

1. Course information

Instructor: Sheng-Hung Lee | shdesign@umich.edu | d-mixlab.teaup.umich.edu

Time and room: Tuesday 1:00-4:00 pm, 2210 A&AB

Class number: 35513 | Office hours: by appointment (3324)

Course webpage: <https://www.d-mixlab.com/ut210>

2. Overview

This course introduces the foundations of design ethnography through contextual inquiry and project-based learning, integrating academic theory with industry case studies to equip students with practical research skills. Emphasizing methodologies relevant to Urban Technology (UT), it enables students to translate human experiences and implicit needs—across individual, service, and urban scales—into actionable insights and design principles. By developing an ethnographic research toolkit encompassing preparation, data collection, synthesis, and storytelling, students will strengthen their competencies and cultivate their identities as emerging UT design anthropologists.

3. Learning objectives

1. Develop proficiency in interview-based research (approximately 70%) as a core foundational skill that supports future studios and professional practice.
2. Understand foundational theories, frameworks, and methodologies of design ethnography across three scales—peoplescape, servicescape, and cityscape.
3. Apply design ethnography methods through collaborative, field-based projects.
4. Develop and articulate personal and professional identities within the emerging field of Urban Technology.

4. Materials

There is no single textbook that fully captures the emerging field of design ethnography. Students are encouraged to engage with the weekly readings to develop their own capabilities within UT. However, the following two books are recommended as core references for the course.

- *Design Empathy and Contextual Awareness: Frames of Reference for the 21st Century Creative* (Li, 2025) | [link](#)
- *Research for Designers: A Guide to Methods and Practice* (Muratovski, 2024) | [link](#)
- *Design Ethnography: Research, Responsibilities, and Futures* (Pink et al., 2022) | [link](#)
- *Ethnography for Designers* (Cranz, 2016) | [link](#)
- *Beyond Design Ethnography: How Designers Practice Ethnographic Research* (Nova et al., 2016) | [link](#)

5. Learning Roadmap

Part 1. Introduction

- What is design ethnographic research, and how does it strengthen UT projects?
Case study
 - Disneyland Themed Park design | [story link](#) | [paper link](#)
 - Bus stop for people with dementia | [story link](#) | [paper link](#)
 - Bus stop with green roofs in Utrecht, Netherlands | [story link](#) | [paper link](#)
- How design ethnographic research fits into the overall process, and how research can operate across scales:
 - Peoplescape – individual interviews
 - Servicescape – contextual interviews
 - Cityscape – multi-scale interviews

Part 2. Interview-relevant methods

- Interviews:
 - Preparing (e.g., exempt research application, consent form, discussion guide)
 - Conducting (e.g., interview ethics, documentation)
 - Processing / Coding (e.g., constructive grounded theory)
- Photo diary
- Design documentaries
- Positionality
- Auto-ethnography

Part 3. Translation and synthesis

- Final Project Focus (Evidence → Insights → Design Principles)
- How do we move from evidence-based data toward insights and translate those insights into actionable design principles?

6. Interview across scales

The course is organized around three scales of design ethnography—peoplescape, servicescape, and cityscape—with interconnected assignments that collectively fulfill the course objectives. Designed as a co-creative learning journey, it engages students and the instructor as active collaborators in exploring and advancing design ethnographic methods. The course roadmap diagram (Figure 1) adapts Wasson's bow-tie model (2002) and Baskerville and Myers's ethnography–design model (2014) to illustrate how processes unfold across three scales, integrating ethnography and design (Wasson, 2002, p. 84). As the process moves from left to right, ethnographic inquiry transitions into design action through guiding frameworks that bridge research and practice.

- Peoplescape – Conversations focused on personal routines, needs, and meanings
- Servicescape – Interviews situated within the journey, environment, or service interaction
- Cityscape – Interviews that map perspectives across neighborhoods, institutions, and networks

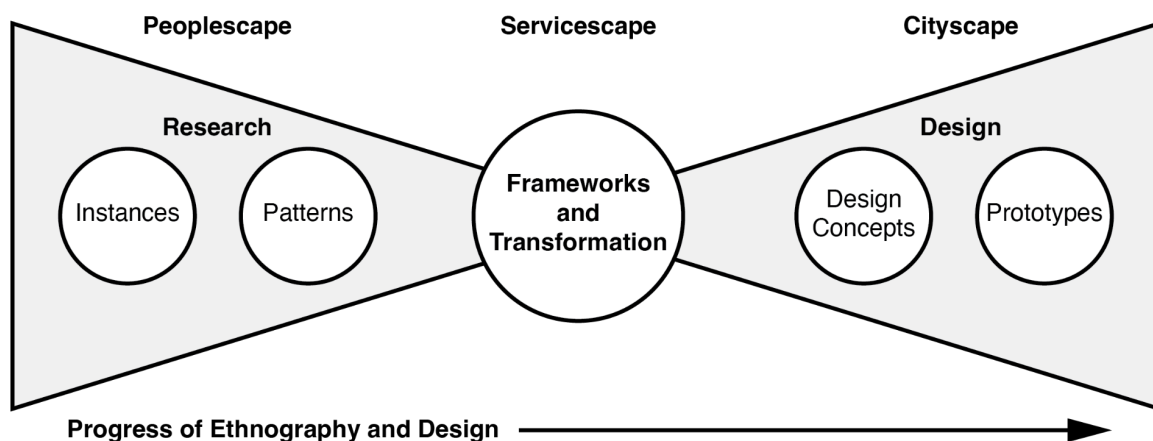


Figure 1. Course roadmap adapted from Wasson's bow-tie model (2002) and Baskerville and Myers's ethnography–design model (2014), illustrating the complexity and proposed design ethnography methodologies across the scales of peoplescape, servicescape, and cityscape.

6.1. Peoplescape: individual interviews

The Peoplescape module introduces foundational principles of design ethnography through hands-on engagement with individuals. Emphasizing research ethics (Fulton Suri & IDEO, 2015) and visual documentation methods such as the photo diary technique (Harper, 2010), students learn to design and execute small-scale ethnographic studies. Using cases like IDEO's Shopping Cart Project (1999), this phase develops students' ability to translate lived experiences into meaningful insights through systematic observation, interviewing, and documentation.

Scope: Week 1-6 (6 weeks)

Focused methods, software, and required reading

- **Design ethnography overview** (Sarah Pink et al., 2022) | [link](#)
- **Research ethics** (Fulton Suri and IDEO, 2015) | [link](#)
- **Research plan** (e.g., recruitment strategy, screening survey, consent form, and interview discussion guide)
- **Photo diary method** (Harper, 2010) | [link](#)

Key case study

- IDEO Shopping Cart (ABC Nightline, 1999) | [link](#)
- Thoughtless Acts (Fulton Suri, 2005) | [link](#)

Individual assignment

1. Pre-course survey | [link](#)

Team assignment

1. Create a **five-page** design ethnography research plan in Google Doc, including 1. a recruitment strategy (1 page), 2. screening survey (1 page), 3. consent form (1 page), and 4. interview guide (2 pages).
2. Conduct **five** interviews (at least **three** in-person) based on the approved research plan and document interviewees' bios, quotes, key insights, and ideas. Summarize the process and outcomes in a **five-slide** Google Slides with supporting photos (Note: Good insights develop over repeated cycles of clustering, collaborative discussion, and growing familiarity with interviewees' perspectives.).

Additional materials

- **The Experience of Evolution: Developments in Design Practice** (Suri, 2015) | [link](#)
- **In Studio: Recipes for Systemic Change** (Boyer et al., 2011, focus on p.86) | [link](#)
 - This book offers rich design ethnography insights through stories, workshops, and frameworks; students can read my review. | [link](#)

6.2. Servicescape: contextual interviews

The Servicescape module expands the design ethnographic lens to explore the interactions between people and service systems. Drawing on tools such as design documentaries (Raijmakers et al., 2006), service blueprints (Lee et al., 2023), and constructivist grounded theory (Charmaz, 2024), students analyze both visible and invisible layers of user experiences. Through case studies like MIT AgeLab's AGNES empathy system, this section emphasizes understanding how designed services shape user behaviors and systemic relationships.

Scope: Week 7, 9-12 (4 weeks)

Focused methods, software, and required reading:

- **Design documentaries** (Raijmakers et al., 2006) | [link](#)
- **Constructive grounded theory** (Charmaz, 2024) | [link](#)
- **ATLAS.ti** | [link](#)

Key case study

- MIT AgeLab AGNES (Age Gain Now Empathy System) | [link](#)

Team assignment

1. Develop **two-page** Google Slides with service blueprint illustrating provider and recipient journeys based on the People section summary.

2. Create a **one-page** Google Slides service system iceberg model highlighting visible and invisible components.
3. Conduct and record **five** interviews (at least **three** in-person), analyze the transcript using constructivist grounded theory in ATLAS.ti, and present coding results and a Sankey diagram in 2 Google Slides.

Additional materials

- **Qualitative Data Analysis with ATLAS.ti** (Frieze, 2019, focus on chapters 1-2) | [link](#)
 - **Research for Designers** (Muratovski, 2024, focus on chapters 1 and 5) | [link](#)
 - This book provides theoretical and practical insights into design ethnography from a designer's perspective; students can read my review. | [link](#)
 - **Service blueprint** (Lee et al., 2023) | [link](#)
 - **Service system** (Vink and Koskela-Huotari, 2021) | [link](#)
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6.3. Cityscape: multi-scale interviews

The Cityscape module explores technology-assisted ethnography at the urban scale, integrating digital and spatial analysis tools. It introduces concepts such as the urban exposome (Sonnenschein, 2022), soft city principles (Sim, 2019), and slow data (Townsend, 2013), along with photogrammetry applications in education (Chapinal-Heras et al., 2024) and urban research (Wu, 2021). Through two case studies—Disneyland's themed design and bus stop design in the Netherlands—students examine how ethnographic inquiry uncovers the human dimensions of technological and systemic urban transformation, supported by readings like *Scenario Planning for Cities and Regions* (Goodspeed, 2020, chapters 1 and 2) and *Life Between Buildings* (Gehl, 2011, chapter 1).

Scope: Week 13-14 (2 weeks)

Focused methods, software, and required reading

- **Positionality** (Rose, 1997) | [link](#)
- **Auto-ethnography** (Ellis et al., 2011) | [link](#)
- **Photogrammetry in education** (Diego Chapinal-Heras et al., 2024) | [link](#)
- **Photogrammetry in urban areas** (Wu, 2021) | [link](#)

Key case study

- Disneyland Themed Park design | [story link](#) | [paper link](#)
- Bus stop for people with dementia | [story link](#) | [paper link](#)
- Bus stop with green roofs in Utrecht, Netherlands | [story link](#) | [paper link](#)

Individual assignment

1. 250-word course essay on the theme of Design Ethnography and UT
2. Post-course survey | [link](#)

Team assignment

- Identify a research site aligned with the Peoplescape and Servicescape modules to apply photogrammetry in design ethnography. Analyze connections between interviews, individual behaviors, and site observations, and present findings in a **five-slide** team presentation on Google Slides.

Additional materials

- **Life Between Buildings** (Gehl, 2011, chapter 1) | [link](#)
 - **Urban exposome** (Sonnenschein, 2022) | [link](#)
 - **Soft city** (Sim, 2019) | [link](#)
 - **Slow data** (Townsend, 2013) | [link](#)
 - **Scenario Planning for Cities and Regions** (Goodspeed, 2020, chapters 1-2) | [link](#)
 - This book offers both theoretical and practical insights into scenario planning to support urban-scale ethnography research; students can read my review, | [link](#)
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7. Grading

- **Class attendance and participation:** 20%
- **Individual assignments:** 20%
(One paper presentation, pre- and post-surveys, and reflection)
- **Team assignments:** 60%
(Eight project-based teamwork activities)

8. Weekly action items

Week 1 | Introduction

Scale: [peoplescape](#)

Action items — Jan 13

- Course and instructor introduction (Syllabus walkthrough)
- Pre-course survey | [link](#)
- Case study: IDEO Shopping Cart (ABC Nightline, 1999) | [link](#)

Assignment

- Team formation (4 members per team) | [link](#)
- Assign individual paper presentation dates and papers | [link](#)

Must read

- **Design Ethnography: Taking Inspiration from Everyday Life** (van Dijk, 2011) | [link](#)
- **Design Ethnography Overview** (Sarah Pink et al., 2022) | [link](#)
- **Ethnography for Designers - Chapter 2: The Ethnographic Design Project** (Cranz, 2016) | [link](#)

Additional materials

- **Thoughtless Acts** (Fulton Suri, 2005) | [link](#)
 - **Collaborative Work: Integrating the Roles of Ethnographers and Designers** (Wasson, 2002) | [link](#)
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Week 2 | Interview preparation

Scale: [peoplescape](#)

Action items — Jan 20

- Individual paper presentation
- IRB ethics and UT applications
- Research plan overview and discuss (e.g., recruitment strategy, screening survey, consent form, and interview discussion guide)

GM support

- GM leadership representative or point of contact to deliver a 45–60 minute talk about the project collaboration and the role of the students, and take a group photo to kick off the project officially.

Assignment

- Research Topic: **Future Autonomous Experience**
- Create a **five-page** design ethnography research plan in Google Doc, including 1. a recruitment strategy (1 page), 2. screening survey (1 page), 3. consent form (1 page), and 4. interview guide (2 pages).
- Each team will interview a minimum of **five** participants (at least **three** in-person interviews):
 1. One potential consumer (via GM)
 2. Two younger participants (students)
 3. Two older participants (through the student's personal connection)

Must read

- **Research Ethics** (Fulton Suri and IDEO, 2015) | [link](#)
- **Design Ethnography** (Salvador et al., 1999) | [link](#)
- **Ethnography in the Field of Design** (Wasson, 2000) | [link](#)

Additional materials

- **Swedish Design: An Ethnography** (Murphy, 2015) | [link](#)
 - **Design Thinking Pedagogy** (Wrigley and Mosely, 2022) | [link](#)
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Week 3 | Photo diary

Scale: [peoplescape](#)

Action items — Jan 27

- Individual paper presentation
- Each team presents its **draft** research plan (10 minutes per team)
- Critique and discuss each team's research plan
- Photo diary method intro and case studies

GM support

- GM's support in providing contact information for interview participants:
 1. Internal perspectives: GM designers, engineers, and leadership.
 2. External perspectives: Current customers and potential customers.

Assignment

- Refine a **five-page** design ethnography research plan (e.g., add more details, concerns, and ideas)

Must read

- **Photo Diary Method** (Harper, 2010) | [link](#)
- **The Experience of Evolution** (Suri, 2015) | [link](#)
- **Involving People in Design** (McClelland and Suti, 2005) | [link](#)

Additional materials

- **Observations on Concept Generation and Sketching in Engineering Design** (Yang, 2009) | [link](#)
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Week 4 | Revised interview plan

Scale: [peoplescape](#)

Action items — February 3

- Individual paper presentation
- Each team presents its **refined** research plan (5 minutes per team)
- Team interview practice, screener case study

GM support

- GM team will help review the high-level discussion guide to ensure the questions and overall direction are aligned before the students reach out to interviewees.

Assignment

- Conduct **five** interviews (at least **three** in person) based on the approved research plan and document interviewees' bios, quotes, key insights, and ideas. Summarize the process and outcomes in a **five-slide** Google Slides with supporting photos.

Must read

- **Doing Sensory Ethnography** (Pink, 2015, chapters 1-3) | [link](#)

Additional materials

- **Belonging & Belongings: Design Research Through Visual Explorations** (van Dijk et al., 2014) | [link](#)
- **In Studio: Recipes for Systemic Change** (Boyer et al., 2011) | [link](#)

Week 5 | Field notes

Scale: [peoplescape](#)

Action items — February 10

- Individual paper presentation
- Each team presents its **interview** result (10 minutes per team)

Assignment

- Refine interview notes
- Conduct additional interviews as needed to ensure the quality and rigor of the study's findings.

Must read:

- **Writing Ethnographic Fieldnotes** (Emerson et al., 2011) | [link](#)
- **Doing Visual Ethnography** (Pink, 2021, chapters 1-3) | [link](#)

Additional materials

- **On Ethnography** (Daynes and Williams, 2018) | [link](#)
 - **Convivial Toolbox** (Sanders and Stappers, 2019) | [link](#)
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Week 6 | Interview summary and mid-term presentation

Scale: [peoplescape](#)

Action items — February 17

- Mid-term presentation

GM support

- Milestone sharing: Students will share their interview insights with the GM team.

Assignment

- Deliver the mid-term presentation slide

Must read

- **The Art(fulness) of Open-ended Interviewing** (Rapley, 2001) | [link](#)
- **Street Phenomenology** (Kusenbach, 2003) | [link](#)
- **Handbook of Interview Research** (Gubrium and Holstein, 2002, chapters 3-8) | [link](#)

Additional materials

- **Thinking and Doing Ethnography in Service Design** (Segelström et al., 2009) | [link](#)
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Week 7 | Design documentaries

Scale: [servicescape](#)

Action items — February 24

- Individual paper presentation
- Introduction of the design documentary method.
- Case study: MIT AgeLab AGNES (Age Gain Now Empathy System) | [link](#)

GM support

- Students will visit the field sites recommended by the GM team to conduct observational fieldwork.

Assignment

- Develop **two** Google Slides using a design documentary method based on the People section summary.

Must read

- **Design Documentaries** (Raijmakers et al., 2006) | [link](#)
- **Design Documentaries: Poster** (Raijmakers, 2007) | [link](#)
- **Design Documentaries: Using Documentary Film to Inspire Design** (Raijmakers, 2007) | [link](#)

Additional materials

- **Designing in the Street: Innovation In-Situ** (March and Raijmakers, 2008) | [link](#)
- **Applying Human-centered System Design to the Development of a Tool for Service Innovation** (Lee et al., 2023) | [link](#)

Week 8 | Spring break on March 3

Week 9 | Constructive grounded theory

Scale: [servicescape](#)

Action items — March 10

- Individual paper presentation
- Introduction of the service system, constructive grounded theory, and ATLAS.ti
- Each team presents its **design documentaries** result (5 minutes per team)

Assignment

- Conduct and record **five** interviews (at least **three** in-person interviews), analyze the transcript using constructivist grounded theory in ATLAS.ti, and present coding results and a Sankey diagram in **two** Google Slides.

Must read

- **Grounded Theory as an Emergent Method** (Charmaz, 2008) | [link](#)
- **Grounded Theory: Objectivist and Constructivist Methods** (Charmaz, 2000) | [link](#)

Additional materials

- **Constructive Grounded Theory** (Charmaz, 2024) | [link](#)
 - **Co-create Financial Planning Services for an Aging Population** (Lee et al., 2023) | [link](#)
 - **ATLAS.ti** | [link](#)
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Week 10 | Sankey diagram

Scale: [servicescape](#)

Action items — March 17

- Individual paper presentation
- Each team presents its **coding result** and **Sankey diagram** (10 minutes per team)

Assignment

- Each team refines the coding result and the Sankey diagram

Must read

- **Toward a Conceptual Framework for AI and Robotics in Aging in Place: Insights from Constructivist Grounded Theory** (Lee et al., 2025) | [link](#)
- **Co-create Financial Planning Services for an Aging Population: Designers' Perspectives** (Lee et al., 2023) | [link](#)

Additional materials

- **Qualitative Data Analysis with ATLAS.ti** (Friese, 2019) | [link](#)
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Week 11 | Positionality

Scale: [servicescape](#)

Action items — March 24

- Individual paper presentation
- Guest lecture from GM service design manager (TBD)
- Each team presents its **refined** coding result and Sankey diagram (10 minutes per team)

GM support

- The GM team may offer virtual office hours for students who have questions or need support with their ideas and research findings.

Assignment

- Refined coding result and Sankey diagram

Must read

- **Positionality** (Rose, 1997) | [link](#)

Additional materials

- **An Introduction to Service Design** (Penin, 2018) | [link](#)
 - **The Service Innovation Handbook** (Kimbell, 2017) | [link](#)
 - **This Is Service Design Doing** (Stickdorn, 2018) | [link](#)
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Week 12 | Photogrammetry

Scale: [cityscape](#)

Action items — March 31

- Individual paper presentation
- Introduction of the urban exposome, soft city, and slow data
- Team discussion and practice photogrammetry

Assignment

- Identify a research site that aligns with the Peoplescape and Servicescape modules to apply photogrammetry within a design ethnography context. Prepare a **five-slide** team presentation using Google Slides.

Must read

- **Photogrammetry in Education** (Diego Chapinal-Heras et al., 2024) | [link](#)
- **Photogrammetry in Urban Areas** (Wu, 2021) | [link](#)

Additional materials

- **Soft City** (Sim, 2019) | [link](#)
 - **Slow Data** (Townsend, 2013) | [link](#)
 - **Urban Exposome** (Sonnenschein, 2022) | [link](#)
 - **Cities, Communities and Clinics Can Be Testbeds for Human Exposome and Aging Research** (Woods et al., 2025) | [link](#)
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Week 13 | Autoethnography

Scale: [cityscape](#)

Action items — April 7

- Individual paper presentation
- Case study presentation
 - Disneyland Themed Park design | [story link](#) | [paper link](#)
 - Bus stop for people with dementia | [story link](#) | [paper link](#)
 - Bus stop with green roofs in Utrecht, Netherlands | [story link](#) | [paper link](#)
- Each team presents its photogrammetry of the site and explores connections among interviews, individual behaviors, and site observations (10 minutes per team).

Assignment

- Analyze connections between interviews, individual behaviors, and site observations, and present findings in a **five-slide** team presentation on Google Slides.

Must read

- **Evocative Autoethnography** (Bochner and Ellis, 2016, chapter 3) | [link](#)
- **Auto-ethnography** (Ellis et al., 2011) | [link](#)
- **Analytic Autoethnography** (Anderson, 2006) | [link](#)

Additional materials

- **Life Between Buildings** (Gehl, 2011, chapter 1) | [link](#)
- **Scenario Planning for Cities and Regions** (Goodspeed, 2020, chapters 1-2) | [link](#)

Week 14 | Rehearsal

Scale: [cityscape](#)

Action items — April 14

- Individual paper presentation
- Each team presents its **refined** photogrammetry of the site and **analyzes** connections among interviews, individual behaviors, and site observations (10 minutes per team).

GM support

- The GM team can preview the final presentation to help students prepare and refine their work.

Assignment

- **250-word** course essay on the following four suggested questions
 1. How might incorporating interview-based research enhance the development of archetypes in UT 230?
 2. How can the methods introduced in UT 210 directly support the analytical goals and deliverables of UT 230?
 3. In what ways could interviews provide insight into behaviors, routines, or motivations that are not visible through observation alone?
 4. How do Design Ethnography and UT intersect—and where do productive tensions arise?
- Post-course survey | [link](#)

Additional materials

- **Urban Experience and Design** (Hollander and Sussman, 2021) | [link](#)
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Week 15 | Final

Scale: [peoplescape](#) + [servicescape](#) + [cityscape](#)

Action items — April 21

- Final presentations (15 minutes per team)

GM support

- GM team will give students feedback about their research financial presentation.

Assignment

- Upload the team's final slide presentation to CANVAS

Additional materials

- **From computation to curation: Expanding the boundaries of design practice** (Lee, 2025) | [link](#)
 - **Design Education Is Too Important to Be Left to Designers** (Formosa, 2025) | [link](#)
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Acknowledgment

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