

HCDE 501 A Su 22: Theoretical Foundations Of Human Centered Design And Engineering

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Content by Kristin Dew, PhD & Mark Zachry, PhD

Meets Tuesdays 6-9:50pm (at the very latest) in Denny 112 and online as noted below in the course schedule.

Class Zoom link for remote days: <https://washington.zoom.us/j/96929003977> ↗ <https://washington.zoom.us/j/96929003977>

Instructor:

Kristin N. Dew, PhD: kndew@uw.edu (<mailto:kndew@uw.edu>)

Office hours at the end of class & by appointment: <https://washington.zoom.us/my/kndew> ↗ <https://washington.zoom.us/my/kndew>

TA:

Michael W. Beach, PhD Candidate: mwb8@uw.edu (<mailto:mwb8@uw.edu>)

Office hours by appointment: <https://washington.zoom.us/j/7683873484> (<https://washington.zoom.us/j/7683873484>)

Slack: (Join link below)

https://join.slack.com/t/hcde501su22/shared_invite/zt-1bcs5p6fk-RbXQA8tT5tP0XQ5dCaiWcA ↗ https://join.slack.com/t/hcde501su22/shared_invite/zt-1bcs5p6fk-RbXQA8tT5tP0XQ5dCaiWcA

During this course, you will need access to our class syllabus and content on the UW Canvas system. Please double-check you have access and notifications turned on so that you receive reminders and announcements.

COVID policies: This course has been redesigned as a "flipped classroom" hybrid with pre-recorded lectures, pre-class readings and pre-class journal entries to leverage more asynchronous work and keep class time focused on small group breakout discussions and project work time. Class sessions are synchronous and there will only be a Zoom-in option for emergencies; you are expected to notify the instructional team if you are not able to attend an in person session. Online sessions will be recorded.

If you are sick in any way or have a known COVID exposure and symptoms, please let the instructor know you need to miss class, stay home, and catch up the old-fashioned way by checking in with classmates and office hours on what you've missed.

Description:

This course will introduce you to major theoretical perspectives from our field and prepare you to translate and apply scholarly work to your professional practice. By reading, writing about, illustrating, and discussing this material, you will have an opportunity to explore the complexities of interaction, communication, and technology as they are considered through influential theoretical lenses. This exploration will include: how interaction has been defined in different ways and why these differences matter to people who study and produce research and design work. The role of this course, and your contributions to it, is to learn how to translate theories as conceptual tools for professional design and research practice. In doing so, you will also be gaining practice in framing design and research problems in different ways, a skill that is essential to problem-solving as professionals.

By the end of the course, you should be able to:




- Define and map key differences among the major theories that are influential in our field.
- Explain and illustrate the implications of some of these theories on our perception of what interfaces, interactions, and other designed artifacts are, as well as how they function in human activity, organizations, and society at large: for example, to transfer information, create experiences, regulate conduct, and shape diverse identities.
- Explain and illustrate the implications of some of these theories for people conducting research (e.g. problem framing, selecting appropriate methods).
- Explain and illustrate the implications of some of these theories for professionals in design (e.g. problem framing, translating research into implications for design).





Please note that changes may be made to the class calendar, particularly given the need to remain flexible in current circumstances. When changes are made, they will be announced in class and on Canvas. It is your responsibility to ensure your Canvas notifications are turned on and to ask questions if you think you missed something. Please plan to attend all class sessions.

We strive to make this classroom experience accessible. Our assignments may have audio and non-text components. Because everyone's full participation is critical, assignments must be submitted in a format that is accessible to all of your colleagues in the class; in other words, someone should be able to review your work either only visually or only via audio and understand the pertinent information. For presentations, please use presentation tools with captioning, e.g. Google Slides in Chrome, and ensure key visual elements are described to the audience. This guide can come in handy if you're unsure how to make presentations more accessible. <https://www.sigaccess.org/welcome-to-sigaccess/resources/accessible-presentation-guide/> ↗ <https://www.sigaccess.org/welcome-to-sigaccess/resources/accessible-presentation-guide/>


Schedule:

Dates	Topics	Assigned Readings and Due Dates
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6/21	Online session: Course overview, what is theory in HCI, and what is our role as "translators" in HCI?	<p>Skim before class if possible. There will be time in class to read this week's readings & watch the first lecture:</p> <ul style="list-style-type: none"> Skim Carroll. "Human Computer Interaction (HCI)." http://interaction-design.org/encyclopedia/human_computer_interaction_hci.html ↗ (http://interaction-design.org/encyclopedia/human_computer_interaction_hci.html) Closer read of Colusso et al. "A Translational Science Model for HCI." (https://canvas.uw.edu/courses/1573741/files/folder/Readings?&id=2889aa29-e0b3-469b-9e79-adbb01177c6e) Rogers. HCIT, Chapters 1-3 ↗ (https://alliance-primo.hosted.exlibrisgroup.com/permalink/f/kjtuig/CP71230261570001451) Kaptelinin & Nardi. "Do We Need Theory in Interaction Design?" (https://canvas.uw.edu/courses/1573741/files/folder/Readings?&id=2889aa29-e0b3-469b-9e79-adbb01177c6e) Lecture recording ↗ (https://uw.hosted.panopto.com/Panopto/Pages/Viewer.aspx?id=2889aa29-e0b3-469b-9e79-adbb01177c6e) DUE: Reading journal 1 (https://canvas.uw.edu/courses/1573741/discussion_topics/7315712)
6/28	In person session (Denny 112): From first wave to second (from cognition to context): Distributed Cognition	<ul style="list-style-type: none"> Rogers. HCIT, Chapters 4 & 5 ↗ (https://alliance-primo.hosted.exlibrisgroup.com/permalink/f/kjtuig/CP71230261570001451) Hollan, Hutchins, & Kirsh. "Distributed Cognition." (https://canvas.uw.edu/courses/1573741/files/92613916/download) Extra video on task-based d cog analysis (optional): https://www.youtube.com/watch?v=lcToz4VxH04 ↗ (https://www.youtube.com/watch?v=lcToz4VxH04)  <p>https://www.youtube.com/watch?v=lcToz4VxH04</p> <ul style="list-style-type: none"> Lecture recording week 2 ↗ (https://uw.hosted.panopto.com/Panopto/Pages/Viewer.aspx?id=41b5010c-2a67-4cb4-8512-adc2013bf) DUE: Reading journal 2 (https://canvas.uw.edu/courses/1573741/discussion_topics/7315713)
7/5	Online session: Interaction in context: Activity Theory	<ul style="list-style-type: none"> Kaptelinin & Nardi, "Activity Theory in HCI." ↗ (https://www.interaction-design.org/literature/book/the-encyclopedia-of-human-computer-interaction) PDF Link (https://canvas.uw.edu/courses/1573741/files/92613967/preview). (It's a saved PDF of the page). Mwanza's practice-oriented methodology: http://oro.open.ac.uk/11804/1/Daisy_Japan_Interact_2001.pdf ↗ (http://oro.open.ac.uk/11804/1/Daisy_Japan_Interact_2001.pdf) <ul style="list-style-type: none"> SKIM related Engestrom article. "Activity Theory as a Framework for Analyzing and Redesigning Work." (https://canvas.uw.edu/courses/1573741/files/92613967/preview) <ul style="list-style-type: none"> See video: https://www.youtube.com/watch?v=jP2v6pzhCQw ↗ (https://www.youtube.com/watch?v=jP2v6pzhCQw) SKIM Bødker, S. (1990). "Activity theory as a challenge to systems design." (https://canvas.uw.edu/courses/1573741/files/92613967/preview) SKIM Baumer & Tomlinson's example. "Comparing Activity Theory with Distributed Cognition for Video Analysis: Beyond "Activity Theory"" (https://canvas.uw.edu/courses/1573741/files/92613967/preview) Lecture recording week 3 ↗ (https://uw.hosted.panopto.com/Panopto/Pages/Viewer.aspx?id=a32528d2-1b8e-4fd0-a9e0-adc9015e8) DUE: Reading journal 3 (https://canvas.uw.edu/courses/1573741/discussion_topics/7315714)
7/12	In person session: Understanding communities & organizations: Social & behavioral psychology	<ul style="list-style-type: none"> Resnick & Kraut. "Introduction to Building Successful Online Communities." (https://canvas.uw.edu/courses/1573741/files/92613931/download) Beenen et al. "Using social psychology to motivate contributions to online communities." (https://canvas.uw.edu/courses/1573741/files/92613931/download) Example: Twitch's updated Hateful Conduct & Harassment Policy ↗ (https://blog.twitch.tv/en/2020/12/09/introducing-our-new-hateful-conduct-and-harassment-policy/) Lecture recording week 4 ↗ (https://uw.hosted.panopto.com/Panopto/Pages/Viewer.aspx?id=1b881fd6-9b9b-4656-8f0c-add00123e5) DUE: Reading journal 4 (https://canvas.uw.edu/courses/1573741/discussion_topics/7315715) <p>https://canvas.uw.edu/courses/1573741/discussion_topics/7315715</p>
7/19	Online session: Practice theory	<ul style="list-style-type: none"> Kuutti & Bannon. "The turn to practice in HCI." (https://canvas.uw.edu/courses/1573741/files/92613931/download) Supplemental videos: <p>A short animation:</p> <p>https://www.youtube.com/watch?v=RPvW98ZXVPU&t=5s (https://www.youtube.com/watch?v=RPvW98ZXVPU&t=5s)</p>  <p>https://www.youtube.com/watch?v=RPvW98ZXVPU&t=5s</p> <p>A nice short summary of practice theory as it relates to accessibility:</p> <p>https://www.youtube.com/watch?v=GgV-BGV0zrE (https://www.youtube.com/watch?v=GgV-BGV0zrE)</p> 

		 <p>https://www.youtube.com/watch?v=GgV-BGV0zrE</p> <p>A longer lecture from notable practice scholar Elizabeth Shove, who works in sustainability and innovation: https://youtu.be/-pd1PIPtAUs?t=1 ↗ https://youtu.be/-pd1PIPtAUs?t=1</p>  <p>https://youtu.be/-pd1PIPtAUs?t=1</p> <ul style="list-style-type: none"> • Week 5 lecture recording Part 1 ↗ https://uw.hosted.panopto.com/Panopto/Pages/Viewer.aspx?id=bf4dc935-af43-4ea2-9540-add7 • Week 5 lecture recording Part 2 ↗ https://uw.hosted.panopto.com/Panopto/Pages/Viewer.aspx?id=8d1b2e22-1a76-4012-8c0b-add7 • DUE: Reading journal 5 (https://canvas.uw.edu/courses/1573741/discussion_topics/7315719)
7/26	Moved online due to heat: Blurring boundaries between "technology" and "society": Sociomateriality	<ul style="list-style-type: none"> • Orlikowski. "Sociomaterial Practices." (https://canvas.uw.edu/courses/1573741/files/92613926/download) • Scott & Orlikowski. "Great Expectations: The Materiality of Commensurability in Social Media." (https://canvas.uw.edu/courses/1573741/files/92613926/download) <ul style="list-style-type: none"> ◦ Also available via UW Library ↗ https://alliance-primo.hosted.exlibrisgroup.com/primo-explore/fulldisplay?docid=TN_cdi_oup_oso_acprof_9780199664054_chapter_6&context=PC&vid=UW&lang=en_US&search_scope=all&adaptor=primo • Extra example: Barrett. "The Blurred Lines & Closed Loops of Google Search." ↗ https://www.wired.com/story/blurred-lines-c • Extra example of AirSpace: https://www.theverge.com/2016/8/3/12325104/airbnb-aesthetic-global-minimalism-startup-genti • Optional video reviewing Orlikowski in particular: https://www.youtube.com/watch?v=leeJuNcsVsY&t=924s ↗ https://www.youtube.com/watch?v=leeJuNcsVsY&t=924s  <p>https://www.youtube.com/watch?v=leeJuNcsVsY&t=924s</p> <ul style="list-style-type: none"> • Week 6 lecture recording ↗ https://uw.hosted.panopto.com/Panopto/Pages/Viewer.aspx?id=4743ac98-ad5c-4705-a3c8-addc0150a1 • DUE: Reading journal 6 (https://canvas.uw.edu/courses/1573741/discussion_topics/7315716)
8/2	Online session: Accounting for power & difference: Critical theory	<ul style="list-style-type: none"> • Bardzell. "Feminist HCI: Taking Stock & Outlining an Agenda for HCI." (https://canvas.uw.edu/courses/1573741/files/92613968/download) • Ogbonnaya-Ogburu et al. "Critical Race Theory in HCI." (https://canvas.uw.edu/courses/1573741/files/92613893/download) • Kumar & Karusala. "Intersectional Computing" ↗ https://alliance-primo.hosted.exlibrisgroup.com/permalink/f/1vbsh/TN_cdi_proc • SKIM Im et al. "Yes: Affirmative Consent as a Theoretical Framework for Understanding & Imagining Social Platforms" ↗ https://www.youtube.com/watch?v=hziR6-ulcp4 • Video (featuring HCDE PhD student Rebecca Michelson!) demonstrating how to adopt feminist concerns in a design research project: https://www.youtube.com/watch?v=hziR6-ulcp4 ↗ https://www.youtube.com/watch?v=hziR6-ulcp4  <p>https://www.youtube.com/watch?v=hziR6-ulcp4</p> <ul style="list-style-type: none"> • Week 7 lecture recording ↗ https://uw.hosted.panopto.com/Panopto/Pages/Viewer.aspx?id=abf578de-3a0f-46c3-9f33-ade30168929 • DUE: Reading journal 7 (https://canvas.uw.edu/courses/1573741/discussion_topics/7315718) • DUE: Technology connections presentations (https://canvas.uw.edu/courses/1573741/assignments/7405535)
8/9	In person session: Decentering the human: Posthumanism	<ul style="list-style-type: none"> • Forlano. "Posthumanism & Design." (https://canvas.uw.edu/courses/1573741/files/92613932/download) • Frauenberger. "Entanglement HCI: The next wave?" (https://canvas.uw.edu/courses/1573741/files/92613960/download) • Flynn. "Advocate: Reshaping the Smart Home with a River as the Primary Stakeholder." ↗ https://medium.com/designing-fl • Optional video by Liu et al.: "Design for Collaborative Survival" ↗ https://www.youtube.com/watch?v=Z53d1WCVsxM • Week 8 lecture recording ↗ https://uw.hosted.panopto.com/Panopto/Pages/Viewer.aspx?id=1cdb8183-dd86-4d91-972c-adea0136c • DUE: Reading journal 8 - no peer responses due (https://canvas.uw.edu/courses/1573741/discussion_topics/7315717)
8/16	Online session: Final essay workshop	<ul style="list-style-type: none"> • DUE in class: Draft of final paper for peer review/workshop; (https://canvas.uw.edu/courses/1573741/assignments/7405533)_final

Policies:

Attendance	Contributing to class discussions regularly will help you succeed in this course and is key to your colleagues' experience. In class, we will discuss texts that will help you complete the major assignments for this class. In online discussion forums, you will interact with others in the class to advance your mutual understanding of ideas introduced in the assigned readings. If you must miss class due to illness or emergency, please contact the instructional team prior to or as soon as possible after your absence. While we will not take attendance per se, your contributions to the class will be considered when calculating your final grade such that students who made exceptional contributions to class discussion may receive a bump up if they are on the cusp of a higher grade.
Late Assignments	Discussion postings and other assignments that are late may receive a 10% per day penalty, but we remain committed to being flexible in the current context. If you have extenuating circumstances, please reach out BEFORE missing the deadline for an extension so we can work out alternative arrangements.
Participation	On several occasions you will be responsible for reporting information to the class. You will also be participating in class workshops, during which you should contribute to your peers' work. Active participation in class discussions will help you develop the knowledge you will need to successfully complete this course.
Assignment Quality	As a graduate student, you should produce polished work for the major assignments that reflect the highest standards of professional communication. You should produce documents with few errors (grammar, mechanics, etc.) that you would be proud to share to public channels (e.g. Medium).
Reading	You are responsible for reading all of the material identified on the course schedule. It is your responsibility to develop graduate level scholarly practices like taking notes, raising questions, and debating ideas with your colleagues.
Collaboration	This quarter, you will be asked to contribute to the success of your colleagues' projects by providing them with feedback on their works-in-progress and their thinking. You may also be collaborating with colleagues on some assignment work.
Plagiarism	<p>The assignments you complete for this class must be your own, original scholarly work. That is, <i>all</i> of the text and images in your assignments must be your own writing/creation unless you appropriately use quotation marks and standard attribution techniques; if it isn't your original idea or creation, cite it. Please consult the related department guidelines for additional information about academic conduct and plagiarism:</p> <p>http://www.hcde.washington.edu/policies/plagiarism-and-academic-conduct </p> <p>(http://www.hcde.washington.edu/policies/plagiarism-and-academic-conduct)</p>
Grades	<p>Final grades for this course will be reported using the standard grading system of the University of Washington: https://grad.uw.edu/policies-procedures/graduate-school-memoranda/memo-19-grading-system-for-graduate-students/</p> <p>A 99% or above is assigned a 4.0; 60% corresponds to a grade point of 0.7. Numerical grades are equivalent to letter grades as shown below. You must satisfactorily complete <i>all</i> assignments to earn a passing grade in this course.</p> <p>3.9 - 4.0 A</p> <p>3.5 – 3.8 A-</p> <p>3.2 – 3.4 B+</p> <p>2.9 – 3.1 B</p> <p>2.5 – 2.8 B-</p> <p>2.2 – 2.4 C+</p> <p>1.9 – 2.1 C</p> <p>1.5 – 1.8 C-</p>

1.2 – 1.4 D+

0.9 – 1.1 D

0.7 – 0.8 D-


0.0 E

Assignments	Percentage
Participation (Individual reading journal & in-class participation)	40%
Technology Connections (Individual presentation)	20%
Final Paper (Individual or pair essay)	40%



Accommodations:

Students with Disabilities	<p>Your experience in this class is important to us. If you have already established accommodations with Disability Resources for Students (DRS), please communicate your approved accommodations to us at your earliest convenience so we can discuss your needs in this course. If you have not yet established services through DRS, but have a temporary health condition or permanent disability that requires accommodations, you are welcome to contact DRS at 206-543-8924 or uwdrs@uw.edu or disability.uw.edu. DRS offers resources and coordinates reasonable accommodations for students with disabilities and/or temporary health conditions.</p> <p>Reasonable accommodations are established through an interactive process between you, your instructor(s) and DRS. It is the policy and practice of the University of Washington to create inclusive and accessible learning environments consistent with federal and state law.</p>
Religious Accommodations	<p>Washington state law requires that UW develop a policy for accommodation of student absences or significant hardship due to reasons of faith or conscience, or for organized religious activities.</p> <p>The UW's policy, including more information about how to request an accommodation, is available at registrar.washington.edu/staffandfaculty/religious-accommodations-policy</p> <p>Accommodations must be requested within the first two weeks of this course using the form at registrar.washington.edu/students/religious-accommodations-request</p>
Mental health	<p>If you need support or are feeling overly stressed, you are welcome to reach out to the instructional team at any time. We do our best to listen and support you, but please understand we are not trained health professionals. The UW Counseling Center (washington.edu/counseling/about/how-to-get-help/) provides a number of options for receiving support, including self-help, workshops, and short-term and long-term counseling.</p> <p>If you are experiencing a crisis after hours and cannot wait until we are open, please call the Crisis Clinic at (206) 461-3222 or toll-free at 1-866-427-4747.</p> <p>If you are experiencing a life-threatening emergency, dial 911.</p> <p>If you feel unsafe, please contact UW Safe Campus at (206) 523-7233 (SAFE).</p>

Course Summary:

Date	Details	Due
Tue Jun 21, 2022	 HCDE 501 A Su 22: Theoretical Foundations Of Human Centered Design And Engineering (https://canvas.uw.edu/calendar?event_id=2787547&include_contexts=course_1573741)	6pm to 10pm

Date	Details	Due
Sat Jun 25, 2022	 Reading journal 1 (https://canvas.uw.edu/courses/1573741/assignments/7405525)	due by 11:59pm
Mon Jun 27, 2022	 Reading journal 2 (https://canvas.uw.edu/courses/1573741/assignments/7405526)	due by 12:59pm
Tue Jun 28, 2022	 HCDE 501 A Su 22: Theoretical Foundations Of Human Centered Design And Engineering (https://canvas.uw.edu/calendar?event_id=2787548&include_contexts=course_1573741)	6pm to 10pm
Tue Jul 5, 2022	 Reading journal 3 (https://canvas.uw.edu/courses/1573741/assignments/7405527)	due by 1:59pm
	 HCDE 501 A Su 22: Theoretical Foundations Of Human Centered Design And Engineering (https://canvas.uw.edu/calendar?event_id=2787549&include_contexts=course_1573741)	6pm to 10pm
Mon Jul 11, 2022	 Reading journal 4 (https://canvas.uw.edu/courses/1573741/assignments/7405528)	due by 11:59pm
Tue Jul 12, 2022	 HCDE 501 A Su 22: Theoretical Foundations Of Human Centered Design And Engineering (https://canvas.uw.edu/calendar?event_id=2787550&include_contexts=course_1573741)	6pm to 10pm
Mon Jul 18, 2022	 Reading journal 5 (https://canvas.uw.edu/courses/1573741/assignments/7405532)	due by 11:59pm
Tue Jul 19, 2022	 HCDE 501 A Su 22: Theoretical Foundations Of Human Centered Design And Engineering (https://canvas.uw.edu/calendar?event_id=2787551&include_contexts=course_1573741)	6pm to 10pm
Mon Jul 25, 2022	 Reading journal 6 (https://canvas.uw.edu/courses/1573741/assignments/7405529)	due by 11:59pm
Tue Jul 26, 2022	 HCDE 501 A Su 22: Theoretical Foundations Of Human Centered Design And Engineering (https://canvas.uw.edu/calendar?event_id=2787552&include_contexts=course_1573741)	6pm to 10pm
Mon Aug 1, 2022	 Reading journal 7 (https://canvas.uw.edu/courses/1573741/assignments/7405531)	due by 11:59pm
Tue Aug 2, 2022	 HCDE 501 A Su 22: Theoretical Foundations Of Human Centered Design And Engineering (https://canvas.uw.edu/calendar?event_id=2787553&include_contexts=course_1573741)	6pm to 10pm
	 Technology connections presentation (pairs) (https://canvas.uw.edu/courses/1573741/assignments/7405535)	due by 11:59pm
Mon Aug 8, 2022	 Reading journal 8 (https://canvas.uw.edu/courses/1573741/assignments/7405530)	due by 11:59pm
Tue Aug 9, 2022	 HCDE 501 A Su 22: Theoretical Foundations Of Human Centered Design And Engineering (https://canvas.uw.edu/calendar?event_id=2787554&include_contexts=course_1573741)	6pm to 10pm
Tue Aug 16, 2022	 HCDE 501 A Su 22: Theoretical Foundations Of Human Centered Design And Engineering	6pm to 10pm

Date	Details	Due
	https://canvas.uw.edu/calendar?event_id=2787555&include_contexts=course_1573741	
Sat Aug 20, 2022	 Final analysis essay (individual or pair) https://canvas.uw.edu/courses/1573741/assignments/7405533	due by 11:59pm
	 Reading response journal (individual) https://canvas.uw.edu/courses/1573741/assignments/7405534	