

I ILLINOIS

DTX 221 - HCD Across Disciplines

Course Information

- **Semester:** Fall 2026
- **Duration:** Full Semester
- **Contact Hours:** Tuesday & Thursday, 3:30 – 4:50 PM (two 80-minute sessions per week)
- **Format:** In-person and on-line (lecture/discussion format)
- **Location:** Room 1046, School of Design (SCD), University of Illinois Urbana-Champaign
- **Weekly Hours of Expected Student Work, apart from instruction time:** ~6 hours per week
- **Credit Hours:** 3 Undergraduate Credit Hours

Instructor Information

- **Instructor Name:** Ally Merrett
- **Instructor Title:** Adjunct Professor
- **Department/School/College/Unit:** Siebel Center for Design, University of Illinois Urbana-Champaign
- **Contact information:** merrett2@illinois.edu | (217) 300-3027
- **Office location:** Sunrise Studio, Siebel Center for Design Building, 1208 S. 4th Street
- **Drop-in hours for students:** Tuesdays 3:00–3:30 PM in 1046 SCD or by appointment (Zoom available)
- **Teaching Assistants:** No TA assigned for this course.

Course Description

DTX 221 introduces students to Human-Centered Design (HCD) across disciplines, emphasizing the application of design thinking methods to address complex social, institutional, and community-level challenges. The course integrates lectures, structured discussion, collaborative workshops, and applied case study analysis. Students explore the five spaces of HCD—Understand, Synthesize, Ideate, Prototype, implement—while considering ethical, organizational, and societal impacts. Real-world applications in technology, healthcare, education, and social services highlight how structured social environments shape user experience and outcomes. Special attention is given to how

race, culture, and structural inequality shape access to and outcomes within these systems, with case studies drawn from U.S. communities and institutions.

Learning Outcomes

By the end of this course, students will be able to:

- Demonstrate knowledge and understanding of the histories, cultures, and contributions of racial and ethnic minority communities in the United States, and explain relevant social science concepts and theories (e.g., inequality, systems thinking, human-centered design) in relation to contemporary social issues.
- Conduct ethically grounded design research using appropriate information-gathering methods and construct well-reasoned, evidence-based arguments to support analysis of social systems and human-centered design decisions.
- Analyze how power, privilege, justice, inequality, and marginalization shape interactions among social groups, institutions, and systems, with attention to race, class, ethnicity, gender, culture, identity, and community in U.S. contexts.
- Apply human-centered design methodologies—including research, ideation, prototyping, and implementation—to real-world challenges affecting diverse communities and evaluate the effectiveness of these interventions in addressing inequities.
- Demonstrate self-awareness, cultural humility, and ethical responsibility by reflecting on one's own positionality, engaging respectfully with diverse perspectives, and communicating design research effectively through written, visual, and oral formats.

General Education

Proposed for General Education certification in Social and Behavioral Sciences (Behavioral Sciences and Social Sciences) and U.S. Minority Cultures.

Prerequisite

None.

Course Materials

Learning Management System (LMS):

- Canvas: <https://canvas.illinois.edu> – All readings, assignments, discussion boards, and announcements will be posted here.

Course Readings:

- Selected practitioner and scholarly articles (posted in Canvas)
- Case study materials for technology, healthcare, education, and social services

Materials: Laptop for design activities and digital collaboration

Equipment: Webcam and microphone for workshops or asynchronous activities

Software: Miro, Figma, or Canva (accessed via free student accounts or campus lab)

Course Requirements and Policies

Grading Breakdown

Instructional Activity	Occurrences	Point Value	Total Points
Assignments	10	10	100
Discussion Participation	Weekly	5	50
Quizzes	4	25	100
Midterm Exam	1	100	100
Case Study Poster (Final Project) 1	1	150	150
Final Exam	1	100	100
Total	N/A	N/A	600

Grading Criteria

Assignments and projects are graded using rubrics evaluating clarity, argumentation, evidence use, visual effectiveness, and audience awareness. Timely feedback provided.

Course Components

- **Assignments:** Analytical responses, reflection exercises, and case study exercises submitted via Canvas.
- **Discussions:** Weekly structured discussions to apply course concepts, in-class or in Canvas forums.
- **Quizzes:** Short quizzes on readings and lectures.
- **Final Project – Case Study Poster:** Students synthesize course concepts into a visual and written poster, presented publicly at the SCD Student Showcase. Project is scored in multiple submissions: Project Proposal, Poster Draft 1, Poster Draft 2, Final Submission. Final Submission will include:
 - Analysis of institutional context
 - Interpretation of behavioral patterns and evaluation of intervention outcomes
- **Exams:** Midterm and final exams assess HCD theory, methods, and application.
- **Extra Credit:** Optional opportunities announced during the semester.

Late Assignment Policy: Work submitted late without prior approval will incur a 10% per day deduction. Assignments more than 5 days late may not be accepted.

Class Attendance: Regular attendance is expected. Participation points are awarded based on engagement in discussions, workshops, and collaborative exercises.

Absence Policy: Notify the instructor in advance. Excused absences require documentation per university policy.

Participation: Active engagement is required and contributes to participation grades.

Final Letter Grades

Percentage/Points	Letter Grade
97 - 100	A+
93 - 96	A
90 - 92	A-
87 - 89	B+
83 - 86	B
80 - 82	B-
77 - 79	C+
73 - 76	C
70 - 72	C-
67 - 69	D+
63 - 66	D
60 - 62	D-
60 and below	F

Course Schedule/Outline

Format: Tuesdays – In-Person | Thursdays – Remote

Week	Topics	Instructional Activities	Case Studies
Week 1 08/25 & 08/27	<ul style="list-style-type: none"> Introduction to HCD & Five Spaces 	<p>Tuesday (In-Person): Introductory Workshop; Course Overview, Pulse Check</p> <p>Thursday (Remote): HCD Historical Context; Online Discussion</p>	<p><i>Creative Reaction Lab: Equity-Centered Community Design</i> (Analyzing how Black and Latinx designers in St. Louis developed a community-centered design framework in response to racial inequity and the 2014 Ferguson uprising)</p>
Week 2 9/1 & 9/3	<ul style="list-style-type: none"> Research Methods & Empathy in the Understand Space 	<p>Tuesday (In-Person): Case Study Analysis (Interactive), Understand Space, Interviews</p> <p>Thursday (Remote): Small Group Activity (Zoom Breakouts), Cultural Bias, More Tools</p>	<p><i>Best Babies Zone: HCD for Black Infant Mortality Disparities</i> (Analyzing how the Alameda County Public Health Department used empathy interviews and journey mapping to address racial disparities in Black infant mortality rates in Oakland, California)</p>
Week 3 9/8 & 9/10	<ul style="list-style-type: none"> Synthesis & Problem Definition – <i>Assignment #1 Due</i> 	<p>Tuesday (In-Person): Journey Map Workshop, Synthesize Tools, Project Documentation</p> <p>Thursday (Remote): Virtual Discussion & Reflection Post, HMW's, 2x2's</p>	<p><i>Designing for Black Maternal Health: DC Primary Care Association</i> (Analyzing how a policy designer used HCD methods — including home visits, co-creation sessions, and synthesis workshops — to understand and address the experiences of Black women navigating Washington, D.C.'s maternal health system)</p>

Week	Topics	Instructional Activities	Case Studies
Week 4 9/15 & 9/17	<ul style="list-style-type: none"> Ideation Techniques – <i>Assignment #2 Due</i> 	<p>Tuesday (In-Person): In-Class Brainstorming Activity, Ideate Tools, AI in Co-Creation</p> <p>Thursday (Remote): More Ideate Tools, Juxtapositions, Mock-Ups, Feedback Form</p>	<p><i>Impact Justice Homecoming Project</i> (Analyzing how a community-centered housing model was designed to meet the needs of formerly incarcerated people — disproportionately Black and Latino — by centering their lived experience rather than institutional assumptions)</p>
Week 5 9/22 & 9/24	<ul style="list-style-type: none"> Prototyping & Rapid Iteration – <i>Assignment #3 Due</i> 	<p>Tuesday (In-Person): Hands-on Prototype Workshop, Case Study Analysis, Critiques</p> <p>Thursday (Remote): Desirability Testing, Expanding and Contracting Questions</p>	<p><i>Baltimore MTA Accessible Signage Redesign</i> (Analyzing how the Maryland Transit Administration used participatory design and iterative prototyping to redesign accessible signage in a majority-Black city, centering users with disabilities throughout the testing process)</p>
Week 6 9/29 & 10/1	<ul style="list-style-type: none"> Implement & User Feedback – <i>Assignment #4 Due</i> 	<p>Tuesday (In-Person): Small Group Testing Exercise, Design Principles, Reality Lab</p> <p>Thursday (Remote): Road-mapping, Tarot Cards of Tech, Midterm Practice Exam</p>	<p><i>Creative Reaction Lab: Metro Transit Equity Redesign</i> (Analyzing how the Equity-Centered Community Design framework was used to examine St. Louis’s transit system through the lens of racial segregation and to prototype community-centered redesign proposals)</p>

<p>Week 7 10/6 & 10/8</p>	<ul style="list-style-type: none"> Midterm – <i>Assignment #5 Due</i> 	<p>Tuesday (In-Person): Design Process Refresh, Holistic analysis of HCD</p> <p>Thursday (Remote): Midterm</p>	<p>No Case Study</p>
<p>Week 8 10/13 & 10/15</p>	<ul style="list-style-type: none"> HCD in Healthcare – <i>Assignment #6 Due</i> 	<p>Tuesday (In-Person): Case Study, Evolution of HCD in healthcare practices</p> <p>Thursday (Remote): Analogous Design, Device Design, Guest Speaker</p>	<p>Required Reading: Criado Perez, C. (2019). <i>Invisible Women: Data Bias in a World Designed for Men</i>, Abrams Press (selected chapters, posted on Canvas). Discussion prompt: How does gender bias in data collection and system design shape healthcare outcomes for women? Where in the HCD process could these biases be identified and addressed? Case Studies: <i>NASCAR x Hospitals, Boxing for Future Health</i> (Analyzing how hospitals can benefit from the practices of other professions)</p>
<p>Week 9 10/20 & 10/22</p>	<ul style="list-style-type: none"> HCD in Education – <i>Assignment #7 Due</i> 	<p>Tuesday (In-Person): Interactive Workshop, Universal Design</p> <p>Thursday (Remote): HCD in Education Workbook, Guest Speaker</p>	<p><i>Design the Future: Disability-Inclusive HCD in Education</i> (Analyzing how a San Francisco Bay Area program redesigned the design thinking process to be accessible to blind and physically disabled students, addressing the exclusion of disabled BIPOC youth from design education) shape social service design)</p>

<p>Week 10 10/27 & 10/29</p>	<ul style="list-style-type: none"> HCD in Social Services – <i>Assignment #8 Due</i> 	<p>Tuesday (In-Person): Case Study Poster Drafting (In-Class Work Session), Mind-Maps</p> <p>Thursday (Remote): Designing for Vulnerable Populations, Guest Speaker</p>	<p><i>Grounding Health Research in Design: COVID-19 Equity Design</i> (Analyzing how Black community members in New Orleans — including formerly incarcerated individuals — were engaged as co-designers in COVID-19 public health research, examining how trust, power, and community ownership shape social service design)</p>
<p>Week 11 11/3 & 11/5</p>	<ul style="list-style-type: none"> Interdisciplinary Collaboration – <i>Assignment #9 Due</i> 	<p>Tuesday (In-Person): Group Collaboration Exercise, HCD in Data Analytics</p> <p>Thursday (Remote): Virtual Discussion & Reflection, HCD in Business, Guest Speaker</p>	<p><i>Oregon State University Career Champions: ECCD for Students of Color</i> (Analyzing how Oregon State University used Equity-Centered Community Design to redesign career support services through cross-institutional collaboration, centering the experiences of first-generation, low-income students of color)</p>
<p>Week 12 11/10 & 11/12</p>	<ul style="list-style-type: none"> Ethical Considerations in HCD – <i>Assignment #10 Due, Final Poster Proposal Due</i> 	<p>Tuesday (In-Person): Case Study Analysis, Evaluating Ethical Dilemmas</p> <p>Thursday (Remote): Wall-to-Wall, Case Study, Where is Power Held Workshop</p>	<p><i>Equity by Design</i> (Analyzing systemic oppression for Black & Latin youth)</p>

Week 13 11/17 & 11/19	<ul style="list-style-type: none"> Challenges in Scaling HCD -- <i>Final Poster Draft 1</i> 	<p>Tuesday (In-Person): Case Study Workshop, Barriers to Successful HCD Projects</p> <p>Thursday (Remote): Strategies for Overcoming Obstacles, HCD Business Strategy</p>	<p><i>Vera Institute: Opening Doors to Fair Chance Housing</i> (Analyzing how the Vera Institute partnered with 22 public housing authorities across 12 states to redesign admissions policies that systematically excluded formerly incarcerated people, examining what institutional redesign requires at scale)</p>
Week 14 11/24 & 11/26	<ul style="list-style-type: none"> Poster Workshop + Future of HCD -- <i>Final Poster Draft 2</i> 	<p>Tuesday (In-Person): Individual Feedback Sessions, HCD in an Evolving Landscape</p> <p>Thursday (Remote): Draft Revisions & Virtual Check-In, Effective Visual Communication</p>	<p><i>The Future is Now, Hospitable Hospice</i> (Analyzing how human-centered design can transform end-of-life care in the United States, where access to hospice and palliative care is shaped by racial, economic, and geographic inequities)</p>
Week 15 12/1 & 12/3	<ul style="list-style-type: none"> SCD Student Showcase, -- <i>Final Poster Due</i> 	<p>Tuesday (In-Person): Public Poster Presentation</p> <p>Thursday (Remote): Asynchronous Peer Feedback</p>	<p>Final Poster Case Studies: <i>Design Justice in Chicago Public Schools, Equity by Design Youth Leadership Program, HCD for Refugee Public Health Access in U.S. Communities, Socially Assistive Robots for Emotional Regulation in Underserved Schools</i></p>
Week 16 12/8 & 12/10	<ul style="list-style-type: none"> Course Wrap-Up 	<p>Tuesday (In-Person): Final Exam</p> <p>Thursday (Remote): Final Reflection Submission</p>	<p>Case Study: No Case Study</p>

Academic Integrity

The University of Illinois Urbana-Champaign [Student Code](https://studentcode.illinois.edu/) (https://studentcode.illinois.edu/) should also be considered as a part of this syllabus. Students should pay particular attention to Article 1, Part 4: Academic Integrity.

Academic dishonesty may result in a failing grade. Every student is expected to review and abide by the [Academic Integrity Policy](https://studentcode.illinois.edu/article1/part4/1-401/) (https://studentcode.illinois.edu/article1/part4/1-401/). Ignorance is not an excuse for any academic dishonesty. It is your responsibility to read this policy to avoid any misunderstanding. Do not hesitate to ask the instructor(s) if you are ever in doubt about what constitutes plagiarism, cheating, or any other breach of academic integrity.

Students with Disabilities

The University of Illinois Champaign-Urbana, is committed to ensuring that all students, including students with disabilities, do not experience barriers to learning and participating fully in class. Students who have a letter of accommodation from DRES are advised to share that with instructors as soon as possible to ensure accommodation needs can be discussed and met.

To obtain disability-related academic accommodations, disabled students must contact Disability Resources and Educational Services (DRES) as soon as possible. To contact DRES, please visit 1207 S. Oak Street, Champaign, call (217) 333-1970, email disability@illinois.edu, or visit the [DRES website](https://dres.illinois.edu/) (https://dres.illinois.edu/).

Family Educational Rights and Privacy Act (FERPA)

See [FERPA – Office of the Registrar](https://registrar.illinois.edu/academic-records/ferpa/) (https://registrar.illinois.edu/academic-records/ferpa/) for more information on the Family Educational Rights and Privacy Act (FERPA).

Mental Health

Significant stress, mood changes, excessive worry, substance/alcohol misuse or interferences in eating or sleep can have an impact on academic performance, social development, and emotional wellbeing. The University of Illinois offers a variety of confidential services including individual and group counseling, crisis intervention, psychiatric services, and specialized screenings which are covered through the Health Service Fee. If you or someone you know experiences any of the above mental health concerns, it is strongly encouraged to contact or visit any of the University's resources provided below. Getting help is a smart and courageous thing to do for yourself and for those who care about you.

- Counseling Center (217) 333-3704
- McKinley Health Center (217) 333-2700
- National Suicide Prevention Lifeline (800) 273-8255
- Rosecrance Crisis Line (815) 720-4953 (available 24/7, 365 days a year)

If you are in immediate danger, call 911.

This statement is approved by the University of Illinois Counseling Center

Community of Care

As members of the Illinois community, we each have a responsibility to express care and concern for one another. If you come across a classmate whose behavior concerns you, whether in regard to their well-being or yours, we encourage you to refer this behavior to the Connie Frank CARE Center (formerly the Student Assistance Center) in the Office of the Dean of Students. You may do so by calling (217) 333-0050 or by submitting an [online referral](https://odos.illinois.edu/community-of-care/referral) (<https://odos.illinois.edu/community-of-care/referral>). Based on your report, staff in the Connie Frank CARE Center will reach out to offer support and assistance.

Further, as a Community of Care, we want to support you in your overall wellness. We know that students sometimes face challenges that can impact academic performance (examples include mental health concerns, food insecurity, homelessness, personal emergencies). Should you find that you are managing such a challenge and that it is interfering with your coursework, you are encouraged to contact the [Connie Frank CARE Center](https://odos.illinois.edu/community-of-care/CAREcenter) (<https://odos.illinois.edu/community-of-care/CAREcenter>) (formerly the Student Assistance Center) in the Office of the Dean of Students for support and referrals to campus and/or community resources.

Disruptive Behavior

Behavior that persistently or grossly interferes with classroom activities is considered disruptive behavior and may be subject to disciplinary action. Such behavior inhibits other students' ability to learn and an instructor's ability to teach. A student responsible for disruptive behavior may be required to leave class pending discussion and resolution of the problem and may be reported to the [Office for Student Conflict Resolution](https://go.illinois.edu/ReportMisconduct) (<https://go.illinois.edu/ReportMisconduct>), conflictresolution@illinois.edu, or (217) 333-3680 for disciplinary action.

Emergency Response Recommendations

Emergency response recommendations and campus building floor plans can be found at [Public Safety's Run, Hide, Fight website](https://police.illinois.edu/em/run-hide-fight/) (<https://police.illinois.edu/em/run-hide-fight/>). I encourage you to review this website within the first 10 days of class.

Religious Observances

It is the policy of the University of Illinois Urbana-Champaign to reasonably accommodate its students' religious beliefs, observances, and practices that conflict with a student's class attendance or participation in a scheduled examination or work requirement, consistent with state and federal law. Students must make requests for accommodation in advance of the conflict to allow time for both consideration of the request and alternate procedures to be prepared. Requests should be directed to the instructor. An optional resource to assist students in making such requests can be found on The Office of the Dean of Students' [Religious Observances website](https://odos.illinois.edu/resources/students/religious-observances) (<https://odos.illinois.edu/resources/students/religious-observances>).

Sexual Misconduct Reporting Obligation

The University of Illinois is committed to combating sexual misconduct. Faculty and staff members are required to report any instances of sexual misconduct to the University's Title IX Office. In turn, an individual with the Title IX Office will provide information about rights and options, including supportive measures, resources, the campus disciplinary process, and law enforcement options.

A list of the designated University employees who, as counselors, confidential advisors, and medical professionals, do not have this reporting responsibility and can maintain confidentiality, can be found on [We Care Student Resources](https://wecare.illinois.edu/resources/students/#confidential) (<https://wecare.illinois.edu/resources/students/#confidential>).

Other information about resources and reporting is available on [At Illinois We Care](https://wecare.illinois.edu) (<https://wecare.illinois.edu>).

Veterans and Military Students

As a military-friendly institution, and per federal regulations and Illinois statutes, the University of Illinois Urbana-Champaign has established policies and procedures to accommodate military-connected students. In addition to the support available at the [Chez Veterans Center](https://chezveteranscenter.ahs.illinois.edu/) (<https://chezveteranscenter.ahs.illinois.edu/>), members of the National Guard or Reserves and active-duty military personnel with military obligations (e.g., deployments, training, drills) are encouraged to communicate these, in advance whenever possible, to the instructor. For policy details, see the Student Code on [Excused Absences and Departure from the University for U.S. Military or other U.S. National Defense Services](https://studentcode.illinois.edu/article3/part3/3-313) (<https://studentcode.illinois.edu/article3/part3/3-313>).