

# Human Computer Interaction

## Interdepartmental Graduate Program



# Graduate Student Handbook

Updated October 2019

**IOWA STATE UNIVERSITY**

## **Welcome to the Human Computer Interaction (HCI) Interdepartmental Graduate Program at Iowa State University**

This student handbook is provided to give you general guidance about important issues related to your graduate career. Because the Human Computer Interaction Interdepartmental Graduate Program continually seeks to improve, some changes may occur between the annual printings of this handbook. You should stay in close communication with your major professor regarding important curriculum and policy issues. We also encourage you to bring questions and comments to the Director, Program Coordinator and members of the HCI Supervisory Committee at any time.

### **HCI Director of Graduate Education (DOGE)**

Stephen Gilbert  
1620 Howe Hall  
515-294-6782  
[gilbert@iastate.edu](mailto:gilbert@iastate.edu)

### **HCI Graduate Program Coordinator**

Tiffany Kayser  
1620 Howe Hall  
515-294-2089  
[tkayser@iastate.edu](mailto:tkayser@iastate.edu)

### **HCI Graduate Program Website**

<http://www.vrac.iastate.edu/hci/>

# Administration and Contact Information

The Director of Graduate Education, Supervisory Committee, and Program Coordinator oversee Human Computer Interaction Interdepartmental Graduate Program activities. Please contact the HCI Graduate Program Coordinator if you have any questions about the program.

<b>Department Administrators</b>	
Stephen Gilbert	HCI Director of Graduate Education (DOGE)   1620 Howe Hall   515-294-6782   <a href="mailto:gilbert@iastate.edu">gilbert@iastate.edu</a>
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# Introduction

The Interdepartmental Graduate Program in Human Computer Interaction (HCI) is an interdisciplinary academic program created to foster research excellence in HCI at Iowa State University. It offers outstanding opportunities for graduate study in a wide range of disciplines. The program welcomes students from a diverse collection of technical and creative fields whose unifying characteristic is the desire to develop new ways to bridge the gap between human and machine.

HCI Graduate Program Learning Goals — Every HCI student should be able to:

- Design and evaluate systems with a user-centered design lens
- Participate in a multidisciplinary product development team
- Choose and apply an appropriate user-centered design approach
- Identify key players and organizations in HCI
- Use theories and models in the HCI field
- Describe emerging technology trends

The HCI program involves over 80 nationally and internationally known faculty who participate in a wide range of collaborative projects with other faculty and industry partners. These faculty members are a diverse group of highly dynamic researchers who are enthusiastic about the challenges and opportunities presented by this rapidly changing field. All of these faculty members share a common interest in the invention, application and evaluation of next generation computer interfaces. The HCI program currently includes (but is not restricted to) interdisciplinary research within 32 academic areas of focus:

Aerospace Engineering and Engineering Mechanics	Geological and Atmospheric Sciences
Agricultural and Biosystems Engineering	Gerontology
Apparel, Educational Studies & Hospitality Management	Greenlee School of Journalism and Communication
Architecture	Human Development and Family Studies
Art and Design	Industrial Design
Biomedical Sciences	Industrial and Manufacturing Systems Engineering
Chemistry	Kinesiology
Civil, Construction, and Environmental Engineering	Logistics, Operations, and Management Information Systems
Computer Science	Materials Science and Engineering
Curriculum and Instruction	Mathematics
Ecology, Evolution and Organismal Biology	Mechanical Engineering
Economics	Music
Educational Leadership & Policy Studies	Psychology
Electrical and Computer Engineering	Statistics
English	Veterinary Microbiology & Preventative Medicine
Genetics, Development & Cell Biology	Veterinary Pathology

## HCI Program Degree Options

The program is flexible with four credentialing options:

- [PhD in HCI](#)
- [MS in HCI](#)
- [Online Masters degree in HCI \(M.HCI\)](#)
- [Online Graduate Certificate in HCI](#)

## General Information

HCI Graduate Program Coordinator

1620 Howe Hall

Phone: 515-294-2089

Email: [hci@iastate.edu](mailto:hci@iastate.edu)

Website: <http://www.vrac.iastate.edu/hci/>

*The HCI Graduate Program Coordinator keeps records of your progress to degree.* It is especially important to notify the Graduate Program Coordinator of any changes that should be noted for our records in the department and regularly update your information in AccessPlus for the Registrar's Office records.

The Graduate Program Coordinator is who you submit **nearly all** graduate program POS and graduation forms for approval and signature from the Director of Graduate Education (DOGE). Most forms are available online or can otherwise be obtained from the Graduate Program Coordinator. It is always good to make copies for yourself or email a PDF scan to yourself.

## ISU Email

All current students are eligible for a university Net-ID and email account (register by going to [http://www.it.iastate.edu/howtos/register\\_net-id](http://www.it.iastate.edu/howtos/register_net-id) and follow the instructions). The graduate program staff sends many vitally important messages by email regarding impending deadlines and clarifications of policy. If you have any questions about your Net-ID or email address, contact the Solution Center, [solution@iastate.edu](mailto:solution@iastate.edu), (515) 294-4000.

## Medical Conditions or Learning Disabilities

<https://sas.dso.iastate.edu/>

1076 Student Services Building; (515) 294-7220; TTY (515) 294-6635

Staff members in Disability Resources coordinate support services that students may need in order to reach their fullest academic potential. The DR staff members provide accommodations and serve as a resource within the university community concerning students who have physical or learning disabilities. DR provides assistance, information, support, counseling, education, referral, and promotes disability awareness in students, faculty, staff, the Ames community, and the state of Iowa. **Students with medical or**

learning disabilities need to identify themselves and to arrange for accommodation through Disability Resources before they can receive departmental accommodation for existing conditions.

## Upon Admission to Iowa State University

To help in the orientation process, new students should:

- Read this handbook. E-mail is the HCI program's primary means of communication, so students should register for e-mail as soon as possible. Detailed information about e-mail registration can be found at <https://www.it.iastate.edu/services/cymail>. Please notify the HCI Graduate Program Coordinator, [hci@iastate.edu](mailto:hci@iastate.edu), of your Iowa State e-mail address once you receive it.
- Review the following references and examine them carefully. They contain information about University regulations and policy, including requirements for graduation.

### ***Orientation Resources for International Students***

<https://www.isso.iastate.edu/new-student-orientation>

The International Students and Scholars website can be found at <https://www.isso.iastate.edu/>

### ***Graduate College Handbook***

<http://www.grad-college.iastate.edu/common/handbook/>

### ***Electronic Thesis/Dissertations***

<http://www.grad-college.iastate.edu/current/thesis/>

***Iowa State Graduate College forms*** are available online at:

[http://www.grad-college.iastate.edu/common/forms/student\\_forms.php](http://www.grad-college.iastate.edu/common/forms/student_forms.php)

Other useful references include:

### ***ISU General Catalog***

<http://catalog.iastate.edu/>

### ***Schedule of Classes***

<http://classes.iastate.edu/>

### ***Academic Calendars***

<http://registrar.iastate.edu/calendar/>

## **Accessplus**



<https://accessplus.iastate.edu/frontdoor/login.jsp>

Iowa State University's AccessPlus is a personalized, secure, university information resource that provides on-demand accessibility to your confidential information. Menu options for students include:

- Address Change
- Current Student Information
- Dining Services
- Financial Aid Information
- Grades and Transcripts
- Long Distance Code
- Course Registration
- Residence Hall Information
- Tax Information
- University Bill
- Class Schedule
- Web-based Training

### ***Iowa State University Phone/E-mail Directory***

<https://www.info.iastate.edu/>

### ***The Iowa State University Homepage***

<http://www.iastate.edu/>

### ***Graduate College Homepage***

<https://www.grad-college.iastate.edu/>



# ISU and Graduate College Policies

No part of this manual supersedes policies or requirements of either the Iowa State University Graduate College or Iowa State University. Students are responsible for knowing and complying with all policies in the [Graduate College Handbook](#) and with [Thesis/Dissertation guidelines](#) and [Graduation deadlines](#).

## Admissions Information

Please follow [this link](#) for complete application instructions and requirements.

### Admission for MS or PhD Programs

Admission into the HCI graduate degree program depends on a combination of your academic qualifications, area of interest, research specialities and the current research needs of the faculty. Evidence of creative talent, the ability to speak and write English clearly, and promise for a successful career are also important considerations for entry into the HCI Graduate program.

Other admission requirements include:

- Transcripts, test scores and other indicators that the student applicant can be successful at the graduate level.
- 3.0 GPA.
- GRE is optional for all students.
- TOEFL score of 95 iBT or greater or IELTS of 7.0 or greater for nonnative English speakers.
- The demonstrated ability to write software competently. This requirement can be met during your course of study in the program.

In addition to the above requirements, the following conditions apply when reviewing your application for admission.

- Meeting or exceeding these guidelines does not guarantee admission.
- An HCI [faculty](#) member must agree to work with and support you as a major professor.
- Your complete file is made available for member of the HCI faculty to review. (See the [faculty page](#) to learn more about the diverse members of the HCI faculty.)

### Admission for M.HCI Program

The Online M.HCI program is most appropriate for individuals with a bachelor's degree in a scientific, engineering, business, or artistic discipline, who are pursuing a professional career, and who already have a strong base of information technology skills.

The program requires that admitted students have undergraduate degrees from an accredited university and have graduated with a GPA that places them in the upper half of their graduating class. Demonstrable programming skills will be required. A minimum TOFEL score of 95(iBT) will be required of all non-native English-speaking students. Candidates may be considered for admission by the HCI supervisory committee if they do not meet all these requirements but otherwise show outstanding potential. However, all students must meet the university's minimum requirements for admission.

Other admission requirements for the Online HCI program include the following:

- Transcripts, test scores and other indicators that the student applicant can be successful at the graduate level.
- 3.0 GPA.
- TOEFL score of 95 iBT or greater or IELTS of 7.0 or greater for nonnative English speakers.
- Demonstrated ability to write software competently. This requirement can be met during your course of study in the program.

### **Admission to the HCI Graduate Certificate**

These requirements are based on the same requirements as an M.HCI applicant. Students may take up to nine credits before admission into a degree or certificate program.

Admission into the certificate program does not guarantee admission into the masters or doctoral programs. If a student who receives a certificate wishes to obtain admission into the masters or doctoral programs, the student will need to gain acceptance into the programs by meeting the admission requirements. Credits earned towards the certificate may be counted towards the masters and doctoral degree requirements if approved by the student's program of study committee.

### **Academic Leave/Re-entry**

Reentering graduate students with active status do not need to complete a reentry application, but they should contact HCI Graduate Program Coordinator. Two consecutive calendar years of non-registration puts students on "inactive" status and requires submission of a [Reinstatement to Active Status form](#) with the approval of the graduate program and the Graduate College to obtain "active" status and resume coursework.

Arrangement for a leave of absence is made between the graduate assistant and that assistant's supervisor adhering to all grant and other funding source restrictions. When a graduate assistant needs to be absent either for personal reasons or illness, the supervisor should be understanding and accommodating to that need. At the same time, the graduate assistant should attempt to plan personal leave so that it does not interfere with or cause neglect of the duties associated with his or her appointment. Supervisors of graduate assistants are responsible for ensuring that their assistants do not exceed reasonable limits for leave.

When a conflict arises between the graduate assistant and that assistant's supervisor regarding leave of absence use, either party may involve the Director of Graduate Education (DOGE). If the conflict is not resolved in a timely manner, any of the parties may involve the Dean of the Graduate College for a binding resolution. When resolving conflicts, the concerned party must present all evidence in writing (email is acceptable) and all parties involved must receive a copy. In order to accommodate schedules, allow a minimum of five business days for document review and resolution meeting to be scheduled between the two parties within two weeks. Resolutions achieved between the DOGE and parties need to be in writing (email is acceptable) and must be sent to all parties including the Dean of the Graduate College.

# Home Department and Major Professor

## Establishing a Home Department

For administrative purposes, the major professor's department is generally the student's home department. All online M.HCI students should have filed their [home department e-form](#) within first semester after starting the program; the HCI Graduate Program Coordinator can assist with any questions when completing this form.

## Major Professor

For PhD and MS students, your major professor is the person who will chair your Program of Study (POS) committee. This person supervises your thesis, creative component, or dissertation.

The HCI Director of Graduate Education (DOGE) will serve as the major professor for online M.HCI students. The HCI Graduate Program Coordinator will serve as the academic advisor.

## Co-major Professors

If you are pursuing a co-major, each of the major fields must be represented by a different major professor, which will require the designation of co-major professors. However, the same person, if a faculty member in both majors, will be allowed to serve as major professor for both majors.

## Concurrent Master's Degrees

By special request, students may complete two degree programs that lead to two concurrently awarded master's degrees by following these requirements:

- Complete and submit a "Two Concurrent Graduate Degrees" form to the Graduate College (1137 Pearson Hall),
- File separate Program of Study Committee (POSC) forms for each degree,
- File separate "Application for Graduation" forms for each degree,
- Complete separate projects or theses for each degree,
- File separate "Final Oral Exam Request" forms for each degree, and
- Pass separate final oral examinations and complete a separate "Graduate Student Approval Form" for each degree.

Two awarded master's degrees require at least 22 hours of non-overlapping graduate credit in each major and two terminal projects (theses or creative components). These two degrees do not have to be awarded during the same term, since requirements for each are completed separately.

# Degree Program Requirements

The Human Computer Interaction Interdepartmental Graduate Program offers a PhD degree, an MS Degree, an Online Masters of HCI degree, and a Graduate Certificate in HCI. The MS degree is not a prerequisite for the PhD program.

Students who are admitted to the MS program and who wish to transfer to the PhD program in HCI may request to do so. Approval is required from the major professor supporting the student's MS program.

## Requirements for the Doctor of Philosophy in Human Computer Interaction

### PhD Course Requirements

Iowa State University requires a minimum of 72 graduate credits to earn a PhD. At least 36 graduate credits, including all research credits, must be earned at ISU.

PhD students will be required to choose any four courses, one each from the Design, Implementation, Phenomena, and Evaluation categories, plus two additional courses of their choice from the list of core courses or the list of recommended electives. PhD students will therefore be required to take a total of six courses. In addition to these courses, PhD students will be required to take a minimum of 9 research credits.

### Core Courses

#### Design

- HCI 521 — Cognitive Psychology of HCI
- HCI 595 – Visual Design for HCI
- ArtGR 530 – Graphic Design and Human Interaction: Usability
- IE 572 – Design and Evaluation of Human Computer Interaction

#### Implementation

- HCI 575 — Computational Perception
- HCI 580 – Virtual Worlds and Applications
- CprE/ME 557 — Computer Graphics and Geometric Modeling

#### Phenomena

- ArtGR 540 — Graphic Design and Human Interaction: Design for Social Inclusion
- HCI 655 — Organizational and Social Implications of HCI
- HCI 589 — Design and Ethics
- JLMC / T SC 574 – Communication Technologies and Social Change
- ME/WLC 584 – Technology, Globalization and Culture

## Evaluation

- ENGL/STAT 332 — Visual Communication of Quantitative Information
- HCI 504 — Evaluating Digital Learning Environments
- PSYCH 501 — Foundations of Behavioral Research
- STAT 480 — Statistical Computing Applications
- HCI 522 – Scientific Methods in HCI

## Recommended Electives

- ArtIS 508 – Computer Aided Visualization
- CI 503 – Theories of Designing Effective Learning and Teaching Environments
- CI 511 – Technology Diffusion Leadership and Change
- ENGL/LING 516 – Methods of Formal Linguistic Analysis
- HCI 510X – Foundations of Game-Based Learning
- HCI 520 – Computational Analysis of English
- HCI/ME 525 – Optimization Methods for Complex Designs
- HCI 558 – Introduction to the 3D Visualization of Scientific Data
- HCI 574 – Computational Implementation and Prototyping
- HCI 585 – Developmental Robotics
- HCI 587X – Models and Theories in Human Computer Interaction
- HCI 596 – Emerging Practices in Human Computer Interaction
- HCI 603 – Advanced Learning Environments Design
- HCI 681 – Cognitive Engineering
- IE 577 – Human Factors
- STAT 401 – Statistical Methods for Research Workers

## PhD Program Timeline

1. Graduate College Student Forms can be found at [this link](#).
2. ISU Graduate College requirements are summarized in the Graduate College Handbook available at [this link](#).
3. Submit Program of Study and appoint a graduate Program of Student Committee (POSC)
  - a. Before the end of the first semester of your second year
  - b. Program of Study and Committee form via [AccessPlus](#) > Grad Stdnt Status tab > My POSC form button
4. Submit Request for Preliminary Oral Examination
  - a. At least two weeks prior to proposed preliminary oral examination date
  - b. Complete the [eForm](#). Must be received by the Graduate College by the [deadline](#).
  - c. Your Preliminary Oral Exam is completed before the end of the first semester of the third year and a minimum of six months must elapse between passing the preliminary oral examination and taking the final oral examination.
  - d. If the preliminary oral examination is taken between terms (including the first day of classes for the later term), registration can be for either the term before or the term after the examination date.

- e. If the preliminary oral examination is taken between terms (including the first day of classes for the later term), registration can be for either the term before or the term after the examination date.
5. Submit Dissertation Proposal to POS committee
  - a. At least two weeks prior to the preliminary oral examination
6. Take Preliminary Oral Examination
  - a. A minimum of six months must elapse between passing the preliminary oral examination and taking the final oral examination.
7. Submit Application for Graduation
  - a. Typically, within three weeks of the start of the semester of graduation (see [ISU Graduation Deadlines](#))
  - b. “Graduation” tab in [AccessPlus](#)
8. Submit Request for Final Oral Examination
  - a. At least three weeks before the intended date of the student’s final oral examination
  - b. Complete the [eForm](#). Must be received by the Graduate College by the [deadline](#).
  - c. Open your account with ProQuest and input the title of your dissertation, which will appear in the commencement program. <http://www.etsadmin.com/cgi-bin/home>
9. Submit Dissertation to Members of the POS Committee
  - a. Two weeks prior to the final oral examination
10. Take Final Oral Examination
  - a. At least six months after the preliminary oral examination
  - b. After completing the [Thesis Checklist](#), you will find a link to upload your dissertation at the end of the checklist.
  - c. Upload your dissertation to ProQuest - note deadline for uploading.
11. Additional Graduate College graduation information can be found [here](#).

### **PhD Program of Study and Committee Form (POSC)**

Students should work with their major professor to begin planning a suitable program for completion of the HCI graduate coursework. Before the end of the first semester of the student’s second year, students, in coordination with their major professor, should appoint a graduate Program of Study Committee (POSC). The composition and responsibilities of the POSC committee must be in accordance with the Graduate College guidelines (see below).

The POSC committee should include faculty whose expertise will ensure a breadth of knowledge on the committee and whose knowledge and research interests can aid and complement the student’s research interests. The POSC committee must consist of at least five members of the Graduate College Faculty. The committee must have at least three faculty members—including the major professor and any co-major professor—from within the Human Computer Interaction major (i.e., who are members of the HCI faculty). One member of the committee must be either outside the major (not an HCI faculty member) or outside the student’s home department.

To file a POSC, a student logs into AccessPlus and navigates to the “Grad Student Status” tab. On the right-hand side of the screen the student will see a button labeled “My POSC Form.” The student clicks on that button and a blank POSC will be displayed. For further instructions, the student is directed to the help page

of the ISU Graduate College. After the form is approved by the committee, it is routed to the DOGE and then on to the ISU Graduate College. If the POSC is rejected it will be routed back to student. All committee members must approve any changes to the POSC.

### **PhD Preliminary Oral Examination**

The Graduate College requires a preliminary oral examination of Ph.D. degree students; most programs add a written portion to the preliminary oral examination (the written portion may be determined by your advisor). The Ph.D. degree preliminary oral examination rigorously tests a graduate student's knowledge of major, minor, and supporting subject areas as well as the student's ability to analyze, organize, and present subject matter relevant to the field. A [Preliminary Oral Exam Request](#) must be submitted to the Graduate College at least two weeks before the proposed date of the examination.

### **PhD Dissertation**

Dissertations must be prepared according to the Graduate College [requirements](#).

### **PhD Final Oral Examination**

The dissertation must be distributed to members of the POSC at least two weeks prior to the final oral examination. It is the responsibility of the student to arrange a meeting time and place in agreement to all committee members. The examination is generally a defense of the dissertation; however, questions may be asked on specific coursework or areas of concentration. For examinations to be valid, all members of the committee must be present throughout the entire scheduled period of the exam.

The Request for Final Oral Examination [eForm](#) is available on the Graduate College's website and must be received by the Graduate College at least three weeks prior to the intended date of the exam, per the deadline established by the Graduate College. The student is responsible for reserving a conference room. The HCI Graduate Program Coordinator will provide the final oral exam paperwork to the major professor prior to the of the exam.

### **PhD Annual Reviews**

Annual Reviews will be conducted during the month of October. The survey will be conducted via Qualtrics (online survey tool) and the Graduate Program Coordinator will email the student. If the survey remains incomplete, the Graduate Program Coordinator will send out reminder emails to both the major professor and the student.

# Requirements for the Master of Science in Human Computer Interaction

## MS Course Requirements

In order to earn an MS at Iowa State University, each student's Program of Study (POS) must include at least 30 graduate credits. A minimum 22 of the graduate credits must be earned at ISU.

MS students will be required to choose any four courses, 1 each from the Design, Implementation, Phenomena, and Evaluation categories. MS students will therefore be required to take a total of four courses from the core. In addition to these courses, MS students will be required to take a minimum of 3 research credits. A cumulative 3.00 grade point average is required.

## Core Courses

### Design

- HCI 521 — Cognitive Psychology of HCI
- HCI 595 – Visual Design for HCI
- ArtGR 530 – Graphic Design and Human Interaction: Usability
- IE 572 – Design and Evaluation of Human Computer Interaction

### Implementation

- HCI 575 — Computational Perception
- HCI 580 – Virtual Worlds and Applications
- CprE/ME 557 — Computer Graphics and Geometric Modeling

### Phenomena

- ArtGR 540 — Graphic Design and Human Interaction: Design for Social Inclusion
- HCI 655 — Organizational and Social Implications of HCI
- HCI 589 — Design and Ethics
- JLMC / T SC 574 – Communication Technologies and Social Change
- ME/WLC 584 – Technology, Globalization and Culture

### Evaluation

- ENGL/STAT 332 — Visual Communication of Quantitative Information
- HCI 504 — Evaluating Digital Learning Environments
- PSYCH 501 — Foundations of Behavioral Research
- STAT 480 — Statistical Computing Applications
- HCI 522 – Scientific Methods in HCI

## Recommended Electives

- ArtIS 508 – Computer Aided Visualization
- CI 503 – Theories of Designing Effective Learning and Teaching Environments
- CI 511 – Technology Diffusion Leadership and Change



- ENGL/LING 516 – Methods of Formal Linguistic Analysis
- HCI 510X – Foundations of Game-Based Learning
- HCI 520 – Computational Analysis of English
- HCI/ME 525 – Optimization Methods for Complex Designs
- HCI 558 – Introduction to the 3D Visualization of Scientific Data
- HCI 574 – Computational Implementation and Prototyping
- HCI 585 – Developmental Robotics
- HCI 587X – Models and Theories in Human Computer Interaction
- HCI 596 – Emerging Practices in Human Computer Interaction
- HCI 603 – Advanced Learning Environments Design
- HCI 681 – Cognitive Engineering
- IE 577 – Human Factors
- STAT 401 – Statistical Methods for Research Workers

### MS Program Timeline

1. Graduate College Student Forms can be found at [this link](#).
2. ISU Graduate College requirements are summarized in the Graduate College Handbook available at [this link](#).
3. Submit Program of Study and appoint a graduate Program of Student Committee (POSC)
  - a. Before the end of your first year
  - b. Program of Study and Committee form via [AccessPlus](#) > Grad Stdnt Status tab > My POSC form button
4. Submit Application for Graduation
  - a. Typically, within three weeks of the start of the semester of graduation (see [ISU Graduation Deadlines](#))
  - b. “Graduation” tab in [AccessPlus](#)
5. Submit Request for Final Oral Examination
  - a. At least three weeks before the intended date of the student’s final oral examination
  - b. Complete the [eForm](#). Must be received by the Graduate College by the [deadline](#).
  - c. **For Thesis Students Only:** Open your account with ProQuest and input the title of your thesis, which will appear in the commencement program. <http://www.etsadmin.com/cgi-bin/home>
6. Submit Thesis or Creative Component to Members of the POS Committee
  - a. Two weeks prior to the final oral examination
7. Take Final Oral Examination
  - a. For Thesis Students only: After completing the [Thesis Checklist](#), you will find a link to upload your thesis at the end of the checklist, then upload your thesis to ProQuest - note deadline for uploading.
  - b. For Nonthesis Students only: Submit Creative Component to ISU Digital Repository. Instructions in #7 at this [link](#).
8. Additional Graduate College graduation information:
  - a. For master’s thesis students at this [link](#).
  - b. For master’s non-thesis student at this [link](#).

## **MS Program of Study and Committee Form (POSC)**

Students should work with their major professor to begin planning a suitable program for completion of the HCI graduate coursework. Before the end of the first year, students, in coordination with their major professor, should appoint a graduate Program of Study Committee (POSC). The composition and responsibilities of the POSC committee must be in accordance with the Graduate College guidelines (see below).

The POSC committee should include faculty whose expertise will ensure a breadth of knowledge on the committee and whose knowledge and research interests can aid and complement the student's research interests.

**Master's with thesis:** The master's POS committee for a student completing a thesis consists of at least three members of the graduate faculty. It must include two members, including the major professor, from the HCI faculty. One member of the committee must be either outside the major (not an HCI faculty member) or outside the student's home department.

**Master's with creative component (nonthesis):** The master's POS committee for a student completing a creative component consists of one member of the HCI faculty as the major professor. One additional HCI faculty member is needed on the committee.

To file a POSC a student logs into AccessPlus and navigates to the "Grad Student Status" tab. On the right-hand side of the screen the student will see a button labeled "My POSC Form." The student clicks on that button and a blank POSC will be displayed. For further instructions, the student is directed to the help page of the ISU Graduate College. After the form is approved by the committee, it is routed to the DOGE and then on to the ISU Graduate College. If the POSC is rejected it will be routed back to student. All committee members must approve any changes to the POSC.

## **MS Thesis**

The MS thesis is the result of a focused research effort by the student and must be prepared according to the Graduate College [requirements](#).

## **Final Oral Examination**

The thesis or creative component must be distributed to members of the POS committee at least two weeks to the final oral examination. It is the responsibility of the student to arrange a meeting time and place in agreement to all POS committee members. For examinations to be valid, all members of the POS committee must be present throughout the entire scheduled period of the exam.

The Request for Final Oral Examination [eForm](#) is available on the Graduate College's website and must be received by the Graduate College at least three weeks prior to the intended date of the exam, per the deadline established by the Graduate College. The student is responsible for reserving a conference room. The HCI Graduate Program Coordinator will provide the final oral exam paperwork to the major professor prior to the of the exam.

## Sample Curricula for MS in HCI

### Sample I

HCI	575	Computational Perception
JLMC	574	Communication Technology and Social Change
HCI	521	The Cognitive Psychology of HCI
Stat	401	Statistical Methods for Research Workers
HCI	580	Virtual Worlds and Applications
HCI	558	Introduction to the 3D Visualization of Scientific Data – replace elective
ME	557	Computer Graphics and Geometric Modeling
HCI	699	6-9 Research credits, including thesis research

### Sample II

Art GR	672B	Graphic Design & Human Interaction: Design for Social Inclusion
HCI	589	Design and Ethics
HCI	520	Computational Analysis of English
HCI	504	Managing & Evaluating Instructional Technology Programs
CI	503	Theories of Designing Effective Learning and Teaching Environments
CI	511	Technology Diffusion Leadership and Change
HCI	521	Cognitive Psychology of HCI
HCI	699	6-9 Research credits, including thesis research

### Sample III

HCI	520	Computational Analysis of English
JLMC	574	Communication Technology and Social Change
HCI	521	The Cognitive Psychology of HCI
HCI	504	Managing & Evaluating Instructional Technology Programs
MIS	533	Data Management for Decision Makers
MIS	534	Electronic Commerce
ME	584	Technology, Globalization and Culture
HCI	699	6-9 Research credits, including thesis research

### Sample IV

Art GR	672B	Graphic Design & Human Interaction: Design for Social Inclusion
JLMC	574	Communication Technology and Social Change
HCI	575	Computational Perception
HCI	504	Managing & Evaluating Instructional Technology Programs
ArtGR	672A	Graphic Design and Human Interaction: Usability
HCI	521	The Cognitive Psychology of HCI
ArtIS	509	Computer and Video Game Design and Development
HCI	699	6-9 Research credits, including thesis research

# Requirements for the Online Master of Human Computer Interaction

## Online M.HCI Course Requirements

The Human Computer Interaction Graduate Program is pleased to announce the addition of an Online HCI master's degree program, M.HCI, effective with the fall 2017 term. This degree program was created from the growing demand from business and industry for a graduate degree program that provides education in the field of Human Computer Interaction.

Students in this program will be required to take four courses, one each from the Design, Implementation, Phenomena and Evaluation categories. However, M.HCI students must take two additional courses of their choice from the list of core courses or the list of recommended electives. M.HCI students will therefore be required to take a total of six courses (18 credits) from those listed below and the remaining four courses (12 credits) would be electives of your choosing. A total of 30 credits are required to graduate.

## Core Courses

### Design

- HCI 521 — Cognitive Psychology of HCI
- HCI 595 – Visual Design for HCI
- IE 572 – Design and Evaluation of Human Computer Interaction

### Implementation

- HCI 575 – Computational Perception
- HCI 580 – Virtual Worlds and Applications
- CprE/ME 557 – Computer Graphics and Geometric Modeling

### Phenomena

- HCI 655 – Organizational and Social Implications of HCI
- HCI 589 – Design and Ethics
- JLMC / T SC 574 – Communication Technologies and Social Change
- ME/WLC 584 – Technology, Globalization and Culture

### Evaluation

- HCI 504 – Evaluating Digital Learning Environments
- HCI 522 – Scientific Methods in HCI

Note: A grade of 'B' (3.0 GPA) or better is required for each of the core HCI courses.

## Recommended Electives

- HCI 510X – Foundations of Game-Based Learning
- HCI/ME 525 – Optimization Methods for Complex Designs
- HCI 558 – Introduction to the 3D Visualization of Scientific Data
- HCI 574 – Computational Implementation and Prototyping

- HCI 585 – Developmental Robotics
- HCI 587 – Models and Theories in Human Computer Interaction
- HCI 596 – Emerging Practices in Human Computer Interaction
- HCI 603 – Advanced Learning Environments Design
- HCI 681 – Cognitive Engineering
- IE 577 – Human Factors

### **M.HCI Program Timeline**

1. Graduate College Student Forms can be found at [this link](#).
2. ISU Graduate College requirements are summarized in the Graduate College Handbook available at [this link](#).
3. File your home department by the end of your first semester. The eform can be found [here](#).
  - a. You will be requesting admission to the Department of: *Industrial & Manufacturing Systems Engineering*; Your major professor is: *Stephen Gilbert*; Your major and degree sought: *MHC in Human Computer Interaction*
4. Submit Program of Study and Committee Form
  - a. By the end of the second month of the second academic semester
  - b. Some tips in filling out your POSC
    - i. Modify Degree Program > Options > Choose “Coursework Only”
    - ii. Committee > M.HCI students do not have a POS committee. Your major professor is the DOGE of the HCI Graduate Program: Stephen Gilbert
5. Submit Application for Graduation
  - a. Typically, within three weeks of the start of the semester of graduation. (see [ISU Graduation Deadlines](#))
  - b. “Graduation” tab in [AccessPlus](#)
6. Coursework Only Final Check
  - a. Typically, within three weeks of the start of the semester of graduation. (see [ISU Graduation Deadlines](#))
  - b. Complete the [eForm](#). Must be fully approved by deadline.
7. Additional Graduate College graduation information:
  - a. For coursework-only students at this [link](#).

## Online Graduate Certificate Course Requirements

The program consists of a sequence of four three-credit graduate courses in Human Computer Interaction, which includes three core courses and one elective, for a total of 12 credits.

HCI 521 — Cognitive Psychology of Human Computer Interaction

HCI 655 — Organizational and Social Implications of HCI

*or*

HCI 589 — Design and Ethics

*or*

ME/WLC 584 – Technology, Globalization and Culture

HCI 575 — Computational Perception

*or*

CprE/ME 557 — Computer Graphics and Geometric Modeling

*or*

HCI 580 – Virtual Worlds and Applications

One Elective Course. Suggested electives include, but are not limited to:

- CI 503 – Theories of Designing Effective Learning and Teaching Environments
- CI/HCI 504 – Evaluating Digital Learning Environments
- CI 511 – Technology Diffusion Leadership and Change
- HCI 520 – Computational Analysis of English
- HCI 522 – Scientific Methods in HCI
- HCI/ME 525 – Optimization Methods for Complex Designs
- HCI 558 – Introduction to the 3D Visualization of Scientific Data
- HCI 574 — Computational Implementation and Prototyping
- HCI 585 – Developmental Robotics
- HCI 587X – Models and Theories in Human Computer Interaction
- HCI 594 – Organizational Applications of Collaborative Technologies and Social Media
- HCI 595 – Visual Design for HCI
- HCI 596 – Emerging Practices in Human Computer Interaction
- HCI 603 – Advanced Learning Environments Design
- HCI 681 – Cognitive Engineering
- IE 577 – Human Factors

### Academic Procedures

A Certificate Program of Study (POS) form shall be filed for each Certificate student no later than the first week of the final term. The POS form (you can choose online or paper) can be found on the [Graduate College's forms site](#). If you choose the paper form, please sign the form and send it to the HCI Graduate Program, by email, to [hci@iastate.edu](mailto:hci@iastate.edu). The HCI Graduate Program will get the required faculty signatures on the form for you and send it to the Graduate College for approval.

Certificate students do not have a POS committee, but do have a supervising professor. The supervising professor for the HCI Certificate program is Stephen Gilbert.

The POS form will list the courses required to receive the certificate and be signed by the student, supervising professor and the Director of Certificate Studies (DOCS).

The regular Graduate College course rules apply to certificates: a student must have a graduate GPA of 3.0 or better, no course with less than a C may be applied to the POS, all courses on the POS must be graduate courses.

Once you have completed all requirements, send a Certification Completion form, which can be found on the [Graduate College's forms site](#), to hci@iastate.edu. We will get the form signed by the DOCS and forward it to the Graduate College. The Graduate College will then certify that all requirements have been completed satisfactorily and inform the Registrar and the Graduation Office.

The Registrar will add a notation to the permanent record (transcript) indicating that a Graduate Certificate in HCI was granted on a specified dated and issue a printed ISU graduate certificate.

# Course Policies

## Probation and Academic Standing

If a graduate student does not maintain a cumulative 3.00 grade point average on all course work taken, exclusive of research credit, he or she may be placed on academic probation by the Dean of the Graduate College. Grades earned by graduate students in undergraduate courses are included in the calculation of the grade point average. Academic probation judgments are made on the basis of grades in course work only.

New, first-term, degree-seeking graduate students who fall below a 3.00 GPA at the end of their first semester at Iowa State University will be given a one term grace period to bring their grades back to a 3.00 GPA. These students will receive a warning letter from the Graduate College.

Students on probation:

- will have a hold placed on future registrations,
- will not be admitted to candidacy for a degree if they are a doctoral student,
- will be required before registration each term to undergo a review of their record and have the program recommend in writing if the Graduate College should permit further registration, and
- must, before graduation is approved, complete all courses listed on the program of study with a minimum grade of C and have achieved a 3.00 GPA or greater.

While on academic probation, you are *not eligible* to hold an assistantship or receive tuition scholarships. However, if you are placed on academic probation, you should contact the DOGE immediately for a waiver that would allow you to keep your assistantship for one semester giving you a chance to remedy this situation.

## Courses Used in the Program of Study

Courses that bear graduate credit (500- or 600-level at ISU) are used to meet graduate program of student (POS) requirements. Some undergraduate courses (300- or 400-level at ISU) and graduate courses taken as an ISU undergraduate or nondegree graduate student may be used in the POS if they meet certain requirements.

The minimum grade acceptable for courses to be used on the POS is a C. Students cannot graduate with F's or I's (incompletes) on their records unless the POS committee determines there are extenuating circumstances, petitions the Graduate College for approval to allow the student to graduate with these on their record, and the request is approved by the Graduate College Dean.

## Graduate Courses Taken as an ISU Undergraduate

Certain graduate-level courses listed in the ISU Catalog may be used in the program of study even though they were taken for graduate credit by the student as an undergraduate at ISU. The following conditions must be met:



- The POS committee can request approval from the Dean of the Graduate College for up to nine hours of such credit to be applied toward meeting advanced degree requirements. These courses must be clearly marked on the POSC form.
- Credits earned in these courses must be in addition to those used to meet requirements for the bachelor's degree.
- Contact the Registrar's Office staff (210 Enrollment Services Center) to certify and note on the permanent record the courses that were not used for the undergraduate degree.
- Credits earned in these courses must have grades of B or better.
- The student must be classified as an undergraduate and **not** a nondegree undergraduate (special) student. Credits taken as a nondegree undergraduate(special) student are **not** allowed.

### **Graduate Courses Taken as an ISU Nondegree Graduate Student**

If you are admitted to ISU and took graduate courses as a nondegree seeking graduate student, you may use up to 9 credits of that graduate coursework toward meeting your graduate POS requirements.

### **Undergraduate Courses on Program of Study**

- With POS-committee approval, graduate students will be permitted to use undergraduate classes from both within and outside of their majors on POS forms.
- No 100- or 200-level classes may be used, but all 300- and 400-level classes at Iowa State (not undergraduate classes from other institutions) will be eligible.
- For graduate students who entered degree programs prior to spring semester of 2018, up to 15 credits from 300- and 400-level courses may be used on a POSC form, with a maximum of 6 credits at the 300 level.
- For graduate students who entered degree programs in spring semester of 2018 and thereafter, a limit of 9 credits at the undergraduate level will be in effect, with a limit of 3 credits at the 300 level.
- If a 300-level class is used, it must be from outside of the student's major.

### **Expired Courses**

Courses that you wish to count toward your POS requirements need to have been taken within seven calendar years of the year in which your graduate degree is granted. "Expired" graduate courses (those at Iowa State University, or those documented as graduate-level from other appropriately accredited institutions) that are between eight to ten years old may be used toward a graduate degree with the approval of a student's program of study committee and HCI DOGE.

### **Transfer Courses**

At the discretion of the POS committee, and with the approval of the HCI Graduate Program and the Graduate College, graduate credits earned as a graduate student at another institution or through a distance education program offered by another institution may be transferred if the grade was B or better. Such courses must have been acceptable toward an advanced degree at that institution and must have

been taught by individuals having graduate faculty status at that institution. If a student wishes to transfer credits from graduate courses taken at or through another university as an undergraduate student, it is that student's responsibility to provide verification by letter from that institution that those graduate courses were not used to satisfy undergraduate requirements for a degree. (Grades from courses taken at another institution will **not** be included in ISU grade calculations, nor will the grades display on an ISU transcript.)

A copy of an official transcript must accompany the POSC in order to transfer credits. The transcript should show that the courses were taken as a graduate student. There should be a clear indication that the courses taken were graduate level courses. The POS committee may ask for other materials, such as a course outline or accreditation of the institution, to evaluate the course. Transfer courses not completed when the POS is submitted must be completed before the term in which the student graduates. A transcript must then be submitted through the online POSC process for review and final approval.

Research credits earned at another institution are generally not transferred. In rare circumstances, the transfer of S or P marks may be accepted for research credits only. It is the responsibility of the POS committee to obtain a letter from the responsible faculty member at the other institution stating that research credits recommended for transfer with S or P marks are considered to be worthy of a B grade or better.

# Graduate Assistantships

All students studying on campus in the Human Computer Interaction Interdepartmental Graduate Program receive some form of financial support from either an on-campus or an external source. Both the source of the support and the responsibilities associated with it vary from situation to situation. Stipends for students admitted are provided by major professors or home departments and are governed by departmental policies. The responsibilities associated with a stipend are determined by the major professor.

All graduate students on assistantships sign a Graduate Assistantship Letter of Intent that lists the terms and conditions of their appointment. Generally, graduate assistantship appointments are on a half-time basis. "Half-time" is the maximum time appointment for graduate students; the remaining "half-time" is spent as a student in graduate studies and research. Please note the following three conditions associated with graduate assistantships and letters of intent.

- Financial constraints and program changes may result in adjustment in specific responsibilities and/or sources of funds during the period of appointment.
- The Graduate Assistantship Letter of Intent is based on the University fiscal year and does not imply that support will terminate on the end date noted in the Letter of Intent.
- HCI students will receive continued Graduate Assistantship support for the duration of PhD degree work as long as students remain in good standing. The specific source(s) of funding may vary depending on resources available to the major professor.

Appointments can be terminated by mutual consent or for reasons as described in the [Graduate College Handbook](#).

## Benefits for Graduate Assistantships

Benefits in addition to stipend support accrue to the graduate assistant during the appointment period. A full explanation of these benefits appears in the Policy Library; the following shortened description omits references to forms and approvals. Graduate Assistants are responsible for making sure they review and understand the benefit information.

Benefit information is also available from:

Student & Scholar Health Insurance Program

3810 Beardshear Hall

Phone: 515-294-4800

Email: [isusship@iastate.edu](mailto:isusship@iastate.edu)

<https://sship.hr.iastate.edu>

**Health Insurance Plan** - Graduate assistants with an appointment of one quarter time or more for at least 3 months of the fall or spring terms receive self only health insurance coverage as a benefit of employment for the term at no cost.

**Dental Insurance Plan** - Graduate assistants with an appointment of one quarter time or more for at least 3 months of the fall or spring term are eligible for the dental insurance plan which is partially subsidized by the university and the monthly premium will be deducted from the graduate assistant's paycheck.

**Leave** - Arrangement for a leave of absence is made between the graduate assistant and that assistant's supervisor adhering to all grant and other funding source restrictions. When a graduate assistant needs to be absent either for personal reasons or illness, the supervisor should be understanding and accommodating to that need. At the same time, the graduate assistant should attempt to plan personal leave so that it does not interfere with or cause neglect of the duties associated with his or her appointment. Supervisors of graduate assistants are responsible for ensuring that their assistants do not exceed reasonable limits for leave.

When a conflict arises between the graduate assistant and that assistant's supervisor regarding leave of absence use, either party may involve the appropriate Director of Graduate Education (DOGE). If the conflict is not resolved in a timely manner, any of the parties may involve the Dean of the Graduate College for a binding resolution. When resolving conflicts, the concerned party must present all evidence in writing (email is acceptable) and all parties involved must receive a copy. In order to accommodate schedules, allow a minimum of five business days for document review and resolution meeting to be scheduled between the two parties within two weeks. Resolutions achieved between the DOGE and parties need to be in writing (email is acceptable) and must be sent to all parties including the Dean of the Graduate College.

# Specific Policies and Laws of Interest to Graduate Students

The following policies and laws apply to graduate students or assistants:

- **Student Disciplinary Regulations (Student Conduct Code).** All students, including graduate students, are subject to the [Student Disciplinary Regulations](#) that contain the Code of Conduct. Behaviors not permitted include: academic misconduct, abuse of controlled substances, assault or threat of assault, bribery, contempt, disruption of the rights of others, violation of fire or safety regulations, endangerment, gambling, harassment, hazing, misuse of computers, false identification, misuse of keys, sexual abuse, theft, threat of harm, unlawful entry, possession of weapons, and violation of law.
- **Academic Misconduct.** Instances of suspected academic misconduct in research should be reported to the Office of the Vice President for Research. Applicable rules and procedures appear in [Section 7.2](#) of the [Faculty Handbook](#). For issues regarding conduct of research, graduate students are held to the same standards as faculty. Instances of graduate students suspected of academic misconduct not involving research should be reported to the Office of Judicial Affairs in the Dean of Students Office. See the [Student Disciplinary Regulations](#) for applicable rules and procedures.
- **Discrimination and Harassment Policy.** The University's policies on discrimination and harassment apply to graduate students. See the University's [Policy Library](#). Issues and concerns of discrimination and harassment should be reported to the Office of Equal Opportunity.
- **Sexual Misconduct, Sexual Assault, Sexual Harassment, Stalking, and Intimate Partner Violence Involving Students.** The University's policies and procedures on sexual misconduct apply to graduate students. See the University's [Policy Library](#). Issues and concerns relating to sexual misconduct should be reported to the Office of Equal Opportunity.
- **Conflicts of Interest.** Several provisions of law and policy related to conflicts of interest apply to graduate students (see the [Policy Library, Personnel, Conduct & Human Relations Section; Faculty Handbook, Section 7.2, 8.2](#)). As required by federal regulations, the University has adopted a conflict of interest policy affecting employees who have outside business commitments. Graduate assistants, especially those on research appointments, with significant private business arrangements must comply with this policy. University facilities should not be used for private commercial purposes without approval.
- **Statement on Professional Ethics.** Graduate students are expected to comply with the Faculty Statement on Professional Ethics (see [Faculty Handbook, Section 7.2](#)).
- **Compliance with Research Standards.** Graduate students conducting research must comply with the University's procedures for human subjects review, animal care and use, use of radioactive materials, prior approval of certain recombinant DNA experiments, and various safety requirements (see [Faculty Handbook, Section 8.3](#)).
- **Ownership of Intellectual Property and Data.** Iowa State University subscribes to the general principle that the intellectual property created by a student is generally owned by that student. However, student work often owes much to faculty initiative. In addition, the provisions of sponsored research grants that fund research appointments may affect the ownership of

intellectual property. Students must be aware of these restrictions on ownership of intellectual property as provided by [University policies on patents and copyrights](#). Graduate students will be given an opportunity to use data resulting from sponsored research grants; however, that opportunity is subject to the University's obligations with respect to those grants. The University has a general obligation to publish the results of scientific investigation. Consequently, the student's right to control data collected under sponsorship is not exclusive. Unless prior approval for a temporary embargo is secured from the Graduate College, theses and dissertations are made publically available upon their final approval by the Graduate College.

- **Tutoring.** A graduate teaching assistant may not tutor a course that he or she is teaching. In addition, graduate students must check with their department or graduate major before entering into a tutoring agreement to learn whether additional regulations exist.