

GRADLIS 9701: INFORMATION RETRIEVAL: Research and Practice
SUMMER 2024 – CLASSROOM

INSTRUCTOR
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Office Hours: Tuesdays 12-2pm

EVALUATION		
Assignment	Date	Weight
<i>Tagging & Thesauri</i>	May 28 th	10%
<i>Repository Critique</i>	June 11 th	15%
<i>Annotated Bibliography</i>	June 25 th	10%
<i>Presentation of Final Project</i>	July 30 th OR August 6 th	10%
<i>Final Project</i>	August 6 th	30%
<i>Participation</i>	(ongoing)	25%

COURSE TIMES & LOCATION

Tuesdays 9am-11:50am FNB 2230 & FNB 3010 (computer lab)

COURSE DESCRIPTION

Introduction to the advanced principles and theory of information retrieval. Effective search strategies. Evaluation of the capabilities and limitations of information retrieval systems and models and the scope and accessibility of conventional and open access bibliographic and non-bibliographic repositories. Current issues and research.

Enrollment in this course is restricted to graduate students in the Master's of Library and Information Science program. Prerequisites: GRADLIS 9002, GRADLIS 9003

COURSE OBJECTIVES

Upon successful completion of readings, assignments and class participation, students will be able to:

1. Demonstrate an understanding of selected information retrieval concepts, theories, and models (Program-Level Learning Outcomes 6, 8).
2. Demonstrate expertise in the planning and developing of effective search strategies for information retrieval (Program-Level Learning Outcome 8).
3. Demonstrate requisite skills to critically evaluate the capabilities and limitations of information retrieval systems and models (Program-Level Learning Outcomes 4, 6, 8).
4. Demonstrate requisite skills to critically evaluate the scope and accessibility of conventional and open access bibliographic and non-bibliographic repositories (Program- Level Learning Outcomes 3, 8).
5. Identify, analyze, and discuss current issues and research as well as future developments in information retrieval (Program-Level Learning Outcomes 2, 3, 5).

LEARNING OUTCOMES

MLIS Program-Level Learning Outcomes	What assignments provide evidence of learning outcomes?	How will instructors assess mastery of learning outcome?
Demonstrate an understanding of selected information retrieval concepts, theories, and models (Program-Level Learning Outcomes 6, 8).	<i>Final Project; Final Project Presentation; Research Database Search Strings; Tagging and Thesauri; annotated bibliography</i>	- final project & associated presentation should demonstrate understanding and precise application of the theories and models - use of high-quality cited works for the annotated bibliography (and subsequent final project) provide evidence that students are well located within the broader research context
Demonstrate expertise in the planning and developing of effective search strategies for information retrieval (Program-Level Learning Outcome 8).	<i>Research Database Search Strings; Tagging and Thesauri; participation</i>	- The students' application of search strategy skills will show evidence of their exposure to, and practice with IR systems.
Demonstrate requisite skills to critically evaluate the capabilities and	<i>Repository Critique</i>	- Students will need to navigate, evaluate, and assess the relative capabilities and limitations

limitations of information retrieval systems and models (Program-Level Learning Outcomes 4, 6, 8).		of a information retrieval system for the Repository Critique assignment.
Demonstrate requisite skills to critically evaluate the scope and accessibility of conventional and open access bibliographic and non-bibliographic repositories (Program-Level Learning Outcomes 3, 8).	<i>Search Profile; Repository Critique</i>	<ul style="list-style-type: none"> - Students will evaluate their own abilities to access and assess the scope of their IR activities in the Search profile assignment - Students will demonstrate an advanced knowledge of accessibility (highlighting Open Access) and repository scope and context in the Repository Critique assignment
Identify, analyze, and discuss current issues and research as well as future developments in information retrieval (Program-Level Learning Outcomes 2, 3, 5).	<i>Final Project; Final Project Presentation</i>	<ul style="list-style-type: none"> - The final project and associated presentation allow students to display their knowledge and analysis of a current issue or future development that is of interest to them.

COURSE MATERIALS

There is no required text for this course. Course materials (readings, notes, detailed assignment instructions) will be available through the course’s associated OWL site or through Western’s Library system.

METHODS OF EVALUATION

The evaluation of assignments is based on the [MLIS Grading System](#). Points towards participation grades are awarded for substantive, constructive participation in the class: including sharing material, asking questions, engaging in class exercises, etc. More information is available in the “Participation Rubric” document on OWL.

WEEK OF:		TOPICS, DUE DATES, & READINGS:
Part 1: Core Tools	May 7	<p>Introduction to the Course Types of Systems; System Components In-class activity: My Searcher Profile</p> <p>Chapter 4: <i>Selecting a Relevant Database</i> in: Markey, K. (2015). <i>Online searching : A guide to finding quality information efficiently and effectively</i>. Rowman & Littlefield Publishers. https://ebookcentral.proquest.com/lib/west/reader.action?docID=4085921&ppg=76</p> <p>Chapter 1: <i>Basic concepts of information retrieval systems</i> Chowdhury, G.G. (2010). <i>Introduction to modern information retrieval</i>. 3rd ed. New York: Neal-Schuman Publishers, Inc.</p>
	May 14	<p>Analysis, Indexing, and Representations of Information Indexing; Abstracting; Tagging; and more In-class activity: Indexing & Abstracting</p> <p>"<i>Indexing</i>" pp. 491-495 from: Blair, A., Duguid, P., Goeing, A., & Grafton, A. (Eds.). (2021). <i>Information: A historical companion</i>. Princeton University Press.</p> <p>Chapter 8: <i>Abstracts and Abstracting</i> from: Chowdhury, G.G. (2010). <i>Introduction to modern information retrieval</i>. 3rd ed. New York: Neal-Schuman Publishers, Inc.</p> <p>Furner, J. (2009). <i>Folksonomies</i>. In M. J. Bates & M. N. Maack (Eds.), <i>Encyclopedia of Library and Information Science</i> (3rd ed., pp. 1858–1866). CRC Press. https://doi.org/10.1081/E-ELIS3-120043238</p>

WEEK OF:	TOPICS, DUE DATES, & READINGS:
<p>May 21</p>	<p>Searching Research Repositories Thesauri & Applying Thesauruses; Subject Headings; Subject Headings for special topics (MeSH & Music) Computer Lab (FNB3010) activity: Retrieval Practice</p> <p>Chapter 6: <i>Controlled Vocabulary for Precision in Subject Searches</i> in: Markey, K. (2015). <i>Online searching : A guide to finding quality information efficiently and effectively</i>. Rowman & Littlefield Publishers. https://ebookcentral.proquest.com/lib/west/reader.action?docID=4085921&ppg=76</p> <p>Introduction to MeSH: https://www.nlm.nih.gov/oet/ed/pubmed/mesh/index.html</p> <p>Finding Music: https://www.lib.uwo.ca/music/repertoire.html</p>
<p>May 28</p>	<p>Search Engines Pt.1 How they work: Web-crawlers (Auto-Indexing); Query matching; Result ranking ** Tagging and Thesauri Assignment due**</p> <p>Chapters 2: <i>Search Engine Indexing: Finding Needles in the World's Biggest Haystack</i> and 3: <i>PageRank: The Technology that Launched Google</i> in: MacCormick, John. (2012) <i>Nine Algorithms That Changed the Future: The Ingenious Ideas That Drive Today's Computers</i>, Princeton: Princeton University Press. https://doi-org.proxy1.lib.uwo.ca/10.1515/9780691209050</p> <p>Chapter 3: <i>The Materialities of Search</i> in: Haider, J., & Sundin, O. (2019). <i>Invisible Search and Online Search Engines: The Ubiquity of Search in Everyday Life</i> (1st ed.). Routledge. https://directory.doabooks.org/handle/20.500.12854/72577</p>

WEEK OF:	TOPICS, DUE DATES, & READINGS:	
	June 4	<p>Search Engines Pt. 2 How to use them; Natural Language Searching Computer lab (FNB3010) activity: Practice Searching Ch 3: <i>The world according to Google</i> and Ch 13: <i>Hints, tips and the future</i> Bradley, Phil. 2017. Expert Internet Searching. Fifth edition. London: Facet Publishing.</p>
Part 2: Digging Deeper	June 11	<p>Algorithmic Bias & Hidden Infrastructures Filter Bubbles; Siloing; Misclassifications; AI in Search Computer Lab (FNB3010) Activity: testing AI tools ** Repository Critique Assignment due**</p> <p><i>Introduction</i> and Ch. 5: <i>The future of Knowledge in the Public</i> from: Noble, Safiya Umoja. <i>Algorithms of Oppression: How Search Engines Reinforce Racism</i>, New York, USA: New York University Press, 2018. https://www.degruyter.com/document/doi/10.18574/nyu/9781479833641.003.0004/html</p>
	June 18	<p>Web Analytics Measuring Web Traffic; Server Logs; Search Trends Computer Lab (FNB3010) activity: Google Analytics Practice</p> <p>Fu, Y., Lomas, E., & Inskip, C. (2021). Library log analysis and its implications for studying online information seeking behavior of cultural groups. <i>The Journal of Academic Librarianship</i>, 47(5), https://doi.org/10.1016/j.acalib.2021.102421</p>

WEEK OF:	TOPICS, DUE DATES, & READINGS:	
	June 25	<p>Image & Video Retrieval **Annotated Bibliography Assignment due** Computer Lab (FNB3010) activity: Multimedia Retrieval Practice</p> <p>Chapter 16: <i>Multimedia Information Retrieval</i> from: Chowdhury, G.G. (2010). <i>Introduction to modern information retrieval</i>. 3rd ed. New York: Neal-Schuman Publishers, Inc.</p> <p>Chapter 13: <i>Image Presentation</i> from: Zhang, D. (2019). <i>Fundamentals of Image Data Mining: Analysis, Features, Classification and Retrieval</i>. Springer International Publishing.</p>
July 1-5th MLIS Reading Week - - No Coursework!		
	July 9	<p>Multilingual Information Retrieval Not Deep, Not Dark, Only 가리어지다 Library Practice: Multilingual materials at Western</p> <p>Rigby, C. (2015). Nunavut Libraries Online Establish Inuit Language Bibliographic Cataloging Standards: Promoting Indigenous Language Using a Commercial ILS, <i>Cataloging & Classification Quarterly</i>, 53:5-6, 615-639, DOI: 10.1080/01639374.2015.1008165</p>

WEEK OF:	TOPICS, DUE DATES, & READINGS:	
	July 16	<p>Searching for Data & Searching as Research (Reviews) Computer Lab (FNB3010) activity: Data retrieval practice</p> <p>Bramer WM, de Jonge GB, Rethlefsen ML, Mast F, Kleijnen J. (2018) A systematic approach to searching: an efficient and complete method to develop literature searches. <i>Journal of the Medical Library Association</i>, 106(4):531-541. doi: 10.5195/jmla.2018.283</p> <p>Townsdin, S.R. (2018) Librarians and Open Government Data: Opening Possibilities, <i>Public Services Quarterly</i>, 14:1, 65-74, DOI: 10.1080/15228959.2017.1412278</p>
	July 23	<p>Search Tactics & The Future of Search In-class activity: My Searcher Profile Reprise</p> <p>This paper is long and has a lot of math! Please skip sections 1-2 and focus on Section 3-4 (pp1716-1724 of document pagination, pp19-28 of .pdf)</p> <p>Azad, H. K. & Deepak, A. (2019). Query Expansion techniques for information retrieval: A survey. <i>Information Processing and Management</i> 56: 1698-1735. https://doi.org/10.1016/j.ipm.2019.05.009</p>
	July 30	Presentations of Final Projects
	August 6	Presentations of Final Projects **Final Paper due**

POLICIES

Late Penalties:

Late assignments will be penalized at a rate of 5% per day unless an extension has been negotiated beforehand. **Late assignments will not be accepted after one week**, and the grade will be recorded as zero.

Extensions:

2-day extensions will typically be granted for **any** reason if notice of two days or greater is given before the due date. Longer extensions and accommodations will be made on religious, medical, or compassionate grounds. If your situation requires accommodation in multiple courses, you are **strongly encouraged** to contact FIMS' Graduate Student Services Manager, Chris Circelli, (ccircel@uwo.ca) and/or to register with Western's Academic Support <http://academicsupport.uwo.ca/> (if applicable). These services are private and confidential. Staff can help you to access supports as well as communicate your accommodations to your instructors.

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.

As your instructor, I promise to do my best to: provide transcription services for videos, ensure readings are screen-reader accessible, speak clearly and at a reasonable pace, ensure images and videos are described, and to always be available to listen to concerns with an open mind and to use those concerns to improve upon my pedagogy.

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/handbook/appeals/scholastic_discipline_grad.pdf

To respect your copyright, no plagiarism-checking software will be used in this course.

Support Services:

Students who are in emotional/mental distress should refer to Mental Health@Western <https://www.uwo.ca/health/psych/> for a complete list of options about how to obtain help.