

HCI/UX Capstone – Project Proposal Guidelines

College of Computing & Informatics, Drexel University

The Capstone is your chance to synthesize and further practice everything you've done so far in your master's degree program. In this two-quarter sequence, you'll carry out a research or design project of your choosing—aligned with your learning and professional goals. The overarching aim of this project is to equip you with something to showcase your skills as you take your next step in life. For some, that means a UX portfolio piece; for others, part of a Ph.D. program application; for others still, an experience to speak about during job interviews—and so on.

The information in this document should help you in preparing your proposal, which is due at the end of Week 1. You can begin working on your project as soon as your proposal has been approved by the Capstone course instructor. Ideally, that will happen during Week 2 of your first term of Capstone, but in some cases there may need to be more back and forth between you, the instructor and any others involved.

The End Product

You should strive to create something you're proud of and excited to share publicly, such as on a personal website/portfolio or as a publication.

Project Scope

When defining your project, you should plan to work 10 hours per week over a period of 20 weeks (two terms of 10 weeks each, taking a break between quarters). Your project must span both quarters of Capstone, meaning that you'll complete a larger project than you have for any individual course so far.

Individual vs. Team

You may work individually or on a team of 2–3 students. In the past, we have observed that students who work on a team are more successful, and produce better projects, than those working alone. However, working on a team also introduces additional project management responsibilities—and sometimes challenges. Ultimately, this is your choice. Consider your learning and professional goals in making this choice. If you wish to work on a team, all team members must enroll for the same two terms of Capstone.

Approach: Research or Design

You can choose to complete your project through either a Research or Design approach. A research approach is an excellent choice to do a deep dive into a topic that has interested you, as well as learn more about publishing and presentation at HCI conferences and journals. Design Capstones are ideal for students who wish to showcase their design skills in a portfolio piece.

Research

Research projects should start with a question about the interaction between humans and technology or about how design facilitates human activity that you hope to answer. For example, you could investigate features of how people interact with voice interfaces, compare how different social media platforms elicit different kinds of content, examine the usability of privacy features, or address user experience for a particular group of people or for a particular activity. Note that you must have a faculty mentor if you choose to do a research project.

Most research Capstones involve: (1) designing a study to investigate your topic/answer your question, (2) reviewing related projects and research, (3) collecting data, (4) analyzing the data, and (5) writing up the results in a comprehensive report. The goal will be to produce publication-quality work that extends

human knowledge. You are welcome to pursue formal academic publication of your work (and the instructor can guide you through that process), but note that if your research involves speaking with or gathering data from human beings, you most likely will need Institutional Review Board approval for your project proposal prior to carrying it out. You may wish to begin by browsing the topics of past research papers published at HCI conferences like DIS, CHI, CSCW, and Ubicomp.

Design

Design projects start with an idea for a new system or product, or an inkling to investigate a problem space within which to design something. They generally involve: (1) conducting exploratory research and defining a set of user requirements, (2) generating and refining design solutions, (3) implementing a prototype/demo of the product, (4) user testing and (5) documenting this process in a final presentation/report.

Design projects ideally will involve external stakeholders or clients. However, you are welcome to pursue a design project yourself, but you must conduct empirical user research at some point in the process. (Our goal with this requirement is for you to incorporate outside feedback in your design process.)

The Instructor vs. Clients, Mentors and Supervisors

The instructor listed for the Capstone course will be guiding you through discussion and reflection about your project, rather than directly advising you on the substance of the project itself. (Though admittedly sometimes the line is blurry.) For that reason, we ask that you enlist some outside feedback at least at some point in your project. There are different ways that could look, depending on your project:

- **Client:** If you have a relationship with a professional or organization, you could do a UX project for them as a client.
 - If you'd like to do a client project but don't already have a connection, one place to look is Catchafire, which bridges skilled volunteers with organizations in need. [Check out their volunteer opportunities.](#)
 - Besides that, consider reaching out to local businesses in your area!
- **Mentor:** If you are currently working (or have a relationship with a UX professional), you could do a project for your job and/or something that a UX professional could supervise you in.
 - If you don't yet have a mentor, one place to find one is on [UX Coffee Hour](#).
- **Faculty:** If you're doing a research project that involves human subjects and/or that you may wish to publish as an official academic publication, you'll need to enlist a faculty supervisor. In other cases, you may simply wish to take advantage of a faculty member's expertise in an area of interest to you. We don't have a formal channel for making these connections; reach out to individual faculty members to discuss possible opportunities.
- **User Group:** You can also work on your own/with your group without any specific mentor/supervisor, but we ask that your project include empirical user research to bring in feedback and perspectives from actual or prospective users. This may include exploratory design research, participatory design or co-design, usability testing, etc.

Looking for Inspiration?

A great place to look for inspiration is in the student competitions held annually at the CHI conference (the premier research and design venue for HCI/UX work). They have tracks for research and design.

To peruse these works, follow the links listed below.

On those pages, find the link for "SESSION: Student Design Competition" or "SESSION: Student Research Competition." Some of these works are open-access, meaning they can be downloaded freely from anyone, but others are behind a paywall (this is the case if you see the green "Get Access" button). Drexel provides a subscription to this library, so you'll be able to access articles in any case. The easiest way to get behind the paywall is to access this website from a campus network or to [log in to the VPN](#). But you can also search for an article title on the [Drexel Libraries website](#) to get access to any of these articles.

- CHI 2024: <https://dl.acm.org/doi/proceedings/10.1145/3613905>
- CHI 2023: <https://dl.acm.org/doi/proceedings/10.1145/3544549>
- CHI 2022: <https://dl.acm.org/doi/proceedings/10.1145/3491101>
- CHI 2021: <https://dl.acm.org/doi/proceedings/10.1145/3411763>

To Submit Your Proposal

Prepare a document with the following information and submit it on Blackboard:

- **Your name**, as well as those of any team members (Note: Only one team member needs to submit)
- **Choice: Research or Design**
 - *If Research*: Name the faculty advisor who has agreed to work with you
 - *If Design*: Name the user group that you will be designing for, as well as the client/mentor if you have one
- **Description** of about half a page of the proposed project. Describe: (1) what you will do, (2) why you are interested this project, (3) how doing this project will help you meet your personal or professional goals, and (4) what you think some of the challenges will be.
- **Milestones**: Identify 3-4 milestones per quarter (6-8 total) for your project. For each milestone, give a brief description of what it will entail, as well as an anticipated date of completion.
- **Gantt chart**: Create a visual representation of the various components of your project, mapped over time. This should provide a more granular view of your project than just the list of milestones. You may create this using any tools you wish, but keep in mind that you may be asked to revise this before approval, and you may have to make revisions along the way.