

Human Computer Interaction

UT-Austin iSchool Syllabus
Fall 2026

2026-08-28

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Description (from the catalog)

The history and importance of human-computer interaction (HCI), theories of HCI design, modeling of computer users and interfaces, empirical techniques for analyzing systems and interfaces, interface design, and styles of interaction. Emphasis on reviewing research papers, current works, and future directions in HCI research.

Details

Important note: The information presented in this syllabus is subject to expansion, contraction, change, or stasis during the semester. In case of conflict between versions, the copy on Canvas takes precedence.

Course Number

30790

Prerequisites

Graduate standing

Time

Th 1530–1830

Place

UTA-1.208

Canvas

<https://utexas.instructure.com/courses/1454788>

Dates

August 24–December 07, 2026

Final Exam

To Be Announced

Instructors

Valle Hansen, Mick McQuaid

Emails

valle.hansen@ischool.utexas.edu, mcq@utexas.edu

Office (Mick)

1616 Guadalupe St, Room 5.402

Office Hours

- Valle: by appointment on Zoom
- Mick: by appointment in my office or on Zoom at <https://utexas.zoom.us/my/mickmcquaid>

Academic Assistant

Yang Yu, yyds@utexas.edu

Materials

- Our lecture videos are required viewing and must be watched *before* the relevant class.
- Hornbæk et al. (2025) is the required textbook; it is available on Canvas for free or in hard copy from Oxford University Press
- Norman (2013) is not required but recommended; and is available online at [ut library link](#)
- Norman (2023) is not required but recommended; it is available online at [ut library link](#)

Learning Outcomes

The objective of this course is for students to learn fundamentals of human perception and cognition, to learn how to conduct user research, how to design, prototype and evaluate user interfaces. Students will learn user interaction design principles through theory and practice. At the end of this course you will be able to:

- understand the main concepts in human computer interaction;
- understand the fundamentals of human perception and cognition and their implications for user experience and interaction design;
- conduct research to learn about user needs and human uses of technology;
- undertake iterative and inexpensive user-centered design methods;
- design and prototype user interfaces;
- understand and apply interaction design guidelines;
- identify the strengths and weaknesses of interfaces and provide suggestions of how to improve them;
- perform basic user interface evaluation and usability testing;
- undertake further training and research in this area.

Class Format

This course takes a practical, applied, hands-on approach, based on the application of established best practices, principles, and proven methods to ensure a quality user experience. Our goal for you is to introduce you to the activities of the UX process and to give you the opportunity to gain some practical experience with them. You are exposed to each activity in several ways. First you read about it in the book, and the instructors will review the highlights in lecture videos. Then we will discuss topics in the class and conduct exercises illustrating them in class. Finally, you will apply your newly learned skills in a portfolio piece or pieces throughout the semester.

Schedule

Week 1 (27 Aug) Introduction — Overview — **Before class:** nothing this week — In class: introductions; discuss Norman (2023), Section 1, artificiality (optional) — **Exercises:** HCI

background questions (not graded)

Week 2 (3 Sep) People — Perception — Motor Control — Cognition — **Before class:** Read Hornbæk et al. (2025): Ch 1–5 — In class: discussion; discuss Norman (2023), Section II, meaningfulness (optional) — **Exercises:** Saliency and Fitts audit of a live interface (35 min) — Reverse-engineer an AI assistant’s mental model (40 min) — Greyscale and memory-load teardown (30 min)

Week 3 (10 Sep) People — Needs — Motivations — Experience — Collaboration — Communication — **Before class:** Read Hornbæk et al. (2025) Ch 6–9 — In class: discussion; discuss Norman (2023), Section III, sustainability (optional) — **Exercises:** Peak-end journey redesign (35 min) — Motivation and dark-pattern teardown (35 min) — AI conversation-partner audit (40 min)

Week 4 (17 Sep) User research — Interviews — Field Research — Surveys — **Before class:** Read Hornbæk et al. (2025) Ch 10–13 — In class: Guest speaker Taylor Arndt, Techopolis; discussion; discuss Norman (2023), Section IV, humanity-centric (optional) — **Exercises:** Question teardown and rebuild (35 min) — Watch, don’t ask: a 12-minute contextual inquiry (35 min) — Method-match for an AI feature (40 min)

Week 5 (24 Sep) User research — Unobtrusive research — Representations — **Before class:** Read Hornbæk et al. (2025) Ch 14, 15 — In class: Guest speaker Hanna Melo Fugulin, American Foundation for the Blind; discussion; discuss Norman (2023), Section V, human behavior (optional) — **Exercises:** Diagnose the inference gap (35 min) — Audit an AI-generated persona (40 min) — From scenario to task model to a testable requirement (40 min)

Week 6 (01 Oct) Interaction — Information and control — Dialogue — Tool use — Automation — Rationality — Practice — **Before class:** Read Hornbæk et al. (2025) Ch 16–22 — In class: Guest speaker Daniel Pogue, ExxonMobil; discussion; discuss Norman (2023), Section VI, action (optional) — **Exercises:** Diagnose one failure through six lenses (35 min) — Put a number on the channel (15 min) — Audit an AI agent’s authority and evaluation gulf (40 min)

Week 7 (08 Oct) User interfaces — Input devices — Displays — Interaction techniques — Commands and navigation — Graphical user interfaces — Reality-based interaction — **Before class:** Read Hornbæk et al. (2025) Ch 23–29 — In class: discussion — **Exercises:** One task, four interaction styles (35 min) — Move it off the screen (35 min) — Crutch or running shoe: audit an AI interface’s directness (40 min)

Week 8 (15 Oct) Design — Design cognition — Design practice — Design processes — **Before class:** Read Hornbæk et al. (2025) Ch 30–33 — In class: discussion — **Exercises:** Sketch until it hurts (35 min) — Run a crit (40 min) — Does the model fixate too? (40 min)

Week 9 (22 Oct) Engineering — Systems — Design engineering — **Before class:** Read Hornbæk et al. (2025) Ch 34–36 — In class: discussion — **Exercises:** Raise the abstraction (35 min) — Map the system around the interface (40 min) — Score the concepts, then break the score (40 min)

Week 10 (29 Oct) Engineering — Safety and risk — Software — Computational representations and models — **Before class:** Read Hornbæk et al. (2025) Ch 37–39 — In class: discussion — **Exercises:** Fault-tree an interface (35 min) — What does undo mean here? (35 min) — Optimize a menu, then argue with the optimum (40 min)

Week 11 (05 Nov) Evaluation — Analytical evaluation methods — Think-aloud studies — **Before class:** Read Hornbæk et al. (2025) Ch 40–42 — In class: discussion — **Exercises:** Heuristic evaluation showdown (35 min) — Two methods and a flow: cognitive walkthrough + think-aloud (40 min) — AI interface audit (40 min)

Week 12 (12 Nov) Evaluation — Experiments — **Before class:** Read Hornbæk et al. (2025) Ch 43 — In class: discussion — **Exercises:** From question to test, and back (35 min) — Break the assumptions (40 min) — Audit an AI’s statistical advice (40 min)

Week 13 (19 Nov) Evaluation — Field studies — **Before class:** Read Hornbæk et al. (2025) Ch 44 — In class: discussion — **Exercises:** From lab test to field study (35 min) — Design a pilot for a half-built system (35 min)

Fall Break

Week 14 (03 Dec) Conclusion — **Exercises:** Exit reflection (not graded)

Grading

The grading scale used along with the grade components follow.

Table 1: Scores are not rounded

letter grade		lower bound			upper bound
A	>=	94.0%			
A-	>=	90.0%	&	<	94%
B+	>=	87.0%	&	<	90%
B	>=	83.0%	&	<	87%
B-	>=	80.0%	&	<	83%
C+	>=	77.0%	&	<	80%
C	>=	73.0%	&	<	77%
C-	>=	70.0%	&	<	73%
D	>=	60.0%	&	<	70%
F				<	60%

Project: 7 milestones

Students pick one small, self-contained feature in an app they already use and redesign it, but the problem they fix has to be tied to a specific concept from the textbook (e.g., Fitts’s law, feedback, cognitive load) with a sentence of evidence of the problem statement. They work inside the app’s existing design system and produce several materially different solutions, tradeoffs, a clickable prototype, and a quick evaluation.

We will present you with challenges from management during your project. These will be constraints you will have to react to without advance notice. Examples of such constraints might be “it needs to be completed in 2 weeks with 1 engineer” or “Product Management has said that your solution can’t touch any other parts of the app” or similar.

By *materially different* we mean 4–5 materially different solutions where *materially different* means the solutions differ in the substance of the approach, solving a problem in genuinely different ways, rather than in how the approach looks or is styled.

All milestones are due at 2359 Central on the date shown.

- Milestone 1: Topic selection and problem statement, due 10 Sep, 5%
- Milestone 2: Usage research data elicitation and analysis, due 01 Oct, 10%
- Milestone 3: Brainstorming designs, due 15 Oct, 10%
- Milestone 4: Design selection, due 22 Oct, 10%
- Milestone 5: Prototype (wireframes + pilot test), due 05 Nov, 10%
- Milestone 6: Evaluation, due 19 Nov, 15%
- Milestone 7: Final report, due 07 Dec, 15%

Individual work: ongoing assignments

- Reading assignments and participation in online discussions on Canvas, 5%
- Assignment 1: Design critiques, 5%
- Assignment 2: Final reflections + lessons learned, 5%
- Attendance 10%

Reading assignments

You are responsible for keeping up with readings in the book per the schedule given in the course schedule/calendar. All assigned readings are to be done before a class meeting (except our first meeting, of course). You are required to post at least one discussion question relevant to the assigned weekly reading on the designated Canvas discussion area (please note there may be more than one topic per week) and respond to at least one question posted by another student. Your questions should be in depth and sufficiently detailed to demonstrate that you read the assigned material (and not just skimmed it). Questions should not be too short (e.g., <10 words) or too long (e.g., > 200 words; these numbers are just rough guidelines). Questions should show your critical analysis of each reading and should not be superficial. Any student, TA or an instructor may post responses to online questions. The deadline for posting questions is Monday evening 10pm *before* the class meeting time. Be prepared to discuss your questions during class meeting. Responses should be posted by noon the day before class.

Design Critiques

In the second half of the semester, every student will be asked to present design critiques of work done by other students in class.

The project grading process

The instructors grade your submissions together. You will be working under somewhat varying conditions, reflecting various real-world situations, and some of the constraints we hand you mid-project will be harder than others. We grade your response to the situation you were given, not your work against your classmates'. The emphasis in this class is on the process, and your deliverables are graded from that perspective.

Grading has two parts, and they work differently on purpose.

Part one: the completeness check

First we check whether the submission is all there. Did you turn in every component the assignment asked for? Are the files named and formatted as specified, the figures labeled, the sources cited, the prose proofread?

This part is mechanical. We are not exercising judgment here, we are reading a list. Meeting these expectations earns you nothing, because they are the floor rather than the work. Missing them costs you. A submission that omits a required component, or that is careless enough that we have to work to figure out what you turned in, loses up to 10% of that milestone's points before we look at the substance at all. If a required component is missing entirely, we cannot assess it, and it is scored as missing.

Part two: the quality assessment

Everything else is judgment, and that is where most of your grade comes from. We are not going to give you a rubric.

That is deliberate. In the work you are preparing for, no one hands a designer a scoring sheet before a design review. Your work gets evaluated by experienced people, against the problem you claimed to be solving, in a conversation where you have to be able to hold your own. A rubric would invite you to optimize for the rubric, and rubric-optimal design work is a recognizable genre: it satisfies every stated requirement and helps nobody. We would rather grade the thing itself, and we would rather you spend the semester learning to make defensible choices than learning to fill boxes.

What we can tell you is what we are asking ourselves as we read. These are questions, not criteria. They are not weighted, not exhaustive, and not all of them apply to every milestone.

- Is the problem real, and did you show us that it is rather than assert it?
- Is the concept from the course doing actual work in your analysis, or is it a label applied after the fact?
- Are your alternatives genuinely different approaches, or one idea in several guises?
- Did you choose among them for reasons, and are those reasons ones a colleague could argue with?
- Does the prototype let us see the idea, or does it hide it?
- Did your evaluation have the capacity to tell you that you were wrong?
- Did you respond to the constraint you were handed, or route around it?

- Could a reader who was not in the room follow your reasoning from the problem to the decision?

The mark of strong work is that we learn something from reading it: we finish with a clearer view of the problem than we had at the start.

Judgment means the number is not a quantity you can reverse-engineer, and that two experienced readers can land in different places. That discomfort is part of the training. What discretion does not mean is that we grade on how hard you appear to have worked, on whether we share your taste, or on where your work falls in a ranking of the class.

How we keep it consistent

We read a sample of each milestone together before assigning any grades on it, discuss what we are seeing, and settle on where the line falls that time. We then grade independently and confer on any submission we disagree about.

Every milestone comes back with written comments that explain the judgment. The comments are the feedback. The number is a summary of them, and it is the less informative of the two.

Course policies

Attendance

We will take attendance every day and attendance will count for one tenth of your total grade.

If you have a legitimate need for absence, such as illness or job interview, notify the instructors by email as soon as possible and you may receive an excused absence.

POLICIES

For a list of important university policies and helpful resources that you may need as you engage with and navigate your courses and the university, see the [University Policies and Resources for Students](#) Canvas page. The page includes important safety information including the policy on carrying of handguns on campus, the language of the University Honor Code, Title IX legal requirements for Texas employees, and information about how to receive support through the office of Disability & Access, tutoring services, the Counseling and Mental Health Center, University Health Services, and other resources.

Important Note: The policies of the University are undergoing change. The following *may* be superseded by the policies at <https://utexas.instructure.com/courses/1377522>, which is a Canvas course containing the honor code which you *must* adhere to, as well as much of the following information. A better URL may be <https://utexas.instructure.com/enroll/TP964H> if for some reason you are not enrolled in the site.

Attendance

All concerns about attendance recording must be resolved within 72 hours of the class session in question. In other words, you can't come to the instructor weeks later and insist you were present on such-and-such a day.

Assignment Submission

All assignments must be submitted via Canvas. No assignment should be submitted via email. Any assignment submitted via email will receive a grade of zero. It may be tempting to try to submit assignments via email when you have trouble with Canvas but the correct response is to contact tech support and resolve the problem with Canvas.

Extra credit and grade rounding

There is no extra credit available in this class and grades are not rounded. You receive exactly the letter grade corresponding to the score you achieve.

Disability and Access

The university is committed to creating an accessible and inclusive learning environment consistent with university policy and federal and state law. Please let me know if you experience any barriers to learning so I can work with you to ensure you have equal opportunity to participate fully in this course. If you are a student with a disability, or think you may have a disability, and need accommodations please contact Disability and Access (D&A). Please refer to D&A's website for contact and more information: <http://community.utexas.edu/disability/>. If you are already registered with D&A , please deliver your Accommodation Letter to me as early as possible in the semester so we can discuss your approved accommodations and needs in this course.

Policy on Academic Integrity

Students who violate University rules on academic misconduct are subject to the student conduct process and potential disciplinary action. A student found responsible for academic misconduct may be assigned both a status sanction and a grade impact for the course. The grade impact could range from a zero on the assignment in question up to a failing grade in the course. A status sanction can range from probation, deferred suspension and/or dismissal from the University. To learn more about academic integrity standards, tips for avoiding a potential academic misconduct violation, and the overall conduct process, please visit the Student Conduct and Academic Integrity website at: <http://deanofstudents.utexas.edu/conduct>.

Class Recordings

[HOP 2-9970](#) prohibits students from recording class instruction (audio or video) unless a student obtains the instructor's permission or Disability & Access has approved audio recording as an accommodation.

Official class recordings are reserved only for students in this class for educational purposes and are protected under FERPA. The recordings should not be shared outside the class in any form. Violation of this restriction by a student could lead to Student Misconduct proceedings.

Artificial intelligence

In accordance with the University's Institutional Rules on Student Services and Activities, Chapter 11, students accept the responsibility to always uphold academic integrity and an honor code reflective of a scholarly community devoted to academic and personal success. All members of the University community are fully accountable and responsible for any output they produce as part of academic work. They are also responsible for following the guidance specified in the [Texas Statement on Academic Integrity](#) and avoiding prohibited uses of generative AI tools outlined in the Information Security Office's guidance on [Acceptable Use of Generative AI Tools](#).

In this course, generative AI use is partially permitted.

Generative AI use is permitted for academic work in this course, provided that students 1) use AI [responsibly](#), 2) practice discernment and conduct meaningful human review of any output generated by AI, and 3) properly disclose use according to the disclosure policies in this syllabus. Using generative AI tools without proper adherence to the disclosure policy in this course, even when AI use is permitted, may constitute academic misconduct under UT Austin's Institutional Rules and may be referred to Student Conduct and Academic Integrity in the Office of the Dean of Students for resolution.

The creation of artificial intelligence tools for widespread use is an exciting innovation. These tools have both appropriate and inappropriate uses in classwork. The use of artificial intelligence tools (such as ChatGPT) in this class is permitted for take-home activities (except sketchbooks) but must be documented. Usually, you should include a lengthy disclaimer at the end of the assignment as a separate paragraph telling which generative AI tool was used, e.g., ChatGPT, and what it was used for. Failure to document will be considered a cheating offense, punishable under the rules for academic integrity. The disclaimer must be specific and thorough. A brief, vague statement will not be considered sufficient. ***The easiest way to comply with this requirement is to copy and paste your chat history as an appendix.*** This includes both successful and unsuccessful prompts. I really mean your entire chat history here.

There may be certain cases where you are *not* permitted to use generative AI for in-class activities. These will be announced.

Personal Pronouns

Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with differences of race, culture, religion, politics, sexual orientation, gender identity & expression, and nationalities. Class rosters are provided to the instructor with the student's legal name, unless they have added a "chosen name" with the registrar's office, which you can do so here: https://utdirect.utexas.edu/apps/ais/chosen_name/. I will gladly honor your request to address you by a name that is different from what appears on the official roster, and by the pronouns you use (she/he/they/ze, etc). Please advise me of any changes early in the semester so that I may make appropriate updates to my records. For instructions on how to add your pronouns to Canvas, visit <https://utexas.instructure.com/courses/633028/pages/profile-pronouns>. More resources are available on the Women's Community Center website, <https://community.utexas.edu/wcc/>.

Basic Needs Security

Any student who faces challenges securing their food or housing and believes this may affect their performance in the course is urged to contact the Dean of Students for support. UT maintains the UT Outpost (<https://deanofstudents.utexas.edu/emergency/utoutpost.php>) which is a free on-campus food pantry and career closet. Furthermore, please notify the professor if you are comfortable in doing so. This will enable him to provide any resources that he may possess.

Mental Health Information

Students who are struggling for any reason and who believe that it might impact their performance in the course are urged to reach out to Bryce Moffett if they feel comfortable. This will allow her to provide any resources or accommodations that she can. If immediate mental health assistance is needed, call the Counseling and Mental Health Center (CMHC) at 512-471-3515 or you may also contact Bryce Moffett, LCSW (iSchool CARE counselor) at 512-232-4449. Bryce's office is located in FAC18S and she holds drop in Office Hours on Wednesday from 2-3pm. For urgent mental health concerns, please contact the CMHC 24/7 Crisis Line at 512-471-2255. There's a short video of Bryce Moffett explaining what she does at <https://ischool.utexas.edu/people/care-counselor>

Carrying of Handguns on Campus

Students in this class should be aware of the following university policies related to Texas' Open Carry Law: Students in this class who hold a license to carry are asked to review the [university policy regarding campus carry](#).

- Individuals who hold a license to carry are eligible to carry a concealed handgun on campus, including in most outdoor areas, buildings and spaces that are accessible to the public, and in classrooms.

- It is the responsibility of concealed-carry license holders to carry their handguns on or about their person at all times while on campus. Open carry is NOT permitted, meaning that a license holder may not carry a partially or wholly visible handgun on campus premises or on any university driveway, street, sidewalk or walkway, parking lot, parking garage, or other parking area.
- Per my right, I prohibit carrying of handguns in my personal office. Note that this information will also be conveyed to all students verbally during the first week of class. This written notice is intended to reinforce the verbal notification, and is not a “legally effective” means of notification in its own right.

LGBTQIA+ Community

As an institution committed to creating a safe and inclusive learning environment, The University of Texas at Austin strictly prohibits discrimination, harassment, or marginalization based on sexual orientation or gender identity under Title IX. If you encounter any discrimination or harassment, please seek support from the Title IX office.

If you experience any form of discrimination or harassment, please contact the Title IX office for support. If you do not wish to contact the UT Title IX office, you may view confidential community resources at <https://titleix.utexas.edu/community-resources-confidential>.

I am committed to creating a safe and inclusive learning environment for all students. This includes fostering an environment of respect, openness, and understanding in the classroom and actively working to address any discrimination or harassment that may occur. If you wish to display your pronouns on your Canvas page, you can find a guide here: <https://utexas.instructure.com/courses/633028/pages/profile-pronouns>. Furthermore, you can include a “preferred name” by viewing the following link to class rosters, which come with the student’s legal name (unless an addition of a preferred name is made): https://utdirect.utexas.edu/apps/ais/chosen_name/.

TITLE IX DISCLOSURE

Beginning January 1, 2020, Texas Education Code, Section 51.252 (formerly known as Senate Bill 212) requires all employees of Texas universities, including faculty, to report to the Title IX Office any information regarding incidents of sexual harassment, sexual assault, dating violence, or stalking that is disclosed to them. Texas law requires that all employees who witness or receive information about incidents of this type (including, but not limited to, written forms, applications, one-on-one conversations, class assignments, class discussions, or third-party reports) must report it to the Title IX Coordinator. Before talking with me, or with any faculty or staff member about a Title IX-related incident, please remember that I will be required to report this information.

Although graduate teaching and research assistants are not subject to Texas Education Code, Section 51.252, they are mandatory reporters under federal Title IX regulations and are required to report a wide range of behaviors we refer to as sexual misconduct, including the types of misconduct covered under Texas Education Code, Section 51.252. Title IX of the Education Amendments of 1972 is a federal civil rights law that prohibits discrimination on the basis of

sex – including pregnancy and parental status – in educational programs and activities. The Title IX Office has developed supportive ways and compiled campus resources to support all impacted by a Title IX matter.

If you would like to speak with a case manager, who can provide support, resources, or academic accommodations, in the Title IX Office, please email: supportandresources@austin.utexas.edu. Case managers can also provide support, resources, and accommodations for pregnant, nursing, and parenting students.

For more information about reporting options and resources, please visit: <https://titleix.utexas.edu>, contact the Title IX Office via email at: titleix@austin.utexas.edu, or call 512-471-0419.

References

Hornbæk, Kasper, Per Ola Kristensson, and Antti Oulasvirta. 2025. *Introduction to Human-Computer Interaction*. Oxford University Press. <https://doi.org/10.1093/oso/9780192864543.001.0001>.

Norman, Donald A. 2013. *The Design of Everyday Things, 2nd Edition*. Basic Books.

Norman, Donald A. 2023. *Design for a Better World*. MIT Press.