CSC 318H1: Design of Interactive Computational Media – September 2021

Instructor Prof. ILONA POSNER ipposner@cdf.toronto.edu
Office Hours Upon request
Class Tuesdays **18:00-21:00** Synchronous Online (Zoom)
Course website: Quercus (portal.utoronto.ca)

TAs

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Course Description

User-centred design results in robust solutions that successfully address real human problems. In this course, students will learn about methods and principles of user-centred design to explore a **problem space** and the people within that space, identifying users' needs, system constraints and requirements, and ultimately designing solutions that incorporate all those components. Designs will be iterated from initial concepts to valuable solutions by gathering feedback and usability testing prototypes with users throughout the course. The course project will culminate with the development of a robust design that addresses the identified problem. Final project presentations will take place at the end of the course. Projects Competition will be held (at the end of the course). This course has no final exam.

Learning Objectives

This course is designed to provide students with the foundations necessary for understanding and applying user-centred design to address real-world problems. The learning objectives are:

1. to practice research methods for understanding user needs and practices.
2. to interpret raw data and create design artefacts (e.g., personas, scenarios).
3. to brainstorm, sketch and design prototypes that solve real user problems.
4. to evaluate prototypes (one's and others') for usability, learnability, and usefulness.
5. to work in multidisciplinary design teams.

We will address a design problem specific to a real-world problem.

Prerequisites

No required background, but any of the following is an asset: Graphic design / image manipulation; Technical writing; Research and literature review experience; Development of software, especially mobile or web; Knowledge of Psychology or human cognition.

Method of instruction

Remote real-time synchronous lectures, tutorials, and interactive workshops. Semester-long, team-based project work and individual assignments. Students are required to use their own computers and supplies such as paper and sharpies for all contact hours of the course. Note that recording of the lectures (video, audio) is **NOT ALLOWED**. Accommodations will be addressed on an individual basis.

Evaluation and Grading Schedule

This course will follow the **Human/User-Centred Design** approach that includes: formative research to explore the problem space and its current reality, iterative design to develop a solution in several phases with increasing detail using input from the target audience, and summative research to verify the proposed solution actually delivers on its promise.

This is a **group project course**, working successfully in a group is a requirement. The participation grade (worth 20% of the course grade) will be determined by your contribution to group work (using confidential evaluations from each group member) combined with the instructor's and TA's evaluation. The group work component will be worth 50% of the course grade while individual work will make up the other 50%. **Lack of participation in group assignments may reduce an individual's group mark.**

Week	Due Date	Topics	Indiv. 50%	Group 50%
1	Sept 14	*First class: Course introduction, expectations, project Ideas* *Tutorial: Group Formation*		
2	Sept 21	**A1 Group**: Problem Space, Draft Research Plan (1 pg) & Group Forms *Class: Surveys, interviews, observations* *Tutorial: Brainstorm research methods and instruments*		
3	Sept 28	**A2a Pair**: **DRAFT** Formative Study Research Instruments (<3 pg) ***Workshop in Class & Tutorial: Pilot testing research instruments***	2	
	Sept 29	**A2b Pair**: **FINAL** Formative Study Research Instruments for approval (<3 pg)	3	
4	Oct 5	**A3 Pair**: Formative Study Results (2 pg) & Literature Reviews (1 pg) *Class: Research analysis & reporting, Requirements, Personas, Experience Maps, Short Form Creative Brief, Value Prop* *Tutorial: Share A3 Formative Study Results (< 3 minutes) & critique*	5	
5	Oct 11	**A4 Group**: Combined Research Results, Requirements, Personas, Short Form Creative Brief, Experience Map		10
	Oct 12	*Class: low-fidelity prototyping & prototype testing* *Tutorial: Share A4 Results & Requirements (<5 mins) & critique*		
6	Oct 19	**A5a Individual**: Low-Fidelity Prototypes & Usability Test Script ***Workshop in Class & Tutorial**: Low-fidelity prototype usability testing*	7	
	Oct 22	**A5b Individual**: Low-Fidelity Prototype Test Results (5 pgs)	3	
7	Oct 26	**A6a Group** Combined Low-Fi Prototypes *Class:* Internal Evaluations Cognitive Walkthroughs & Heuristic Evaluations *Tutorial: Share A6a highlights & discuss A6b*		5
8	Nov 2	**A6b Group & Individual** Internal Evaluations (Heuristic & Cognitive Walkthroug *Class: High-Fidelity Prototypes & Formal Usability Testing, Case studies* *Tutorial: Share A6b highlights & discuss A7*	5	5
	Nov 9	*NO CLASS – Reading Week Break*		
9	Nov 16	**A7a Group**: **DRAFT** High-Fidelity Prototypes & Usability Study Docs ***Workshop in Class & Tutorial**: High-Fidelity prototype pilot usability testing*		10
	Nov 19	**A7b Group**: **FINAL** Usability Study Instruments		5
10	Nov 23	*Class: Formal usability testing, analysis, & results presentation* *Tutorial: Discuss usability testing & final project presentations*		
11	Nov 30	**A9 Group**: Final Project Presentations *Class: Case Studies & Practice final project presentation & critique* *Tutorial: Final Project Presentations Competition* (<8 mins)		5
	Dec 3	**A8 Group**: Usability Study Results Report Slides		10
		A10 Individual: Peer Reviews, Feedback Survey, **Course Participation**	part of 20	
12	Dec 7	**Student Design Competition** following in-class practice presentations. One team per tutorial compete before Expert Judges		
		Weekly Quizzes & Surveys	5	

Course Policies

Real-time remote course format: To be able to succeed in this real-time remote course you will need to:
1. **Be available online during the course lectures and tutorial times using a computer** (not just your phone or tablet) with a reliable internet connection, and sufficient bandwidth.
2. **Quercus** will be used for important Announcements, Assignments, Quizzes, Lecture slides, Videos, & Readings. **It is your responsibility to check Quercus and your emails attached to Quercus at least daily** for **important time-sensitive** course updates.
3. **Participate actively and regularly** in course-related surveys, quizzes, and interactive exercises using **various online tools** such as: Quercus, BB Collaborate, Zoom, Google, Mentimeter, etc…
4. **Communicate frequently with your group members** regarding course deliverables and assignments.
5. **Participate actively in group work activities** including in remote group meetings, at times agreed upon by your group, overcoming any time-zone or other scheduling challenges.

Assignments: The course deliverables include written submissions in forms of research instruments, reports, prototypes, and presentations. Each assignment must include your **group name**, **group member names**, **TA name**, **headings**, **sub-headings**, **table of contents**, **references** (in a standard citation format), and an **Assignment Attribution Section** stating which group member did which part of the assignment. The written documents will need to be of University-level writing quality. Poorly written or formatted documents will be **penalized up to 10%.**

Late policy: Most assignments are to be submitted on Quercus, before **Midnight, unless stated**. On-time submissions are graded as normal. Submissions < 24 hours late incur a 10% penalty. Submissions < 48 hours late incur a 30% penalty. Submissions more than 48 hours late earn 0%. Exceptions to this policy are to be made only in extreme circumstances, with communication in advance of the original deadline and may require a medical certificate or similar document.

Re-marking: Students requesting re-marking of an assignment must submit detailed reasons in writing, to both instructor and TA, **within one week** after receiving the assignment grade. Re-evaluation appeals are at the discretion of the instructors. Note: adjustments in marks will be rare and could equally result in a lowering or raising of the mark. If a re-revaluation is completed by the instructors, the student must accept the resulting grade 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.

Quizzes: Quizzes will be assigned regularly throughout the course to assess knowledge gained. All quizzes will add up to a total of **5% of the individual course grade.**

Contact Policy: Questions about course material should be **emailed to TA, *not* to the instructor**. When emailing, begin your subject line with "CSC318 Group Number", followed by a meaningful phrase. Include your **full name**, **group name** & **number, & student number** in the body of the email. Group work related questions should be emailed to **all group members and the TA**. Allow up to 48 hours for a reply. All correspondence with staff must happen via **official U. of Toronto email addresses only**, or will not receive a response.

Readings and Reference Textbook: The course has **weekly readings** which will be available on Quercus. The recommended textbook is *Interaction Design: Beyond Human-Computer Interaction* – 5th Edition, 2019, Wiley; Jenny Preece, Helen Sharp, and Yvonne Rogers; ISBN-13: 978-1119020752.

Academic Offenses: All the work you submit must be done by you (individually or within your group), and your work must not be submitted by anyone else. **Plagiarism is academic fraud and is taken very seriously.** Read the Rules and Regulations from the U of T Calendar (especially the Code of Behaviour on Academic Matters): http://www.artsandandscience.utoronto.ca/ofr/calendar/rules.htm Also review this doc regarding plagiarism in the context of CS: http://www.cs.toronto.edu/~fpitt/documents/plagiarism.html.