**Course coordinator:**

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**Office hours:**

I won’t have set office hours, but you can arrange a meeting time with me via email. My office is in the Communications Research Lab, Room 137 (building 43 on the campus map).

TA: Sujane Kandasamy kandas3@mcmaster.ca

**COURSE OVERVIEW**

# Course Description

**HRM 724 – eHealth: Fundamentals of eHealth and the Canadian Health Care System**

This tutorial-based course will cover a broad range of eHealth topics from the perspective of health care delivery. We start with an introduction to the Canadian healthcare system—how it’s structured and funded. During the course we will look at some elements of healthcare in detail: primary care, medication management, homecare, and public health. We will also look at important functions of eHealth applications, such as computerized decision support, quality improvement, and patient safety. We will spend one of our sessions touring the Mohawk MEDIC lab showcasing some applications for healthcare.

Much of eHealth is implemented as a result of system and organizational change. We will spend some time talking about the importance of rigorous scientific evaluation of eHealth projects, covering research and the potential for big data projects to guide new knowledge and to ensure clinical efficacy. Other topics include use of standards and vocabularies; privacy and security; and the future of eHealth.

The course is designed to give an overview of eHealth from the health care perspective. It is also designed to provide students with opportunities to enhance skills important for their future work in eHealth. There is a focus on teamwork and written communication in a variety of formats.

The course is organized to enable learning to occur in a number of ways. Weekly readings and activities are completed before class to ensure that students are ready to actively participate in the sessions. Large group lectures are included to help you synthesize key areas and introduce you to experts in the field. In the small group tutorials, you will broaden your understanding of the content through discussions with your student colleagues and gain insights from an interdisciplinary group with diverse experiences and backgrounds.

# Course Objectives

At the end of the course, you should be able to:

* Describe the Canadian health care system—how it is structured and funded
* Identify information flow and needs across healthcare levels;
* Define eHealth and appreciate the breadth of the field;
* Identify the main applications of eHealth in health care, understand their role and potential impact, challenges in the field, and critically appraise possible limitations of eHealth solutions;
* Recognize the effect of the culture of health care on planning, implementation, and use of information technologies;
* Identify areas in healthcare that could benefit from an eHealth-supported solution;
* Consider privacy, security, and confidentiality issues from the health care provider and patient perspective in relation to eHealth applications and research, and be aware of the role of policy and legislation in this area;
* Appreciate the complexity of healthcare and the role that eHealth can play in providing care for patients and the population.

# Other learning outcomes:

* Write a good research question
* Select and summarize research from peer-reviewed journals
* Critically reflect on your own learning and how you’re incorporating your new understanding of eHealth into your approach to learning and applying this knowledge going forward
* Synthesize knowledge in an area in a written report and communicate this knowledge
* Develop good writing and referencing
* Enhance your teamwork skills
* Communicate your ideas in a number of formats (written, spoken, multimedia)

# Format

* The course uses large group lecture-style sessions followed by small group tutorials. Each tutorial session will focus on a learning package that includes the unit objectives, required and additional readings, and discussion points.
* ***Participants are expected to have read the readings and completed any weekly activities for the tutorial discussions before the session***.
* The anticipated number of hours that a student should allocate depends on a number of factors, including: the student’s background, experience, the session, and the readings. Students typically spend 3 hours in class and another 6-10 hours reading the material, and completing the activities for each session.

# Scheduling

**Class Sessions will be held from:**

**September 11 to December 11, 2018**

**4 to 7 pm**

**Large group sessions typically run from 4-5:30 pm.**

**Tutorial Groups will be in smaller rooms; they will run from 5:30-7 pm.**

# Avenue to Learn

Course content, news updates, and assignment submission will be through Avenue to Learn (Avenue) <https://avenue.cllmcmaster.ca/d2l/home>. Please check it regularly for news. The Avenue calendar will contain class dates and room locations, as well as deadlines. We will not be in the same lecture hall all term, so be aware of any changes via the calendar.

# Textbooks (mandatory readings described in each unit outline)

The topics discussed in the following books will be covered in lectures. Other sources will also be consulted and details will be provided in the guides provided for each session.

1. Shortliffe, Edward H and Cimino James J. Biomedical Informatics, Computer Applications in Health Care and Biomedicine, Springer-Verlag London 2014. (*selected chapters*). The book is available online via McMaster digital library. For off-campus access, you will need to login through proxy with macid.
2. Lavis, JN (ed). Ontario's Health System: Key Insights for Engaged Citizens, Professionals and Policymakers. 2016. PDFs of Chapters are available at https://www.mcmasterforum.org/find-evidence/ontarios-health-system

A paperback version is available for purchase at Amazon.ca.

# Suggested reading (optional)

Hoyt RE, Yoshihashi A, Bailey N. Health informatics: Practical guide for healthcare and information technology professionals. Lulu Press. 2014 Seventh edition. <http://www.lulu.com/shop/william-r-hersh-and-robert-e-hoyt/health-informatics-practical-guide-seventh-edition/paperback/product-23655642.html>. An electronic version of the book can be purchased or rented at RedShelf.com.

Gaddi A, Capello F, Manca M. eHealth, Care and Quality of Life. 2014 electronic library holding in the Health Science Library

Casson, Leslie, E. A Writer’s Handbook – Third Edition Developing Writing Skills for University Students. Broadview Press 2011. Available digitally <https://broadviewpress.com/product/a-writers-handbook-fourth-edition/?ph=052216213796b53102946d02> or through Amazon. This will help you with writing assignments.

# Some health research journals relevant to eHealth

(you can get access through <http://hsl.mcmaster.ca/>)

<http://medinform.jmir.org/>

<https://www.journals.elsevier.com/international-journal-of-medical-informatics>

<http://www.healthaffairs.org/>

<http://journals.lww.com/cinjournal/pages/default.aspx>

<http://www.biomedcentral.com/bmcmedinformdecismak/>

<https://implementationscience.biomedcentral.com/>

# Topics: the order of these may change based on availability of invited guest lecturers. Details will be on Avenue to Learn as the order is confirmed.

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| --- |
| Introduction to the Canadian healthcare system  |
| Course overview and introduction to eHealth and the flow of health information; Canadian eHealth landscape |
| Evidence-based medicine and why it matters to eHealth |
| Primary care: Health care data and Electronic Health Records (EHR) systems |
| Vocabularies, terminologies, and standards |
| Implementation, adoption, use, system maturation (primary care) |
| Consumers and patient information systems and needs, Mobile devices, Personal health records  |
| Connected care |
| Pharmacy eHealth and medication management (hospital-based care) |
| Public health informatics |
| Big data |
| Ethics, security, privacy, and confidentiality |
| Future of eHealth |
| Video watching closing session |

**STUDENT EVALUATION AND ASSIGNMENTS**

# Overview of Assignments, Grading, and Due Dates

Written assignments are used to evaluate knowledge, critical appraisal skills, critical thinking, analysis, and synthesis skills. They test the understanding of principles or relationships, foster independent thinking and learning, and develop writing skills. Written assignments are assessed on content, organization, style, and mechanics.

A successful eHealth professional needs to work with many stakeholders, not all of whom have the same perspectives. Communication of complex ideas in simple, concise language is key, especially to stakeholders who may not understand the complexities of eHealth and implementation. Assignments for this course are designed to help you develop and hone these skills.

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| **Assignment** | **Grade allocation** | **Due date** |
| **Formulating a question exercise** | 3% | Sep 28 (electronic submission by 11:59 pm on AVENUE on the due date). |
| **Article summary**  | 10% | Oct 12 (electronic submission by 11:59 pm on AVENUE on the due date). |
| **Individual reflection paper**  | 20% | Nov 2 (electronic submission by 11:59 pm on AVENUE on the due date) |
| **Final project: (groups of 3 or 4-NO MORE THAN 4)** |
| Proposal, 2-4 pages | 5% | Nov 16(electronic submission by 11:59 pm on AVENUE on the due date).  |
| Final report | 35% | Dec 10 (electronic submission by 11:59 pm on AVENUE on the due date) |
| Final presentation video | 10% | Dec 10 (electronic submission by 11:59 pm on AVENUE on the due date) |
| **Video reviews** | 2% | Dec 11 (during video viewing session) |
| **Tutorial participation** | 13% | 1% per session (attendance/participation) |
| **Team report** | 2% | Dec 10 (electronic submission by 11:59 pm on AVENUE on the due date) |

## *Assignment details and rubrics used for grading will be posted on Avenue.*

**COURSE POLICIES follow University policies**

**Syllabus is subject to change.** The instructor and university reserve the right to modify elements of the course during the term. The university may change the dates and deadlines for any or all courses in extreme circumstances. Updated versions will be posted on Avenue to Learn website for the course. Students are responsible for finding out about announced changes if they miss class. If either type of modification becomes necessary, reasonable notice and communication with the students will be given with explanation and the opportunity to comment on changes. It is the responsibility of the student to check course websites weekly during the term and to note any changes.

**Late assignments.** Electronic copies of assignments are due as indicated above and in the Avenue calendar. They are to be submitted via Avenue to Learn. Late assignments received within 24 hours of the due date will be docked 5% of the assigned grade. Assignments received between 24 and 48 hours late will be docked 10%. Assignments will not be accepted after 48h. If you anticipate having problems meeting these deadlines, please contact me before the assignment is due to discuss your situation.

**Special needs.** Please see the University policy in the Graduate Student Handbook: <http://goo.gl/6sdo54>.

**Academic Integrity.** Academic dishonesty is to knowingly act or fail to act in a way that results or could result in unearned academic credit or advantage. It is your responsibility to understand what constitutes academic dishonesty. However, if you have questions regarding a particular assignment, it is always best to ask me prior to completing the assignment

See section 6.1 of the Graduate Student Handbook for University policies: <http://goo.gl/6sdo54>.

The McMaster University Office of Academic Integrity has resources for students and faculty. Violations (e.g., plagiarism, handing in work done by others, or cheating) will not be tolerated. Please familiarize yourself with requirements and resources for a violation-free time at McMaster. <http://mcmaster.ca/academicintegrity/index.html>

The following illustrates only three forms of academic dishonesty:

1. Plagiarism, e.g. the submission of work that is not one’s own or for which other credit has been obtained.

2. Improper collaboration in group work.

3. Copying or using unauthorized aids in tests and examinations.

<https://www.mcmaster.ca/policy/Students-AcademicStudies/AcademicIntegrity.pdf>

**In this course we will be using a web-based service (Turnitin.com) to reveal plagiarism.** Students will be expected to submit their work electronically to Avenue to Learn which is enabled with Turnitin.com so that it can be checked for academic dishonesty. Students who do not wish to submit their work to Turnitin.com must still submit a copy to the instructor. No penalty will be assigned to a student who does not submit work to Turnitin.com. All submitted work is subject to normal verification that standards of academic integrity have been upheld (e.g., on-line search, etc.). To see the Turnitin.com Policy, please go to [www.mcmaster.ca/academicintegrity](http://www.mcmaster.ca/academicintegrity).

**On-line element:**

In this course we will be using Avenue to Learn. Students should be aware that, when they access the electronic components of this course, private information such as first and last names, user names for the McMaster e-mail accounts, and program affiliation may become apparent to all other students in the same course. The available information is dependent on the technology used. Continuation in this course will be deemed consent to this disclosure. If you have any questions or concerns about such disclosure please discuss this with the course instructor.

**Attendance**

You are expected to be present at all sessions—both the large group presentation at the start of each session and your tutorial group that happens during the final 90 minutes. Please let your tutorial group and me (lokkerc@mcmaster.ca) know of any planned absences. One absence is acceptable, two with VERY good reasons can be allowed, and 3 absences can cause you to fail the course. Consistent late arrivals may be factored into your class participation marks.

**Citation format**

Correct and **consistent** citing is a mark of quality and attention to detail. For this course you are required to follow APA format. Please use these guides! I am looking for consistency and adherence to the rules.

[**https://library.mcmaster.ca/guides/apa-style-guide**](https://library.mcmaster.ca/guides/apa-style-guide) **and** [**https://owl.english.purdue.edu/owl/resource/560/01/**](https://owl.english.purdue.edu/owl/resource/560/01/)

**McMaster Grad writing consultants**

<https://gs.mcmaster.ca/grad-writing-consultations-gwc>

**Tips for editing**

Use Casson, Leslie, E. A Writer’s Handbook – Third Edition Developing Writing Skills for University Students. Broadview Press 2011 for guidance on writing.

10 Perfect Pieces of Advice on How to Edit Your Writing <https://www.grammarly.com/blog/advice-on-editing/>

**optional on-line courses**

<https://www.mygradskills.ca/courses/understanding-and-avoiding-plagiarism>

**Additional resources:**

<https://www.mygradskills.ca/>

<https://owl.english.purdue.edu/>