GBDA 310 Online   **Syllabus**
Advanced User Experience Design and Research

Fall Term 2020
Stratford School of Interaction
Design and Business,
University of Waterloo

Course Description

The objective of this course is to develop a comprehensive understanding of user experience design and research methods. Students will develop a critical understanding of UX methods for collecting user-centred data, synthesize and analyze information, and communicate results and design implications. Course topics range from qualitative and quantitative research methods covering each phase of the design process.

Contact

Section 1 & 2 Course instructor: Leah Zhang-Kennedy
Email: lzhangke@uwaterloo.ca
Office Hours: by appointment

Teaching Assistants:
TBA

Course Goals and Learning Outcomes

This course will be directed towards user experience design and research methods. Students will gain a critical understanding of a broach range of topics relevant to the collection and analysis of user data and extending their researcher's toolbox for collecting and interpreting quantitative and qualitative data.

Upon completion of this course, students should be able to:

- Apply a variety of research methods to answer a research question.
- Distinguish the strengths and limitations of a wide range of data collection methods.
- Choose the appropriate method and procedure for analyzing quantitative and qualitative data.
- Communicate their research methodology to others.

Textbook

There is no required textbook.

Required Readings and Resources

Each week required readings will be posted in advance to LEARN.

Course Requirements and Assessment

GBDA310 online is broken down into three major components: 1) discussions, 2) UX toolkit and module, and 3) UX research proposal. Students expected to put in 8 – 10 hours per week for viewing the course content and supplementary materials, participate in online discussions and completing assignments. All assignments should be completed independently except for the discussion responses. Students are responsible for choosing a research topic for their proposal.

Weekly discussion responses: 30%
        Weekly contribution to the discussion forums (best 7/8 will count)

UX toolkit and module: 30%
        UX design and research toolkit and learning module for five selected UX methods

UX research proposal: 40%
        Video proposal: 10%
        Research proposal report: 30%

Discussions, UX toolkit, and Research Proposal

Discussion responses

Throughout the course, you will participate in online discussions in groups. Each student is expected to actively engage in weekly discussions. Each week, the instructor will post a series of discussion prompts, and students can respond to any topic at any time during the week until the end time indicated by the instructor. Students can also create new discussion threads relating to the research topic covered each week. Posting discussion responses each week will result in a weekly discussion contribution grade. Each student is expected to contribute at least two paragraph-length discussion posts per week. Since there are so many forums in the course, the grading of posts is done globally using a simple three-point (excellent - satisfactory - poor) system. Students are encouraged to meaningfully respond to other students' posts instead of making simple statements about the topic. Remember, in a discussion, don't just make statements, discuss! Aim for thoughtful, original, and constructive responses.

UX toolkit and module

Select any **five** out of the forty UX design and research methods that you are most interested in and develop a module for others to learn about these methods. You may use the course material as a starting point and add new content or take your own approach for presenting the content. The final form can be an interactive PDF, a website, or another app (e.g. Wakelet, Padlet, or Milanote) as long as others can have easy access to the material. Take a human-centred design approach to designing your toolkit in terms of presentation, engagement, usability, and utility. Consider using a combination of multimedia, images, diagrams, videos, infographics, concise text, case studies, and hands-on activities when developing the module content. Make some references to further readings and learning. Your module will be added to the class compilation of a UX design and research methods toolkit available to the whole class by the end of the term.

Research Proposal
Part 1: Video research proposal
Make a 3-minute selfie video about a research question on a topic of interest and your plan to answer your research question. Start with a brief self-introduction; tell me about yourself and why you are interested in this research topic then leading to a 2-minute explanation of what you propose to research, including some preliminary ideas about what UX methods you are planning on using to investigate this topic. This assignment is a research proposal only and you do not need to conduct the research in this course, but your idea must be researchable and feasible (e.g., can be answered by a study or a series of studies). The scope of the proposed research should be completable within a school semester. The idea proposed in the video will form the basis of your research proposal. The purpose of the video proposal is to receive early feedback from the instructor and TA about the

feasibility, scope, and merit of your research idea. You may propose more than one idea (and make a longer video) if you would like to receive feedback about which idea has more research potential..

Part 2: Research proposal report
You will write a research proposal report about how you are planning to use UX design and research methods at each stage of the research and design process. The report should describe your research methodology for answering your research question. The instructor will provide guidance for the report format. (Again, this assignment is a research proposal only and you do not need to conduct the research.)

Project Extensions and Lateness Policy
Unless otherwise indicated, all course deliverables are due at **11:59 pm EST (Eastern Standard Time) on Wednesdays**.

Assignments: flexible deadline extension of 72-hours will be available to each student for the Research Proposal and UX Toolkit. You may use it for one 72-hour extension on one assignment or three 24-hour extensions split between the individual deliverables (video proposal, research report, or UX Toolkit). You do not need to notify the instructor which deliverable you are using your extension for. Once the extensions are used up, projects handed in late will be penalized by a deduction of 10% per 24-hour period, or part thereof, out of the final mark received on the assignments.

Discussions: No extensions. Weekly discussion responses must be posted on LEARN before the weekly deadline indicated by the instructor. Late discussion posts will not be graded.

Submission of work
Follow the directives provided in the assignment descriptions. If your submission contains multiple files, please upload them to LEARN as a **single ZIP file.** Label the submission in the format: **firstname_lastname_assignment-title**

Course Communication
This class with use LEARN as the primary communication tool—reminders, updates, discussions, readings and notes will be posted often. Students are expected to check LEARN frequently.

Please Note: This is a friendly reminder that you won't gain access to the online learning systems (LEARN) until your Registered Status on Quest for the term is "Fees Arranged." Visit the Finance - Student Accounts website to find out how to become "Fees Arranged" for the term. If you submitted a payment or Promissory Note more than three days ago and you're not yet "Fees Arranged", please contact Student Accounts immediately to investigate: 519-888-4567 extension 38466, sfaccnts@uwaterloo.ca Room 1110, Needles Hall, between 8:30 & 4:30 weekdays.

Tentative Course Schedule
This is a tentative timeline. The content of the topics and order may change based on class progress and interest. Detailed week-by-week readings, assignments, and full content will be posted to LEARN.

Week	Topic	Due Dates
1	Class intro and getting to know you	Unless otherwise stated, all course deliverables are due at **11:59 pm EST (Eastern Standard Time) on Wednesdays**.
2	Introduction to UX design and research methods; Pre-discussions	
	PHASE 1: UX Methods for Planning, Scoping, and Problem Definition	
3	1. Design thinking 2. Research through design 3. Participatory design 4. Stakeholder analysis 5. Lean UX	
4	6. Secondary research 7. Literature reviews 8. Focus groups 9. Empathy map 10. User journey map	09-30-2020 **DUE:** Week 3 discussion responses
	PHASE 2: UX Methods for Exploration, Synthesis, and Design Implications	
5	11. Ethnography 12. Dairy studies 13. Contextual inquiry 14. Interviews 15. Surveys	10-07-2020 **DUE:** Week 4 discussion responses **DUE:** Video research proposal
	READING WEEK (Oct 10 to Oct 18)	
6	16. Grounded theory 17. Mental model diagrams 18. Observation 19. Affinity diagrams 20. Experience mapping	10-21-2020 **DUE:** Week 5 discussion responses
	PHASE 3: UX Methods for Concept Generation and Prototype Iteration	
7	21. Design sprint 22. Cognitive walkthrough 23. Service blueprint 24. Business model canvas 25. Heuristic evaluation	10-28-2020 **DUE:** Week 6 discussion responses
8	26. Crazy 8s 27. How might we… 28. Minimum viable product (MVP) 29. Scenarios 30. Remote moderated research	11-04-2020 **DUE:** Week 7 discussion responses **DUE:** UX toolkit and module
	PHASE 4: UX Methods for Evaluation, Refinement, and Production	
9	31. Usability testing 32. Controlled experiments	11-11-2020 **DUE:** Week 8 discussion responses

	33. Think-aloud protocol	
	34. Wizard of OZ	
	35. A/B testing	
10	36. Descriptive statistics	11-18-2020
	37. T-tests	**DUE:** Week 9 discussion responses
	38. Nonparametric tests	
	39. Content analysis	
	40. Thematic analysis	
11	Work week	11-25-2020
		DUE: Week 10 discussion responses
12	Last week of class	12-02-2020
		DUE: Research proposal final report

Notes on Avoidance of Academic Offenses

Academic Integrity: In order to maintain a culture of academic integrity, members of the University of Waterloo community are expected to promote honesty, trust, fairness, respect, and responsibility. Check www.uwaterloo.ca/academicintegrity for more information.

Grievance: A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable may have grounds for initiating a grievance. Read Policy 70, Student Petitions and Grievances, Section 4, www.adm.uwaterloo.ca/infosec/Policies/policy70.htm. When in doubt please be certain to contact the department's administrative assistant who will provide further assistance.

Discipline: A student is expected to know what constitutes academic integrity (check www.uwaterloo.ca/academicintegrity) to avoid committing an academic offence, and to take responsibility for his/her actions. A student who is unsure whether an action constitutes an offence, or who needs help in learning how to avoid offences (e.g., plagiarism, cheating) or about "rules" for group work/collaboration
should seek guidance from the course instructor, academic advisor, or the undergraduate Associate Dean. For information on categories of offences and types of penalties, students should refer to Policy 71, Student Discipline, www.adm.uwaterloo.ca/infosec/Policies/policy71.htm. For typical penalties check Guidelines for the Assessment of Penalties, www.adm.uwaterloo.ca/infosec/guidelines/penaltyguidelines.htm.

Appeals: A decision made or penalty imposed under Policy 70 (Student Petitions and Grievances) (other than a petition) or Policy 71 (Student Discipline) may be appealed if there is a ground. A student who believes he/she has a ground for an appeal should refer to Policy 72 (Student Appeals) www.adm.uwaterloo.ca/infosec/Policies/policy72.htm

A Note for Students with Disabilities

The Office for persons with Disabilities (OPD), located in Needles Hall, Room 1132, collaborates with all academic departments to arrange appropriate accommodations for students with disabilities without compromising the academic integrity of the curriculum. If you require academic accommodations, please register with the OPD at the beginning of each academic term.