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**Instructors:**Anastasia Kuzminykh (**akuzminy@**)Edward Lank (**lank@**)**Office hours: F 10:00 - 12:00 DC3140****(Or by appointment)****TAs:**Henderson, Jay Ellis (**jehender@**)Suh, Sang Ho (**shsuh@**)dEon, Gregory Lawrence (**gldeon@**)**Office hours: T 11:00 - 12:00 DC3140****(Or by appointment)****Lectures: MWF | 01:30 - 02:20 (MC 4040) | 2:30-3:20 (MC 4063)****Course Description & Objectives**

Human-Computer Interaction teaches the fundamental issues that underlie the creation and evaluation of usable and useful computational artifacts.

By the end of course, you will be able to:

- Identify the primary luminaries relevant to Interactive Design and HCI
- Identify major movements in HCI research, and their motivations, philosophies, and goals
- Identify your target users, design studies to understand your users and their needs within a sociocultural context
- Create user data driven designs and prototypes of different levels of fidelity
- Design studies to evaluate design on different stages of development
- Properly gather and analyze qualitative and quantitative data from user studies including data from: in-situ observations, semi-structured interviews, field studies, in-house experiments, heuristic evaluations
- Distinguish bad and good experimental design
- Add to your portfolio a high quality design of your own product

Course mainly consists of four types of students' activities:

- Lectures
- In-class activities
- Assigned readings
- Individual group project performed throughout the term in groups of 3-4 students

### **Marking Scheme**

Deliverable	Due date	Weight	
		CS 449	CS 649
In-class quizzes	May 6 - July 29	5%	5%
<b>Assignment 0</b>	May 13		
<b>Assignment 1</b>	May 24	5%	6%
<b>Assignment 2</b>	June 16	8%	10%
Presentation 1	June TBD, June TBD	5%	5%
<b>Assignment 3</b>	July 7	10%	12%
Presentation 2 (+ video of demo)	July TBD	12%	12%
<b>Final Report</b>	July 29	25%	30%
Final Exam		30%	20%

### **Course Policies**

**For assignments and the final report** deliverables: **soft copy by 8:59 pm** on the due date.

**You are not allowed to submit the next assignment if the previous assignment was not submitted.**

**Failing to submit all the assignments and final report by the end of the term may result in failing the course.**

**Late penalties** for deliverables: **-1% for each additional day (9:00 pm to 8:59 pm).**

If assignment was not submitted before the next assignment due date, you will get **0%** for this assignment, however, next assignment will not be considered submitted until you submit all the previous assignments.

Students in CS 449 and CS 649 will **give a public presentation of their projects**, at the end-of-term demo day. This requirement is independent of any choice students may make regarding any intellectual property connected to their course projects.

### **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/](http://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](http://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/](http://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, TA, 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](http://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](http://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](http://www.adm.uwaterloo.ca/infosec/Policies/policy72.htm).

**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 to lessen the impact of your disability, please register with the OPD at the beginning of each academic term.

**Group Work**

Students are to work on the course project in groups of 3-4 people. Project groups must be formed at the beginning of the term (**by Monday, May 13**) and expected to stay the same throughout the term. Assignments, presentations and final reports are submitted per group and marked accordingly.

**Project description***Choosing project topic:*

Each project group is required to choose a unique project topic from the list of suggested projects. Topics are assigned to project groups on first come, first served basis, thus it is recommended to choose several topics of interest at the beginning. If your group wants to work on a different project, not listed among the suggested projects, it **necessarily requires an instructor's approval**.

Project topics must be finalized by **Monday, May 13**.

*Project details and expectations:*

Throughout the course each project group is working on the project chosen at the beginning of the term. At the end of the course each project is expected to result in a high fidelity interactive prototype of an application. Original project topics are outlining the general area and goal of the

application. During the term students are required to identify specific functionalities required for the successful adoption of a specific application (based on exploratory user studies), meet with an industry specialist for a design consultation session, create and prototype an initial design of the application (low fidelity prototyping), further iterate on the design based on the results of the user studies (high fidelity prototyping) and assess the final design through the user studies.

#### *Project deliverables:*

Students are expected to submit **3 assignments (+ assignment 0)** throughout the course. These assignments help the instructor to monitor the intermediate progress of the projects and to provide forehanded feedback on the next steps to ensure correct and effective work flow. Assignments all together are building up to a **final report**. There are two **group presentations** during the term. Main goals of the presentations are to practice verbal presentations of the product design, obtain feedback from HCI specialists, classmates and additional feedback from the course staff, explore other projects presented by classmates. In addition to the final presentation and final report each project group is required to submit a **3 minute video** to demonstrate the final high fidelity interactive prototype of their application. Be aware, that all videos will be posted on the course website and publicly available for watching.

#### **In-class quizzes**

To monitor class attendance and familiarization with class materials and additionally assigned materials, there are short quizzes occasionally (read "randomly") given in some classes. Each quiz will have 3 questions and there will be 5 minutes in class to answer them individually, on paper. There are 12 quizzes in total during the course. Quizzes weight 5% of the final mark and are marked as following: 2% for writing 10 out of 12 (0.2% for each). 3% for quality of answers (0.1 for each correct answer).

#### **Project Presentations**

There are 2 presentation sessions happening during the course.

Main goals of the presentations are to practice verbal presentations of the product design, obtain feedback from HCI specialists, classmates and additional feedback from the course staff, explore other projects presented by classmates.

Students are required to prepare a 4 min talk to describe their project, pitch and justify their design idea and describe the design process. The talk should be supported by visual materials.

#### **CS 649 Additional Requirements:**

Graduate students are expected to perform an academic literature review related to some assignments topics and to the final report content. For more details see the assignments description.

**Note** that CS 649 has a separate marking scheme with weights distribution that differs from CS 449.