

Course: KMD1001

Term: Fall 2015

Instructors: Winnie Chen and Wayne Giang

Contact Information: email: win.chen@mail.utoronto.ca; wayne.giang@mail.utoronto.ca

Office hours: By appointment via email

Course Meeting time: Tuesday, 1:00pm to 4:00pm; Wednesday, 5:00pm to 8:00pm

Course Location: Semaphore Room, KMDI (Ground Floor, Robarts Library)

Description: Knowledge media are systems incorporating computer and communications technology that enhance human thinking, creativity, communication, collaboration, and learning. This course reviews research methodologies for knowledge media design, focusing on methods suitable for requirements engineering, user research, and design evaluation. The course will provide a foundation for other KMD courses and includes topics in human-centred design and evaluation.

Goals and 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.
- introduce students to research methodologies related to design, including ethnography, interviews, surveys, focus groups, prototyping, heuristic evaluations and user testing.
- engage students with relevant research and design work from academia and industry
- explore different means to communicate research methods and the design process, including a research proposal and a poster presentation

Deliverables and Evaluation

Students will be evaluated through three (3) assignments and a participation grade.

Assignment	Weight	Due Date	Type
1. Case Study Oral Presentation	25%	In class, TBA	Groups of 3
2. Research Question Workshop (peer evaluations)	20%	October 20/21	Individual
3. Research Proposal	30%	December 10	Groups of 3
4. Poster Presentation	15%	TBA	Groups of 3
5. Participation	10%	On Going	Individual

Assignment Details

1. Case study presentation

In groups of 3, students will select a research article relevant to one of the research method topics listed for this course, and prepare a 15 minutes presentation to the class that will include:

- A clear summary and description of the study, with a particular focus on the methodology
- An in-depth critique of the strengths and limitations of the study
- Recommendations on future work on similar topics
- Lead an Q&A session and a brief discussion with the class

You will also submit **a one page write up that summarises the article and your critique**. You must send the instructors your article of choice at least one class ahead, and **submit the write up at least one day ahead of your presentation**.

2. Research Question Workshop

You will each prepare a brief presentation about a topic of interest and its associated research question. You will prepare one slide each for (i) an introduction and motivation for your topic, (ii) synthesis of a brief literature review, (iii) your research worldview, and (iv) your research question(s). The proposed topic and research question must address a knowledge media design challenge or problem.

During the workshop you will present your slides to a small group and provide feedback and critiques of the other presentations. You will be required to hand in the slide deck, your critiques and feedback, and a short reflection on your research question based on the feedback you received. Your work on the research question will be used as a starting point for your research proposals.

3. Research Proposal

In groups of 2-3, you will submit a complete research proposal, which will include (i) an introduction, (ii) brief literature review, (iii) research purpose statement, (iv) research questions, (v) research design (detailed methodology), and (vi) limitations. The research must address a knowledge media design challenge or problem. Note that the description of the research design is particularly important and should include one or more of the research methods that are covered in this course.

4. Poster Presentation

In groups of 2-3, you will prepare a well designed poster to present your research proposal at the poster session (TBA). Be prepared to present and answer questions at the poster session.

5. Participation

Participation grades will be based on your contribution in the following aspects:

- At the end of each class, you will be required to submit a brief summary and reflection about the class material through BlackBoard:
 - include any outstanding questions you may have about the class material today.
 - if you missed this class, your entry will be on the required reading for this class.
- In-class activities; and
- In-class discussions, including guest lectures.

General Expectations:

1. **Communication Policy:** Please do not email course questions to the instructors. If you have a question, there is a good chance other people in the course have the same question or, at least, will benefit from the answer. Please post all questions related to course content on Blackboard (using the most appropriate forum) so that everyone in the course can benefit from your questions and the replies. Questions posted to Blackboard will be answered within two (2) business days.
2. **Readings:** It is important to complete the required readings before your class in order to fully benefit from the class activities.
3. **Late policy:** Late submission of an assignment carries a penalty of one grade (e.g., from B+ to B) for each class. Submissions will not be accepted after two weeks. Exceptions will be made only when supported by appropriate documentation.
4. **Requests for assignment extensions:** Please make every effort to meet the assignment deadlines. If you absolutely require an extension, please send the instructor a request with the following information: (i) reason for extension, (ii) current status of the assignment, and (iii) due date requested. If an extension is granted, you must include correspondence regarding the request and the reply with your assignment.
5. **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.
6. **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>).

7. **Participation and Attendance:** Discussion and interaction in the classes are important ways to learn. Sharing your experiences and ideas with your classmates is central to your learning experience in this course. As such, you should attend and participate in every class.
8. **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.
9. **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.
10. **Important Dates:** <http://current.ischool.utoronto.ca/studies/academic-dates>
 - Final date to drop fall session full (Y) or half (F) courses without academic penalty: Oct 27, 2015

Class Topics and Readings (tentative dates):

September 15/16: Course Overview

Baecker, R. (1997) *The Web of Knowledge Media Design*. pp 1-11. Retrieved from http://www.dgp.toronto.edu/people/RMB/kmdi_talk.pdf

September 22/23: Research Design / Ethics

Cresswell, J (2014). Chapter 1: The Selection of a Research Approach. *Research design: qualitative, quantitative and mixed methods approaches*. 4th edition. Sage Publications. Thousand Oaks.

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)

Available at http://www.ethics.gc.ca/pdf/eng/tcps2/TCPS_2_FINAL_Web.pdf

September 29/30: Literature Review

Randolph, J. (2009). A Guide to Writing the Dissertation Literature Review. *Practical Assessment, Research & Evaluation*. 14(13). Available online: <http://pareonline.net/getvn.asp?v=14&n=13>

October 6/7: Ethnography and Participant Observations

Atkinson, P., & Hammersley, M. (1994). Ethnography and participant observation. *Handbook of qualitative research*, 1(23), 248-261.

Yu, E., Kealey, R., Chignell, M., Ng, J., & Lo, J. (2010). Smarter healthcare: an emergency physician view of the problem. In *The smart internet* (pp. 9-26). Springer Berlin Heidelberg.

October 13/14: Interviews

Doody O, Noonan M (2013) Preparing and conducting interviews to collect data. *Nurse Researcher*. 20(5), 28-32. Available through UofT portal at: <http://simplelink.library.utoronto.ca/url.cfm/478122>

Talja, S. (1999). Analyzing qualitative interview data: The discourse analytic method. *Library & information science research*, 21(4), 459-477.

October 20/21: Research Question Workshop

October 27/28: Focus Group

Morgan, D. (2001). Focus Group Interviewing. In Jaber F. Gubrium, & James A. Holstein (Eds.), *Handbook of Interview Research*. (pp. 141-160). Thousand Oaks, CA: SAGE Publications, Inc. Available at: <http://srmo.sagepub.com/view/handbook-of-interview-research/d10.xml>

November 3/4: Survey Research

Gelman, A., Romero, G.A. (2010). How many zombies do you know? Using indirect survey methods to measure alien attacks and outbreaks of the undead. Available at <http://www.stat.columbia.edu/~gelman/research/unpublished/zombies.pdf>

Behrend, T. S., Sharek, D. J., Meade, A. W., & Wiebe, E. N. (2011). The viability of crowdsourcing for survey research. *Behavior research methods*, 43(3), 800-813.

November 10/11: Reading Week

November 17/18: Experimental Design

TBA

November 24/25: Prototyping

Baskinger, M. (2008). Pencils before pixels: a primer in hand-generated sketching. *Interactions*. SIGCHI ACM Special Interest Group on Computer-Human Interaction, 15.

Newman, M. W., & Landay, J. A. (2000, August). 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.

December 1/2: Heuristic Evaluation and User Testing

Chen, S. Y., & Macredie, R. D. (2005). The assessment of usability of electronic shopping: A heuristic evaluation. *International journal of information management*, 25(6), 516-532.

Vogel, B., Kurti, A., Milrad, M., & Kerren, A. (2011, August). An interactive web-based visualization tool in action: User testing and usability aspects. In *Computer and Information Technology (CIT), 2011 IEEE 11th International Conference on* (pp. 403-408). IEEE.

Sample Reports:

IBM Design (n.d.). IBM Design Principles. Available at:
<http://www.designprinciplesftw.com/collections/ibm-design-principles>

Davidson, C. (1999). *DiaryMate v1.1* (Common Industry Format for Usability Test Report v1.1). Haden, CA: Good Clients, Inc.

December 8/9: Final Poster Presentation