

MSC 2021Y: Projects in Translational Research

(version 2. Main revisions in **GREEN**)

Course Outline	
This course is designed to provide students with the necessary foundation for developing translational research projects and successfully completing the program. Students will learn about design methodologies, complete a small project management module, and gain insight into the translational research landscape in Toronto through a series of workshops that help the students plan and execute the capstone project.	
Course Information	
Course Code: MSC2021Y Semester Offered: Fall and Winter 2016-2017 Course Meeting Time: Thursday 1 to 4pm Course Location: Translational Research Program Offices, 263 McCaul St., Toronto Credit Value: 1.0	Pre-requisites: Registration in the Translational Research Program Masters or permission of the TRP Director.
Instructors	
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Course Description	
MSC2021 prepares you for the capstone project course by providing you with the necessary tools, techniques and network. This course will compliment other program courses, including the MSC1000 syllabus. The class will meet weekly for three (3) hours, during which there will be lectures, workshops, panels and other activities depending on the specific topic. The weekly schedule is detailed below. Note that the schedule of topics and readings may change during the year, depending on the needs of students.	

Course Goals and Learning Objectives

The goal of this course is to provide students with the tools necessary to complete the capstone project. To this end, we will be conducting research regarding marketplace needs, improving our understanding of the relationship between research and practice, reviewing existing artifacts of translational research projects, focusing on tools and techniques from the field of project management, networking, pitching and identifying both the projects and the teams necessary to undertake the capstone project.

At the end of this course, students will have:

- A draft of a capstone project proposal
- A clear understanding of the capstone project requirements (MSC4000)
- An understanding of various design methodologies relevant to health care
- Experience working with an external client to address user needs

Course Requirements

Students are required to attend lectures, participate in discussions and meet all prescribed deadlines for deliverables. Students are required to use a consistent citation formats for all assignments. Students may be required to find online readings using University of Toronto Library resources. Students are required to read all assigned readings and be prepared to discuss key issues from the readings in class.

Teaching Methods

In this course teaching will be performed through a variety of methods, including (but not limited to): lectures, workshops, panel discussions, audio/visual presentations and individual and group assignments. Instruction will be supplemented by multimedia presentations and class discussion based on readings and presented materials.

Assessment and Grading Policies

Late assignments will be penalized a grade (ie. from B+ to B) every 48 hours after the due date and time. Assignments over two weeks late will not be accepted and will receive a grade of 0. Assignments that do not meet minimum university expectations will not be accepted for marking. Attendance is required and participation will be based on how students interact in class and online and engage with the materials read and presented in class.

Evaluation

Assignment	Weight	Due Date	Type
Needs presentations	5%	October 13, 2016	Collaborative
Software Review Report	20%	December 8, 2016	Collaborative
Presentation to St. Joseph's	5%	February 2, 2017	Collaborative
Design Technique presentation	20%	March 2 or March 9, 2017	Pairs
Project Proposal draft	5%	March 23, 2017	Collaborative
Project Proposal	30%	April 6, 2017	Collaborative
Networking Reports	10%	Throughout the course	Individual
Participation	5%	Throughout the course	Individual

Assignment Details:

First Term (September to December, 2016) 25%

1. Needs presentation (5%)

Students will present the results of the exercises completed at St. Joseph's Health Centre.

2. Collaborative Software Review Report (20%)

Students will be asked to work in collaborative groups to evaluate and try a software package, and work with team members to compare and decide which software package to recommend for work in the Translational Research program.

Second Term (January to April, 2017) 60%

3. Present to St. Joseph's Health Centre (5%)

In groups, students will present potential solutions to the needs identified in Assignment #1.

4. Design Technique presentation (20%)

In pairs, students will select a design methodology or technique to present to class.

5. Project Proposal draft (5%)

Groups must submit a draft outlining their proposal. These drafts will be evaluated and the instructor will meet with the groups to discuss.

6. Project Proposal (30%)

Capstone project proposal, prototypes, a project poster and any presentation slides for evaluation.

Across both terms (September 2016 to April 2017) 15%

6. Networking reports (10%)

Students must submit a report from at least five (5) networking events, describing the event, who they met and how specific conversations may be of help to the completion of the capstone project. Each report is worth 2% (pass/fail).

7. Participation (5%)

In addition to general participation, as part of the participation evaluation, each student is expected to present results of in-class activities on behalf of their group at least twice during the course.

Class Topics

Fall Term

Week 1 Introduction to course.

Date: September 15

Format: Lecture.

Introduction, course requirements and course goals, evaluation.

Week 2: Discovering the need, part 1

Date: September 22

Format: Lecture and exercises

Presentation by St Joseph's staff in order to provide context. Followed by exercises.

Week 3: Discovering the need, part 2

Date: September 29

Format: Lecture and exercises. How can we clarify the need? What tools can we use to identify the need?

Week 4: Discovering the need, part 3

Date: October 6

Format: Workshop exercises in situ. This class will be held at St. Joseph's Health Centre (30 The Queensway, Toronto, ON M6R 1B5)

Students will explore a health care environment and collect data regarding needs and problems.

Week 5: Discovering the need, part 4 and defining the problem

Date: October 13

Format: Student presentations, lecture, exercises

Assignment #1: presentation and related document

Students will present and discuss the result of the previous week's exercise. We explore the importance of understanding the patient, user or individual for which a need exists.

Week 6: Design methods: Define problem (continued)

Date: October 20

Format: Workshop.

How do we translate a need into a defined problem for which we can pose solutions? We will continue the work started the previous week.

Week 7: The Value Network

Date: October 27

Format: Lecture and exercises

Consider the visit to St Joseph's Hospital. Who are all the stakeholders involved? Who has influence? Who is the decision-maker? What are the flows of goods and services, information, and money (if any)? What are the intangibles that move through the network including influence, goodwill, identity, belonging, comfort etc..?

Week 8: Validation/Context

Date: November 3

Format: Workshop

Has the problem been defined correctly? Present research regarding the problem context. Class will meet with representatives of St. Joseph's Health Centre to workshop the ideas.

READING WEEK - November 10

Week 9: Introduction to Project Management and the Project Charter

Date: November 17

Format: Lecture.

The project charter/proposal. The terminology and taxonomy of projects (scope, budget, time, deliverables, milestone, approvals). With an eye towards the capstone project proposal, we will discuss different components of project and team charters.

Week 10: Design methods: Ideate

Date: November 24

Format: Workshop.

How do we generate ideas that address problems? How do we define “ideation”? How can this methodology be used to not only understand the challenge of translational research, but to provide potential solutions?

Week 11: Design methods: Ideate *Continued*

Date: December 1

Format: Workshop.

Week 12: Capstone Projects: Guest speakers.

Date: December 8

Format: Presentations and discussion

Selected groups of students currently working on capstone projects (in MSC4000) will present their capstone work-to-date and share challenges (and advice!)

Assignment #2: Software Recommendation report

Winter Term
Week 13: Design methods: Ideate <i>Continued</i> Date: January 12 Format: Lecture and workshop
Week 14: Pitching Date: January 19 We will discuss techniques related to pitching an idea while practicing the presentations to St. Joseph's Health Centre on January 19.
Week 15: Business Model Canvas for Healthcare Date: January 26 Format: Lecture and workshop We will explore the Business Model Canvas, a framework for analyzing and strategizing the implementation of innovation. In particular we will look at the implementation of innovation in a healthcare context.
Week 16: St. Joseph Presentations Date: February 2 Assignment #3: presentation and related document Format: Presentation to St. Joseph Health Centre leadership of needs and solutions. This class will be held at St. Joseph's Health Centre (30 The Queensway, Toronto, ON M6R 1B5)
Week 17: Prototyping Date: February 9 Format: Lecture and workshop We will practice the design tools learned thus far by applying them in a real prototyping exercise.
March Break: February 16

Week 18: UX Design and Journey Maps Date: February 23 Format: Lecture and Workshop
Week 19: Student presentations Date: March 2 Format: Student presentations Assignment #4: presentation and related documents (continued)
Week 20: Student presentations Date: March 9 Format: Student presentations Assignment #4: presentation and related documents
Week 21: Capstone Projects and St. Joseph Health Centre Date: March 16 Format: Workshop
Week 22: Project proposal work Date: March 23 Assignment #5: Project proposal draft Format: Group work
Week 23: Project proposals work Date: March 30 Format: Group work
Week 24: What's next? Date: April 6 Format: Discussion Assignment #6: Final project proposal

Discussion and recap of course and discussion of next steps and key learnings from the course.

Late Policy

Late submission of any assignment carries a penalty of one grade (e.g., from B+ to B) for every two days. Exceptions will be made only when supported by appropriate documentation.

Academic Integrity

From the Code of Behaviour on Academic Matters:

*"It shall be an offence for a student knowingly:
(d) to represent as one's own any idea or expression of an idea or work of another in any academic examination or term test or in connection with any other form of academic work, i.e. to commit plagiarism."*

Wherever in the Code an offence is described as depending on "knowing", the offence shall likewise be deemed to have been committed if the person ought reasonably to have known.

Honesty and fairness are considered fundamental to the University's mission, and, as a result, all those who violate those principles are dealt with as if they were damaging the integrity of the University itself. When students are suspected of cheating or a similar academic offence, they are typically surprised at how formal and seriously the matter is dealt with – and how severe the consequences can be if it is determined that cheating did occur. The University of Toronto treats academic offences very seriously. Students should note that copying, plagiarizing, or other forms of academic misconduct will not be tolerated. Any student caught engaging in such activities will be subject to academic discipline ranging from a mark of zero on the assignment, test or examination to dismissal from the University as outlined in the calendar. Any student abetting or otherwise assisting in such misconduct will also be subject to academic penalties.

Students are assumed to be informed about plagiarism and are expected to read the handout, titled "Plagiarism and Reference Format". [How Not to Plagiarize](http://www.writing.utoronto.ca/advice/using-sources/how-not-to-plagiarize) (<http://www.writing.utoronto.ca/advice/using-sources/how-not-to-plagiarize>) written by Margaret Procter. It is a valuable and succinct source of information on the topic. You are also supposed to be familiar, and considered as being familiar, with the *Code of Behaviour on Academic Matters* (Codes and Policies or <http://www.governingcouncil.utoronto.ca/policies/behaveac.htm>) and *Code of Student Conduct* (<http://www.governingcouncil.utoronto.ca/policies/studentc.htm>), which spell out your rights, your duties and provide all the details on grading regulations and academic offenses at the University of Toronto.

Religious Observance

Information about the University's Policy on Scheduling of Classes and Examinations and Other Accommodations for Religious Observances is at <http://www.viceprovoststudents.utoronto.ca/publicationsandpolicies/guidelines/religiousobservances.htm>.