McGill Course EXMD 630

Developing Digital Health Innovations for Impact
Winter 2023; CRN 966
Tuesdays; 1pm to 4pm

Are you interested in creating digital health innovations?
Would you like your innovation to address a well-defined clinical/public health problem?

Do you want to learn about design thinking that goes behind creating digital health innovations?

Are you keen to develop a prototype of an innovation to address the problem?
Would you want to learn from experienced faculty who have been there and done that?
Then, our course EXMD630 is just right for you.

One of the best ways to unlearn is to innovate.

As defined by the Government of New Zealand, innovation is:

"the creation, development, and implementation of a new product, process or service, to improve efficiency, effectiveness or competitive advantage."

This elective, interactive course aims to introduce innovative thinking and the development of innovative digital health solutions. It will integrate many thinking strategies. You will also learn about implementation science/usability evaluations/clinical trials that form the core of evaluating and refining digital health innovations. Interdisciplinary course content will showcase product and process innovations from across the spectrum of health care (i.e., from preventative to curative). Product innovations (i.e., smart diagnostic devices, wearables, bots) and process innovations (i.e., applications (apps), web platform or portal-based services, machine learning-based (algorithms, games, chatbots) will be showcased.

The course is aimed at students who wish to develop an innovative prototype of a digital health solution (product innovation or process innovation)—primarily aimed at graduate students and health care professionals (i.e., medicine, health, allied health sciences). It is open to professionals from diverse streams (i.e., engineering, business, social sciences, education, communication, computerscience) involved in health care and interested in developing a digital health innovation.

This course is being offered as part of our New Master's in Digital Health Concentration.

Course Instructor: Dr Nitika Pant Pai., MD., MPH., PHD
Associate Professor – Medicine, McGill University
Email: nitika.pai@mcgill.ca

Prior approval from course instructor is required. Deadline to register: Jan 10, 2023.
You will also learn from our Guest Faculty with depth and experience in innovation:
Dr Robyn Tamblyn, Dr Nancy Mayo, Dr Steven Grover, Dr Susan Bartlett, Dr David Buckeridge, Dr Sara Ahmad, Dr Dan Poenaru.

....

COURSE AIMS/OBJECTIVES:

1. Through guided, interactive, innovative group projects focusing on a clinical/health problem, the students will learn strategies and thinking skills that will contribute to the development of an innovative mindset. Course activities will combine logic driven and lateral thinking skills.
2. Students will be required to create innovative digital health prototypes to solve their chosen complex health problems and encouraged to think **"out-of-the-box" using design thinkng.** The innovative digital health prototypes will be aimed at solving domestic or global health problems and will be aimed to impact clinical and/or public health outcomes.
3. Students will practice working collaboratively in interdisciplinary groups to develop, design, curate and present their innovative prototype in development. *Interdisciplinary groups will consist of a mix of students from different backgrounds (i.e., health, medicine, engineering, business, behavioral science, computer science, and health communications).*
4. The students will design their own innovation= leading to a proof-of-concept prototype.
5. They will be given leads on how to test/evaluate their prototype using a usability or impact implementation science framework.
6. Students will also learn to protect their innovation and patents, guided by McGill University's Research and Innovation office.
7. Students will also gain insights into the innovation process from <u>guest faculty members</u> who candidly share their innovation journeys.

....

Join us on an exciting journey of unlearning!