DALHOUSIE UNIVERSITY
Faculty of Computer Science

THERE WILL BE NO CONVERTING OF FINAL GRADES TO PASS/ILL THIS SEMESTER.
ALL LETTER GRADES WILL BE FINAL!

CSCI-4163/6610 — Human Computer Interaction
Course Syllabus

Instructor Information

Instructor:	Dr. Joseph Malloch	**Office:**	4047 Paramount Building
E-mail:	jmalloch@dal.ca	**Office Hours:**	TBA & by appointment
Class Meeting Time:	Tues & Thurs 16:05-17:25	**Room No:**	Chemistry 226
Lab Meeting Time:	Thurs 14:35-15:55	**Room No:**	Goldberg 127
Course Homepage:	https://dal.brightspace.com		
Teaching Assistants:	TBA		

Important Dates

1. Labour Day - University closed: September 4, 2023
2. Classes begin, Fall term: September 5, 2023
3. Last day to add/drop courses: September 19, 2023
4. National Day for Truth and Reconciliation, University closed: October 2, 2023
5. Last day to drop without "W": October 4, 2023
6. Thanksgiving Day, University closed: October 9, 2023
7. Last day to drop with "W": November 2, 2023
8. Fall Study Break November 13 to 17, 2023 (no classes, University open)
9. University closed, in lieu of Remembrance Day, November 13, 2023
10. Classes end, Fall term, Monday classes held on Tuesday, December 5 and Wednesday, December 6, 2023
11. Tests:
    - Tuesday, October 3, 2023
    - Thursday, November 2, 2023

Course Description

This class deals with human-computer communication and how to facilitate it. The class begins with a discussion of information processing characteristics important to human computer interaction and formal models of human computer interaction. Subsequent topics may include dialogue techniques, information presentation, interaction devices, computer training, help systems, computer supported co-operative work, information search and visualization, hypermedia, and the world wide web.

In groups, students will perform user-centred approaches to gather requirements and evaluation for a system through different evaluation types (e.g., interviews, surveys, and observations, etc.). Students will have the opportunity to play the role of different players in these evaluation types to gain hands on experience.

In addition to the hands-on project, students will conduct a class seminar where they will present seminal and recent papers on relevant HCI topics. They will also lead the class in relevant discussion.

Learning Outcomes

- Understand and define the fundamentals of the user-centred development process of design and user-centred evaluation of prototypes and real-world applications
- Understand and identify the various methods and models that can be used to understand users and their needs
- Demonstrate knowledge of human-computer interaction principles and related methodologies
- Apply HCI principles and study techniques in an ethical and responsible manner to the design of formal study evaluations
- Analyze, interpret, and describe data collected from evaluations

Course Rationale

This goals aims to help students develop an appreciation for experimental HCI research, to understand the strengths and weaknesses of different experimental methods in HCI, and to be able to apply these methods to do basic HCI research.

Class Format and Course Communication

- Content will be delivered using a combination of lectures and interactive group exercises.
- The lectures will be recorded.
- Students must ask the instructor permission before recording class lectures.
- Course announcements will be posted to Brightspace and the course mail list, which comprises the instructor's and students' Dal emails. It is the student's responsibility to check their Dal e-mail on a daily basis. To access your Dal e-mail account please see: `https://www.dal.ca/dept/its/o365/services/email.html`
- TA and Instructor office hours will be posted. Additional help is available at the CS Learning Centre. `https://www.dal.ca/faculty/computerscience/about/student_life/learningcentre.html`

Evaluation Criteria

The instructor reserves the right to change the grading scheme for a student (with their permission) if it is in their interest. Note: no late assignments, project deliverables, or seminar deliverables will be accepted (a grade of 0 will be issued).

0.1 Undergraduate Evaluation

1. 9% — Summaries of papers from HCI grad seminars and seminar questions (7% summaries, 2% questions)
2. 10% — Participation/quizzes (including active participation)
3. 46% — Group Project (milestones, final report, presentation, peer evaluation, lab reports and individual components)
4. 35% — Tests (2 tests)

0.2 Graduate Evaluation

1. 17% — Seminar of HCI Topic (presentation and report)
2. 6% — Summaries of papers from HCI grad seminars and seminar questions (5% summaries, 1% questions)
3. 10% — Participation/quizzes (including active participation)
4. 42% — Group Project (milestones, final report, presentation, peer evaluation, lab reports and individual components)
5. 25% — Tests (2 tests)

0.3 Additional requirements

0.3.1 Academic Integrity Module

- https://dal.brightspace.com/d2l/home/178166
- Must be completed by October 1st to pass the course.
- Must receive 75% or better on each of the four quizzes in this module.

0.3.2 TCPS

You will need the TCPS certificate for the project (https://tcps2core.ca/welcome)

Notes

- A minimum C grade is required in this course if it is core to your FCS degree, or if it will be used as a prerequisite for a subsequent CSCI course.
- As of 2019, students who receive a grade lower than C in the same required CS course twice, will be dismissed.
- The grade conversion scale in Section 17.1 of the Academic Regulations, Undergraduate Calendar will be used. https://academiccalendar.dal.ca/Catalog/ViewCatalog.aspx?pageid=viewcatalog&catalogid=111&chapterid=6817&topicgroupid=29869&loaduseredits=False
- To pass the course students must have:
  - 50% or better for the summaries of papers of HCI seminars and seminar questions
  - 50% or better for the project overall
  - 50% or better for the test portion of the assessment
  - 50% or better for the research paper (for grad students only)
  - a passing grade overall (e.g., C grade if required course or B- if a graduate student)
- **It is up to the discretion of the instructor to use remote proctoring in the case of online testing. Students may be required to download proctoring software onto their devices. Students who cannot meet system requirements for remote proctoring should contact the instructor for an alternate assessment. (Typical system requirements are: (i) Mac OS or Windows, (ii) a web-cam, and (iii) an internet connection.)**

Student Declaration of Absence

The Student Declaration of Absence policy shall apply. https://www.dal.ca/campus_life/safety-respect/student-rights-and-responsibilities/academic-policies/student-absence.html

Academic Standards

Failure to properly attribute sources in your work will be treated as an academic standards issue and points may be deducted for not following citation requirements. For example, forgetting to quote text taken from other sources, failure to include in-text citations, or a failure to include required information in the citations or references. Please see the resources on proper citation provided by the Dalhousie Writing Centre (https://dal.ca.libguides.com/c.php?g=257176&p=5001261).

Please note that if it appears that the error was made with intent to claim other people's work as your own such as a lack of both citations and references, an allegation of plagiarism will be submitted to the Faculty Academic Integrity Officer, which could result in consequences such as a course failure.

Required Texts and Resources

- There is no required text for the course. Readings will be assigned.
- The lecture slides will be posted on the learning management system (Brightspace).
- Additional assistance is available from the Student Learning Centre (2nd floor, Goldberg CS Building).

Tentative Schedule of Topics

1. Overview
    - Motivation/History
    - Contexts for HCI
2. User-centered development process
    - Early focus on users
    - Empirical evaluation
    - Iterative design
    - Participatory design
3. Research ethics
    - Ethical considerations
    - Ethics submissions
    - Participant recruitment
    - Study design
4. Understanding user's needs
    - Interview/Focus groups
    - Surveys
    - Diaries
    - Observation
5. User centered evaluation
    - Observation
    - Think-aloud
    - Controlled experiments
    - Evaluations measures
    - Data Analysis
6. Models that inform HCI design
    - Attention
    - Perception
    - Movement (e.g., Fitt's Law)
    - Cognition
7. Social Issues
    - Usable security
    - Accommodating human diversity
    - Designing for multiple devices and contexts

Prerequisites

CSCI 3160 (User Interface Design) for CSCI 4163

Responsible Computing Policy

Usage of all computing resources in the Faculty of Computer Science must be within the Dalhousie Acceptable Use Policies (`https://www.dal.ca/dept/university_secretariat/policies/information-management-and-t acceptable-use-policy-.html`) and the Faculty of Computer Science Responsible Computing Policy. (`https://www.dal.ca/content/dam/dalhousie/pdf/faculty/computerscience/policies-procedures/fcs_policy_local.pdf`)

Use of Plagiarism Detection Software

All submitted assignment may be passed through a plagiarism detection software, such as the Moss Software Similarity Detection System (`https://theory.stanford.edu/~aiken/moss/`), or similar systems. If a student does not wish to have their assignments passed through plagiarism detection software, they should contact the instructor for an alternative. Please note, that code not passed through plagiarism detection software will necessarily receive closer scrutiny. `https://cdn.dal.ca/content/dam/dalhousie/pdf/dept/university_secretariat/policy-repository/OriginalitySoftwarePolicy.pdf`

Use of Artificial Intelligence Tools

You may use AI-driven tools to assist you in learning but remember that your objective is to under-stand, achieve, and apply the course competencies and outcomes. While you may use tools for learn-ing, specific assessments in this course will disallow the use of AI-driven tools to assert that you have attained course learning outcomes. This is because a graduate must be able to analyze, assess and produce work unassisted by AI technology. Where tools are allowed: you must acknowledge all tools used to assist you. If applicable, you must provide links to chat logs. Using AI-driven tools where pro-hibited constitutes an academic offense.

Culture of Respect

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]:

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. **Appeal 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=117&loaduseredits=False`

Territorial Acknowledgement

Dalhousie University is located in Mi'kma'ki, the ancestral and unceded territory of the Mi'kmaq. We are all Treaty people.

[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`.

Internationalization

At Dalhousie, 'thinking and acting globally' enhances the quality and impact of education, supporting learning that is "interdisciplinary, cross-cultural, global in reach, and orientated toward solving problems that extend across national borders."

https://www.dal.ca/about-dal/internationalization.html

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. As a student, you are required to demonstrate these 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.

(read more: http://www.dal.ca/dept/university_secretariat/academic-integrity.html)

Accessibility

The Student Accessibility Centre is Dalhousie's centre of expertise for matters related to student accessibility and accommodation. If there are aspects of the design, instruction, and/or experiences within this course (online or in-person) that result in barriers to your inclusion please contact:

https://www.dal.ca/campus_life/academic-support/accessibility.html

for all courses offered by Dalhousie with the exceptionof Truro.

Conduct in the Classroom — Culture of Respect

Substantial and constructive dialogue on challenging issues is an important part of academic inquiry and exchange. It requires willingness to listen and tolerance of opposing points of view. Consideration of individual differences and alternative viewpoints is required of all class members, towards each other, towards instructors, and towards guest speakers. While expressions of differing perspectives are welcome and encouraged, the words and language used should remain within acceptable bounds of civility and respect.

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).

(read more:http://www.dal.ca/cultureofrespect.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 don't follow this community expectation. When appropriate, violations of the code can be resolved in a reasonable and informal manner—perhaps through a restorative justice process. If an informal resolution can't be reached, or would be inappropriate, procedures exist for formal dispute resolution.

(read more: https://cdn.dal.ca/content/dam/dalhousie/pdf/dept/university_secretariat/policy-repositc
Code%20of%20Student%20Conduct%20rev%20Sept%202021.pdf)

Fair Dealing Policy

The Dalhousie University Fair Dealing Policy provides guidance for the limited use of copyright protected material without the risk of infringement and without having to seek the permission of copyright owners. It is intended to provide a balance between the rights of creators and the rights of users at Dalhousie. (read more: https://www.dal.ca/dept/university_secretariat/policies/academic/fair-dealing-policy-.html)

Originality Checking Software

The course instructor may use Dalhousie's approved originality checking software and Google to check the originality of any work submitted for credit, in accordance with the Student Submission of Assignments and Use of Originality Checking Software Policy. Students are free, without penalty of grade, to choose an alternative method of attesting to the authenticity of their work, and must inform the instructor no later than the last day to add/drop classes of their intent to choose an alternate method. (read more: https://cdn.dal.ca/content/dam/dalhousie/pdf/dept/university_secretariat/policy-repository/OriginalitySoftwarePolicy.pdf)

Student Use of Course Materials

These course materials are designed for use as part of the CSCI courses at Dalhousie University and are the property of the instructor unless otherwise stated. Third party copyrighted materials (such as books, journal articles, music, videos, etc.) have either been licensed for use in this course or fall under an exception or limitation in Canadian Copyright law. Copying this course material for distribution (e.g. uploading material to a commercial third party website) may lead to a violation of Copyright law.

Learning and Support Resources

Please see `https://www.dal.ca/campus_life/academic-support.html`