct 26
	Topics: Artificial Intelligence: GPT3+, Deep Learning, and Deep Fakes
	Readings:
	Philip. (2020). GPT-3 Bot Posed as a Human on AskReddit for a Week. *kmeme.com*
	            https://www.kmeme.com/2020/10/gpt-3-bot-went-undetected-askreddit-for.html
	Supplement:
	Jason Edward Lewis (2021). Indigenous AI 101. *The Radical AI Podcast*
	            https://www.youtube.com/watch?v=mSgwjoKyq8k
	Open Source Language Model: https://6b.eleuther.ai/
	Deep Fake Voice Model: https://15.ai/

Nov 2	Reading week

Week 8
Nov 9
	Topics: A Brief History of the Future
	In class: Future Shock self-evaluation
	Readings:
	Karnofsky, H. (2020). The Most Important Century. *Cold-takes.com*
	            https://www.cold-takes.com/the-most-important-century-in-a-nutshell/
	Yudkowsky, E. (2001). *Future Shock Levels*. http://sl4.org/shocklevels.html
	Supplement:
	Miles, R (2018). AI Safety Playlist. *youtube.com*
	            https://www.youtube.com/watch?v=ZeecOKBus3Q&list=PLqL14ZxTTA4fyhYg6xD6Fz05
	            WcuxLGseL&index=2
	Urban, T. (2015). The Artificial Intelligence Revolution. *Wait But Why*.
	            https://waitbutwhy.com/2015/01/artificial-intelligence-revolution-1.html

Week 9
Nov 16
	Topics: Digital divide, who is left behind
	Readings:
	Van Dijk, J. (2020). *The digital divide*. John Wiley & Sons. Chapter 1
	Supplement:
	C.G.P. Grey (2017). Humans Need Not Apply. *YouTube*.
	        https://www.youtube.com/watch?v=7Pq-S557XQU
	Fordyce, R., Heemsbergen, L., Mignone, P., & Nansen, B. (2015). 3D printing and university
	        makerspaces: Surveying countercultural communities in institutional settings. *Digital Culture*
	        & Education, 7(2)

Week 10
Nov 23
	Topics: Modular technologies and obsolescence
	Readings:
	Sieg, K. (2021). Europe Is Guaranteeing Citizens the "Right to Repair" *NextCity*.
	        https://nextcity.org/daily/entry/europe-is-guaranteeing-citizens-the-right-to-repair
	Supplement:
	Watkins, D. (2017). Hacking the farm with low-cost, open source tool designs. *Opensource.com*.
	        https://opensource.com/life/16/2/interview-marcin-jakubowski-open-source-ecology
	Jakubowski, M. (2017). Open-sourced blueprints for civilization. *Ted.com*.
	        https://www.ted.com/talks/marcin_jakubowski

Week 11
Nov 30
	Topics: Mobile Phone, Mobile Library
	Readings:
	Tafirenyika, M. (2017). Mobile phone users in Africa and the Middle East get free Wikipedia. *The*
	        Africa Report.
	        http://www.theafricareport.com/Soapbox/mobile-phone-users-in-africa-and-middle-east-get-f
	        ree-wikipedia.html

Week 12
Dec 7
	Topics: Citizen, patron, content creator (democratization of the internet)
	Readings:
	Clay Shirky. (2008). Gin, Television, and Cognitive Surplus. *edge.com*.
	        https://www.edge.org/conversation/gin-television-and-cognitive-surplus
	Supplement:
	Clay Shirky. (2005). Institutions vs. collaboration. *TED*.
	        https://www.youtube.com/watch?v=sPQViNNOAkw

Week 13 Dec 14	Topics: Course Conclusion: Responsibility for Advocacy In class: Digital Literacy re-assessment Supplement: Toby Ord (2021). Humanity on the precipice. *Rationally Speaking*. http://rationallyspeakingpodcast.org/262-humanity-on-the-precipice-toby-ord/

	Jai. (2014). 500 Million, But Not a Single One More. *jaibot.com* https://blog.jaibot.com/500-million-but-not-a-single-one-more/

EVALUATION

In Class Exercises (4 worth 5% each)	**20 %**
3 Small Reflections (worth 10% each, one for each third of the course, Due Sundays)	**30 %**
1 Final Project Proposal (Due end of week 6 - Sunday Oct 23)	**10 %**
1 Final Term Project (Due End of week 12 - Sunday Dec 11)	**25 %**
Participation (substantive, constructive participation in class: discussion, questions, etc)	**15 %**
Total	**100 %**

3 Small Reflections (10% each)

How we got here: Week 1,2, 3, or 4	Reflection paper 1 due by this date on one of these readings, lectures, or in class discussions
Where we are going: Week 5, 6, 7, or 8	Reflection paper 2 due by this date on one of these readings, lectures, or in class discussions
The challenges: Week 9, 10, 11, or 12	Reflection paper 3 due by this date on one of these readings, lectures, or in class discussions

Students will be required to write three short (1-2 page or 300-500 words) reflection papers. Students should write about questions or interests that arise naturally from the readings, the lecture, or the class discussion. The reading responses should never be summaries of the readings or lecture that week, but thoughtful commentary, analysis, or a substantive researched-based opinion that reflects analytical or critical engagement with the week's course material. What is your contribution to this conversation? Do not waste your time summarizing or setting up large ideas from that week's lecture—get to the nitty-gritty interesting contribution as soon as you can. You only have about 300-500 words, and you want to give yourself space to say something!

Consider comparing two ideas, making a judgment, prescribing a course of action, or otherwise taking a stand. I want to know your opinion and what you think that opinion implies.

Due Date: These papers are due on the Sunday of each week for the topic covered. If you wish to write on the topics covered in week 1, you must submit your reflection by the Sunday that follows the week 1 class. Students can respond to the readings, the lectures, and/or the in-class

discussion. There are three groups of papers, indicated by the colours above, and one reflection must be written from each group. This means students must turn in at least one reflection in the first third of the course, one in the second third, and one in the final third.

An alternative to these written reflections will be offered. Optional instruction on GitHub, XML, and Amazon Web Services (AWS) + Ubuntu, will be offered outside of regular class time. Students may choose to complete small projects related to these topics instead of the written reflection.

Final Project proposal (10%)
- Students will create a proposal for the final project. They will create a two-page document (500-600 words) that describes the topic or research question with a list of initial sources and the reasons for their choice. Please see the Term-Length Project description below for suggestions of possible projects.
- Due Date: Week 6 Sunday Oct 23

Term-length project (25%)
- By the end of the course students will create a project related to Technology and Libraries. The project is expected to be the equivalent to an 8 page paper and can be any sort of product related to technology and libraries: a website, a maker-space creation, an academic paper, or anything approved by the instructor. There will also be an additional 2 page reflection that will detail why the project was chosen, what impact projects like it can have on librarianship, and why it should be considered important. Please see the Term-Length Project description below for suggestions of possible projects.
- Due Date: Week 12 Sunday Dec 11

Participation (15%)
- There will be three in class reflection activities, to be submitted via the OWL forums. Submissions are expected to be roughly a paragraph in length. A particular goal of the reflection activities is to expose students to the value of changing their mind. Additionally, ongoing throughout the year, students will be encouraged to participate in class discussions.

Citations:
Any submitted work can use any established citation style (APA, MLA, Chicago, etc.). Please note what style is being used on the citation page, eg: Bibliography (APA)

Grade range:
For details about the requirements for the various grade ranges please consult the MLIS Grad Handbook on the FIMS intranet: http://intra.fims.uwo.ca/

Late policy:
Late assignments will lose 10% (out of 100) per day.

TERM-LENGTH PROJECT (DESCRIPTION)

Due Date: Week 12 - Sunday Dec 11
Value: 25%

The final project will consist of two parts, a 'project' and a reflection paper on that project. The purpose of this project is to create an original product related to Librarianship and Technology. One of the aims of this project is to create something that can be a part of your professional portfolio.

Project:
The project itself can be any sort of product related to technology and libraries: a website, a maker-space creation, an academic paper, or anything approved by the instructor.

List of possible project ideas:
- A traditional essay on an agreed upon topic (~8 pages)
- Creation of a website related to librarianship or information science
- Creation of a wiki related to librarianship or information science
- Development of a policy document, research guide, or other professional resource
- Creation of an instructional document explaining a relevant technology
- Develop a library program related to issues in technology
- A physical prototype, perhaps created in a library makerspace. A photographic record of its creation and function.
- A how-to document for creation of an item in a makerspace.

Many projects outside of the ones listed here are possible. Please consult with the instructor if you have any questions. All projects are expected to be roughly equivalent to an 8 page essay.

Reflection:
The reflection paper will detail why the project was chosen, what impact projects like it can have on librarianship, and why it should be considered important. In the case of an essay this reflection can simply be one of the sections of the essay itself, but it will need to be clearly labeled as such. You can write about the challenges you had writing the paper: How your ideas changed over time, limitations of your final ideas, aspects you thought might be valuable but didn't have a chance to get into, or counter arguments that you might be able to think of. How did you get here, or where could you have gone? Alternatively, you could reflect on the meta-question: If the ideas are as important as you think, what are the barriers to adoption that you see and what would you do about them if you could? The reflection is 2 pages in addition to the 8 of the main project.

Format:
Please submit all written components as a Word file or a PDF where appropriate. Alternatively, please provide the link or the file of the resource you created
12-point font (preferably Times New-Roman).
1" margins.
Please note which citation style is used.

TERM-LENGTH PROJECT (GRADING RUBRIC)

Evaluation Criteria	Exemplary	Acceptable	Needs Improvement
Project Clarity	The purpose of the project is made readily apparent	The purpose of the project is apparent	The purpose of the project is unclear without substantial explanation
Project Originality	The project is based on a novel idea or approaches a topic in a novel way	The project attempts to explore an established topic in a new way	The project does not attempt to engage beyond the traditional bounds of the field
Project Engagement	The project invites participants to interact with it or otherwise seek out material related to it	The project elicits some further interest	The project is does not prompt participants to engage further
Reflection Clarity	Language used is clear and accessible Is free from spelling, grammar, and sentence structure errors	Language used is accessible Is mostly free from spelling, grammar, and sentence structure errors	Language used is obscure Has many spelling, grammar, and sentence structure errors
Reflection Context	The implications of the project on the broader LIS context is made explicit and is well supported	The implications of the project on the broader LIS context is implicit and is supported	The implications of the project on the broader LIS context is not substantially investigated
Reflection Evidence	Multiple sources of evidence are included, and all are integrated appropriately High-quality sources are primarily used	Multiple sources of evidence are included, and most are integrated appropriately Moderate-quality sources are primarily used	Few sources of evidence are included, and some are integrated appropriately Weak-quality sources are primarily used