Certificate **Programs**

User-Centered Design Certificate

The User-Centered Design (UCD) Certificate Program is an evening program at the graduate level for students who want to explore a wide range of issues in usability and user-centered design. The Certificate consists of four credit-based courses that can be completed in one academic year.

Technical Writing & Editing

The Technical Writing and Editing Certificate Program (TWE) is a nine month evening program for students who want to learn practical applications and fundamental concepts in technical communication, including information design, software user-assistance, editing practices, and software applications.

Students complete six credit-based courses to earn the TWE Certificate. The program, designed by an advisory board of leading technical writers, publications managers, and UW faculty affords students the opportunity to network with leading professionals and potential job contacts.

Technical Japanese Program

The Technical Japanese Program (TJ) offers classes in advanced Japanese for students who want to learn the language as it is used in the business and technical workplace.

Students can take a series of classes in technical Japanese, or they can enter the TJ Master's program and study both an engineering specialty and advanced technical Japanese. HCDE is one of the available specialties.

Labs
Research groups
Departmental **Resources**

HCDE students work in high quality facilities with top-ranked faculty in diverse areas of research. Students have access to a state-of-the-art computing lab.

They also have access to the Laboratory for Usability Testing and Evaluation and other labs run by faculty concerning computing for healthy living, human-robot communication, computer supported collaboration, communication, and engineering education.

Faculty also direct small research groups in which students focus on contemporary research questions. These groups are updated quarterly and have included NSF-funded and NIH-funded work. Research groups have addressed a range of topics such as design for digital inclusion, internet based research, digital games, virtual workspaces, visualizations to support organizational analysis, and engineering education.

Additionally, HCDE students participate in the active Design Use Build (DUB) group, an interdisciplinary, University-wide HCI group.

Communicative

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The University of Washington is committed to providing access, equal opportunity and reasonable accommodation in its services, programs, activities, education and employment for individuals with disabilities.

To request disability accommodation contact the Disability Services Office at least ten days in advance at: 205.543.6450/V; 206.543.6452TTY; 206.685.7264/FAX; or dso@u.washington.edu

HCDE Human Centered Design & Engineering

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College of Engineering
University of Washington
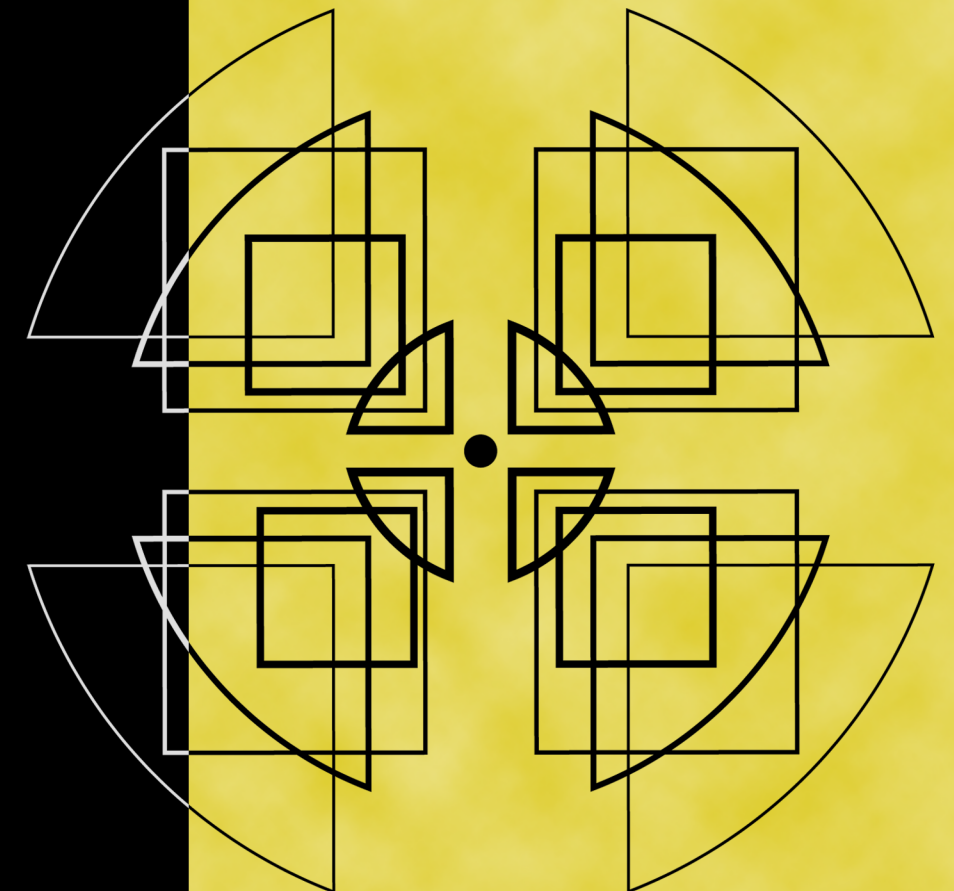
Our **Mission**

HCDE faculty and students are advancing design knowledge by using innovative techniques to study human activity and then translating that knowledge into meaningful information and system designs. HCDE is designing the future by:

- Considering the role of communication in human activity.
- Prioritizing the needs, desires, and behaviors of people and communities who interact with technical systems.
- Addressing the specifics of design by working with interdisciplinary communities of researchers to build innovative technological solutions.

Program Description

The Department of Human Centered Design & Engineering (HCDE) at the University of Washington is at the forefront of an exciting and emerging field. HCDE supports human activities through researching, designing, and building information and communication technologies.

HCDE has an interdisciplinary faculty with expertise from several areas: e.g., Cognitive Psychology, Computer Science, Education, Industrial Engineering, Information Studies, Language and Literature, and Linguistics. Faculty collaborate with each other and with their students, creating insights for understanding the technological, communication, design, and social dimensions of computing.

HCDE students obtain outstanding jobs. Many take jobs in high-tech industry (e.g., Microsoft, Boeing, Intel, IBM, Amazon, T-Mobile, Google), designing user interfaces, websites, software user assistance, and other forms of user-centered communication. Our PhD graduates take jobs at top-level universities and in R&D groups in industry. HCDE also prepares students to assume positions of intellectual leadership in government and non-profits agencies.

Bachelor of Science

The BS in HCDE gives students strong design and communication skills, coupled with a solid foundation in math and science. Students learn about hypermedia and multimedia, human-computer interaction, publications management, rhetoric of technical discourse, and online support systems. Students design, write, edit, and evaluate technical and scientific materials. HCDE undergraduate students create online portfolios as part of their senior projects and are prepared to enter the workforce in a variety of industries.

HCDE undergraduate students complete core requirements (41 credits) including coursework in communication design, usability and user-experience design, and project management. Students choose one of three degree options: Human-Computer Interaction, Technical Communication, or an Individualized Course of Study (29 credits).

The HCI option provides students with a solid foundation in design, evaluation, implementation of interactive computing systems for human use, and the study of major phenomena surrounding them. The TC option provides students with practical applications and fundamental concepts in technical communication, including information design, software user-assistance, editing practices, and uses of software applications to solve communication problems. The Individualized Course of Study gives students an opportunity to create an individualized curriculum designed around students' professional and academic interests.

Students work with their advisor to identify electives that complement the core and create a specialization in a field of their choice.
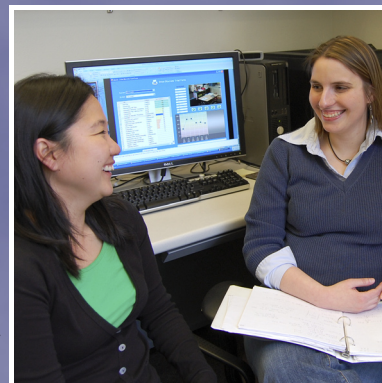
Master of Science

The MS in HCDE prepares students to assume leadership roles in the field of human centered design. MS students typically have significant work experience but seek further intellectual and career challenges. The program focuses on helping students refine their skills in designing, producing, and evaluating technical information.

The MS program consists of 41 credits and includes participation in directed research groups doing hands-on research under the guidance of a faculty member. Most MS students finish in two years or less. The MS program has a flexible curriculum that provides students with a strong foundation in theory, research methods, design skills, and the opportunity to create a specialization unique to their academic and professional interests.

HCDE offers the master's program in two formats: one meeting in the day, the other meeting in the evening. Students who pursue the day MS degree usually leave their jobs to study full time although many also pursue research or teaching assistantships while in school. Evening MS students usually continue with their full time jobs and study part time by taking evening courses.

PhD

The PhD in HCDE prepares students for careers as innovators and intellectual leaders in both academia and industry. The program has multifaceted goals:

- To prepare individuals for careers as researchers, teachers, and intellectual leaders in the field of human centered design and engineering.
- To foster the development and dissemination of new knowledge relevant to human centered design and engineering.
- To encourage the development of an international, multi-cultural perspective.
- To invent new technical and strategic solutions to human centered design and engineering problems.

The PhD program consists of 105 credits of coursework, directed research, and a dissertation. In their coursework, students encounter the main themes and intellectual diversity of the human centered design field.

Core courses cover rhetorical dimensions of communication, empirical research traditions supporting the field, information design, usability testing, user-centered design processes, computer-mediated communication, international communication, content management, research methods, visual communication, and advanced Web design.

Through the directed research program, students have the opportunity, under the guidance and mentorship of a faculty member, to work in a small group conducting research on specific topics. This research experience enriches the students' depth of knowledge and breadth of research expertise and prepares the students for personal research activities that culminate with a dissertation.

Dedicated

expressive