



**Faculty of Information
School of Graduate Studies
University of Toronto – St. George
Semester: Winter 2017
KMD1001H – Theory and Methods in
Knowledge Media Design**

COURSE DIRECTOR: Dr. Olivier St-Cyr, PhD, LEL

Office: **BL 710**

E-mail: olivier.st.cyr@utoronto.ca

Office hours: **Tuesday 12:00pm – 1:00pm; Wednesday 11:00am – 1:00pm**

CLASS TIME: Lecture: **Tuesday 1:00pm – 4:00pm** Location: **BL 417**

COURSE DESCRIPTION:

Knowledge media are systems incorporating computer and communications technology that enhance human thinking, creativity, communication, collaboration, and learning. This course explores the research methods that are used in innovative and human-centered design. It demonstrates the use of those research methods in knowledge media design in areas such as communication, collaboration, and learning. The course will provide a foundation for other KMD courses and includes topics in requirements analysis, user research, and human-centered design. The course will also discuss issues in relation to knowledge media design, including social implications of knowledge media; examples and applications of knowledge media; and examples of design thinking.

Note: Formerly: Knowledge Media Design: Fundamental Concepts (prior to September 2015).

PREREQUISITES:

None.

LEARNING OBJECTIVES:

KMD1001H has seven key learning objectives:

- Enable students to iteratively develop and improve their definitions and understandings of “knowledge media” and “design”, and explore linkages to their studies and practice;
- Explore design thinking; design as a problem-solving strategy and way of thinking;
- Introduce students to research methodologies related to design, including ethnography, interviews, surveys, focus groups, and user-centered design;
- Engage the students with the research work of KMD faculty;
- Explore different means to communicate the design process, including academic publication, posters, reports and client presentations;
- Enable students to hear about knowledge media design practices as carried out by practitioners in industry; and
- Provide a core shared experience for KMD Collaborative Program (CP) students.

RELATIONSHIP TO MASTERS OF INFORMATION (MI) PROGRAM-LEVEL STUDENT LEARNING OUTCOMES:

Master of Information Program-Level Student Learning Outcomes can be found [here](#).

This course helps students master fundamental concepts, theories, and practices of knowledge media design (**Outcome 1**). Knowledge and practice of the different research methods used in knowledge media design will provide students with an understanding on how to gather the information required to conduct User-Centred Design (UCD) activities, and gather data in a socially and ethically responsible manner (**Outcomes 2 and 4**). Learning theories and practices of knowledge media design research methods, will enable students to continue building their knowledge through research and continuous learning (**Outcomes 3 and 6**).

CLASS FORMAT:

The course will consist of lectures, class discussions, and breakout sessions/workshops. Students are expected to attend the classes and to actively participate in the group discussions, breakout sessions, and workshops. For each class, a series of topics are provided to guide students through the readings and activities, and to frame the lectures, discussions, and breakout sessions. Teaching and learning is a shared responsibility, influenced by individual knowledge and experience, and achieved through expanding our awareness of the different issues and approaches involved in information systems. Commitment, preparation, and active participation are important ingredients to realize this goal. Your preparation and participation is important to your learning and the learning of your colleagues.

All the course materials will be available on the University of Toronto learning portal (Blackboard) together with assignments and announcements.

REQUIRED TEXTBOOK:

Baxter, K., Courage, C., & Caine, K. (2015). [Understanding Your Users: A Practical Guide to User Research Methods](#). Morgan Kaufmann. ISBN: 978-0-12-800232-2. (Referred to as BCC)

Available online at: <http://search.library.utoronto.ca/details?10227692>

EVALUATIONS:

Evaluations	Weight
Research Proposal	15%
Poster Presentation	10%
Research Project Final Report	30%
Micro assignments (5)	25%
Workshop #1: Research Questions	5%
Workshop #2: Prototyping	8%
Workshop #3: Evaluation	7%

This course requirements and weights are final and will not be modified throughout the term. The penalty for late assignments is set to **5% per day**, to a maximum of one week; submissions will not be accepted after one week. Exceptions will be made only when supported by appropriate documentation.

Course work	Short description
Research Proposal (15%)	The main deliverable for KMD1001 is a research project addressing a knowledge media design challenge or problem. The project will be executed in groups of 4 to 5 students. In this deliverable, students will prepare a document outlining an introduction and motivation for a topic, a brief literature review, a research purpose statement, research question(s) to be addressed, a research protocol (detailed methodology), and an overview of the research limitations.

Poster Presentation (10%)	Each group will prepare a well-designed poster to present your research project at the poster session (April 4, 2017). Be prepared to present and answer questions about your research. Professional, formal presentations expected.
Research Project Final Report (30%)	Final report for the course project. It will include all materials from the proposal (refined) as well as a summary of the data collection sessions, data analysis, discussions on how the analyzed data will inform design, and a conclusion.
Micro Assignments (25%)	There will be five (5) micro assignments (mini workshops) on selected topics throughout the semester. These micro assignments will be done in small groups (different groups than the project groups) during class time. Some preparation will be expected. Each assignment will have a small deliverable by the end of the class. Each micro assignment is worth 5%.
Workshops (20%)	There will be three (3) full workshops on selected topics throughout the semester. These workshops will be done in groups (same groups as the project groups). Each workshop will have a small deliverable by the end of the class.

COMMUNICATION POLICY:

If you have a question, there is a high chance that other students in the course have the same question or, at least, will benefit from the answer. Please post all the questions to the KMD1001 Blackboard Discussion Board so everyone in the course can benefit from your questions and our answers. Students are encouraged to post answers to the questions of other students where appropriate.

Emails to the instructor must have a subject that starts with "KMD1001H" and include some more details, e.g., "KMD1001H: book appointment February 3rd".

GRADING:

Please consult the iSchool's Grade Interpretation Guidelines (<http://current.ischool.utoronto.ca/grade-interpretation>) and the University Assessment and Grading Practices Policy (<http://www.governingcouncil.utoronto.ca/Assets/Governing+Council+Digital+Assets/Policies/PDF/grading.pdf>). These documents will form the basis for grading in the course.

WRITING SUPPORT:

As stated in the iSchool's Grade Interpretation Guidelines, "work that is not well written and grammatically correct will not generally be considered eligible for a grade in the A range, regardless of its quality in other respects". With this in mind, please make use of the writing support provided to graduate students by the SGS Office of English Language and Writing Support (<http://www.sgs.utoronto.ca/currentstudents/Pages/English-Language-and-Writing-Support.aspx>). The services are designed to target the needs of both native and non-native speakers and all programs are free. Please consult the current workshop schedule (<http://www.sgs.utoronto.ca/currentstudents/Pages/Current-Years-Courses.aspx>) for more information.

ACADEMIC INTEGRITY:

Please consult the University's site on Academic Integrity (<http://academicintegrity.utoronto.ca>). The iSchool has a zero-tolerance policy on plagiarism as defined in section B.I.1.(d) of the University's Code of Behaviour on Academic Matters (<http://www.governingcouncil.utoronto.ca/Assets/Governing+Council+Digital+Assets/Policies/PDF/ppjun011995.pdf>). You should acquaint yourself with the Code. Please review the material in Cite it Right and if you require further clarification, consult the site How Not to Plagiarize (<http://www.writing.utoronto.ca/advice/using-sources/how-not-to-plagiarize>). Cite it Right covers relevant parts of the [U of T Code of Behaviour on Academic Matters \(1995\)](#). It is expected that all iSchool students take the Cite it Right workshop and the online quiz. Completion of the online Cite it Right quiz should be made prior to the second week of classes. To review and complete the workshop, visit the orientation portion of the iSkills site: uoft.me/iskills

ACCOMMODATIONS:

Students with diverse learning styles and needs are welcome in this course. If you have a disability or a health consideration that may require accommodations, please feel free to approach me and/or the Accessibility Services Office (<http://www.studentlife.utoronto.ca/as>) as soon as possible. The Accessibility Services staff are available by appointment to assess needs, provide referrals and arrange appropriate accommodations. The sooner you let them and I know your needs, the quicker we can assist you in achieving your learning goals in this course.

RE-GRADING POLICY:

A student (group) who believes that his or her term work has been unfairly graded may submit a re-evaluation request. Students have up to one month from the date of return of an item (or from the date the mark was made available) to inquire about the mark and submit a request. For example, should the work be returned or the mark be made available on March 3rd, the student has until April 3rd to inquire **in writing** and start the re-evaluation process. Instructors/TAs must acknowledge receipt of a student request for re-evaluation within 3 working days, and decisions should be provided in a timely fashion. Re-evaluation requests may be submitted in writing **to the person who marked the work**. The student must submit (1) the original piece of work and (2) a written explanation detailing why he or she believes the work was unfairly/incorrectly graded. **The course instructor must be CCed on all communications.**

Following a re-evaluation decision, if the student is still not satisfied with the result, he or she may appeal to the instructor in charge of the course if the work was not marked by the instructor (e.g., marked by a TA). In this instance (i.e., the instructor was not the one who marked the work), the student must now submit to the instructor (1) the original piece of work, (2) the written reasons as to why he or she believes the work was unfairly/incorrectly marked, and (3) communications from the original marker. Re-evaluation appeals are at the discretion of the instructor. If a re-evaluation is granted by the instructor, the student must accept the resulting mark as the new mark, **whether it goes up or down or remains the same**. When appealing a re-evaluation decision, the student accepts this condition. Instructors and TAs should ensure all communications with the student is in writing (e.g. follow-up e-mail) and keep a copy for later reference.

IMPORTANT DATES:

First class:	January 10 th , 2017
Last day to add or substitute S (Winter) courses:	January 23 rd , 2017
Last day to drop S (Winter) courses without grade:	February 27 th , 2017
Reading week:	February 20 th – 24 th , 2017
Last class:	April 4 th , 2017

SCHEDULE			
Weeks	Topic	Readings	Due
#1 Jan 10	Course Overview + Introduction to User Experience + Overview of Design Thinking	<ul style="list-style-type: none"> BCC: Chapter 1 Baecker, R. (1997) The Web of Knowledge Media Design. pp 1-11. Luchs, M. G. (2016). A Brief Introduction to Design Thinking. In Design Thinking: new product development essentials from the PDMA. Chapter 1, pp. 1-11. 	<ul style="list-style-type: none"> Group activity: Brainstorming for project
#2 Jan 17	Literature Review + Learning About Your Product Users	<ul style="list-style-type: none"> BCC; Chapter 2 Kirlik, A. (2010). A Human-tech Research Agenda and Approach. In Human-tech: ethical and scientific foundations. Chapter 3, pp. 21-52. Randolph, J. (2009). A Guide to Writing the Dissertation Literature Review. Practical Assessment, Research & Evaluation. 14(13), pp. 1-13. Cresswell, J. (2014). Review of the Literature. In Research design: qualitative, quantitative and mixed methods approaches. 4th edition. Sage Publications. Chapter 2, pp. 25-50. 	<ul style="list-style-type: none"> Group activity: Brainstorming for project
#3 Jan 24	Ethics with Human Subjects + Research Design	<ul style="list-style-type: none"> BCC: Chapter 3 & Chapter 5 Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada, Social Sciences and Humanities Research Council of Canada. (2010). Ethical Conduct for Research Involving Humans. Chapter 1 (7-13), Chapter 4 (47-53), and Chapter 5 (55-65). Cresswell, J. (2014). The Selection of a Research Approach. In Research design: qualitative, quantitative and mixed methods approaches. 4th edition. Sage Publications. Chapter 1, pp. 3-24. 	<ul style="list-style-type: none"> Workshop #1 (Research Questions, half class)
#4 Jan 31	Preparing User Research + During Research Activity	<ul style="list-style-type: none"> BCC: Chapter 6 & Chapter 7 	<ul style="list-style-type: none"> MA #1: 1- Preliminary Research Design. 2- What are the ethical considerations for your project?

#5 Feb 7	Interviews + Focus Group	<ul style="list-style-type: none"> BCC: Chapter 9 & Chapter 12 Doody O, Noonan M (2013) Preparing and conducting interviews to collect data. Nurse Researcher. 20(5), pp. 28-32 Talja, S. (1999). Analyzing qualitative interview data: The discourse analytic method. Library & information science research, 21(4), pp. 459-477 Morgan, D. (2001). Focus Group Interviewing. In Jaber F. Gubrium, & James A. Holstein (Eds.), Handbook of Interview Research. (Chapter 7; pp. 141-160). Thousand Oaks, CA: SAGE Publications, Inc. 	
#6 Feb 14	Surveys	<ul style="list-style-type: none"> BCC: Chapter 10 Usability and user experience surveys 	<ul style="list-style-type: none"> MA #2: Analyzing Interview Data Research Proposal
RW Feb 20-24	Reading Week (no classes)		
#7 Feb 28	Field Studies	<ul style="list-style-type: none"> BCC: Chapter 13 Chan, A. J., Islam, M. K., Rosewall, T., Jaffray, D. A., Easty, A. C., & Cafazzo, J. A. (2010). The use of human factors methods to identify and mitigate safety issues in radiation therapy. Radiotherapy and Oncology, 97(3), pp. 596-600. 	<ul style="list-style-type: none"> MA #3: Analyzing Surveys Data
#8 Mar 7	Prototyping Workshop	<ul style="list-style-type: none"> Paper Prototyping as a Core Tool in the Design of Cell Phone User Interfaces http://toondoctor.com/storyboardworkshopischool.html Baskinger, M. (2008). Pencils before pixels: a primer in hand-generated sketching. Interactions. SIGCHI ACM Special Interest Group on Computer-Human Interaction, 15(2), pp. 28-36. Newman, M. W., & Landay, J. A. (2000). Sitemaps, storyboards, and specifications: a sketch of Web site design practice. In Proceedings of the 3rd conference on Designing Interactive Systems: processes, practices, methods, and techniques, (pp. 263-274). ACM. 	<ul style="list-style-type: none"> Workshop #2 (Prototyping, full class)

#9 Mar 14	Evaluation Methods	<ul style="list-style-type: none"> BCC: Chapter 14 MacDonald, C. M., & Atwood, M. E. (2013). Changing Perspectives on Evaluation in HCI: Past, Present, and Future. In CHI '13 Extended Abstracts on Human Factors in Computing Systems (CHI EA '13). New York, NY: ACM. pp. 1969-1978. Chan, A. J., Islam, M. K., Rosewall, T., Jaffray, D. A., Easty, A. C., & Cafazzo, J. A. (2011). Applying usability heuristics to radiotherapy systems. <i>Radiotherapy and Oncology</i>, 102(1), pp. 142-147. 	<ul style="list-style-type: none"> MA #4: Analyzing Field Studies Data
#10 Mar 21	Evaluation Workshop	<ul style="list-style-type: none"> Barnum, C. M. (2010). Planning for usability testing. In <i>Usability Testing Essentials: Ready, Set...Test!</i> Morgan Kaufmann. Chapter 5, pp. 105-156. Barnum, C. M. (2010). Preparing for usability testing. In <i>Usability Testing Essentials: Ready, Set...Test!</i> Morgan Kaufmann. Chapter 6, pp. 157-198. 	<ul style="list-style-type: none"> Workshop #3 (Evaluation, full class)
#11 Mar 28	Reporting Your Findings + Conclusion	<ul style="list-style-type: none"> BCC: Chapter 15 	<ul style="list-style-type: none"> MA #5: Heuristic Evaluation
#12 Apr 4	Poster Session (Location: TBD)		<ul style="list-style-type: none"> Poster Presentation Final Research Report

SUMMARY OF DUE DATES

Workshop #1	Tuesday January 24 th , 2017 by 4:00:00pm
Micro Assignment #1	Tuesday January 31 st , 2017 by 4:00:00pm
Micro Assignment #2	Tuesday February 14 th , 2017 by 4:00:00pm
Project Research Proposal	Sunday February 19 th , 2017 by 11:59:59pm
Micro Assignment #3	Tuesday February 28 th , 2017 by 4:00:00pm
Workshop #2	Tuesday March 7 th , 2017 by 4:00:00pm
Micro Assignment #4	Tuesday March 14 th , 2017 by 4:00:00pm
Workshop #3	Tuesday March 21 st , 2017 by 4:00:00pm
Micro Assignment #5	Tuesday March 28 th , 2017 by 4:00:00pm
Poster Presentation	Tuesday April 4 th , 2017 by 1:00:00pm
Project Final Report	Friday April 7 th , 2017 by 11:59:59pm