Course Syllabus

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This page tiny.cc/hsyllabus (http://tiny.cc/hsyllabus) is the GoTo place that explains and links to all the relevant course components, including the Google Docs.

The page tiny.cc/hquercus (http://tiny.cc/hquercus) links to the announcements and will have the weekly modules: These specify and provide links to what you need to do.

CSC 428/2514 Human Computer Interaction Research: Course Overview and Objectives

This HCI course is about **designing interventions** (with and without technology) to change people's behavior. Interventions can be interfaces, instructions, and interactions from computer to human, human to computer, human to human.

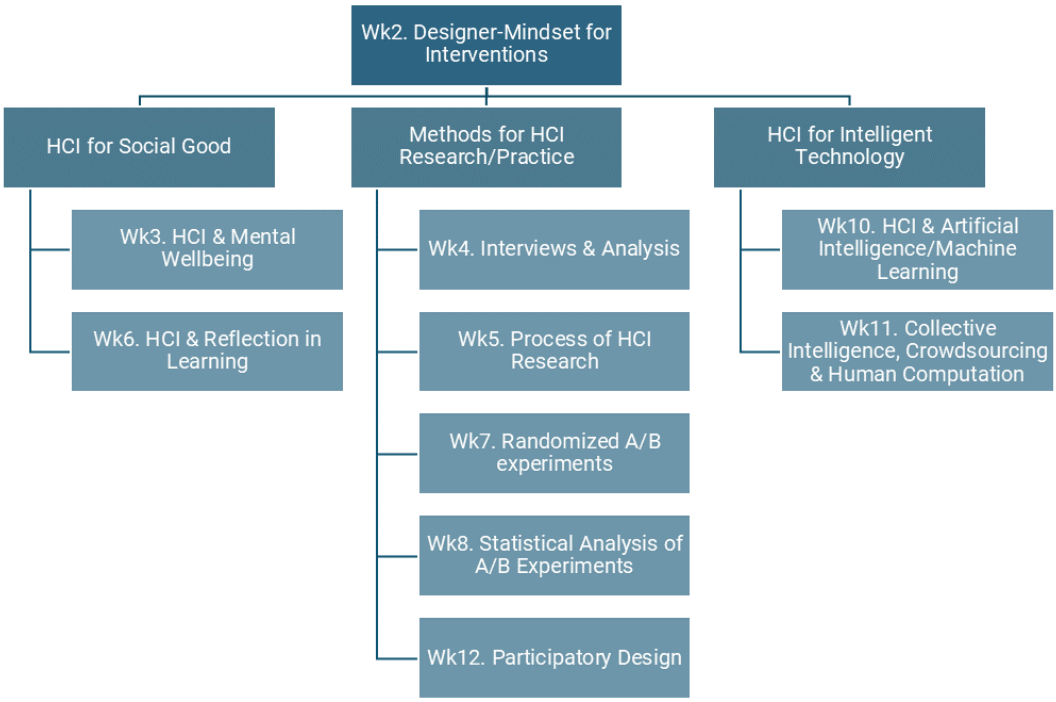
The HCI Research course's structure is around reading research papers, as an advanced *Seminar* where you learn from primary papers vs lectures. The goal is to prepare you to identify and use papers that can help you tackle real-world problems in academic research and/or industry jobs.

Course Description: The course covers Applications & HCI MetaSkills of a #Designer-Mindset (Wk2) for the process of designing interventions, which is a foundation for three key areas:

Methods for HCI Research/Practice. These include the HCI Research process (Wk5), data collection methods like Interviews and analysis (Wk4), Randomized A/B Experiments (Wk7), Statistical Analysis of A/B Experiments (Wk8), and Participatory Design between users and designers (Wk12).

HCI for Social Good Application. Examples of how to use HCI for enhancing Mental Wellbeing (Wk3), and in Reflection & Learning (Wk6).

HCI for Intelligent Technology. Designing technology that intelligently helps people, using both *Artificial* Intelligence/Machine Learning (Wk10), and tech for *Human* Collective Intelligence, like Crowdsourcing & Human Computation (Wk11).



Lecture Schedule

The schedule may be subject to changes, which will be announced.

	Lecture Topic	Folder link
Week 1: Wed 4th Sep	**Welcome, Course Introduction**	**Week1 - Introduction (https://drive.google.com/drive/folders/1uSWClGhJ_rQMOw4uUHhjVdlgdEXvFqaj)**
Week 2: Wed 11th Sep	**Designer Mindset in HCI** HCI Research MetaSkill of a #Designer-Mindset helps you constantly experiment to improve everyday Interventios,	**Week2 - Designer Mindset & Intelligent Adaptive Interventions (https://drive.google.com/drive/folders/1zRCF9c4UhRxl3mBDhFcEI-_EJK3YmTq3)**

	getting better at "achieving goals within constraints". What is the Goal of an Intervention? What is the behaviour we do or don't want people to engage in? Why? What are the Constraints we have? How can we experiment and get data to figure out which Interventions are best, when?	
Week 3: Wed 18th Sep	**HCI & Mental Wellbeing** Case studies of using HCI & Psychology to do interventions to help people manage mental wellbeing.	**Week3 - HCI & Mental Wellbeing (https://drive.google.com/drive/folders/1oeHogyAgot3nTCPS4MPMvPkdDQdc_kYe**
Week 4: Wed 25th Sep	**Interviews & Analysis** HCI Research MetaSkill of how to use and	**Week4 - Interviews & Analysis (https://drive.google.com/drive/folders/1v9Mrl1V8HOVfsq9VBqiaUCx2oeHnRAjU)**

	analyze interviews as a way to get knowledge out of other people's heads, into a form you can interpret it and use it for design of interventions.	
Week 5: Wed 2nd Oct	**Process of HCI Research** Walkthrough of a process for how to do an HCI research project. We define 'research project' as gathering data to answer a question, so it helps in both practical industry goals and academic research.	**Week5 - Process of HCI Research (https://drive.google.com/drive/folders/1WdBmLqA21fy8f3y7sIdLGAOly9sulmN5)**
Week 6: Wed 09th Oct	**HCI & Reflection in Learning & Other Domains** Understanding how prompting people to reflect and generate knowledge can	**Week6 - Reflection in Learning (https://drive.google.com/drive/folders/160p3m8K3nnsm-zrW-RnodWH94USZCvBG)**

	help learning, and when intuitions about what helps learning can be misleading.	
Week 7: Wed 16th Oct	**Randomized A/B experiments** Principles for using A/B Experiments that compare alternatives, to discover how to change & enhance user experiences.	**Week7 - Randomized A/B experiments (https://drive.google.com/drive/folders/1tvp7Xhvd7N49FQH-PGgxgZZTpg0Bsw2M)**
Week 8: Wed 23rd Oct	**Statistical Analysis of A/B Experiments** A real-world example of how to analyze data from an A/B experiment on email messages. This grounds your understanding of statistics, to prepare for 'data science' activities in industry, as well as research.	**Week8 - Statistical Analysis of A/B Experiment (https://drive.google.com/drive/folders/19cnSYPuKO-13XzGYHqybWsy_tFzNGj93)**

Week 9: Wed 30rd Oct	**Reading week!**	**Week9 - Reading Week (https://drive.google.com/drive/folders/1TOgvrbDSux50OB13FOzCHMjALSX2wXN**
Week 10: Wed 6th Nov	**HCI & Machine learning/Artificial Intelligence** Integrating HCI & Artificial Intelligence to build systems that let people organize and qualitatively test out ideas, such as in writing.	**Week10 - HCI & Machine learning/Artificial Intelligence (https://drive.google.com/drive/folders/1UeGWjDyhk_sO2hs8VPPWnjPRZhAv-Soj)**
Week 11: Wed 13th Nov	**Collective Intelligence, Crowdsourcing & Human Computation** Using HCI in designing workflows and technology to harness the collective intelligence of 'crowds' of people. This 'artificial' artificial intelligence can be a	**Week11 - Collective Intelligence, Crowdsourcing & Human Computation (https://drive.google.com/drive/folders/1VbzRCNH3THG20dMw1SlJ_UAy0cn2vQu6**

	complement or improvement over AI.	
Week 12: **Wed 20th Nov**	**Participatory Design & Recap of Course Topics Part 1** Participatory design is a method for involving more users and stakeholders in designing interventions.	**Week12 - Participatory Design (Course Recap Part 1) (https://drive.google.com/drive/folders/11XeWGQxk95srT3nzirSqnmkG-tIf2VJZ)**
Week 13: **Wed 27th Nov**	**Recap of Course Topics Part 2** Not revisiting content means the time invested doesn't have the full impact of you synthesizing, and seeing how to apply it. These required recaps allow you to review what you've learned about HCI, and how to use it!	**Week13 - Course Recap Part 2 (Required Attendance) Write Final Wrap-Up Reflections (https://drive.google.com/drive/folders/1rsNPrvOS-DQ44c7TOLqCHdsnCCRL1STr)**

Classes

Wed 6-9 pm

Delivery

In Person in Myhal 380.

Course Website: tiny.cc/hquercus (http://tiny.cc/hquercus)

Class-Structure

Wed 6:10-7 Professor-Led. (1) 10-25 minute Lecturing: (a) Situate-Within-Course (this week's material) & share Learning-Questions. (b) Short Talk on Week's Topic (complementing paper). (2) Breakout Rooms & Discord Reflection.

Wed 7:10-8 Student-Led. (1) 5-15 minute Video/Lecturing: (a) Show Learning-Questions & Discussion-Questions; (b) Provide Context for Weekly Reading. (2) Breakout Rooms & Discord Reflection.

Wed 8:10-9 (1) #AMA with Joseph (**tiny.cc/hamajoseph (http://tiny.cc/hamajoseph)**). (2) AMA with Guest Industry Speakers. [Check schedule for which weeks have extra Tutorial content led by Joseph or TAs].

Students who signed up for **tiny.cc/hamajoseph (http://tiny.cc/hamajoseph)** will ask their questions, Joseph will answer them.

The #Class-Designers also host a Guest-Speaker (Joseph can help find them, he has a Whatsapp group of people here: **https://chat.whatsapp.com/ElxgJgXgP966hLUYHxXvEQ (https://chat.whatsapp.com/ElxgJgXgP966hLUYHxXvEQ)**). Or the #Class-Designers can choose to dive deeper into a specific topic, and teach a custom class.

What to do each week?

Go to **tiny.cc/hquercus (http://tiny.cc/hquercus)** and follow the module for the week: It links to the readings, the #Learning-Questions (to think about during the readings), the #Reflections, and the heading to check your class role (class/tutorial designer, breakout room, **tiny.cc/hamajoseph (http://tiny.cc/hamajoseph)**).

There is also a #ToDos announcement each week.

Grading Scheme: tiny.cc/hgradedwork (http://tiny.cc/hgradedwork)

- Before Reflection & Algorithm (15%)
- After Reflection & Algorithm (10%)
- MOU & Onboarding Part 1 & Part 2 (4%)
- Class Design (15%)
- Assignment 1 (15%)
- Assignment 2 (30%)
- Contribution To Class (5%)
- Generative AI Activities (6%)

Read details at tiny.cc/hgradedwork (http://tiny.cc/hgradedwork)

Prerequisites: CSC318H1; STA237H1/ STA247H1/ STA255H1/ STA257H1/ ECE302H1 (https://engineering.calendar.utoronto.ca/course/ece302h1) / STA286H1/ CHE223H1 (https://engineering.calendar.utoronto.ca/course/che223h1) / CME263H1 (https://engineering.calendar.utoronto.ca/course/cme263h1) / MIE231H1 (https://engineering.calendar.utoronto.ca/course/mie231h1) / MIE236H1 (https://engineering.calendar.utoronto.ca/course/mie236h1) / MSE238H1 (https://engineering.calendar.utoronto.ca/course/mse238h1) / ECE286H1 (https://engineering.calendar.utoronto.ca/course/ece286h1) ; CSC209H1/ proficiency in C or C++ or Java/ APS105H1 (https://engineering.calendar.utoronto.ca/course/aps105h1) / ESC180H1 (https://engineering.calendar.utoronto.ca/course/ece180h1) / CSC180H1

Corequisites: None

Exclusions: CSC428H5. NOTE: Students not enrolled in the Computer Science Major or Specialist program at A&S, UTM, or UTSC, or the Data Science Specialist at A&S, are limited to a maximum of 1.5 credits in 300-/400-level CSC/ECE courses.

Recommended Preparation: A course in PSY; (STA248H1/STA250H1/STA261H1)/(PSY201H1, PSY202H1)/(SOC202H1, SOC300H1)

Credit Value: 0.5

Distribution Requirements: Science

Breadth Requirements: The Physical and Mathematical Universes (5)

Program Area Section: Computer Science

Asking Questions & Support

1. Q-and-A discord channel: https://discord.com/channels/1149024854566252634/1199846247457099868 (https://discord.com/channels/1149024854566252634/1199846247457099868) Make sure to tag the TAs Andrii (@andrew2k), Zahra, and Joseph (@josephjaywilliams) so they see the message.
2. Email hciteaching@cs.toronto.edu (mailto:hciteaching@cs.toronto.edu) with questions specific to you or to set up office hours.
3. Fill out your availability for online (or in-person) study groups, office hours, Assignment Group Meetings at this link: tiny.cc/havailability (http://tiny.cc/havailability)

This will help people nominate times when anyone can jump onto a call (tiny.cc/hclasszoom (http://tiny.cc/hclasszoom)) for Study Groups, or meeting for Assignment Group Meetings (which helps save time). It will also help the TAs & Joseph schedule office hours to talk to you, or other meetings. For example, Joseph tried to meet very student at least once as part of a group.

Contact: (Email hciteaching@cs.toronto.edu (mailto:hciteaching@cs.toronto.edu) with questions not answered on Discord or to make appointments for office hours)

- Andrii Lenyshyn andrii.lenyshyn@mail.utoronto.ca (mailto:andrii.lenyshyn@mail.utoronto.ca) TA
- Zahra Hassanzadeh zahra.hassanzadeh@mail.utoronto.ca (mailto:zahra.hassanzadeh@mail.utoronto.ca) TA
- Joseph Jay Williams williams@cs.toronto.edu (mailto:williams@cs.toronto.edu) Instructor

Course Summary:

Date	Details	Due
Wed Sep 4, 2024	Week 1 #BeforeReflection&Algorithm (https://q.utoronto.ca/courses/354414/assignments/1342536)	due by 11am

Date	Details	Due
Fri Sep 6, 2024	Week 1 #AfterReflection&Algorithm (https://q.utoronto.ca/courses/354414/assignments/1313794)	due by 11am
Tue Sep 10, 2024	Week 2 #BeforeReflection&Algorithm Mon/Tue 11 am (https://q.utoronto.ca/courses/354414/assignments/1313806)	due by 11am
Fri Sep 13, 2024	Week 2 #AfterReflection&Algorithm Thu/Fri 11am (https://q.utoronto.ca/courses/354414/assignments/1313805)	due by 11am
Tue Sep 17, 2024	Week 3 #BeforeReflection&Algorithm (https://q.utoronto.ca/courses/354414/assignments/1313808)	due by 11am
Fri Sep 20, 2024	Week 3 #AfterReflection&Algorithm (https://q.utoronto.ca/courses/354414/assignments/1313807)	due by 11am
Tue Sep 24, 2024	Week 4 #BeforeReflection&Algorithm (https://q.utoronto.ca/courses/354414/assignments/1313810)	due by 11am
Wed Sep 25, 2024	Tiny.cc/hmoualgorithm (https://q.utoronto.ca/courses/354414/assignments/1313793)	due by 6pm
Fri Sep 27, 2024	Week 4 #AfterReflection&Algorithm (https://q.utoronto.ca/courses/354414/assignments/1313809)	due by 11am
Tue Oct 1, 2024	Week 5 #BeforeReflection&Algorithm (https://q.utoronto.ca/courses/354414/assignments/1313812)	due by 11pm
Fri Oct 4, 2024	Week 5 #AfterReflection&Algorithm (https://q.utoronto.ca/courses/354414/assignments/1313811)	due by 11am

Date	Details	Due
Tue Oct 8, 2024	Week 6 #Before-Reflection-Algorithm (https://q.utoronto.ca/courses/354414/assignments/1313814)	due by 11am
Wed Oct 9, 2024	Assignment 1 (https://q.utoronto.ca/courses/354414/assignments/1313773)	due by 6pm
Fri Oct 11, 2024	Week 6 #After-Reflection-Algorithm (https://q.utoronto.ca/courses/354414/assignments/1313813)	due by 11am
Tue Oct 15, 2024	Week 7 #BeforeReflection&Algorithm (https://q.utoronto.ca/courses/354414/assignments/1313776)	due by 11am
Fri Oct 18, 2024	Week 7 #AfterReflection&Algorithm (https://q.utoronto.ca/courses/354414/assignments/1313775)	due by 11am
Tue Oct 22, 2024	Week 8 #BeforeReflection&Algorithm (https://q.utoronto.ca/courses/354414/assignments/1313816)	due by 11am
Fri Oct 25, 2024	Week 8 #AfterReflection&Algorithm (https://q.utoronto.ca/courses/354414/assignments/1313815)	due by 11am
Tue Nov 5, 2024	Week 10 #BeforeReflection&Algorithm (https://q.utoronto.ca/courses/354414/assignments/1313796)	due by 11am
Fri Nov 8, 2024	Week 10 #AfterReflection&Algorithm (https://q.utoronto.ca/courses/354414/assignments/1313795)	due by 11am
Tue Nov 12, 2024	Week 11 #BeforeReflection&Algorithm (https://q.utoronto.ca/courses/354414/assignments/1313798)	due by 11am
Wed Nov 13, 2024	AI LLM ChatGPT Activity (8%) (https://q.utoronto.ca/courses/354414/assignments/1313772)	due by 6pm

Date	Details	Due
Fri Nov 15, 2024	Week 11 #AfterReflection&Algorithm (https://q.utoronto.ca/courses/354414/assignments/1313797)	due by 11am
Tue Nov 19, 2024	Week 12 #BeforeReflection&Algorithm (https://q.utoronto.ca/courses/354414/assignments/1313801)	due by 11am
Fri Nov 22, 2024	Week 12 #AfterReflection&Algorithm (https://q.utoronto.ca/courses/354414/assignments/1313799)	due by 11am
Tue Nov 26, 2024	Week 13 #BeforeReflection&Algorithm (https://q.utoronto.ca/courses/354414/assignments/1313804)	due by 11am
Wed Nov 27, 2024	#AMA-Joseph in tiny.cc/hamajoseph (https://q.utoronto.ca/courses/354414/assignments/1313767)	due by 5pm
	#Breakout-Discussion-Design (https://q.utoronto.ca/courses/354414/assignments/1313768)	due by 5pm
	#Tutorial-Reimagined-Design (https://q.utoronto.ca/courses/354414/assignments/1313770)	due by 5pm
	#Learning-Resources-Class-Design (https://q.utoronto.ca/courses/354414/assignments/1313769)	due by 6pm
Fri Nov 29, 2024	Week 13 #AfterReflection&Algorithm (https://q.utoronto.ca/courses/354414/assignments/1313803)	due by 11am
Tue Dec 3, 2024	Assignment 2 - Design, Explanation, Analysis & Interpretation of Randomized A/B Comparisons (or Final Project) (https://q.utoronto.ca/courses/354414/assignments/1313774)	due by 6pm

Date	Details	Due
Tue Dec 10, 2024	2% Bonus: (1) Attending Week 13 Final Class & (2) Week 13 #Before Reflection & (3) Week 13 #After Reflection. (https://q.utoronto.ca/courses/354414/assignments/1313771)	due by 6pm
	Contribution-To-Class (tiny.cc/hwriteownreference) (https://q.utoronto.ca/courses/354414/assignments/1313777)	due by 6pm
	Sign up for Meeting with Joseph: Helping You Wrap-Up Semester! (https://q.utoronto.ca/courses/354414/assignments/1313792)	
	Week 9 #ReadingWeek (https://q.utoronto.ca/courses/354414/assignments/1313817)	
	Week 9 #ReadingWeek (https://q.utoronto.ca/courses/354414/assignments/1313818)	
	WONT USE tiny.cc/hmoualgorithm (https://q.utoronto.ca/courses/354414/assignments/1313765)	
	Wrap-Up tiny.cc/hmoualgorithm (https://q.utoronto.ca/courses/354414/assignments/1313766)	