Master of Science – Human-Centered Computing
2025-2026

REQUIREMENTS

Admission Requirements

1. **Grade point average of 3.0** (B) from all undergraduate coursework.
2. **Resume** detailing work experiences and accomplishments.
3. **Personal statement** of career goals and background experiences, including an explanation of how this program will help achieve educational and professional objectives.
4. **Recommendations:** Two professional or academic recommendations received online, addressing the candidate's potential for graduate study completion. You will provide the emails of two references, and they will be sent a link to complete their online recommendation.
5. Candidates are recommended to have knowledge of a **programming** language equivalent to 2 or 3 undergraduate courses.
6. Candidates are recommended to have knowledge of **applied statistics**.

Degree Requirements

The Human-Centered Computing (M.S.) program requires a minimum of 34 credits.

Core Courses (13 credits)

Required:
- HCC 502   User Experience Research (3 credits)
- HCC 503   User Experience Design (3 credits)
- HCC 601   HCC Synthesis: Foundations and Trajectories in Social Computing (3 credits)
- HCC 602   Design for Creative Learning Experiences (3 credits)
- HCC 605   Professional Development for Human Subjects Research (1 credit)

Electives Requirements (3-6 credits)

Any 500 or 600 level CIS course can be used as an elective. Students will require 3 additional elective credits if the project option of the capstone is chosen.

Capstone Requirements (3 or 6 credits)

Each candidate must complete either the project course or the thesis sequence. Please contact the graduate program director one semester prior to starting any of these.

Project course:
- CIS 693   Master's Project

Thesis sequence:
- CIS 690   Thesis Research Preparation
- CIS 695   Master's Thesis

HUMAN-CENTERED COMPUTING TRACKS

All candidates are required to complete one of the listed tracks of 4 classes for a total of 12 credits.

Augmented and Virtual Reality Development

This track equips students with skills to design and develop multi-modal applications for innovative user interactions and interfaces.

Required:
- HCC 552   AR/VR Design and Research
- HCC 553   AR/VR Development

Choose 2 of the following:
- CIS 657   Mobile Application Development
- CIS 678   Machine Learning
- SE 511   Introduction to Software Engineering

Human-Centered Artificial Intelligence

This track prepares students with skills to design and apply AI in diverse contexts focused on the needs of the users. Students will be able to apply AI within domain of interest to deploy critical infrastructure to augment human-machine intellect.

Required:
- AI 501   Introduction to Artificial Intelligence
- HCC 531   Human AI Interaction

Choose 2 of the following:
- AI 502   Introduction to Generative AI
- AI 511   AI Ethics and Bias
- AI 531   Natural Language Processing
- CIS 671   Information Visualization
- CIS 678   Machine Learning

Human-Centered Software Development

This track prepares students to create user-centered, reliable and scalable software products for diverse computing applications.

Required:
- SE 511   Introduction to Software Engineering
- SE 512   Requirements Specification

Choose 2 of the following:
- AI 521   Applied Computer Vision
- AI 531   Natural Language Processing
- CIS 678   Machine Learning
- SE 522   Software Architecture and Design
- SE 537   Software Quality Assurance