HCIN 5100W: Fundamentals of HCI Design and Evaluation

Masters in Human-Computer Interaction
Carleton University, Ottawa, Canada
Course Outline Winter 2026

Instructor:

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Office Location: HP 5127
Office Hours: Mondays, 10:00-11:00AM; or by appointment.
Contact: `elizabeth.stobert@carleton.ca`

Meetings:

Term: Winter 2026
Times: 11:35 AM –2:25 PM Mondays, January 5 – April 6
(Class cancelled February 16 for Reading Week)
Room: Please check Carleton Central

Course Objective:

Students completing this course should gain a deep understanding of the psychological research relating to cognition and design, as well as how to design and conduct user studies.

Topics:

Main topics will include:

- Human perception
- Cognitive psychology
- Personality psychology
- Developmental psychology
- Social psychology
- Distributed cognition
- Affective computing
- Accessible design

- User study design
- Usability evaluation methods
- Ethical considerations in HCI research

Assessment:

Assessment will be based on work including: in-class presentation and discussion of papers from the literature; a final exam; and a user study project evaluating the design of a piece of software.

Paper presentation and discussion: 25%
User study project: 45%
Final Exam: 30%

The majority of class meetings will be discussion-based. We will cover 2–3 readings from the literature per week, and students will form groups to create joint presentations on that reading. Students are expected to read all papers, and participate equally in paper presentations. Each student will be responsible for summaries for two papers during the semester.

The user study will have interim deadlines, but the final deliverable will be a poster presentation on the last day of class.

Scheduling for the final examination will be during the April examination period, and will be set by the university. Exams take place on campus, and may be scheduled outside of class time, including on evenings, and weekends.

Late Submission Policy:

Late assignments will be accepted with a deduction of one grade-level per day (e.g. an excellent assignment submitted two days late would receive a maximum grade of A-).

Course Resources:

There will be no set textbook. Instead, papers from the literature and online resources will be made available as appropriate. All course papers and other resources will be available online through Brightspace. Use your Carleton ID and password to log into `http://brightspace.carleton.ca`.

Students will be required to produce a poster as a deliverable for the user study project. There is no requirement to have the poster professionally printed as long as a neat and presentable copy can be brought to class and submitted on the deadline. However if students wish, posters can be printed at Staples for around $40, or may be constructed out of bristol board etc. for a lower cost.

University Policies:

Academic Accommodation Carleton is committed to providing academic accessibility for all individuals. You may need special arrangements to meet your academic obligations during the term. The accommodation request processes, including information about the Academic Consideration Policy for Students in Medical and Other Extenuating Circumstances, are outlined on the Academic Accommodations website `students.carleton.ca/course-outline`.

Graduate Academic Advisors The Graduate Advisors for the Master of HCI program are available in Room 5302 HP; or by email at `hci@carleton.ca`. The graduate advisors can assist with understanding your academic audit and the remaining courses required to meet graduation requirements.

Academic Integrity

Student Academic Integrity Policy: Every student should be familiar with the Carleton University student academic integrity policy. A student found in violation of academic integrity standards may be sanctioned with penalties which range from a reprimand to receiving a grade of F in the course, or even being suspended or expelled from the University. Examples of punishable offences include plagiarism and unauthorized collaboration. Any such reported offences will be reviewed by the office of Graduate Studies. More information on this policy may be found on the ODS Academic Integrity page:
`https://science.carleton.ca/students/academic-integrity/`

Plagiarism: As defined by Senate, "plagiarism is presenting, whether intentional or not, the ideas, expression of ideas or work of others as one's own". Such reported offences will be reviewed by the office of Graduate Studies. Please note that content generated by an unauthorized A.I.-based tool *is* considered plagiarized material.

Unauthorized Co-operation or Collaboration: Senate policy states that "to ensure fairness and equity in assessment of term work, students shall not co-operate or collaborate in the completion of an academic assignment, in whole or in part, when the instructor has indicated that the assignment is to be completed on an individual basis".

Generative AI Technologies: The assessment activities in this course were designed to be completed by an individual working alone. Unless it is explicitly stated otherwise, the use of any will be considered academic misconduct. This includes, but is not limited to, chatbots (e.g., ChatGPT, Google Bard, Bing Chart), research assistants (e.g., Elicit), and image generators (e.g., Stable Diffusion, Dall-E), etc. An exception to the above rule is made for automated grammar and punctuation checking tools (such as Grammarly).

As our understanding of the uses of AI and its relationship to student work and academic integrity continue to evolve, students are required to discuss their use of

AI in any circumstance not described here with the course instructor to ensure it supports the learning goals for the course.