

# (UX) Interaction Design Methods

I543                      SPRING 2022                      IF 0117

Section 1- Tuesday 11:30am - 2:00pm

Section 2- Thursday 11:30am - 2:00pm

## Instructor

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Office hours: MF 3-4 pm  
[Zoom](#)

## Associate Instructors

*(Removed personnel details for publishing purposes)*

## **ZOOM & SLACK**

*(Removed for publishing purposes)*

## **DESCRIPTION**

This course aims to provide a foundation for understanding, choosing, and doing human-computer interaction (HCI) methods. This course aims to teach HCI/d students about design research/practice and various methods designers can use and learn for user research, analysis, designing, prototyping, testing, etc. The project component of the course is designed to encourage and practically apply the methods for designing UIs, digital products, physical artifacts, etc. We will also briefly touch upon on-going developments in HCI methods.

## **LEARNING OBJECTIVES**

### GOALS

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

1. Treat methods as tools for your mindset and design process and learn selection of appropriate methods based on the project framing.
2. Learn and apply a range of data collection, analysis, conceptualization, and testing methods for creating design artifacts.
3. Practice agile project delivery.
4. Engage in reflecting on one's own design philosophy and treatment of design methods.
5. Create portfolio worthy projects and project documentation.

## **DISCLAIMERS**

About methods:

1. It's not a checklist. Methods will be treated differently from tools\*\* in this class.
2. Appropriateness of a method need not only be through the kind of project, but based on the kind of process.
3. Methods introduced for the projects are only *an illustration*, not a rule to use the methods a certain way.

**Tools\*\*:** Sketching, mindmapping, conceptual mapping, Digital tools (Adobe, Sketch), IFTTT.

## REQUIREMENTS AND GRADING

Projects	30%
Exercises	40%
Reflections	20%
Class Participation and Attendance	10%

\*Removed Method mindmaps

### Projects

Projects are group assignments where a team of 4 or 5 students work on a given design brief. The design brief will have all the details and specifications of the requirements of submission. The projects are designed and implanted through the course to allow students to apply the learnt methods to see how they work in design practice, sometimes in agile setups. There are 3 projects for this course that contribute towards 30% of your overall grade. The projects are: 1) **Project 1:** Designing for behavior change; 2) **Project 2:** Designing for cross-channel experiences; and 3) **Project 3:** Designing with the users.

(\*\*Students in a group will be graded the same, unless received any information otherwise)

### Exercises

Exercises are individual assignments where a student works on a given exercise brief. The exercises are designed in a way that the student's efforts are contributed towards the projects and implanted through the course to contribute to their individual 50% of the overall grade. Exercises are also designed to allow students practice their tools, not methods, that will help them in applying the methods. The exercises are: 1) **Exercise 1:** Conducting Interviews; 2) **Exercise 2:** Observing not Stalking; 3) **Exercise 3:** Making Probes or Toolkits; and 4) **Exercise 4:** Sketching Fictitiously or Critically.

### Reflections

Reflections are a form of presenting your thoughts on readings, learnings from class/ experience, and experiential and contextual knowledge; in order to further the topic with your questions and ideas. The prompts for weekly reading reflections should mainly draw from the readings assigned for that week (represented as Reflection #-100-150 words) and specific reflections at the end of projects are given particular questions to be answered on Canvas (represented as Reflection S#-150-250 words). For weekly reading reflections, the student is expected to: 1) Quote from the reading; 2) Discuss/ Contest that quote in relation to their understanding of methods in general and the particular method; 3) Extend the conversation on how the method/ approach helps them think through your design process (in general), project, or exercise in hand; and/or 4) BYOM Bring Your Own Method in relation (similar, in addition to, contradictory, etc) to methods being discussed. Students are expected to post their reflection and also post a reply to their peers' post as a part of engaging with their reflection for full credit. All weekly reading reflections are due by Monday 11:59pm (for Section 1) and Wednesday 11:59pm (for Section 2) on Canvas. For project specific reflections, the prompts are provided on Canvas Discussion boards for the Reflections. All project specific reflections are due the next day, EoD (End of Day) of the project submission. Note: Refer to particular dates and times on Canvas.

### Class Participation and Attendance

Class Participation includes engaging in class discussions and arranged class activities. During project presentations, this might also include presentation engagement and critique from the students. Attendance includes being present in person in the class. Unless sick and priorly taken permission from the instructor, the students are not granted an excuse for attendance.

**CLASS SCHEDULE AND STRUCTURE****Lecture and Studio Time**

1 hr: Lecture and Discussion

1 hr: Activity or Studio time to work on a project and applying the methods

**Schedule for 16 weeks (Subject to Change)**

WEEK/ WEEK OF	TOPIC **Thinking	READINGS	SHOW AND TELL (10 MINS)	WORK DUE
1 Jan 10	Introduction  Design Thinking and Approach	Transactions Article (2015)		
2 Jan 17	What are methods? What are they made of?	(Gray, 2016a)- Nature of Methods (Gray, 2016b) - Method as Mindset	*Release P1 and E1  Tools have amoeba nature and methods allow strategic moves	<b>Reflection 1</b>
<b>MODULE 1: MOBILE DESIGNING</b>				
3 Jan 24	Interviews	(Kvale & Brinkmann, 2009)  Optional: (Cooper et al., 2014, Chapter 2)	Empathy as a Method	<b>Reflection 2</b>
4 Jan 31	Affinity diagramming   Thematic analysis  Problem Framing	UMOD- Affinity Diagramming, Personas, Cognitive Walkthrough  (Dorst, 2015)	Problems or Opportunities or Gaps?	<b>Exercise 1</b>  <b>Bring to Class: Unitized interview data</b>
5 Feb 7	Concept Building  Context Specific Methods*	<u>(Lockton, 2015)</u>		<b>Reflection 3</b>  <b>Gallery Walk Critique (45mins)</b>
6 Feb 14	Interaction Heuristic Principles  Testing Usability	<u>(Nielsen, 2020)</u>  (Krug, 2009, Chapter 1,2,4)	ZEN METHOD	<b>Bring to Class: A website or task flow for Heuristic Evaluation</b>
7 Feb 21	<b>PRESENTATIONS- Project 1</b> Bodystorming	UMOD- BodyStorming	*Release P2 and E2	<b>Project 1 Reflection S1</b>

MODULE 2: MULTI-DEVICE DESIGNING				
8 Feb 28	Observations Contextual Inquiry	(Carspecken, 2013, Chapter 3) (Holtzblatt & Beyer, 2014, Chapter 3) UMOD- Design Ethnography	Solutions, Ideas, or Concepts- Feasibility is an obstruction or channel for creativity?	<b>Reflection 4</b>
9 Mar 7	Designing for cross channel experiences  Experience Maps	(Dong et al., 2016) (Benyon & Resmini, 2017)**  (Gibbons, 2017) UMOD- AEIOU	Screens, the only solution?- Thinking with and through Artifacts	<b>Exercise 2</b>  <b>Bring to Class: Observations and Field notes</b>
10 Mar 14	SPRING BREAK WEEK			
11 Mar 21	Experience Prototyping	(Lim et al., 2008) (Buchenau & Suri, 2000)	Shouldn't designers have fun?	<b>Reflection 5</b> <b>Gallery Walk Critique (45mins)</b>
12 Mar 28	<b>PRESENTATIONS- Project 2</b>		*Release P3 and E3	<b>Project 2</b> <b>Reflection S2</b>
MODULE 3: ENGAGING USERS AS DESIGNERS				
13 Apr 4	Co-design and Co-creation	(Sanders & Stappers, 2014) (Sanders & Stappers, 2008)	Hierarchy and Power in Design	<b>Reflection 6</b>
14 Apr 11	Cultural probes  Artifact analysis Content Analysis	(Gaver et al., 1999)  UMOD- Artifact Analysis	Design research can be fun too	<b>Exercise 3</b>  <b>Gallery Walk Critique (45mins): Your Toolkit/ Probes</b>
15 Apr 18	<b>PRESENTATIONS- Project 3</b>		*Release E4	<b>Project 3</b> <b>Reflection S3</b>
MODULE 4: RETHINKING ABOUT A SPACE				
16 Apr 25	<b>Design Fiction Summary of Class</b>	(Brown et al., 2016)	Is fiction only for fun?	<b>Reflection 7</b>
17 May 2	No Class			<b>Exercise 4</b>

## READINGS

### Required Texts

Here is the required textbook for the course:

Hanington, B., & Martin, B. (2019). *Universal methods of design expanded and revised: 125 Ways to research complex problems, develop innovative ideas, and design effective solutions*. Rockport publishers.

### Required Links

Here are some links of design method collections that can be used for the course:

- Design. Think. Make. Break. Repeat.: <http://designthinkmakebreakrepeat.com/>
- IDEO: <https://www.designkit.org/methods>
- Delft Design Guide: Design Strategies and Methods: [https://arl.human.cornell.edu/PAGES\\_Delft/Delft\\_Design\\_Guide.pdf](https://arl.human.cornell.edu/PAGES_Delft/Delft_Design_Guide.pdf)
- Service Design Tools: <https://servicedesigntools.org/tools>
- Hyper Island Toolbox: <https://toolbox.hyperisland.com/>
- Ethics-focused Methods Collection: <https://arxiv.org/abs/2102.08909>

### List of Readings

Below is a list of required readings for the course. They will be made available through Perusall and Canvas, and may be changed at the instructor's discretion.

- Bardzell, J., Bardzell, S., & Stolterman, E. (2014). Reading critical designs: supporting reasoned interpretations of critical design. *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems, 1951–1960*. <https://doi.org/10.1145/2556288.2557137>
- Benyon, D., & Resmini, A. (2017, July 1). User experience in cross-channel ecosystems. *HCI 2017. Proceedings of the 31st International BCS Human Computer Interaction Conference (HCI 2017)*. <https://doi.org/10.14236/ewic/hci2017.38>
- Brown, B., Bleecker, J., D'Adamo, M., Ferreira, P., Formo, J., Glöss, M., Holm, M., Höök, K., Johnson, E.-C. B., Kaburuan, E., Karlsson, A., Vaara, E., Laaksolahti, J., Lampinen, A., Leahu, L., Lewandowski, V., McMillan, D., Mellbratt, A., Mercurio, J., ... Ydholm, M. (2016). The IKEA Catalogue: Design Fiction in Academic and Industrial Collaborations. *Proceedings of the 19th International Conference on Supporting Group Work, 335–344*. <https://doi.org/10.1145/2957276.2957298>
- Buchenau, M., & Suri, J. F. (2000). Experience prototyping. *Proceedings of the 3rd Conference on Designing Interactive Systems: Processes, Practices, Methods, and Techniques, 424–433*. <https://doi.org/10.1145/347642.347802>
- Camere, S., Schifferstein, H. N. J., & Bordegoni, M. (2015). The experience map. A tool to support experience-driven multisensory design. *DeSForM 2015 Aesthetics of Interaction, Dynamic, Multisensory, Wise; Proceedings of the 9th International Conference on Design and Semantics of Form and Movement, Milano (Italy) 13-17 Oct. 2015*. [https://portal.findresearcher.sdu.dk/files/118652462/DeSForM\\_2015.pdf#page=150](https://portal.findresearcher.sdu.dk/files/118652462/DeSForM_2015.pdf#page=150)
- Carspecken, F. P. (2013). *Critical ethnography in educational research: A theoretical and practical guide*. Routledge. <https://content.taylorfrancis.com/books/download?dac=C2009-0-10831-3&isbn=9781136641497&format=googlePreviewPdf>
- Cooper, A., Reimann, R., Cronin, D., & Noessel, C. (2014). *About Face: The Essentials of Interaction Design*. John Wiley & Sons. <https://play.google.com/store/books/details?id=w9Q5BAAAQBAJ>
- Dong, T., Churchill, E. F., & Nichols, J. (2016). Understanding the Challenges of Designing and Developing Multi-Device Experiences. *Proceedings of the 2016 ACM Conference on Designing Interactive Systems, 62–72*. <https://doi.org/10.1145/2901790.2901851>
- Dorst, K. (2015). Frame Creation and Design in the Expanded Field. *She Ji: The Journal of Design, Economics, and Innovation, 1(1), 22–33*. <https://doi.org/10.1016/j.sheji.2015.07.003>
- Gaver, B., Dunne, T., & Pacenti, E. (1999). Design: cultural probes. *Interactions, 6(1), 21–29*. [https://dl.acm.org/doi/fullHtml/10.1145/291224.291235?casa\\_token=mtLS5cgo-b4AAAAA:tP8v22eZawy8GIFY8dCMwzITBLLSA94rdPJXiE0GBtCMoFFkMNY3pC2JROi9TGLJKpEBjcmCv2Xx5A](https://dl.acm.org/doi/fullHtml/10.1145/291224.291235?casa_token=mtLS5cgo-b4AAAAA:tP8v22eZawy8GIFY8dCMwzITBLLSA94rdPJXiE0GBtCMoFFkMNY3pC2JROi9TGLJKpEBjcmCv2Xx5A)

- Gibbons, S. (2017, November 5). *UX Mapping Methods Compared: A Cheat Sheet*. Nielsen Norman Group logoNielsen Norman Group. <https://www.nngroup.com/articles/ux-mapping-cheat-sheet/>
- Gray, C. M. (2016a). What is the Nature and Intended Use of Design Methods? *DRS Biennial Conference Series*. <https://doi.org/10.21606/drs.2016.307>
- Gray, C. M. (2016b). "It's More of a Mindset Than a Method": UX Practitioners' Conception of Design Methods. *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems*, 4044–4055. <https://doi.org/10.1145/2858036.2858410>
- Holtzblatt, K., & Beyer, H. (2014). Contextual Design: Evolved. *Synthesis Lectures on Human-Centered Informatics*, 7(4), 1–91. <https://doi.org/10.2200/S00597ED1V01Y201409HCI024>
- Krug, S. (2009). *Rocket Surgery Made Easy: The Do-It-Yourself Guide to Finding and Fixing Usability Problems*. New Riders. [https://play.google.com/store/books/details?id=9Q3OQVyX\\_QC](https://play.google.com/store/books/details?id=9Q3OQVyX_QC)
- Kvale, S., & Brinkmann, S. (2009). *InterViews: Learning the Craft of Qualitative Research Interviewing*. SAGE. <https://play.google.com/store/books/details?id=bZGvwsP1BRwC>
- Lim, Y.-K., Stolterman, E., & Tenenberg, J. (2008). The anatomy of prototypes: Prototypes as filters, prototypes as manifestations of design ideas. *ACM Trans. Comput.-Hum. Interact.*, 15(2), 1–27. <https://doi.org/10.1145/1375761.1375762>
- Lockton, D. (2015, August 12). *Design with Intent*. <https://designwithintent.co.uk/>
- Nielsen, J. (2020). *10 Usability Heuristics for User Interface Design*. <https://www.nngroup.com/articles/ten-usability-heuristics/>
- Sanders, E., & Stappers, P. J. (2008). Co-creation and the new landscapes of design. *CoDesign*, 4(1), 5–18. <https://doi.org/10.1080/15710880701875068>
- Sanders, E., & Stappers, P. J. (2014). Probes, toolkits and prototypes: three approaches to making in codesigning. *CoDesign*, 10(1), 5–14. <https://doi.org/10.1080/15710882.2014.888183>

## POLICIES

### Academic Misconduct

We are morally and procedurally bound by IU's policies on academic misconduct, the details of which you can read about here:

<https://handbook.iuhighschool.iu.edu/policies/code-of-student-rights-responsibilites.html>

### Religious Observation

Students missing class for a religious observance can find the officially approved accommodation form by going to the Vice Provost for Faculty and Academic Affairs webpage for religious accommodations. The form must be submitted at least 2 weeks prior to the anticipated absence.

### Title IX and IU's Sexual Misconduct Policy

As your instructor, one of my responsibilities is to create a positive learning environment for all students. Title IX and IU's Sexual Misconduct Policy prohibit sexual misconduct in any form, including sexual harassment, sexual assault, stalking, and dating and domestic violence. If you have experienced sexual misconduct, or know someone who has, the University can help. If you are seeking help and would like to speak to someone confidentially, you can make an appointment with: The Sexual Assault Crisis Services (SACS) at (812) 855-8900 (counseling services) Confidential Victim Advocates (CVA) at (812) 856-2469 (advocacy and advice services) IU Health Center at (812) 855-4011 (health and medical services) It is also important that you know that Title IX and University policy require me to share any information brought to my attention about potential sexual misconduct, with the campus Deputy Title IX Coordinator or IU's Title IX Coordinator. In that event, those individuals will work to ensure that appropriate measures are taken and resources are made available. Protecting student privacy is of utmost concern, and information will only be shared with those that need to know to ensure the University can respond and assist. I encourage you to visit [stopsexualviolence.iu.edu](http://stopsexualviolence.iu.edu) to learn more

### **COVID**

If you have a positive COVID-19 test, have COVID-like symptoms, or have been instructed to quarantine you should not attend class. To ensure that you can do this, attendance in this class will:

- Only be taken to comply with accreditation requirements, or
- Not be taken, or
- Be taken but will be prorated and will not lower a student's grade when that student was absent due to compliance with campus isolation expectations. For those students, alternative assignments or make-ups will be offered on a case-by-case basis.

Please work with your instructor to determine a path to continue your progress in the class during these absences, in whatever way the instructor determines fits within course objectives.

### **Bias-Based Incident Reporting**

Bias-based incident reports can be made by students, faculty and staff. Any act of discrimination or harassment based on race, ethnicity, religious affiliation, gender, gender identity, sexual orientation or disability can be reported through any of the options: 1) email [biasincident@indiana.edu](mailto:biasincident@indiana.edu) or [incident@indiana.edu](mailto:incident@indiana.edu); 2) call the Dean of Students Office at (812) 855-8188; or 3) use the IU mobile App ([m.iu.edu](http://m.iu.edu)). Reports can be made anonymously.