Students and faculty come together in Human Centered Design & Engineering (HCDE) to focus on understanding human needs and interests as they solve the engineering problems our world is facing. From user-centered design to human-computer interaction, we are designing the future.

**OUR VISION**

Educating tomorrow’s leaders is our highest priority. Our students design the future by investigating and shaping the role of technology in human activity. By observing people and communities who interact through social and technical systems and addressing design and engineering problems with an interdisciplinary community of faculty, students, and researchers, our graduates are building the technologies of tomorrow.

**INTERDISCIPLINARY RESEARCH**

Our department is an internationally recognized leader in human centered design and engineering and is the only department of its kind in the world. From experimental studies of the design of new technologies to studies of technology adoption, our award-winning and interdisciplinary research has broadened the knowledge base of the field.

**COMMMITMENT TO EDUCATION**

Our curriculum emphasizes student-centered and hands-on learning. Beyond traditional classroom courses, students join research groups and work with top-ranked professors to research, design, and build solutions to real-world problems in collaborative teams. Our students learn to center on human needs and interests. They learn the theory and principles that enable them to respond to the constantly changing technology landscape, and go on to assume leadership positions in industry, government, nonprofit organizations, and academia.

hcde.uw.edu
Human Centered Design & Engineering Education

Human Centered Design & Engineering (HCDE) at the University of Washington, Seattle, is advancing the research and design of technologies by using innovative techniques to study human activity and develop meaningful information and sociotechnical systems. HCDE faculty and students are designing the future while prioritizing the needs, desires, and behaviors of people and communities who interact through sociotechnical systems.

HCDE offers four academic programs:

- Bachelor of Science
- Master of Science
- Doctor of Philosophy
- Graduate Certificate in User-Centered Design

All Bachelor's, Master's, and Doctoral students receive engineering degrees in Human Centered Design & Engineering.

Bachelor of Science

The BS is a flexible major that provides a solid foundation in designing user experiences and interfaces, creating information visualizations, conducting user research, and designing and building web technologies. Students learn to center on human needs and interests as they solve design problems and build engineering solutions.

Master of Science

The MS fosters students' knowledge and skills in the design and evaluation of technologies and user interfaces. The curriculum, offered in the evening to accommodate both full time and part time students, prepares students for leadership roles in information design, user interface design, user research, human-computer interaction, and related specializations.

Doctor of Philosophy

The PhD prepares students for notable careers in academia, industry, and government. Students conduct original research in the design and engineering of systems to support human endeavors, as well as develop demonstrable expertise relative to their research interests.

User-Centered Design Certificate Program

The UCD certificate is a graduate-level program for students seeking to explore issues in user research and user-centered design. Students study the latest theories and explore tools and techniques to place user needs and desires at the forefront of each stage of the design process.

Careers in HCDE

Graduates of our programs find jobs as user experience (UX) architects, designers, and researchers; usability evaluators; web and information developers; instructional designers; and more. Students have access to prominent corporations that are based or have offices in the Pacific Northwest, as well as to Seattle’s vibrant startup community, making Seattle the perfect location from which to launch an exciting career.

Student Demographics

Undergraduate enrollment: 96
Bachelor's degrees awarded 2013: 21
Graduate enrollment: 181
Graduate degrees awarded 2013: 59
Certificate program enrollment: 84

ENROLLMENT BY PROGRAM
Research and Innovation

The Department of Human Centered Design & Engineering (HCDE) advances research, design, and practice in order to improve cognition, behavior, engagement, and participation among individuals, groups, organizations, and communities of people. Our approaches are interdisciplinary but are fundamentally sociotechnical: we investigate the interaction of people’s practices and meanings with technologies and technical development.

Research Areas

Our faculty’s research focus on six interrelated areas of study:

- Influencing Behavior, Thinking, & Awareness
- Design for Emergent Collaborations & Organizations
- Low Resource & Underserved Populations
- Material and Embodied Technologies, & Ubiquitous Computing
- Data Visualization & Big Data
- Learning in Professional & Technical Environments

HCDE highlights these areas to demonstrate faculty expertise and interests, and student opportunities. Students investigate contemporary research questions in many of these areas by participating in faculty directed, small research groups. During their studies, many HCDE students also participate in a broad array of technology and design lectures and projects across the University of Washington campus.

Corporate Affiliates Program

In an effort to further expand research and innovation in the department, the HCDE Corporate Affiliates Program was designed to further expand research and innovation by fostering long-term relationships with industry partners. Affiliates enjoy a special connection with HCDE, leading to technical exchange, collaboration, and interaction with faculty, students, and alumni.
TRAILBLAZERS

Many alumni and faculty in the Department of Human Centered Design & Engineering (HCDE) have made significant contributions to the department, industry, and research. Here are just a few.

Mark Zachry (Professor) researches intelligent interfaces to support virtual interactions and social behavior in computational systems. Zachry’s current projects include a multi-year study of networked knowledge workers on the web, systems for enabling social translucence on the Internet, and the development of new forms of economic exchange in virtual spaces. He is an Associate Fellow in, and has received the Jay R. Gould Excellence in Teaching Award from, the International Society for Technical Communication.

Julie Kientz (Assistant Professor) researches healthy living; in particular, she focuses on designing, developing, and evaluating novel, future computing applications involving the capture and review of data for the domains of health and education, as well as on understanding and reducing the burdens of health technologies. She was honored as one of MIT Technology Review’s 35 Innovators Under 35 in 2013, and she received the HCDE Junior Faculty Innovator Award in 2012, and the National Science Foundation CAREER award in 2009.

Matt Shobe (MS ’96) co-founded and led user experience design at FeedBurner, a web-feed management provider that was acquired by Google in 2007. He is currently design advisor at BigDoor.com, a Seattle startup. Shobe also serves as a mentor to Seattle-area startups in the TechStars and Startup Weekend programs. He founded, sponsors, and judges HCDE’s annual Shobe Prize competition, encouraging students to follow their entrepreneurial ambitions.

Darivanh Vlachos (BS ’11, MS ’13) is a proven leader in human centered design & engineering. In fact, she received both the 2013 HCDE Graduate Award and the 2011 Undergraduate Award for Leadership and Engagement. As a student, she was integral in forming a successful student association at both the undergraduate and graduate levels. In her research, Darivanh worked with Computer Science & Engineering PhD candidate Rohit Chaudri on FoneAstra, a low-cost system for monitoring milk pasteurization, which was launched in May 2012 in South Africa with great success.

Jonathan Morgan (PhD ’13) is a research strategist for the Wikimedia Foundation, the global nonprofit company that runs Wikipedia. Jonathan’s doctoral research focused on designing tools to support open online collaboration in wikis and beyond. He is the recipient of the 2008 UW Engineering Clairmont L. Egtvedt Fellowship, a 2011 Wikimedia Research Fellowship, and the 2013 HCDE Graduate Award for Academic Excellence.

Michael Berg (UCD certificate ’05, TWE certificate ’06, MS ’09) has worked at Microsoft since 2002, initially as a play test moderator and currently as a program manager on the User Experience Central Team. He also manages Microsoft’s Usability Partner Program, building relationships with other companies to support contextual usability research. As an HCDE alumnus, Berg has frequently contributed to the department by hosting faculty, alumni, and students at Microsoft, donating Xbox and Kinect to the HCDE student association, and directing a student research group.

Natasha Jones (PhD ’12) is a professor at the University of New Mexico. Her research focuses on social justice and technical communication, ethnography, and multimodal pedagogy. Her dissertation examined how loosely-networked, distributed organizations reconcile disparate localized and organizational motivations to meet established goals. In addition to her academic work, Jones excels as an educator and received the 2011 Excellence in Teaching Award from the University of Washington as a PhD student.

“The Department of Human Centered Design & Engineering puts humans at the forefront of all design processes—researching and designing information systems and applications to meet the needs of users around the world.”

JAN SPYRIDAKIS, DEPARTMENT CHAIR AND PROFESSOR