

Syllabus

The word Masterclass (https://en.wikipedia.org/wiki/Master_class) refers to "a class given to students of a particular discipline by an expert of that discipline; usually music, but also painting, drama, any of the arts, or on any other occasion where skills are being developed." In music, for example, a master class typically involves a student performing a piece to the teacher and other students, and the teacher subsequently critiquing the performance and having the student re-perform certain parts based on the feedback.

This course is called **Masterclass in Human-Computer Interaction**, in that students will learn how to conduct HCI research by doing and through critiques. We will study the process of HCI research: from formulating questions, selecting/using the appropriate research methodologies (e.g., experiments, diary studies, interviews, etc), connecting the research to theories, analyzing data (e.g., statistical modeling, grounded theory analysis), to deriving design implications from the results.

The research theme varies from year to year; for W21, the theme is **Education Technology**. We will be exploring a wide range of HCI research on the design of technology to support learning.

There are three main components: Paper Critique, Presentation, Project.

1. Paper Critique

For the first half of the course, on alternate weeks, students will learn about a particular type of HCI methodology. Students will complete readings that explain that methodology, work in groups to come up with a rubric for assessing papers that use that methodology, and use that rubric to evaluate an assigned paper.

2. Presentation

For the first half of the course, on alternate weeks, designated students will choose a paper from the reading list ([reading.html](#)) that employs the particular type of methodology that we learned about in the previous work. Assignment of papers is first-come-first-serve. Students must give a 20-minute presentation on the paper by describing motivation, research questions, connections to theories, methodologies, results and design implications. In the discussion, the student will show the rubric that they developed in the previous work, and lead a short discussion (10 minute) with the class about the merit of the research based on the rubric.

3. Project

The class project is the most important component of this course. Students will work on a group project to answer research questions related to education technology, and apply 1-2 of the methodologies we learned in class to answer the questions. As part of the project, students will learn about and be exposed to a variety of human subject experiments by participating in the pilot studies designed by their classmates. Students are encouraged to choose topics that are closely aligned with their own research area.

During the second half of the course, there will be a set of masterclass sessions. During each masterclass

session, a number of students will present a section of their paper, and instructor and students will provide a critique. Before each masterclass, students are expected to review the presenting students' papers and be prepared to provide their observations and critiques during the masterclass.

The final outcome is a 15-page final paper in the SIGCHI Word (https://www.acm.org/binaries/content/assets/publications/taps/acm_submission_template.docx) or Latex (<https://www.acm.org/binaries/content/assets/publications/consolidated-tex-template/acmart-master.zip>) format (use sample-manuscript.tex). The paper will be judged by its potential research impact, in terms of the novelty/clarity of the research questions, soundness of the methodologies, and the amount of interesting findings from the pilot study. Students are encouraged to submit their work to conferences as a short or full paper.

Communication Protocol

Students are expected to attend class during the synchronous meeting time. Special consideration can be made for a few exceptions (e.g., academic travel, illnesses and family emergencies). However, students must discuss their anticipated absence with the instructor, and provide the necessary justification and documentation. During class, students are strongly encouraged to turn their video cameras on, as this course is heavily based on live discussions and critiques.

If you have a question, ask on Slack first. You can ask your question in the public #question channel, especially if it is a question directed at other students. Your team will be provided with a private team channel, which the instructor will also have access to. You can ask your question in your private team channel, especially if it is a discussion about your team's project. You can ask private questions to the instructor by direct messaging them. If your question requires a face-to-face meeting to resolve, book a 30 minutes zoom meeting with the instructors here (<https://calendly.com/edithlaw/cs889-office-hour?month=2021-01>).

Online etiquette is important. While online chat tools, such as Slack, provide a convenient way for students to reach the instructor and fellow students, do not expect instantaneous answers. Keep your questions clear/concise and your comments professional. Be considerate of everyone.

Evaluation

Students will be evaluated on the quality of their participation (in-class discussions), as well as their paper critique, presentation and project.

- paper critique: 15% (5% each)
- presentation: 10%
- project - introduction and related work: 15% (10% writeup / 5% masterclass presentation / participation)
- project - system/study design: 15% (10% writeup / 5% masterclass presentation / participation)
- project - results and implications: 15% (10% writeup / 5% masterclass presentation / participation)
- project - final report: 30%

Policies

Deliverables and Late Penalties

All deliverables are due **08:59 pm** on the due date. Late penalties for all deliverables: **-5% for each additional day (9:00 pm to 8:59 pm)**.

IMPORTANT: If a deliverable was not submitted before the next deliverable due date, you will get **0%** for this assignment. Furthermore, you are not allowed to submit the next deliverable if the previous deliverable was not submitted. Failing to submit all the deliverables by the end of the term may result in failing the course.

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. See <http://uwaterloo.ca/academic-integrity> (<http://uwaterloo.ca/academic-integrity>) 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 (<https://uwaterloo.ca/secretariat/policies-procedures-guidelines/policy-70>), Student Petitions and Grievances, Section 4. 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 <https://uwaterloo.ca/academic-integrity/> (<https://uwaterloo.ca/academic-integrity/>)) 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, TA, academic advisor, or the Undergraduate Associate Dean. For information on categories of offences and types of penalties, students should refer to Policy 71 (<http://www.uwaterloo.ca/secretariat/policies-procedures-guidelines/policy-71>), Student Discipline. For typical penalties, see the Guidelines for the Assessment of Penalties (<http://uwaterloo.ca/secretariat/policies-procedures-guidelines/guidelines/guidelines-assessment-penalties>).

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 are grounds. A student who believes he/she has grounds for an appeal should refer to Policy 72 (<http://www.uwaterloo.ca/secretariat/policies-procedures-guidelines/policy-72>) (Student Appeals).

Note for Students with Disabilities

AccessAbility Services (formerly the Office for Persons with Disabilities), 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 AccessAbility Services at the beginning of each academic term.