



Human centered design engineers research, design, and build systems and technologies that work for people.

Human Centered Design & Engineering (HCDE) is an interdisciplinary major that combines engineering, design, research and technology with insights from the social sciences. Students learn to understand people's needs and create solutions for real-world challenges. Students graduate with a strong foundation in human centered design and research, data visualization, and designing for emerging technologies such as artificial intelligence, data systems and connected devices.

What makes HCDE special?

HCDE is a unique program, both in size and focus. Through small, project-based courses, HCDE students graduate with a solid portfolio of work to share with potential employers. Almost all undergraduates participate in departmental research groups and develop new skills while applying their coursework in innovative ways.

HCDE undergraduates receive opportunities to prepare for their careers through HCDE recruiting events, portfolio review workshops, alumni mentoring and networking events, and company information sessions.

What problems are human centered design engineers trying to solve?

Human Centered Design and Engineering is broad – our research and developments contribute to nearly every industry. Some of the questions HCDE students and faculty are currently asking include:

- How can we support collaboration across domains with different ways of working to address large-scale challenges related to climate change, transportation and more?
- How can we design communication technologies that are more resilient to the spread of misinformation and disinformation online?
- How can we mitigate bias in the development of new artificial intelligence technologies?
- How do we design mobile and wearable technologies that are accessible to the broadest range of people?

WHERE DO HCDE ALUMNI WORK?



Career paths

HCDE graduates work in many industries as designers and researchers who improve people's interactions with technology and with the world around them. Graduates find roles as user researchers, user experience (UX) designers, product designers, product managers, data analysts, software engineers, and systems engineers.

Industries

Roughly half of HCDE graduates work in the technology industry. Other common industries HCDE graduates work in include education, healthcare, media, government, and non-profit sectors.

Companies

Major companies that employ HCDE graduates include Adobe, Alaska Airlines, Amazon, Apple, AT&T, Boeing, Disney, Expedia, Hewlett-Packard, IBM Design, Intel, Meta, Microsoft, Netflix, Nike, Starbucks, Tableau, T-Mobile, and Wikimedia.

How can you learn more?

If you think HCDE is for you, there are many opportunities to explore more:

- Join a Directed Research Group and explore research projects in HCDE.
- Meet with a peer adviser.
- Join an HCDE-related student organization.
- Attend an HCDE information session or a public event like the UX Speaker Series or Capstone Showcase. Find opportunities at hcde.uw.edu/calendar.

STUDENT DESIGN PROJECTS

In the senior capstone, student teams partner with external sponsors to design and evaluate real products and services. Recent projects include:

- + Reimagining the Mobile Experience for Patients
Sponsor: Seattle Children's Hospital
- + AeroAccess: Accessible Air Travel for the Visually Impaired at Boeing
Sponsor: Boeing
- + PACCAR Electric Truck Human Machine Interface
Sponsor: PACCAR
- + Supporting Beginner Birdwatchers with Merlin Bird ID
Sponsor: Ecofutures Design Lab & the Cornell Lab of Ornithology
- + BlueBoard: Helping Governments and Organizations Prioritize Water Health Through Data Insights
Sponsor: PATH
- + BECU Fraud and Security Center Reimagination
Sponsor: BECU

HCDE RESEARCH AREAS

Awareness, learning, and behavior

—
Social interactions and online communities

—
Coordination, collaboration, and infrastructure

—
Just and sustainable futures

—
Novel systems and technologies

—
AI and data science