



COURSE INFORMATION
COMP-4310 Web Health Informatics
Winter 2025, Orillia

Calendar Description:

An introduction to the organization and operation of the health systems of Canada as well as to various associated concepts including a variety of Electronic Healthcare Record systems, healthcare data and knowledge sharing, evidence and proximity based medicine, interoperability between diverse and distributed systems, medical terminology standards and clinical web applications.

Instructor Information:

Instructor: Dr. Chris Brogly
Office Location: see myCourseLink
E-mail: cbrogly@lakeheadu.ca
Office Hours: Zoom hours to be posted on myCourseInfo

TA(s): see myCourseInfo

Course Identification:

Room and Time: OA-2019, 8:30-9:50AM MW
Final Date to Withdraw (Drop): March 7, 2025
Final Day of Classes: April 4, 2025
Winter Study Week: February 17 to 21, 2025

Prerequisite(s):

Computer Science 3413 (Databases) or equivalent

Evaluation

Final grades are calculated based on the following evaluation:

- 3 Assignments, 5% each, 15%
- Midterm 1, Length: Class Time, 20%, Wed Feb 12
- Midterm 2, Length: Class Time, 25%, Wed March 19

- Midterm Formats: Mixed
- Midterm content will be derived from the textbook as well as lectures and posted documents.
- Midterm 2 will be cumulative, but will have more emphasis on topics after Midterm 1.
- Project, 40%
 - The instructor will provide suitable options for health informatics projects; students may also select and pursue their own topic with instructor approval. Students will design, prototype, and, ideally, implement a software solution that addresses some aspect of health informatics. The scope of the project will be limited to be suitable for a one-term course. The instructor will assess the overall quality of deliverables based on the selected topic and assign a grade. Students may work individually or in groups no larger than 4. Team size may be considered as part of the instructor's assessment. No peer evaluation will be completed; one mark will be assigned to all members.

Course Texts and Online Resources:

- Required Text: Health Informatics: Practical Guide, William R. Hersh. You can purchase ebook or print copies [here](#) (Cost: \$79.95 USD) or from [Amazon](#) (Cost: \$34.95 USD Kindle or \$69.95 USD + import fees Paperback).
- Recommended Text: Shortliffe and Cimino (eds.), Biomedical Informatics: Computer Applications in Health Care and Biomedicine (5th Edition), Springer, 2021 (Cost: \$74.99 USD eBook or \$99 USD Paperback) <https://link.springer.com/book/10.1007/978-1-4471-4474-8>
- Research Articles and instructor provided documents will be posted on MyCourseLink. Recommended readings per week will be posted by the instructor on MyCourseLink.

Weeks	Topics to cover
	Note: The instructor may make some changes to content depending on course progression.
Week 1	Chapter 1: Introduction to Biomedical and Health Informatics
Week 2	Chapter 2: A Short History of Biomedical and Health Informatics Chapter 3: Computing in Biomedicine and Health
Week 3	Chapter 4: Electronic Health Records Chapter 5: Standards and Interoperability

Week 4	Chapter 6: Data Science and Artificial Intelligence in Health
Week 5	Chapter 7: Clinical Decision Support Chapter 8: Natural Language Processing
Week 6	Break (Reading Week)
Week 7	Chapter 9: Safety, Quality, Value in Health Informatics
Week 8	Chapter 18: Consumer Health Informatics Chapter 19: Public Health Informatics
Week 9	Chapter 13: Privacy and Security
Week 10	Chapter 14: Information Retrieval
Week 11	Chapter 20: Evidence-based Medicine
Week 12	Selected topics/Conclusion

Assignments and Evaluations:

Students taking this course must understand and agree that:

- (1) Unless otherwise allowed by the course instructor, students must complete the assignments in this course without the assistance of anyone else.
- (2) Unless otherwise allowed by the course instructor, students must not access any sources or materials (in print, online, or in any other way) to complete any course exam.

Academic Integrity:

Students must further understand and agree that, if they violate either of these two rules, or if they provide any false or misleading information about their completion of course assignments or exams, they may be prosecuted under the Lakehead University Student Code of Conduct – Academic Integrity, which requires students to act ethically and with integrity in academic matters and to demonstrate behaviors that support the University’s academic values.

Assignments: There is **Zero-Tolerance** for plagiarism cases. All such cases will be dealt with according to University prescribed rules. All assignments are individual. Students should understand that their assignments must go through a similarity check and if there is similarity detected then **ZERO** mark will be awarded to those students involved in copying.

Late Assignments: Late assignments will automatically receive a **ZERO** however they will be reviewed to provide formative evaluation feedback and must be submitted for course Completion.

Use of AI tools: Please see Lakehead's Policy on AI usage

<https://www.lakeheadu.ca/students/student-life/student-conduct/academic-integrity/chatgpt-ai-tools>

Course Policies:

- Behavioral standards to follow: Student Code of Conduct - Academic Integrity
- Attendance and participation in class discussions is highly recommended.
- Students can communicate with the instructor through email.
- The course outline and schedule are not fixed and subject to change based on class flow.
- University's attendance policy is followed.
- There will be 4 assignments. There are late penalties for assignments determined by the course instructor. Extensions will be granted only by the course instructor. If you have medical or compassionate grounds for an extension, you should take supporting documentation to the office of the Dean of your faculty, who will contact the instructor.
- Assignments and time will be posted on MyCourseLink/D2L and announced via emails to all registered students.

Copyright:

Students should be aware that all instructional, reference, and administrative materials prepared for this course are protected in their entirety by copyright. Students are expected to comply with this copyright by only accessing and using the course materials for personal educational use related to the course, and that the materials cannot be shared in any way, without the written authorization of the course instructor. If this copyright is infringed in any way, students may be prosecuted under the Lakehead University Student Code of Conduct – Academic Integrity, which requires students to act ethically and with integrity in academic matters and to demonstrate behaviors that support the University's academic values.

Regulations:

It is the responsibility of each student registered at Lakehead University to be familiar with, and comply with all the terms, requirements, regulations, policies and conditions in the Lakehead University Academic Calendar. This includes, but is not limited to, Academic Program

Requirements, Academic Schedule of Dates, University and Faculty/School Policies and Regulations and the Fees and Refund Policies and Schedules (Lakehead University Regulations webpage, 2023-24).

Academic Integrity:

A breach of Academic Integrity is a serious offense. The principle of Academic Integrity, particularly of doing one's own work, documenting properly (including use of quotation marks, appropriate paraphrasing and referencing/citation), collaborating appropriately, and avoiding misrepresentation, is a core principle in university study. Students should view the Student Code of Conduct - Academic Integrity for a full description of academic offenses, procedures when Academic Integrity breaches are suspected and sanctions for breaches of Academic Integrity.

Support for Students:

There are many resources available to support students. These include but are not limited to:

- [Health and Wellness](#)
- [Student Success Centre](#)
- [Student Accessibility Centre](#)
- [Library](#)
- [Lakehead International](#) ● [Indigenous Initiatives](#)

Lakehead University is committed to achieving full accessibility for persons with disabilities. Part of this commitment includes arranging academic accommodations for students with disabilities and/or medical conditions to ensure they have an equitable opportunity to participate in all of their academic activities. If you are a student with a disability and think you may need accommodations, you are strongly encouraged to contact Student Accessibility Services (SAS) and register as early as possible. For more information, please contact Student Accessibility Services (SC0003, 343-8047 or sas@lakeheadu.ca