CSCI 4163 / CSCI-6610 --- Human Computer Interaction
Course Syllabus

Instructor/Course Information

Instructor:	Dr. Kirstie Hawkey	**Office:**	209 Goldberg
E-mail:	hawkey@cs.dal.ca	**Office Hours:**	M/F 12:30-1:30 & 3:30-4:30 or by appointment
Class :	T/Th 2:35-3:55	**Class Room:**	Killam LINC 2600
Lab:	M 8:30-10 or 10-11:30	**Lab Room:**	Killam LINC2600
TA:	Khalid Teao - Tearo@dal.ca	**Course page:**	Brightspace – content & important news –
Mail List:	Through Brightspace	**Facebook:**	Informal communication, participation, HCI in the news https://www.facebook.com/groups/1999652993623325/

Course Description

Human-computer interaction (HCI) deals with human-computer communication and how to facilitate it. Computers have become ubiquitous in daily life, and it is important that computing systems are designed for usability as well as utility. In this course, students will learn the foundations of HCI, including the processes for user-centered design, the models that inform HCI design, the social issues influencing HCI design and use, and the evaluation of interfaces and systems with users.

In one group mini-project, students will get hands on experience in performing user-centered design as they gather requirements for a user interface through interviews, surveys, and/or observations. In a second mini-project, they will design and conduct a laboratory experiment evaluating two techniques (e.g., input techniques, authentication techniques) and perform analysis of the results.

In addition to the hands on mini-projects, students will conduct a class seminar where they will present seminal and recent papers on relevant HCI topics and lead a class activity related to the topic.

Important Dates:

Last day of to add/drop: January 19, 2018
Last day to drop without a W: February 5, 2018
Last day to drop with a W: March 12, 2018

Evaluation

Component	Undergrad (4163)	Grad (6610)
Paper critiques (x 2)	10%	10%
Research paper	--	15%
Group mini-project 1	25%	25%
Group mini-project 2	15%	15%
Participation/quizzes/peer evaluations	10%	10%
Readings	10%	10%
3 individual take home tests/assignments	30%	15%

Late Policy

- Late assignments or project submissions will not be accepted – deliverables are due at the beginning of class on the due date. If there are concerns about any deliverable dates, different dates can be negotiated IN ADVANCE.

Required Texts and Resources

There is no required text for the course. Copies of assigned readings will be provided if the online text is not available. The reading list and schedule will be posted on the course web page.

For those students who would like to have a text to refer to, the recommended text is: Lazar, J., Feng, J.H., and Hochheiser, H., "Research Methods in Human-Computer Interaction", ISBN 978-0-470-72337-1.

Communication

There is a Facebook page for formal and informal course announcements, discussions, and communication: 4163/6610 W18 Human Computer Interaction (https://www.facebook.com/groups/1999652993623325/)

Prerequisites

CSCI-3160 or permission of instructor

Group Mini-Projects: Students (in groups of ~4-5) will get hands on experience in performing user-centered design as they:

   MP1: gather requirements for a user interface through interviews, surveys, contextual inquiries, and/or observations.
   MP2: design and conduct a laboratory experiment evaluating two techniques (e.g., input techniques, authentication techniques) and perform analysis of the results.

Note: Students will not conduct a formal study as part of this course. Instead, they will pilot their study with their fellow classmates only as in-class experiential learning activity

Tests: Three take-home tests/assignments will assess individual students' grasp of material covered (i.e., in lectures, seminars, and required readings) and may require students to apply topics from class (i.e., application of a usability technique to a specific problem).

Participation: Students are expected to attend class and tutorials and to participate in activities and discussions. During classes that involve a student-led research seminar, submission of peer evaluations with meaningful feedback will be used as the participation metric. Other metrics may include pop-quizzes, attendance, output from activities, etc.

Readings: This is a reading intensive course. The schedule of readings can be found in the content overview on Brightspace. Students are required to complete the assigned required readings (1-2 per class) **prior** to class and must submit two questions or comments about each paper to Brightspace. For each required reading, points will be assigned as 0 (no

submission/late), 1 (obvious comments/questions), 2 (insightful comments/questions that could be used to generate discussion in class).

Paper Critiques: For any two of the readings between March 1st and the end of the semester, submit an approximately 2 page critique of a reading that describes a study. This should include a summary of the paper (their research question, their methodology, their key findings), discussion of the methodological tradeoffs and whether the chosen methodology was appropriate, and discussion of what you think would be the most interesting next step to research and the methodology you would use.

Research Paper: Graduate students will hand in a ~6 page paper that will include a background literature review of a seminar topic (7-10 references), a discussion of recent advancements in the field, a discussion of the challenges of studying and/or evaluating the research area, and thoughts on appropriate next steps. A measure of a good grad paper is the ability of students to synthesize the related work and provide added value in their discussion beyond what can be found in any one paper.

Tentative List of Topics

- Overview
    - Motivation/History
    - Contexts for HCI
- User-centered development process
    - Early focus on users
    - Empirical evaluation
    - Iterative design
    - Participatory design
- Research ethics
    - Ethical considerations
    - Ethics submissions
    - Participant recruitment
    - Study design
- Understanding user's needs
    - Interviews/Focus Groups
    - Surveys
    - Diaries
    - Observation
- User centered evaluation
    - Observation
    - Think-aloud
    - Controlled experiments
    - Evaluation measures
- Models that inform HCI design
    - Attention
    - Perception
    - Movement (Fitt's Law)
    - Cognition
- Social Issues
    - Computer Supported Cooperative Work
    - Human diversity
    - Designing for multiple devices and contexts

Responsible Computing Policy

Usage of all computing resources in the Faculty of Computer Science must be within the Dalhousie Acceptable Use Policies (http://its.dal.ca/policies/) and the Faculty of Computer Science Responsible Computing Policy. For more information please see https://www.cs.dal.ca/downloads/fcs_policy_local.pdf

Culture of Respect[1]

Every person has a right to respect and safety. We believe inclusiveness is fundamental to education and learning. Misogyny and other disrespectful behaviour in our classrooms, on our campus, on social media, and in our community is unacceptable. As a community, we must stand for equality and hold ourselves to a higher standard.

What we all need to do:
1. **Be Ready to Act:** This starts with promising yourself to speak up to help prevent it from happening again. Whatever it takes, summon your courage to address the issue. Try to approach the issue with open-ended questions like "Why did you say that?" or "How did you develop that belief?"
2. **Identify the Behaviour:** Use reflective listening and avoid labeling, name-calling, or assigning blame to the person. Focus the conversation on the behaviour, not on the person. For example, "The comment you just made sounded racist, is that what you intended?" is a better approach than "You're a racist if you make comments like that."
3. A**ppeal to Principles:** This can work well if the person is known to you, like a friend, sibling, or co-worker. For example, "I have always thought of you as a fair-minded person, so it shocks me when I hear you say something like that."
4. **Set Limits:** You cannot control another person's actions, but you can control what happens in your space. Do not be afraid to ask someone "Please do not tell racist jokes in my presence anymore" or state "This classroom is not a place where I allow homophobia to occur." After you have set that expectation, make sure you consistently maintain it.
5. **Find or be an Ally:** Seek out like-minded people that support your views, and help support others in their challenges. Leading by example can be a powerful way to inspire others to do the same.
6. **Be Vigilant:** Change can happen slowly, but do not let this deter you. Stay prepared, keep speaking up, and do not let yourself be silenced.

University Statements

This course is governed by the academic rules and regulations set forth in the University Calendar and the Senate.
https://academiccalendar.dal.ca/Catalog/ViewCatalog.aspx?pageid=viewcatalog&catalogid=69&chapterid=3457&loaduseredits=False

Academic Integrity

At Dalhousie University, we are guided in all of our work by the values of academic integrity: honesty, trust, fairness, responsibility and respect (The Center for Academic Integrity, Duke University, 1999). As a student, you are required to demonstrate these

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[1] Source: Speak Up! © 2005 Southern Poverty Law Center. First Printing. This publication was produced by Teaching Tolerance, a project of the Southern Poverty Law Center. Full "Speak Up" document found at: http://www.dal.ca/dept/dalrespect.html. Revised by Susan Holmes from a document provided April 2015 by Lyndsay Anderson, Manager, Student Dispute Resolution, Dalhousie University, 902.494.4140, lyndsay.anderson@dal.ca www.dal.ca/think.

values in all of the work you do. The University provides policies and procedures that every member of the university community is required to follow to ensure academic integrity. http://www.dal.ca/dept/university_secretariat/academic-integrity.html

Accessibility

The Advising and Access Services Centre is Dalhousie's centre of expertise for student accessibility and ac- commodation. The advising team works with students who request accommodation as a result of: a disability, religious obligation, or any barrier related to any other characteristic protected under Human Rights legislation (NS, NB, PEI, NFLD). http://www.dal.ca/campus_life/student_services/academic-support/accessibility.html

Student Code of Conduct

Everyone at Dalhousie is expected to treat others with dignity and respect. The Code of Student Conduct allows Dalhousie to take disciplinary action if students dont follow this community expectation. When appropriate, violations of the code can be resolved in a reasonable and informal mannerperhaps through a restorative justice process. If an informal resolution cant be reached, or would be inappropriate, procedures exist for formal dis- pute resolution. https://www.dal.ca/campus_life/safety-respect/student-rights-and-responsibilities/student-life-policies/code-of-student-conduct.html

Diversity and Inclusion – Culture of Respect

Every person at Dalhousie has a right to be respected and safe. We believe inclusiveness is fundamental to education. We stand for equality. Dalhousie is strengthened in our diversity. We are a respectful and inclusive community. We are committed to being a place where everyone feels welcome and supported, which is why our Strategic Direction prioritizes fostering a culture of diversity and inclusiveness (Strategic Priority 5.2). http://www.dal.ca/cultureofrespect.html

Recognition of Mikmaq Territory

Dalhousie University would like to acknowledge that the University is on Traditional Mikmaq Territory. The Elders in Residence program provides students with access to First Nations elders for guidance, counsel and support. Visit the office in the McCain Building (room 3037) or contact the programs at elders@dal.ca or 902-494-6803 (leave a message).

Learning and Support Resources

- General Academic Support — Advising
  http://www.dal.ca/campus_life/student_services/academic-support/advising.html
- Fair Dealing Guidelines
  https://libraries.dal.ca/services/copyright-office/guidelines/fair-dealing-guidelines.html
- Dalhousie University Library http://libraries.dal.ca/